

**The Northeast Voluntary Turf Fertilizer Initiative**



**Draft Meeting Summary - Stakeholder Meeting 1: Formulation and Labeling of Synthetic Products**  
5 Post Office Square, Boston, MA  
May 30, 2012

**Table of Contents:**

Attendee/Contact List..... p2  
Introductory Remarks..... p3  
Expert Presentation..... p5  
Manufacturers Roundtable..... p6  
Discussion of Guidelines..... p8  
Recap of Major Points..... p11  
Next Steps..... p11  
Appendix A: Flip Chart/Facilitator Notes ..... p13

**Table of Abbreviations:**

BMP = Best Management Practice  
CT DEEP = Connecticut Department of Energy and Environmental Protection  
EPA R1 = U.S. Environmental Protection Agency, Region 1 (New England)  
Mass DEP = Massachusetts Department of Environmental Protection  
N = Nitrogen  
NEGC = New England Governors' Conference  
NEIWPC = New England Interstate Water Pollution Control Commission  
NH DES = New Hampshire Department of Environmental Services  
NPS = Nonpoint Source (Pollution)  
P = Phosphorus  
POTW = Publically Owned Treatment Works (i.e. wastewater treatment plant)  
SRN = Slow Release Nitrogen  
TMDL = Total Maximum Daily Load  
TN = Total Nitrogen  
WSN = Water Soluble Nitrogen

## Attendee/Contact List

<u>Name</u>	<u>Affiliation</u>	<u>Phone</u>	<u>Email</u>
Eric Miltner	Agrium Advanced Technologies	(404) 941-9060	<a href="mailto:emiltner@agriumat.com">emiltner@agriumat.com</a>
Paul McDonough	Agrium Advanced Technologies	(440) 653-1785	<a href="mailto:pmcdonough@agriumat.com">pmcdonough@agriumat.com</a>
Ed Nash	Barnstable County, MA		<a href="mailto:ccturfgy@aol.com">ccturfgy@aol.com</a>
Patrick Murphy	Biagro Western Sales	(559) 696-2298	<a href="mailto:patrick@biagro.com">patrick@biagro.com</a>
John Donovan	CDM Smith	(617) 452-6537	<a href="mailto:donovanjf@cdmsmith.com">donovanjf@cdmsmith.com</a>
Martin Petrovic	Cornell University	(607) 227-0310	<a href="mailto:amp4@cornell.edu">amp4@cornell.edu</a>
Robert Hust	CT DEEP	(860) 424-3718	<a href="mailto:robert.hust@ct.gov">robert.hust@ct.gov</a>
Mark Parker	CT DEEP	(860) 424-3276	<a href="mailto:mark.parker@ct.gov">mark.parker@ct.gov</a>
Mary Sherwin	CT DEEP	(860) 424-3246	<a href="mailto:mary.sherwin@ct.gov">mary.sherwin@ct.gov</a>
Lynne Hamjian	EPA Region 1	(617) 918-1601	<a href="mailto:hamjian.lynne@epa.gov">hamjian.lynne@epa.gov</a>
Kate Renahan	EPA Region 1	(617) 918-1491	<a href="mailto:renahan.kate@epa.gov">renahan.kate@epa.gov</a>
Nick Anastas	EPA Region 1	(617) 918-1177	<a href="mailto:anastas.nicholas@epa.gov">anastas.nicholas@epa.gov</a>
Johanna Hunter	EPA Region 1	(617) 918-1041	<a href="mailto:hunter.johanna@epa.gov">hunter.johanna@epa.gov</a>
Trish Garrigan	EPA Region 1 (Facilitator)	(617) 918-1583	<a href="mailto:garrigan.trish@epa.gov">garrigan.trish@epa.gov</a>
Ernie Waterman	EPA Region 1 (Facilitator)	(617) 918-8632	<a href="mailto:waterman.ernest@epa.gov">waterman.ernest@epa.gov</a>
Gregory Nicoll	Harrells, LLC	(908) 698-2106	<a href="mailto:gnicoll@harrells.com">gnicoll@harrells.com</a>
Chuck Barber	Koch Agronomic Services		<a href="mailto:chuck.barber@kochind.com">chuck.barber@kochind.com</a>
Dave Heegard	Lebanon Seaboard	(256) 626-9501	<a href="mailto:dheegard@lebsea.com">dheegard@lebsea.com</a>
Bill Kelso	Lebanon Seaboard	(717) 270-3556	<a href="mailto:bkello@lebsea.com">bkello@lebsea.com</a>
Bethany Card	Mass DEP	(617) 292-5748	<a href="mailto:bethany.card@state.ma.us">bethany.card@state.ma.us</a>
Mark Casella	Mass DEP	(617) 654-6517	<a href="mailto:mark.casella@state.ma.us">mark.casella@state.ma.us</a>
Kenneth Kimmell	Mass DEP		<a href="mailto:kenneth.kimmell@state.ma.us">kenneth.kimmell@state.ma.us</a>
John Kerry	NEGC Committee on Environment		<a href="mailto:kerrynegc@msn.com">kerrynegc@msn.com</a>
Ron Poltak	NEIWPPC	(978) 323-7929	<a href="mailto:rpoltak@neiwppc.org">rpoltak@neiwppc.org</a>
Michael Jennings	NEIWPPC	(978) 349-2511	<a href="mailto:mjennings@neiwppc.org">mjennings@neiwppc.org</a>
Clair Ryan	NEIWPPC	(978) 349-2521	<a href="mailto:cryan@neiwppc.org">cryan@neiwppc.org</a>
Sandy Parco	Neptune's Harvest	(978) 281-1414	<a href="mailto:sandy.parco@neptunesharverst.com">sandy.parco@neptunesharverst.com</a>
Harry Stewart	NH DES	(603) 271-3308	<a href="mailto:harry.stewart@des.nh.gov">harry.stewart@des.nh.gov</a>
Eric Williams	NH DES	(603) 271-2358	<a href="mailto:eric.williams@des.nh.gov">eric.williams@des.nh.gov</a>
Barbara McMillan	NH DES	(603) 271-7889	<a href="mailto:barbara.mcmillan@des.nh.gov">barbara.mcmillan@des.nh.gov</a>
Tim Maniscalco	Responsible Industry for a Sound Environment (RISE)	(317) 550-8696	<a href="mailto:tmaniscalco@pestfacts.org">tmaniscalco@pestfacts.org</a>
Aaron Hobbs	Responsible Industry for a Sound Environment (RISE)	(202) 872-3860	<a href="mailto:ahobbs@pestfacts.org">ahobbs@pestfacts.org</a>
Ed Walsh	Rhode Island Turfgrass Foundation	(401) 742-6536	<a href="mailto:ewalsh@goritf.org">ewalsh@goritf.org</a>
Brian Herrington	Scotts Miracle-Gro	(516) 574-1909	<a href="mailto:brian.herrington@scotts.com">brian.herrington@scotts.com</a>
Charles Osbourne	Town of Marblehead, Osbourne Organics	(781) 631-2468	<a href="mailto:ozflor@aol.com">ozflor@aol.com</a>

## Introductory Remarks

### **Kenneth Kimmel, Commissioner, Mass DEP:**

- Today's meeting is intended to be the first step in what I think is going to be a very successful and important public and private collaboration.
- Voluntary approach allows us to utilize the best science to use the best advice from those who know the most about water quality and about the science of growing turf.
  - Also can potentially create the opportunity for the turf industry to market itself as forward thinking, adaptable, and good environmental actors.
- The costs to municipalities of treating stormwater are very high and growing.
  - All of the Northeastern states recognize that it is more cost effective to prevent pollutants from entering stormwater than to treat after the fact.
  - A lot of people, particularly at the municipal level, are watching this voluntary initiative to see if we can make progress
- Roughly half of the nation's waters suffer from nutrient pollution.
  - Coming to realize that much of this pollution comes from nonpoint and runoff driven sources.
    - Urban/suburban fertilizer runoff is one pollutant source under the larger umbrella of nonpoint sources that we have an opportunity to address.
- The Commissioners of the New England states' environmental regulatory agencies met and decided to pursue a regional effort related to turf fertilizer runoff one year ago.
  - This regional effort should build from successful steps that individual states have already taken.
- Important to emphasize that the guidelines that we will be discussing later are a straw proposal to promote discussion.
- This effort will go well beyond the two days of meetings and will require sustained commitment from industry stakeholders to be at the table as participants.
- Thank you to all attendees for taking the time and effort to be at our meetings.
  - Thank you to NEIWPC for coordinating and EPA R1 for hosting.

### **Ron Poltak, Executive Director, NEIWPC:**

- We recognize that application practice is a big part of the overall environmental impact of turf care on the environment.
  - Water quantity problems from over watering are concerning too.
    - Give an example of a neighbor who is obsessed with having the perfect lawn and who waters so frequently that other neighbors have had their wells run dry.
- The industry stakeholders generally understand the business of lawn care much better than we do.
  - Need industry help in progressing with voluntary approach to creating more uniform standards for both fertilizer production and application for the region.
- There are similar conversations happening around the country about how to combat nutrients
  - This effort to address turf fertilizer is only one part of a multi-faceted approach to solving the nutrient problem in the Northeast.

- New York City has invested over a billion dollars in efforts to remove nutrients from wastewater streams.
- In the Northeast, we hope to get ahead of the curve in working with the lawn care industry to develop a template for guidelines to minimize water quality impacts.
- We look forward to working with you today and tomorrow and into the future as we tackle outreach to fertilizer applicators in follow up meetings this fall.

**Harry Stewart, Water Division Director, NH DES:**

- New Hampshire and the other coastal states have a real issue with nitrogen.
  - EPA has issued NPDES permits for POTWs in New Hampshire that call for limit of technology N reductions.
    - Upset over the permits has caused the discussion surround Great Bay to become highly politicized.
    - Dealing with point sources through permits is just one part of the overall picture.
      - Multiple nonpoint sources of N: atmospheric deposition, septic systems, farm and non-farm fertilizer use.
  - The New England Commissioners put this forward as a voluntary initiative to see what we can do to lowering nutrient contributions from lawns and fertilizer.
    - It's a serious effort to develop a partnership and a voluntary effort to move forward.

**Robert Hust, Water Bureau Assistant Director, CT DEEP:**

- For years Connecticut has been addressing point sources of N in the state to improve water quality in Long Island Sound at great cost to municipalities.
- Due to nutrients in fresh water bodies, CT DEEP is now also focusing on P reduction.
- The state legislature just passed a bill to restrict the P content of turf fertilizers.
  - POTWs advocated strongly for the law and are generally pushing the state to consider nonpoint source reductions.

**Industry Questions and Comments:**

- Where are the state departments of agriculture and why aren't they at the table?
  - All the states represented (CT, NH, MA) have been in touch with representatives from their departments of ag about the regional effort.
    - Information and materials have been shared between agencies.
- EPA R1 has said that it is not part of the process. How can EPA not be part of a regional dialogue?
  - The facilitators from EPA are neutral actors and will not be engaging in discussion.
  - Lynne Hamjian explained that from a programmatic standpoint, EPA R1 has been involved throughout the development of the initiative in a role of providing technical and administrative support.
    - As a regulatory agency of the federal government, EPA is not driving the initiative and won't be engaging state legislators on the issue.
    - The state Commissioners and NEIWPC in the role of coordinator are the leaders in this effort.

- If the voluntary effort is successful, might it preempt a situation similar to what happened with the Chesapeake?
  - EPA is not engaged in this meeting in a regulatory capacity and can't comment on how the outcome could potentially affect regulatory efforts but would be very glad to see a reduction in nutrients yielding from a voluntary effort.
- Will we see any peer reviewed data that show that turf fertilizer contributes to nonpoint source pollution?
  - There are certainly peer reviewed studies out there that demonstrate runoff and leaching of nutrients from fertilized turf.
    - NEIWPC has not yet compiled these studies but plans to do so in the future.

## **Presentation by Dr. Martin Petrovic - Professor, Cornell University Department of Horticulture**

- Dr. Petrovic gave a presentation on the environmental aspects of turf management.
  - Powerpoint slides from the presentation are available for viewing.

### **Presentation Notes:**

- The level of pollutant loading from turf runoff is directly related to the quantity of runoff.
  - High density turf, which generally results from providing adequate nutrition, yields much less run off than low density/poor turf.
- There are environmentally sensitive areas, which might be characterized by shallow, fine and poorly drained soils, a high bedrock profile, presence of a single-source aquifer, and/or steep slopes, which have a high potential for P runoff, and these should be managed differently than non-sensitive areas.
- Generally, one of the most important functions of a lawn/turf area is to hold soil in place.
  - A study found no relationship between tested soil levels of P and P in runoff from turf systems (presumably because the turf prevented soils from eroding).
    - However, over-use of soil amendments (compost, manures) as top-dressing can elevate soil P levels to the point where P in runoff increases significantly.
      - Soil amendments have generally been excluded from state laws restricting P in turf fertilizer, but there is not a strong scientific basis for this.
- While N fertilization is generally necessary to establish dense turf, there is no need to fertilize with P unless a soil test shows that it is necessary.
  - While state laws restricting P have generally not restricted the use of fertilizers containing P during the first growing season (establishing a lawn), Dr. Petrovic argued that P use during establishment should also be based on a soil test since runoff is more likely before the lawn is fully established.
- Turf grass generally serves as a N-sink during its first several years.
  - Older turf grass areas may have reached their capacity for N and may become nitrogen sources if over fertilized - therefore N application should be less on old sites.

- Use of slow release nitrogen (SRN) is particularly important in environmentally sensitive areas and when wet weather is expected.
- N leaching is much less pronounced, especially through sandy soils, when application rates are low ( $< 0.7 \text{ lbs N}/1000\text{ft}^2$ )
- Late fall N application is the most risky

#### Presentation Q & A:

- In your runoff studies, did you do any checking of the biological activity levels in the soils?
  - No, not directly.
- Are differences in leaching between water soluble nitrogen (WSN) and SRN significant?
  - They can be. If you irrigate too much, you have condition for movement - there is not a tremendous amount of difference if you have traditional or SRN. Nitrate-based sources are the most risky, and SRN sources are less likely to leach under normal wetness conditions.
- You seem to be saying both that grass is good for the environment and that using less N is good to prevent leaching. But N is necessary for healthy turf growth. How do you reconcile these positions?
  - It becomes a frequency issue. A lot of times golf course people put down very little N per application but increase their frequency. For most homeowners, this isn't practical. Some grasses need less N, and also some soil systems provide a greater amount of N. It would be hard to find a soil in MA that is over 9% organic level. If you have a very low organic material soil you'll need to build up more N. There are a lot of factors that go into deciding the right amount of N to apply.
- What timescale are you talking when you say that turf can act as an N sink?
  - Roughly 50-100 years. It depends on the starting point - if you start with a soil with very low organic matter, it might be able to accumulate nitrogen for well over 50 years. Most soils max out somewhere. There is an accumulation curve with time. Forested soils high in organic matter may not be able to accumulate any more N.

#### Manufacturer Round Table and Discussion Items

**Note:** In this document, the points made by manufacturers are grouped by focus area and do not appear in the order they were given during the session. We also chose not to attribute particular comments to specific people or companies. *Comments that are followed by an asterisk (\*) were reiterated by at least two manufacturers during the discussion and represent point so emphasis.*

#### Regulatory/Definitional Consistency:

- Concerned that the state departments of agriculture and the American Association of Plant Food Control Officials (AAPFCO) are not involved in the initiative. (\*)
  - AAPFCO is responsible for vetting and approving definitions related to fertilizer such as slow release, controlled release, etc.
  - Guidance should reference AAPFCO definitions. (\*)

- The term “SRN” is too vast and encompasses a lot of different types of fertilizers and people don’t understand the differences.
  - Should be a separate definition for “Controlled Release N Fertilizers” which are different than SRN.
- Regulatory consistency between states is important to the industry. (\*)
  - The Maryland approach is preferred as a model. (\*)
  - New Jersey’s approach is not palatable to some because it did not address enhanced efficiency products.

### Outreach and Education, Application Behavior

- A lot of the message going to the public as a result of all the turf fertilizer registration is that fertilizing turf is bad and that turf is bad for the environment. (\*)
  - The public needs to hear the message that well-managed turf and managed green spaces are environmental resources. (\*)
- Best outcome of initiative would be a set of regional BMPs for application.
- Education to applicators is key.
- For golf-course applicators, the days of over-application are largely over.
  - Golf course superintendents have adapted to use less N based on turf science and economics, not due to regulation.
- Should acknowledge that according to market research, half of all home owners don’t fertilize their lawns at all, which is not good environmental practice is a patchy lawn that erodes easily.
- As a rule, homeowners don’t over-apply - why would they want to pay for two bags of fertilizer, when one would do the job?

### Guideline Comments

- Guidelines should be based on *lb/1000ft<sup>2</sup> application rates* and not on the *percent of nutrients in the bag*. (\*)
- Guidelines should be written in terms of application rate per growing season or year rather than per application.
- Guidelines should not use cut-off dates for fertilization that are real calendar dates. (\*)
  - In exceptionally mild years, professional applicators are seriously hampered by calendar-based cut-off dates which are not in step with actual seasonal conditions
- Guidelines should avoid using odd numbers such as 0.9 lb/1000ft<sup>2</sup> of N.
  - It is hard for applicators to grasp 0.9 lbs. Why not make it 1 lb?
- Any state regulations related to fertilizer should be based on sound science. (\*)
  - Many provisions that currently appear in existing state laws may not be scientifically defensible (e.g. calendar date cut-offs, different cut-offs for DIY vs. pros, organic exemptions).
- When asking manufacturers to change products or labels, it is important to give a realistic timeframe. (\*)
  - Six months lead time on new regulations is not enough because it takes at least one whole turf season (~March - November) to sell existing stocks.
  - A change in policy made in Spring 2012 could reasonably be implemented in 2014.

## Advanced Fertilizer Technologies

- Draft guidelines should include consideration of enhanced efficiency fertilizers. (\*)
  - Enhanced efficiency fertilizers are advanced/high-tech products that are effective in feeding plants according to their nutrient needs while also protecting the environment.
  - While enhanced efficiency fertilizers are a step forward, they are not widely available to the public.
    - They are more expensive than traditional lawn fertilizers and large retailers have been slow to add them to their inventories.
- States should be careful that in writing fertilizer laws, they don't end up handcuffing the development of good/up-and-coming fertilizer technologies. (\*)
  - Polymer Coated Urea (PCU) for example only release through increases in soil temperature - you can apply 2-3 lbs/1000ft<sup>2</sup> in a single application without leaching N.
  - Use of these better technologies can decrease annual application of N by only needing a single application of 2-3 lbs/1000ft<sup>2</sup>.
- Many golf course superintendents prefer to use enhanced efficiency or controlled release products.
- Guidelines should also leave room for advancements in spreader technology.

## Phosphorus and Organic/Blended Products

- If the interest is in protecting water quality, synthetic and organic fertilizers should be treated the same. (\*)
  - P is P and it is going to behave the same no matter the source.
- Some fertilizer products are composed of wastewater biosolids blended with synthetic components.
  - Blending reduced the overall P content from a purely biosolid product, but there would still be low levels of P.
  - As fertilizer industry evolves, there is more interest in blended products with SRN.
- Soil testing for P is not perfect.
  - Some users have observed that while a soil test shows they don't need to add P, they still get better results when using a product with P.
  - Most home owners will not be willing to test their soil.

## Focused Discussion on Draft Guidelines

### Introduction

- Draft guidelines to be discussed are a straw proposal and are not pre-determined to be the way this regional effort is going to go.
  - Producing the guidelines allowed the NEIWPCC-coordinated regional workgroup to do its homework by reviewing existing state laws and university extension guidance.
- We know that application behavior is at least as important as fertilizer content in the bigger picture of environmentally responsible turf management.



- We plan to engage turfcare professionals and various entities that engage the general public on turf care and water quality issues in meetings later this year (September - December).

### General

- A lot of the guidelines focus on percentages (e.g. “Fertilizers may contain no more than x% N by weight), but they guidelines should be written in terms of application rate instead (e.g. “Fertilizer use should not exceed x lbs N/1000 ft<sup>2</sup>). (\*)
  - Ideally, we will all be able to agree on a single maximum application rate for each nutrient/circumstance (e.g. starting lawn vs. maintaining).
- State university extension specialists are the experts on turf maintenance in their state and should play a role in developing these guidelines.

### Phosphorus Content and Labeling

- Guidelines should be written in terms of *plant-available phosphate* instead of total P.
  - Is this consistent with fertilizer labeling?
- A P ban should not actually be “zero” P, but 0.67% P, allowing for incidental traces.
- Guidelines need to be clearer on soil testing (e.g., what tests are acceptable, what labs can be used, are home-tests acceptable, etc.)
  - This has been a failing of some of the state laws.
- Soil testing is advised in all cases, including when establishing or repairing a lawn.
- Soil testing is all well and good as guidance, but requiring soil testing is not practically enforceable and homeowners are unlikely to do it.
  - If soil testing is recommended in the guidelines, it is important to formulate an outreach strategy related thereto.
- The best practice for water quality is not to apply any nutrient unless it is necessary for what you are trying to accomplish.
- On second bullet under P guidelines, 15-20% P by weight is more appropriate than 25%, but an application based standard is still preferred overall.
- 0.5 - 1.0 lbs P/1000ft<sup>2</sup> during the first growing season should be adequate to grow a new lawn in P deficient soil.
- Many TMDLs/lake management plans call for reducing P loading by tens or hundreds of pounds - this can’t be done through turf fertilizer regulation/guidelines alone.
  - Fertilizer reductions won’t be effective when you have flocks of geese contributing up to 12 lbs P each per year to the water.
  - State/EPA response is that we need to address and remove every pound of P that we can from impaired waters using a multi-pronged approach.
- Some manufacturers feel that there is only one policy on P in turf fertilizer that is scientifically defensible (“phosphorus is phosphorus”) while others support an approach with consideration given to the fertilizer type/source.
  - This issue will be discussed further at the meeting on May 31 with organic manufacturers.

### Nitrogen Content and Labeling

- Guidelines related to N should be written in terms of application rate and not % content.
- Different grass species have different N needs.

- Different application rates are appropriate for different site settings.
  - 0.7lb WSN/1000ft<sup>2</sup> is appropriate for finer soils, but in very sand soils would result in a lot of leaching.
- Guideline saying not to use products with SRN >50% of TN more than twice a year is not good.
  - If TN application is at a low rate with each application, it should be allowed more than twice a year.
    - Many golf courses apply product with high SRN multiple times a year in small doses.
- 2lbs TN/1000ft<sup>2</sup> per year is too low.
  - New Jersey limit of 3.2lbs TN/1000ft<sup>2</sup> per year would be better.
  - Should consult with university extensions and other experts for appropriate annual application rates.

### Product Labels (as related to application behavior)

- Changing product labels is difficult and not favored by industry.
  - State departments of agriculture regulate labeling requirements.
- Establishing a buffer zone around bodies of water where no fertilizer can be used might be bad for water quality.
  - If you have turf right up to the water's edge, isn't it better to have healthy/thick turf that will take up precipitation and hold on to soil than thin turf?
- Buffer zone requirements vary a great deal between states and municipalities (in special protection areas).
  - A Wisconsin study showed a 10 foot buffer is adequate.
  - Amount of buffer needed also depends on the type of spreader used.
    - Are same buffer requirements suitable for application of a liquid product?
- Buffer around storm drain is confusing
  - Storm drain is not an easily understood term
    - Does this mean a storm drain in the lawn, or one on the road too?
      - If saying not to apply within 20 feet of a storm drain on the road, many homeowners would not be able to fertilize their whole front lawn.
- Spilling and leaving fertilizer on impervious surface is one of the worst things an applicator can do in terms of environmental impact.

### General Nonpoint Source Issues

- Do states/EPA really know how much of the NPS load in any given watershed is coming from turf run-off/leaching? If so, how much?
  - Depends very much on the watershed and land-use therein (ultra-urban watersheds would have low turf impacts, as would agriculture dominated, but mixed use and suburban watersheds would probably have more).
    - There are watersheds where the non-ag fertilizer inputs are estimated at 10 - 20% of the total nutrient load.
- Are watershed loading estimates of contribution of turf run-off based on actually run-off data collected within the watershed?

- No. Given the number of nutrient-impaired waters, it is not practicable to conduct lawn runoff studies in every watershed.
- Loading estimates are usually derived from models that utilize land use information and export coefficients based on real data.
  - NH DES is in the process of modeling N inputs based on land use and are still working on mapping/calculating the extent of residential lawns and determining an appropriate N input rate.
- Industry is concerned that many of the models being used are inaccurate and based on false assumptions.
  - Would like to better understand the models that states and EPA are using to estimate nutrient loading from turf.
- Would like to see compilation of peer-reviewed studies that show turf being a significant contributor of nutrients.
  - This is something that NEIWPCCC will work on over the course of this initiative.
- Regulators recognize that although the contribution turf run-off varies by land-use and other watershed characteristics, in any watershed it will only be a part of the picture.

## Recap of Major Points

- Guidelines should be written terms of application rate rather than percent content.
- Not in favor of new labeling requirements
- Attendees would like to see a compilation of peer-reviewed studies showing run-off from fertilized turf that could impact water quality
- Lead time on any changes is important - it takes a long time to work existing product through the market
- Should rethink assumption that P is always necessary in starter fertilizer (especially in environmentally sensitive areas where soil P levels are high)
- Fertilizer companies want to be good environmental actors and to sell products that help create healthy landscapes
- General widespread support among attendees of using the Maryland law as a basis for New England effort and that guidelines adhering more closely to the Maryland standards would be acceptable.

## Next Steps

- NEIWPCCC and EPA will coordinate to develop a draft meeting summary.
  - Draft will be circulated to attendees for comment/corrections before it is made public
- NEIWPCCC will attend the June meeting of the NEGC Committee on the Environment and will provide a brief recap of the meetings to the environmental agency commissioners.
- NEIWPCCC will reconvene the State/EPA Workgroup to discuss the major points of the meeting and discuss next steps and revisions to the draft guidelines.
- Revisions to the guidelines will be shared with all manufacturer participants via email with opportunities for comment.
  - Goal is to develop final guidelines by end of 2012

- Further, the hope is that these guidelines will be formalized as MOUs between the states and the relevant stakeholders.
- NEIWPCC will distribute a contact list of members of the state/EPA initiative workgroup to manufacturer participants.
- Workgroup will work to improve communication with state departments of agriculture and will encourage them to become more engaged in the initiative.
- Workgroup will establish date and location of fall meetings (one to focus on outreach to homeowners, slated for early fall and one to focus on guidelines for professional application of fertilizer, slated for late fall).

## Appendix A: Flip Chart/Facilitator Notes

These are “blow-by-blow” notes taken by the meeting facilitators during the Manufacturer Roundtable and Discussion of Draft Guidelines sections of the meeting. They appear in the order spoken on the day.

### Synthetic Manufacturers Round Table

- Synthetic and organic should be treated the same. Nutrients are nutrients.
- Consider enhanced efficiency fertilizer, technology advanced
- Calendar cutoff dates don't make sense
- Application rates are more important than % nutrients in bag
- Whole number is easier than 0.9, suggest 1.0. Make it simple for folks
- Cutoff dates annoyed customers – don't understand
- Turf grass as good environmental contribution, need inputs
- Public needs clarification on how to do it
- Don't scare people into not using fertilizer.
- Perceptions have challenged by some of this information
- Don't handcuff good technology
- Fertilizer seen as “dirty” word - need to address this
- Include controlled release fertilizer → Less nitrogen annually (Polymer Coated Urea)
- Be careful with categorization
- Practices have improved over time, golf course professionals know what they are doing
- Have science behind the regulations
- Concern that Department of Agriculture is not here. Need to get their feedback
- Association of American Plant Food Control Officials (AAPFCO)
- Need to clarify definitions of slow release, controlled release, enhanced efficiency, etc....
- Bring in AAPFCO to get uniform definitions, not always smooth
- Create avenue for product development – keep asking questions/checking
- Check the need to distinguish between homeowner & professional
- Lbs per 1000 vs percentage- these are two different things
- All for water quality, not “us” vs “them”
- Need to avoid over application
- A healthy stand of grass provides effective filtration
- Want good stand of grass. Nitrogen should be our friend
- Better to have consistent regulations
- Maryland model is effective
- Phosphorus is an organic product, using fish we can't get to zero.
- There are different types of nitrogen to consider
- Laws can be too rigid, need to be able to consider new technology
- Hybrid fertilizers are coming
- Prohibition on P could hinder the use of organics
- There is a trend toward slow release, and interest in hybrids
- Phosphorus is phosphorus. It doesn't matter if it is synthetic vs. organic
- Soil testing is best we have so far. Is it perfect? No
  - pH levels matter
  - The balance of nutrients matter

- P could impact plant diseases and other things
- Consistency is important to industry and users
- Industry is always looking for the best technology, ways to provide product to the customer.
- Looking for innovation and the best results
- Opportunities to keep talking are important
- Good to have joint conversation
- Need to consider all technologies (e.g. spreaders)
- How to get beyond content to get good messages to the public
- How do we get to Do-It-Yourselfers?
- Consistency is important
- Timeframes – Need time to adjust to changes, at least one selling season, need to look ahead
- Look at existing models and learn from them, but realize they are not always sufficient
- Issue of cost affects homeowners as well
- Look beyond existing models and consider organics
- Nitrogen rates in New Jersey law are not best, consider Maryland
- Are enhanced efficiency fertilizer (EEF) products widely available yet? Yes, but retailers don't have them
- The definition of EEF is evolving, it has been defined by APPFCO and EPA, it is not the same as slow release
- Enhanced efficiency fertilizers have been around for decades
- EEF - simple definition – Many products fit definition
- EEF definition: Fertilizer that increases nutrient availability to the plant and decreases or limits loss to the environment compared to a standard referenced fertilizer (ammonium urea, sulfate as ex.)

### **Comments on Draft Guidelines**

- All sections refer to percentage should focus on rates instead
- Regional extension specialists – each state as experts, include them

### **Phosphorus**

- Not to exceed 5% to include organics
- 2<sup>nd</sup> bullet drop to 15% - 20% or change to 1 lb/per application per 1000 SF basis
- 1<sup>st</sup> bullet change to “Available phosphate” not phosphorus  
(add error allowance not 0%)
- Soil test or tissue test before phosphorus, always
- How to do soil test? Need to describe
- How to enforce soil test? Consumers won't do it - a problem. Just meant as a recommendation
- Formulation change vs. education/outreach
- Scotts has “starter” or organic exemption
- Seeding needs P to get started – but only if soil “needs” it
- Science should guide levels
- Bottom line reduce amount of P
- Same standard needed for synthetic & organic. Phosphorus is phosphorus
- Lake watershed's reduce P by 80 lbs – so need to be careful about numeric guidelines won't solve WQ issues

- Education/Outreach will be needed
- Will this fix the problem re: P?
- Washington State Canada Goose - (12 lbs of P year)
- Are there other sources that should be considered?
- Will need to take out every lb. of P and N
- EPA not picking on you, WWTP's also working to reduce nutrients
- TMDL's have to look at all sources
- How do you (EPA/States) determine where non-point sources of nutrients are coming from?
- What % can be attributed as coming from lawns? Depends on land use – EPA has examples 10 – 20% range
- About ½ lb per acre from lawn
- Look at application rate not content
- New lawn ½ lb per acre per year and return clippings
- Chesapeake model way off
- Assumptions in model about how much P runs off
- Are you actually monitoring run off from turf?
- Where do export coefficients come from?
- Would appreciate “real” data
- Example: A 28% reduction in P after ordinance went through, but other changes in the watershed were made, so question the results and if they are attributable to fertilizer change
- Consider protection zones instead of regulating product, NH has shoreline zone of 250 feet, and nothing at all in 1<sup>st</sup> 25 feet
- Need to maintain buffer
- Manufactures feel that what they are doing is agronomically correct, they want to help customers be better stewards of the environment
- We have the ability to do it better, not just adopt what other states are doing
- Use application rate instead of percentage
- States use percentage instead of application rate
- Blending of consumer protection & environmental protection laws
- Is there research that says you need P for starter lawns?
- Follow up item: Clair will collect run-off data

## **NITROGEN**

- Push toward higher slow release nitrogen might be higher percentage, move toward application rate
- Different grasses need different amounts of nitrogen

## **LABELING**

- 0.9 lb sticks out → go to 1 lb
- Add 2.5 lbs per application for EEF controlled release provided no more than 0.7 released/month
- Concern about labeling, it can be complicated
- Different types of slow release can need more than 2 app./yr
- Eliminate last bullet, add total cap → 3.25 (from Maryland) to 3<sup>rd</sup> bullet
- Check 3.25 with regional turf specialists at university extensions
- Keep 3.25 for consistency

- There is a range of buffers used 10', 15', or wider, VT is 25' research from Wisconsin Says that 10' is adequate
- What about "healthy turf" to hold runoff
- Consider spreader with shield
- Concern about term "storm drain"
- Include in a "turf area" not the street
- Consumers need to be educated about not getting fertilizer on pavement
- Do the provisions apply to dry or liquid?
- In general agreement with Maryland Law. Some don't like 0.9lbs N.

### **NEXT STEPS**

- Share Meeting Summary with all – Review draft ahead of time
- Reconvene State Workgroup/Revise based on research
- Identify point of contact for Manufacturers - RISE
- Converse via email
- Bring final set of recommendations by end of year
- Send list of names of who is on the Workgroup
- Goal is to have MOU
- Invite Department of Agriculture