ATTENDEES

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<tr>
<th>Elected Official / Resident</th>
<th>Land Care Professionals</th>
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<tbody>
<tr>
<td>April Caricchio – City Councilor (absent)</td>
<td>Jesse O’Brien – Downeast Turf</td>
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<td>Linden Thigpen – Resident</td>
<td>Breece Sleeper – Always Green Tree Lawn &amp; Landscape</td>
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<td>Andrew Capelluti</td>
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<td>Rachel Burger</td>
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<th>City Staff</th>
<th>Non-Governmental Organization</th>
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<tr>
<td>Julie Rosenbach – Sustainability Director</td>
<td>Cathy Ramsdell – Friends of Casco Bay Executive Director</td>
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<td>Rick Perruzzi – Athletic Fields &amp; Golf Course Manager (absent)</td>
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<td>Fred Dillon – Stormwater Program Coordinator (notes)</td>
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<th>Guests</th>
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<td>Gary Fish – MBPC</td>
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<td>Newell Augur – Pierce-Atwood/Scott’s Lawn Care</td>
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1. Review of last meeting & updates

- Adopted with suggested edits
- Need to determine whether we’re going be focusing on lawns / turf

2. Review work plan framework

- General agreement that plan framework we’ve developed is pretty good
- Julie’s overview: goals ➔ BMPs ➔ codification/education & outreach

3. Presentation by State Horticulturist Gary Fish (instead of Matt Wallhead, Ornamental Horticulture Specialist/Asst. Prof., University of Maine Cooperative Extension)

- Generally relies on peer-reviewed journals for definitive guidance
- Provided several handouts (including NEIWPCC document)
- Important to consider references for freezing areas rather than mid-Atlantic states (or in other areas with warmer climates)
- Most nutrient runoff occurs in spring after thaw where N and P aren’t from fertilizer but rather from dead plants
- Freeze/thaw of vegetation gives biggest spike throughout the year
  - Based on Cornell and Wisconsin study
  - Hard to slow and retain runoff
• Don’t put nutrients on ground late in the season because they aren’t taken up – will lose the water soluble portions during winter rains
• Unless on steep slopes and directly next to the water thick turf is generally protective (i.e., retains N & P) while thinner turf results in biggest losses
  ▪ Greatest loss of N & P generally from areas that haven’t been maintained (per Marty Petrovic from Cornell)
  ▪ Form of fertilizer used (synthetic, organic and polymer-coated or slow release ferts) made no significant difference in terms of N or P loss
  ▪ N leaching (loss to groundwater) does occur with quick release ferts (e.g., ammonia or urea-based)
  ▪ Will more intense rains associated with climate change exacerbate potential nutrient losses?
    • Not necessarily - too speculative at this point
    • Good vegetation is one of the best solutions to keep the soil in place
    • Most lawns probably aren’t fertilized

• Kinds of BMPs
  ▪ Keep clippings and leaves off impervious surfaces (pavement & walkways)
  ▪ Keep ferts off frozen/saturated ground
  ▪ De-link fert and crab grass control (pre-emergent crab grass control different from weed and feed)
    • At least one southern Maine supplier doesn’t sell de-linked fert
  ▪ 1st app should be AFTER grass has started growing and avoid applying during extended drought periods
    • Recommendations are a bit different for high performance turf / athletic fields
  ▪ Soil temp is key – it needs to be 50-55 deg. F
  ▪ Return clippings and cut high
  ▪ Over-seed
  ▪ Buffers from water bodies (at least 25’)
  ▪ No mow zones near water
  ▪ Test soils to establish need for fertilizer and don’t apply P unless results call for it
    • Organic ferts or compost are almost never P-free; can add an order of magnitude for P; really important consideration
      • No synthetics / just organics not a good way to go from P perspective – potential to over-apply P is using only organics
    • Don’t go with 4 lb / 1000 sf 4 x a year: cut to 1/2 to 1/3 this amount
  ▪ Turf is a great filter – including clover can require more fert?
  ▪ 50% water insoluble ferts – polymer coated or sulfur coated
  ▪ Important consideration is soil quality for new / redevelopment – poor or insufficient soils can be a real problem – the limiting factor is the expense – 6” of topsoil is ideal
    ▪ Bare ground during construction is an issue as is time of year for trying to establish lawn/turf
  ▪ Cultural pressures and expectations can also drive perceived need for fertilizers
    ▪ Challenges of demo site at Bug Light Park
• Bare soil, ideal lawn
• promote wildflowers
• lawn as part of landscape, not the whole landscape
• thatch is like a sponge; holds water, binds chemicals and fertilizers, stops things; it’s a filter
• Multiple levels of vegetation; don’t rake up leaves and needles to create effective buffer area
• Buffer zone – at least 25’. Pest ordinance setback is 75’ – consider maintaining consistency
  ▪ Buffers with turf involved versus without turf; if steep slope, lose nutrients in runoff

• Organic versus synthetic:
  ▪ Much more important for non-water soluble & slow release
  ▪ Need soluble nitrogen
  ▪ Makes organic vs synthetic moot
  ▪ Hard to find organic fertilizer WITHOUT phosphorus
  ▪ Could end up with ten times the phosphorus in order to get enough nitrogen from organic fert
    • Corn gluten in 10% nitrogen with no phosphorus
  ▪ Question about whether quick release is always water soluble – yes.
    ▪ Slow release can be bound up or organic or synthetic, or has to be broken down to become soluble and taken up by the plant or lost to the environment
    ▪ Considered bridge products
    ▪ Depends on make-up. Avoid fertilizers with high salt index; not good for insects, not good for turf.
      • Colorado State Univ ranks fertilizers based on salt index
  ▪ If fertilizer is not lightly watered in, potential for loss is much higher. ¼” (quarter inch) water application
  ▪ Make sure people understand instructions on fertilizer bag, what the numbers mean and difference between quick and slow release
  ▪ Phosphorous free with zero middle number preferred
  ▪ Compost nutrient content generally not provided with product so greater potential for misuse
  ▪ Salt on the roads, melt products, cross labelling, beware
  ▪ Equipment calibration for fertilizer application is very important as is having right type of spreader and proper calibration; otherwise potential for over-application
  ▪ LOTS of opportunities for potential pitfalls
  ▪ pH is important: if low pH, you are not releasing the fertilizers you are putting on. Lime is important. Soils should be 5.5 to 6.5 pH, important.

4. Review Goals
• We’ll continue reviewing goals at next meeting
• Looking for meeting room for Sept and Oct meetings
• Julie will put Gary’s additional information on website
Goals discussion:
- First goal, add “excess,” to read “keep excess nitrogen out of bay”
- Question about extent to which we can maintain consistency with pest ord
- Remove “ban synthetic fertilizers” – much discussion, organic vs synthetic (derived) fertilizers, organic synthetics also exist, carbon fused, organic has carbon molecule
- Not a black and white issue
- Need to emphasize: quick release vs slow and water soluble vs non water soluble
- New versus established turf – must differentiate approaches
- Determine if science exists to substantiate concerns about potential impacts from synthetics on human health and environment
- Challenge to keep fert ord simple
- Cape Cod ordinance doesn’t allow application of more than 2 lbs in a year of water insoluble
- Many options to meet our overall goals
- Prioritize, categorize

Homework assignment:
- Read materials
- Go through goal sheet, make edits and bring those in
- Be prepared to apply what you read to help with changes to goal sheet
- We will likely move back and forth between BMPS and goals to try to get this right, not contradictory