



City of Portland Pesticide Management Advisory Committee

On Tuesday, March 2, 2021, at 6:00 pm, the Pesticide Management Advisory Committee will conduct a virtual meeting using emergency legislation approved by LD 2167; 1 M.R.S. §403-A, that authorizes cities and towns to conduct meetings online. This meeting will be conducted remotely using Zoom.

Allow your computer to install the free Zoom app to get the best meeting experience.

<https://us02web.zoom.us/j/89592666218?pwd=L1psclJkS3dyNEhuM1puTTJCdmtrUT09>
Passcode: 894956

For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be un-muted by the host when it is time for public comment.

To join by telephone:
Or Telephone: 312 626 6799
Webinar ID: 895 9266 6218
Passcode: 894956

1. Welcome and Check In
2. Review and approve minutes
 - a. Minutes from February
3. Review draft report for Sustainability and Transportation Committee
 - a. Draft report
4. Other Business
5. Next Meeting: April 6, 2021
6. Adjournment
7. Meeting Information

CITY OF PORTLAND, MAINE
Standing Pesticide Management Advisory Committee

Draft Minutes February

Members Present: Jesse O'Brien, Tim Lindsay, Avery Yale Kamila, Carol Laboissonierre, Priscilla Skerry, and Troy Moon

Guests Present: Doug Roncarati

Meeting called to order at 6:35 PM.

January Minutes

Tim motions to approve the January minutes. Avery seconds. Minutes unanimously approved, 6-0.

**Connection Between Water Systems and Fertilizer Use
(Doug Roncarati)**

Both synthetic and organic fertilizers make things grow in water, which is not a good result. Nitrogen is the limiting factor in marine systems and enables algal growth. Phosphorus is the limiting factor in freshwater systems for algal blooms—an issue in streams and rivers. Overuse of fertilizers can impact water systems by creating algal blooms, choking out habitats, and removing oxygen from water after sinking to bottom. When considering an ordinance, recognize that nutrients are nutrients (synthetics or compost) and fertilizers often have pesticides in them.

Lawn clippings and yard waste can provide all the necessary nutrients to soil. These materials are often illegally disposed of in the city and find their way into water systems. Portland has a lot of impervious surfaces that go into combined sewer systems and are put into water bodies without treatment. This can carry fertilizers, pet waste, etc. through the grate systems into Casco Bay and rivers.

With climate change, there are more overflow events in Portland. Portland water treatment has been removing more nitrogen and phosphorus than before from wastewater. Portland water systems trying to capture leaves and pet waste before enter water systems, also creating rain gardens. Reduction of improper fertilizer use (overuse, application during rain events, etc.) is the most important.

The City has two permits: wastewater and stormwater. For stormwater, have to reduce pollutants. Work on outreach and education on reduction of pesticide and fertilizer use. Also working to reduce sediment erosion. State working on nutrient criteria in water, such as checking for nitrogen, phosphorus, nuisance algal growth, etc. When these criteria are approved, there will be better ways to approach checking the health of water bodies and impact of nutrients on health.

Cannot easily remove fertilizer or pesticides from water. Much easier and more effective to remove/reduce source. The City recently developed an integrated water resources plan which includes education/outreach and more organized city approach. Green infrastructure is encouraged as part of Low Impact Design approach. Redevelopment is more challenging and requires some sort of treatment to manage quantity and quality of stormwater runoff. City of Portland has stormwater service charge based on amount of impervious surface that mostly impact large properties with parking lots, etc. This incentivizes properties to implement LIDs with green infrastructure.

Goals also matched in One Climate Future. Convert 15% impervious surfaces in city to green infrastructure. Treat/contain first inch of rainfall onsite.

The City does not do a lot of testing yet. DEP and other organizations are doing in-stream testing. The City may test for chlorine, high nitrogen, or may send for a chemical read in lab.

Draft of Recommendations for S&T

Casey and Troy drafted a recommendation to present to the S&T. Can continue to add comments and changes at March PMAC, which occurs before March S&T.

Committee Comments:

Want other ordinances included in the recommendation to S&T: Dover, UNH, etc.

Jesse will present these recommendations at the South Portland meeting on Thursday.

Important point that the South Portland Ordinance does not match NOFA standards and likes that LMAC is a broader name.

Will also add Pesticide applicator reports summary/analysis.

Might help for lawn fertilizer to be separate from tree/shrub fertilizing. Important to prioritize health of trees and woody plants. Make this addition to the fertilizer ordinance recs.

Tim advocates for fertilizing and addition of nutrients to tree beds, believes the woody beds surrounding reduce runoff.

Newly planted trees and shrubs are most important for fertilizing. City trees are also an area of concern because of lack of soil depth.

What about annuals and perennials, vegetable gardens, patio plants, window boxes?
Yes, regulate these in the fertilizer ordinance. NOFA standards would dictate not to break up the landscape.

Container plants are a different type of environment. Natural soil doesn't drain properly in planters.

Annual plants are big consumers of nitrogen.
Potted plants will already have fertilizer in the soil.
Can regulate how the plant is cared for at the final destination.

As far of land use, there was a section that referred to soil requirements. Carol hopes that we don't require that MOFGA certified compost be used, since this is strictly agricultural.

Make sure site development sites have soil requirements, that are site-specific. The 10 inches number will not be possible at all sites. For organics, you can break down the fungi in the soil if you break it up too much.

30% compost to regular soil for lawns/turfs. 50/50 for trees and shrubs. SoPo has 5% organics in unstable soil, which will become 30% in stable soil.

Change phrasing of 10 inches to "as necessary" or something along those lines.

Must have requirement of healthy soil and grass covered for development. Maybe ensure performance standard for soil that it can grow plant life.

Wrap Up

Everyone will bring in thoughts and ideas on ordinance recs for next meeting.

South Portland is going to host a Zoom meeting on soil testing. Does the committee want to sign onto this? The PMAC agrees to sign on. Will likely occur first week of April.

Troy is hiring for Ashley's replacement.

Citizens engaged in tree issues with Portland.

Troy will include summary of See-Click-Fixes for report to S&T.

Next meeting March 2nd at 6:30.

Meeting adjourned at 8:02 PM.

**City of Portland, ME
Pesticide Management Advisory Committee
Annual Report to the Sustainability and Transportation Committee
March 12, 2021**

Reported Pesticide Ordinance Violations

The City of Portland relies reporting through the See-the City's Pesticide City of Portland received regarding potential violations, spanning the

August. The majority of proper signage on applied lawns, and more specifically the lack of chemical and trade name reporting on the signs. This type of violation was reported at the following locations: 209 Pearl Street, 51 Myrtle Street, 80 Roberts Street.

These first two sections are under development – including them to show information that will be included in the report.

on community- sourced Click-Fix app to enforce Ordinance. In 2020, the 11 See-Click-Fix reports Pesticide Ordinance months of April through reports note the lack of

2020 Pesticide Applicator Summary Reports

When was the reminder sent out?

Who was it sent out to?

How many reports received?

What were the main chemicals?

Fertilizer Ordinance Recommendation

The Portland Pesticide Management Advisory Committee (PMAC) recommends the City of Portland adopt an ordinance to manage the use and application of fertilizers within the jurisdiction of the City to protect the health of its soils, waterways, people, and wildlife. While the PMAC recognizes the need for fertilizers to protect the city's tree canopy and reduce erosion, the PMAC would like the City to develop a fertilizer ordinance that emphasizes organic landcare practices and the reduction of unnecessary fertilizer applications.

Recently, the City of South Portland enacted their own pesticide ordinance. The PMAC has reviewed this ordinance as well as other ordinances listed later in this report when developing these recommendations for a similar Portland Pesticide Ordinance. Attached to this report is also an earlier version of the South Portland Fertilizer Ordinance that the PMAC recommends as a better baseline ordinance for a Portland Fertilizer Ordinance.

The PMAC highly recommends the following items from the South Portland Fertilizer Ordinance be included in the Portland Pesticide Ordinance:

- Make a broader Landcare Management Ordinance, which encompasses the Pesticide Ordinance and the Fertilizer Ordinance.

- Change the name of the PMAC to LMAC (Landcare Management Advisory Committee), which is a more comprehensive, appropriate name and objective for the committee.
- Have the scope of the Portland Fertilizer Ordinance encompass property owners as well as commercial applicators.
- Have the scope of the Portland Fertilizer Ordinance encompass private property within City jurisdiction, as well as City-owned property.
- Include a section on new development/construction, which would require the breaking up of compacted soils.
- Include requirements for education and outreach from the LMAC, with a specified focus on soil health, organic landcare practices, and appropriate applications.
- Include signage requirements at the end of the Landcare Management Ordinance that applies to both pesticide and fertilizer applications. As noted earlier, Portland's main application violations are signage violations. By using similar language to the South Portland Ordinance, these violations may be reduced.

The following are deviations from the South Portland Fertilizer Ordinance that the PMAC recommends for the Portland Fertilizer Ordinance:

- The Fertilizer Ordinance should mirror the Pesticide Ordinance in scope. For instance, the South Portland Fertilizer Ordinance only applies to turf; whereas, their Pesticide Ordinance applies more broadly. The PMAC recommends that the Portland Fertilizer Ordinance apply broadly both to match the Pesticide Ordinance thereby avoiding confusion, and to best protect the health of people, waterways, and wildlife. The scope of soils should encompass all soil conditions, including gardens, flower beds, and soil surrounding trees.
- Many of the application and testing requirements in the South Portland ordinance are very strict and specific, often without proof from NOFA or other industry consensus. This includes the specification that soil testing be required if the organic fertilizer is incorporated more than 2-3 inches deep or if the sub-soil is not broken up to 10 feet. While these specifications are well-intentioned, they are too number-based and are more extreme than NOFA standards. A Portland approach should focus more on the soil care and less on required soil depth numbers.
- NOFA standards and practices should be explicitly noted in the Portland Fertilizer Ordinance as the best practice.
- While the South Portland Fertilizer Ordinance has good intentions in requiring better soil for new development, this section in a Portland ordinance should include required percentages for this soil. Nantucket's *Best Practice* document goes into details about the native soil

composition for the region and appropriate fertilizer ratio. A similar approach should be taken in the Portland Ordinance.

- The South Portland Fertilizer Ordinance allows a loophole where specified synthetic fertilizers applied in the case of grub control are exempt from the ordinance. This exemption expires in 2023. For the purpose of a Portland Fertilizer Ordinance, this grub control loophole should not be included and should be considered a waiver item for waiver committee review.
- Under the South Portland Fertilizer Ordinance, fertilizers may not be applied within 75 feet of a body of water, wetland, or other environmentally sensitive area. This number is based on small streams, which is not appropriate for most Portland bodies of water which are much larger. The PMAC recommends that shoreline numbers should instead be 250 feet, which more appropriately aligns with the State of Maine shoreline zoning requirements.
- In addition to including Pesticide and Fertilizer Ordinances in the greater Landcare Management Ordinance, also include the Portland Heritage Tree Ordinance—and any expansions to this ordinance as a broader tree/canopy ordinance.
- The Portland ordinance should also specifically emphasize (1) fertilizing in the first stages of life, (2) increasing green space and soil within the city, and (3) the protection of trees, perhaps by incorporating the tree ordinance. Overall, a holistic approach should be emphasized over specific products.

In addition to expanding the Pesticide Ordinance to a Landcare Management Ordinance, the City of Portland should revise Section 34-13 of their Pesticide Ordinance to indicate enforcement is to be done by a qualified and certified city employee in organic landcare management. In addition, there should be transparency to all pesticide and fertilizer violations and follow-up actions should be reported to PMAC/LMAC monthly.

Documents Which Informed Fertilizer Ordinance Recommendations

[South Portland Landcare Management Ordinance](#), 2020

[Nantucket, MA Best Practices](#), 2013

[Dover, NH Resolution](#), 2018

[Brunswick, ME Ordinance with Groundwater Provisions](#), 2017

[Hyattsville, MD Best Practices](#), 2016

DRAFT

Portland Fertilizer Policy

Draft

Section 1. Findings

WHEREAS, the City of Portland wishes to protect the health of Casco Bay and other waterways that support the economic vitality of local fisheries and businesses; and

WHEREAS, the City of Portland recognizes that healthy soils serve as the foundation for vibrant ecosystems and plant life; and

WHEREAS, healthy soils play an important role in climate change mitigation by storing carbon (carbon sequestration) and decreasing greenhouse gas emissions in the atmosphere; and

WHEREAS, vegetation plays vital roles in both storing carbon and preventing soil erosion by slowing down water as it flows over the land allowing much of the rain to soak into the ground, and plant roots hold the soil in position and prevent it from being blown or washed away; and

WHEREAS, the City of Portland wishes to promote organic landcare practices that support the development of healthy soils to minimize the need for applying any fertilizers, specially minimize the use of synthetic fertilizers, and ultimately support organic landcare practices; and

WHEREAS, the City of Portland recognizes that in certain circumstances synthetic fertilizers play a role in establishing and maintaining the growth of plants, and organic fertilizers boost the health of soil by providing carbon to microbes and thus contribute to cycling nutrients naturally for plants; and

WHEREAS, overuse and misuse and of any fertilizer are a potential threat of fresh and marine waters; and

WHEREAS, while nitrogen is essential to the health of marine ecosystems, too much nitrogen leads to nuisance and harmful algal blooms, coastal acidification, and degradation of

water quality which can impact eelgrass and harvestable marine resources; and

WHEREAS, phosphorus is a naturally occurring mineral nutrient that is an essential part of photosynthesis necessary for plant growth, but excessive phosphorus concentrations in freshwater bodies can lead to algal and aquatic plant growth that harm aquatic life and impair recreational uses; elevated phosphorus levels can cause toxic algal blooms, reduce water clarity and deplete oxygen levels, which can stress or kill fish and other aquatic animals; and

WHEREAS, excess nitrogen can enter marine waterways from a variety of sources, compelling the need to minimize nitrogen inputs from any and all elective sources; and

WHEREAS, the remediation and restoration of impaired streams and marine waters can be cost prohibitive, and the City of Portland can make a difference by using and promoting sound organic landcare practices; and

Section 2. Purpose

The purpose of this ordinance is to safeguard and protect the environmental health of our soils and our waterways by curtailing nutrient run-off from the excess use and misapplication of fertilizers on turf.

Section 3. Definitions

The following words, terms and phrases, when used in this ordinance, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Algal blooms: An algal bloom (algae bloom) is a rapid increase or accumulation in the population of many types of aquatic photosynthetic, microscopic, unicellular organisms, in freshwater or marine water systems, often recognized by the discoloration from their pigments in the water or on shorelines. Algal blooms are the result of nutrients, such as phosphorus and/or nitrogen from fertilizer runoff, pet

waste, sewage, and other sources, entering aquatic and marine systems and causing excessive growth of the algal population.

Nuisance algal blooms: an excessive population of algae that is characterized by obvious green or blue-green pigmentation in the water, settled or floating mats of algae, reduced light transparency, oxygen deprivation, aesthetic degradation, loss of recreational use, and possible harm to the aquatic community.

Harmful algal blooms (HABs): occur when algal populations grow out of control while producing toxic or other harmful effects on people, fish, shellfish, marine mammals, and birds.

Coastal acidification: The decomposition of algal blooms in the coastal environment contributes to coastal acidification. When these blooms die and decay, decomposing bacteria consume oxygen and release carbon dioxide in bays and coves; the increase in carbon dioxide lowers the pH of the water and the mudflats, and exacerbates ocean acidification caused by the mixing of carbon dioxide from tailpipes and smokestacks, with seawater.

Compost: A soil amendment made from decomposing organic matter used to improve soil structure and nutrient holding capacity. For the purposes of this ordinance, compost is not considered a fertilizer.

Environmentally sensitive areas[1]: 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. This includes coastal and freshwater wetlands, beaches and sand dunes, streams and brooks (especially those impaired for nutrients), wellhead protection zones, 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, and significant wildlife habitat (e.g. deer wintering yard, waterfowl habitat, etc).

Fertilizer: a substance containing one or more recognized plant nutrients and used for its plant nutrient content. State laws generally require that all fertilizer products be registered with the Maine Department of Agriculture, Conservation and Forestry prior to distribution in that state.

Biosolids: Fertilizer derived from sewerage.

Heavy rain event: a rain event producing 0.5 inch or more precipitation in a one-hour period.

Hydro-seeding^[2]: to seed in a mixture of water by pumping through a nozzle that sprays the mixture onto a seedbed. The water mixture may also contain add-ins such as fertilizer and certain mulches.

New development: any alteration of land for the purposes of construction or reconstruction that results in soil disturbance and/or compaction, vegetation removal, and/or regrading and in this context establishing a natural vegetive surface.

Organic Fertilizer: fertilizer derived from either plant or animal products that contain nutrients for plant growth. It is acceptable for these materials to have been subjected to biological degradation processes under normal conditions of aging, rainfall, suncuring, air drying, composting, rotting, enzymatic, or anaerobic/aerobic bacterial action, or any combination of these. These materials may not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis, or pelleting.

Natural and Bridge Fertilizer: fertilizer derived from either plant or animal products that contain nutrients for plant growth. These materials may have been mixed with synthetic materials and/or changed in a physical and/or chemical manner. Not all sources nutrients are certified for organic production.

Organic landcare practices: encompass an approach to land management that integrates cultural, biological, and

mechanical practices by fostering cycling of resources, promoting healthy ecology, and promoting biodiversity. Like Integrated Plant Management, IPM, Organic landcare is not simply about substituting organic-approved products for synthetic materials. Rather, it is a series of practices including mowing at higher levels, aeration, top dressing with compost, over-seeding, and watering deeply but infrequently. These practices can reduce and hopefully eliminate the need for synthetic fertilizers.

Over-seeding: the application of additional grass seed to existing turf. A process to renovate turf.

Performance turf: grounds devoted to athletic fields and golf courses and high value turfgrass areas.

Phosphate Free Fertilizer: a fertilizer product with phosphate levels below 0.5%, intended for established turf or lawn. The middle number of the grade on a phosphate free fertilizer label will be zero.

Re-establishment: a procedure involving complete turf removal and seeding or vegetative establishment (sod) for new turf surface. Does not encompass renovation.

Renovation: improvement of turf involving replanting into existing live and/or dead vegetation. Does not encompass reestablishment.

Soil: the outer, weathered layer of the Earth's crust which can potentially support plant life; it is made up of inorganic particles, organic matter, organisms, water and air.

Soil Amendment: any organic substance, or a mixture of organic substances, intended to improve the physical, chemical, biochemical or other characteristics of the soil, except synthetic fertilizers, agricultural liming materials, unmanipulated animal manures, unmanipulated vegetable manures, pesticides, and other material exempted from regulation.

Soil microbes: living organisms in soil (such as bacteria and fungi), which feed on organic matter and decompose

rapidly and which form a symbiotic relationship with higher plants. Microbes need a food source of organic matter, moisture, oxygen, and a moderate pH and soil temperatures to effective

Slow Release fertilizer: contains nitrogen in a form which delays its availability for plant uptake and use after application, or which extends its availability to the plant significantly longer than a highly soluble reference form of nitrogen. Slow release nitrogen may be either water insoluble, coated with sulfur compounds, polymers, or other material to delay release, occluded through mixing with some inert material, or in a chemical form that is water soluble but slowly available.

Starter fertilizer: a fertilizer formulated to have Nitrogen and Phosphorus available to the plant at planting or near that time to encourage root growth and to enhance the initial establishment. A water-soluble bridge product that contains both organic and synthetic fertilizer to allow plants to take up nitrogen and Phosphorus quickly is strongly recommended.

Stormwater runoff: lateral movement of water (either from precipitation, snow melt, or irrigation) and associated pollutants across land and eventually reaching water bodies or stormwater conduits.

Summer dormancy: the period during mid-summer most commonly observed in un-irrigated lawns when turf growth ceases. Dormancy is characterized by brittle texture and a loss of green color.

Synthetic Fertilizer: any fertilizer manufactured from one or more synthetic materials containing no animal parts, animal byproducts, manures or renderings. Synthetic fertilizer bypasses the microbial life in the soil and is taken up by the plant directly unless the N source formulated or coated with sources to delay available Nitrogen, Nitrate NO_3 , release into the soil.

Total Nitrogen: Nitrogen is required in the greatest quantity other than Carbon, Hydrogen and Oxygen in turfgrasses. The sum of nitrogen required for turfgrasses

is 2 - 4% on a dry weight basis. Other than applications of performance Turf, 2 lbs of a N per 1000 sq. will be sufficient for turf. Fertilizer sources of N are water soluble nitrogen forms, slow-release nitrogen forms, water insoluble nitrogen and organic forms. The percentage of total nitrogen appears as the leftmost number of the grade on fertilizer labels.

Turf, Grass, Turfgrass, Sod and a Lawn: Turf is a community of herbaceous plants that can be mowed and can receive foot traffic, grass is a plant with roots, a crown and leaf blades, turfgrass is the grass plant with its roots intermingled with soil and with its soil biology, sod is turfgrass transplanted from one area to another or vegetation turned over into soil; a lawn is a place in the landscape i.e. the front lawn.

Urban impaired streams: Maine Departmental of Environmental Protection (MEDEP) designation for streams that fail to meet water quality standards due to the adverse effects of stormwater runoff from developed land.

Section 4. Applicability

The following provisions shall apply to the use of fertilizers on turf within the boundaries of the City Portland, on both public and private property.

Section 5. Prohibitions & Allowed Applications

The following prohibitions apply for all applications on all turf types including residential lawns:

- Applications within 75' of a water body or wetland or other environmentally sensitive area are prohibited.
- Applications on frozen ground, impervious, or saturated surfaces are prohibited.
- Applications when heavy rain is forecast or falling are prohibited.
- No fertilizer may be applied during summer dormancy or when the ground is partially or wholly frozen.

- No phosphorus is allowed to be used unless a soil test conducted within the last three years indicates a need for phosphorus, or it is being used for new development/re-establishment, as specified below.
- No prills/pellets are allowed on impervious surfaces; they must be swept up immediately.

The following applications are allowed within the limits specified for each:

- Applications on performance turf must prioritize organic fertilizers but may also allow water-soluble organic bridge fertilizer (must be at least 50% slow-release) as necessary. Total nitrogen not to exceed 4 lbs per 1,000 square feet per year.
- Applications for new development may contain phosphorus without a soil test. Sub-soil compaction at the site must break up hard layering of soil before topsoil is spread. The site must have 4 - 6 inches of topsoil containing a minimum of 5% organic material and a pH level between six (6) and six and a half (6.5) for turfgrass and vegetation. Starter fertilizer may be used for turf and must be incorporated into topsoil. Exceptions for hydroseeding and hay mulching. Two fertilizer applications are permitted for one year only. For each application, total nitrogen and phosphorus may not exceed 1 lb per 1,000 square feet.
- Applications of overseeding for re-establishment of turf may contain phosphorus without a soil test. Only organic fertilizer may be used. Fertilizer will be spread when the turfgrass is dry and watered in. When possible incorporate fertilizer into soil. Exception for hydroseeding. Fertilizer applications may not exceed 1 lb of nitrogen and phosphorus per 1,000 square feet per application. Total nitrogen and phosphorus may not exceed 2 lb per 1,000 square feet per year.
- Applications on all other turf, including residential and all established lawns, are allowed only when a soil test conducted within 2 years. Applications may not exceed the amount recommended in the completed soil test. Only phosphorus-free, water-insoluble, organic fertilizer is allowed for these applications, unless the soil test indicates a need for phosphorus.

Additional sections

- Oversight body
- Education outreach
- BMP's
- Violations
- Other sections

[1] NEIWPCC Regional Clean Water Guidelines for Fertilization of Urban Turf

[2] Turfgrass Management, by A.J. Turgeon