

**South Portland City Council
Position Paper of the Interim City Manager**

Subject:

ORDINANCE #2-16/17 – Amending the Code of Ordinances establishing Chapter 32, “Pesticide Use Ordinance”. Passage requires majority vote.

Position:

On June 8, 2015, the nonprofit group Protect South Portland sponsored a presentation to the City Council about the harmful effects of pesticide use on public health and the environment, and the benefits of alternative land care practices. During this workshop the City Council voiced support for pursuing a pesticide ordinance.

Following a second workshop on July 13, 2015 to review the policy landscape and different types of ordinances, the City Council directed staff to develop a draft ordinance that would greatly restrict or eliminate the use of pesticides throughout the City. The City Manager appointed a committee consisting of Sustainability Coordinator Julie Rosenbach, Parks Superintendent Sarah Neuts, and Stormwater Program Coordinator Fred Dillon to develop a draft ordinance.

The staff committee reviewed numerous documents and solicited input and guidance from a variety of stakeholders including policy makers, advocates, practitioners, and land care professionals to develop the draft ordinance. Staff also worked with Jay Feldman, Director of Beyond Pesticides and Chip Osborne, of Osborne Organics as consultants.

Proposed ordinance language was presented and discussed at a February 29, 2016 workshop and submitted to the Council for a first reading on April 4, 2016. In response to questions and comments at and after the first reading, staff continued to work on the Pesticide Use Ordinance. Because changes proposed by staff were substantive, the ordinance went back to a workshop on August 8, 2016. At this workshop staff reviewed proposed changes and received guidance to move forward with a first reading on Monday, August 15, 2016.

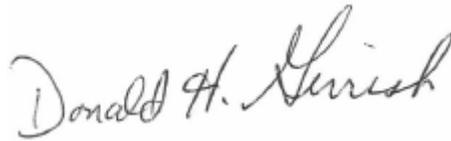
In preparation for this first reading, the following documents are attached to this Position Paper. Please refer to these documents for a full understanding of the process and what is included within the Ordinance:

- 1) Memorandum describing changes to Pesticide Use Ordinance
- 2) Frequently Asked Questions

- 3) Preliminary Education and Outreach plan
- 4) Memo with answers to questions submitted by the Conservation Commission
- 5) Proposed Pesticide Use Ordinance

Requested Action:

Council passage of first reading and set September 7, 2016 for second reading and action.

A handwritten signature in cursive script that reads "Donald H. Gurish". The signature is written in black ink on a white background.

Interim City Manager



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JULIE A. ROSENBACH
Sustainability Coordinator

To: Don Gerrish, Interim City Manager
Joshua Reny, Assistant City Manager

From: Julie Rosenbach, South Portland Sustainability Coordinator

CC: Fred Dillon, South Portland Stormwater Program Coordinator
Sarah Neuts, Parks Superintendant and City Arborist

Date: August 10, 2016

Subject: Changes to the proposed Pesticide Use Ordinance following first reading

During the first reading of the proposed Pesticide Use Ordinance on April 4, 2016, the City Council asked staff to address three areas of concern in the ordinance. This memo reviews the changes proposed by staff to address these concerns, prioritized below as 1,2, and 3. This memo also includes proposed changes in response to numerous comments staff have received since the workshop. These changes are all reflected in an amended version of the ordinance (ORDINANCE #2-16/17).

In addition, staff have developed an FAQs and a preliminary Education and Outreach Plan to clarify and expand upon information included in the ordinance and this memo. These two related documents are attached.

Issues of concern and proposed revisions:

1. SEVENTY-FIVE (75) FOOT SETBACK DISTANCE

Several City Councilors had questions about the setback distance listed in the ordinance and asked staff to clarify this provision. Under the version presented at first reading, the set back distance only applied to waiver applications. In order to grant a waiver application, the PMAC would have to ensure that the application of prohibited pesticides would not occur within seventy-five (75) feet of a tributary, creek, stream, river, lake, or drainage ditch. Upon further consideration, staff included the following change to the ordinance because all pesticides can be harmful to water quality, aquatic vegetation and wildlife:

Prohibit all pesticide use within seventy-five (75) feet of water bodies and wetlands. [Remove this as a condition under the waiver process]

2. THE WAIVER PROCESS

Although the waiver process is designed to address non-emergency applications, there was considerable discussion about the need to expedite the process. Staff agree and included the



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following change to the ordinance:

Authorize the chair of the PMAC and one other member (at least one of these two members must be a licensed applicator) to approve waivers within five business days; appeals to go to the City Manager to be ruled on within three business days.

After discussions with both the Maine Natural Areas Program and Board of Pesticides Control, staff realized that making waiver applications contingent on proving that natural and organic methods were unsuccessful before granting a waiver would be problematic because if these methods are ineffective in controlling invasive plants, the time lag could make management overly burdensome. Instead staff agree that granting waivers when necessary which allow for spot treatments in these circumstances would be more practical, beneficial and in line with the overall intent of this ordinance. Therefore staff recommend the following changes:

Under waivers (Sec. 32-6(B))

Include in the waiver application form a management plan that excludes broadcast and preemptive treatments and requires pest identification and threshold reporting. Under the criteria which must be met for PMAC approval, remove the condition that "Natural and organic methods of pesticide control have proven unsuccessful."

3. ENFORCEMENT

Staff acknowledge that enforcement of this ordinance will be challenging, especially on private property because soil testing is neither practical nor would it be conclusive. Our intention is not to approach implementation of this ordinance in a punitive way, but rather to use education and outreach to promote non-toxic land care practices and help the community to comply with this ordinance. Staff agree this is not an issue for the Police Department. Staff also believe that the most practical approach to enforcement is to work with alleged violators to help bring them into compliance through education and outreach. In this way staff can use education and outreach to ensure compliance without soil testing. Therefore staff made the following changes to the enforcement section:

Under Enforcement (Sec. 32-11)

Remove the police department role and fines for violations. Add a provision that requires the Sustainability Coordinator to work with alleged violator and maintain a listing of complaints and how they were resolved. The listing will include the nature of the complaint, the Sustainability Coordinator's investigative findings and how the complaint was resolved. This information will be reported on the City's website in aggregate by Assessor's tax map number not by specific property address.



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4. NEW ENGLAND PEST MANAGEMENT ASSOCIATION (NEPMA) COMMENTS

NEPMA suggested two changes that would make our ordinance more consistent with state and federal policies. The first regards the exemption for health and safety applications. The Environmental Protection Agency, consistent with FIFRA and the MBPC, uses the term “pest of significant health importance” to describe pests that may pose significant health and safety concerns. These pests can include flies, ants, fleas, blackflies, bedbugs, cockroaches, and rodents which are not all "disease carrying." An infestation of these pests requires immediate effective treatment especially for food handling businesses which must comply with the U.S. Food Code. Staff agree with this point and included the following changes to the ordinance:

Under exemptions (Sec. 32-5(B)(ii)(a))

Specific health and safety application – Replace "pests that bite, sting, are venomous or are disease carrying" with "pests of significant health importance."

Under definitions (Sec. 32-3)

Add a definition for "Pests of significant health importance" that is in line with [EPA's list](#) and FIFRA Sec. 28(d).

The second change proposed by NEPMA is for reporting requirements. To make the ordinance consistent with Maine Board of Pesticides Control rules, NEPMA recommends requiring licensed applicators to report data on a City-wide rather than a site-specific basis. NEPMA is concerned that reporting pesticide use data for individual properties could inadvertently provide proprietary information to competing contractors. Therefore, while the MBPC requires licensed applicators to maintain specific logs for each application site, they are only required to report data on an aggregate basis for each municipality. Aggregate data reporting would satisfy the City's overall policy goal to determine usage trends for how much and which types of pesticides are being applied. Therefore, staff included the following change to the ordinance:

Under reporting (Sec. 32-8)

Replace detailed, address-specific reporting requirements with aggregate data for all applications performed in the City. Use the same format and fields required by the Maine Board of Pesticides Control in their commercial applicator annual summary report.

5. CENTRAL MAINE POWER (CMP) COMMENTS

Central Maine Power (CMP) submitted a letter detailing their vegetation management practices on transmission rights-of-way and at electrical utility substations. They also brought to staff's attention state statutory requirements, which give cities and towns that want to enact pesticide



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use ordinances two options for dealing with utility rights-of-way. The first option is to exempt these applications. Staff included this new exemption in the amended ordinance for consideration by the City Council:

Under application exemptions (Sec. 32-5(B)(ii))

Add an exemption for right-of-way spraying allowing utilities to continue to use synthetic pesticides to maintain rights-of-way through the City.

If the City Council does not want to exempt utility rights-of-way, the only other option is detailed under [Maine Revised Statutes Title 7 Section 625](#), which is to sign a "no spray" agreement with the utility. Under a "no spray" agreement, the City would negotiate with the utility (e.g., CMP) the terms of right-of-way vegetation control without the use of synthetic pesticides. This may entail the City taking over maintenance of these areas or paying the incremental cost to CMP of maintaining these areas without synthetic pesticides. If CMP and the City were unable to come to agreement on the terms of a no spray agreement, CMP would be allowed to proceed with its planned vegetation management program. Both CMP's letter and an example of a no spray agreement are attached to this memo.

If the City Council chooses to negotiate a "no-spray" agreement with utilities, staff will remove the proposed exemption listed above.

6. MAINE ORGANIC FARMERS AND GARDENERS ASSOCIATION (MOFGA) COMMENTS

The Maine Organic Farmers and Gardeners Association submitted a letter with several comments. Staff support many of their recommendations and propose the following changes accordingly. First, MOFGA pointed out a problem with the exemption for commercial agriculture. The intent of the ordinance is to exempt commercial agriculture from regulation under this ordinance, however the current draft lists this as a product exemption. This is problematic because it is a loophole that would allow for the use of these types of products on lawns and turf. Therefore staff recommend the following change:

Replace the current exemption for "commercial agriculture products" with language that specifies that commercial agriculture is not regulated under this ordinance (see #7 below).

Second, MOFGA recommended that golf courses be required to be certified through Audubon International's Golf Course Sanctuary Program. This is something staff discussed previously and agree is a beneficial step for golf courses in addition to the limitations the ordinance specifies for pesticide use.

Under application exemptions (Sec. 32-5(B)(iii)(b))



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Replace the requirement for golf courses to submit an annual management plan to the City with a requirement to be Audubon certified.

Third, MOFGA recommended that in addition to a licensed applicator, one of the individuals granting waivers be NOFA accredited in organic land care to ensure a balanced and well-informed approach.

Include language specifying that at least one of the PMAC members be NOFA accredited (see # 8 below).

7. CLARIFICATION OF PROVISIONS AND EXEMPTIONS

Upon further review, staff believe the provisions of the ordinance in the current draft are confusing and lead to inaccurate interpretations. Therefore we recommend separating and clarifying the provisions of the ordinance and exemptions. The changes recommended are not changes to content but rather changes to simplify and clarify language in the ordinance.

Clarify and simplify Sec. 32-5.

Split this section into two clear parts; the first detailing the applicability of this ordinance—what pesticides are allowed and prohibited for use in the City; and the second listing exemptions.

8. PEST MANAGEMENT ADVISORY COMMITTEE (PMAC) BOARD

To ensure a well-informed and balanced committee, staff recommend two changes to the PMAC advisory committee.

Under Pest Management Advisory Committee (Sec. 32-4(A)(ii) and (iii))

Replace the City's Parks Superintendent or his/her designee with a practicing agronomist and specify that the licensed landscape professional with experience in organic land care management be accredited by NOFA's Organic Land Care Standards.

9. REFRAME THE FOCUS OF THE ORDINANCE

Because of ordinance language that references synthetic pesticides as prohibited and problematic, much of the dialogue has centered on the assumption that all organics are good and synthetics are bad. This is not the case. Language in the ordinance should be re-framed from organics vs. synthetics to allowed vs. prohibited pesticides because a significant number of synthetic pesticides are allowed under the National Organic Program.



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Staff have identified several places in the ordinance to make these changes.

10. EDUCATION AND OUTREACH

Lastly, at the April 4, 2016 Council meeting there was a discussion about the importance of education and outreach. Staff have drafted a preliminary Education and Outreach Plan (attached) to highlight existing resources and potential partnership opportunities, and present a framework for education and outreach to the community once the ordinance passes.

Respectfully, and on behalf of the draft pesticide ordinance committee,

Julie Rosenbach
Sustainability Coordinator

SOUTH PORTLAND PROPOSED PESTICIDE USE ORDINANCE

Frequently Asked Questions (FAQs)

1. What is the purpose of this ordinance?

There is an increasing body of research both nationally and internationally that pesticides have detrimental effects on human health and the environment.¹ The proposed Pesticide Use Ordinance addresses these concerns by greatly restricting the use of pesticides and promoting a transition to organic land care practices. In so doing, the ordinance will protect people, pets, and the environment.

2. Which pesticides will be banned and which will be allowed under the ordinance?

The proposed ordinance would allow the use of EPA registered pesticides that are (i) permitted under the U.S. Department of Agriculture's [National List of Allowed and Prohibited Substances](#)² and/or (ii) [classified as "minimum risk"](#)³ by the EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

3. Why use these lists?

Under the U.S. Department of Agriculture's National List of Allowed and Prohibited Substances for organic production, synthetic substances are prohibited unless specifically permitted. This approach, which requires that man-made synthetic substances undergo rigorous review⁴, requires a robust analysis of each material's human health and environmental impacts, compatibility, and essentiality within an organic system. Compatibility is important because it recognizes that synthetic substances which harm soil biology and ecosystems are undercutting natural nutrient cycling. This cycling reduces the need for continuous synthetic pesticides.

EPA has exempted "minimum risk pesticides" from the requirement that they be registered under the FIFRA because they pose little to no risk to human health or the environment.

¹ Peer-reviewed toxicological and epidemiological studies are listed in Beyond Pesticides' [Pesticide Induced Diseases Database](#).

² See §205.601 Synthetic substances allowed for use in organic crop production and §205.602 Non-synthetic substances prohibited for use in organic crop production.

³ See §152.25(f)(1) Exempted products and (2) Permitted inert ingredients.

⁴ See 7 U.S. Code §6517 - National List

4. How will I know what type of products I can use?

Two independent organizations, the [Organic Materials Review Institute](#) (OMRI) and the [Washington State Department of Agriculture Organic Food Program](#) review and list products which are in compliance with the National List of Allowed and Prohibited Substances. Both of these organizations maintain databases on their websites which can be searched by product, generic materials, company name, product name, or product type. Also, once the ordinance is adopted the City will develop targeted education and outreach for homeowners and retailers about approved products and organic land care practices.

5. Does the ordinance restrict all pesticide uses?

The ordinance restricts pesticide use for all turf, landscape, and outdoor pest management activities. However, there are several exemptions for public health and safety and non-aesthetic uses of pesticides. These exemptions are:

- a) Commercial agriculture
- b) Pet supplies, such as shampoos and tick and flea treatments
- c) Disinfectants, germicides, bactericides, miticides and virucides
- d) Insect repellents when used in the manner specified by the manufacturer;
- e) Rat and rodent control supplies
- f) Swimming pool supplies
- g) General use paints, stains and wood preservatives and sealants
- h) Specific health and safety applications – Prohibited pesticides may be used to control plants that are poisonous to the touch, such as poison ivy; pests of significant health importance such as ticks and mosquitoes; and animals or insects that may cause damage to a structure, such as carpenter ants or termites;
- i) Golf course playing surfaces applications – Prohibited pesticides may be used on non-City owned golf course playing surfaces and on the tees and greens of City-owned golf courses *provided that* the course is designated through Audubon International as a Certified Audubon Cooperative Sanctuary;
- j) Invasive insect applications – Prohibited pesticides may be used to control the Emerald Ash Borer, Asian Longhorned Beetle, Hemlock Woolly Adelgid, Browntail Moth and other insects identified as invasive by the Maine Forest Service; and
- k) Right-of-way spraying – Prohibited pesticides may be used by a public utility that maintains a right-of-way through the City.

6. Who is affected?

Prohibited pesticides will be restricted on public and private property, whether managed by a commercial operator, licensed applicator, a business owner or a resident.

7. When will the ban go into effect?

The ban will be phased in over three years allowing for a transition to organic land care practices. The ban will go into effect for City-owned property one year after the ordinance is adopted (expt. 2017), for private property after two years (expt. 2018), and for golf courses after three years (expt. 2019).

8. Who will implement and oversee the ordinance?

A seven-member Pest Management Advisory Committee (PMAC) comprised of the City's Stormwater Program Coordinator, a practicing agronomist, two licensed landscape professionals (at least one of whom is accredited in organic land care management), and three resident or taxpayer representatives will be established to oversee the implementation of the ordinance and advise the City Council and the Sustainability Coordinator regarding its efficacy. The PMAC will review waiver applications, work with the Sustainability Coordinator to develop outreach and education, issue annual reports, and conduct an evaluation of the ordinance every three years.

9. Can I apply for a waiver?

Yes, for situations that pose a threat to public health and safety or for the control of invasive species that pose a threat to the environment, people may apply to the PMAC for a waiver. Applications must include a management plan without broadcast and preemptive applications, a pest identification and threshold report, and reason for requesting the use of a prohibited pesticide. A two-person sub-committee of the PMAC will review and rule on applications within five business days and appeals will be heard by the City Manager according to the following criteria:

- (1) A situation exists that threatens the public health and safety and/or where invasive species pose a threat to the environment; and
- (2) The applicant has carefully evaluated all alternative methods and materials;
- (3) The applicant will, to the greatest extent practical, minimize the impact of the application on abutting properties;
- (4) The grant of the waiver will not be detrimental to the public health, safety or welfare.

10. What type of notification and reporting is required?

If prohibited pesticides are used through an exemption or approved waiver, the applicator (whether business, resident or commercial applicator) must post warning signs in compliance with Maine Board of Pesticides Control (MBPC) rules and those laid out in the ordinance. In addition, all licensed applicators are required to submit an annual summary report to the City similar to what is required by the MBPC.

11. How will the ordinance be enforced?

The City's Sustainability Coordinator, assisted by the Code Enforcement Officer will enforce the ordinance. The Sustainability Coordinator will work with alleged violators to bring them into compliance by providing educational materials and advice on the use of less toxic chemicals to achieve their desired results. The Sustainability Coordinator will also maintain a listing of complaints of alleged violations. The listing will include the nature of the complaint, a summary of the situation and a brief description of how each complaint was resolved. This information will be reported on the City's website in aggregate by Assessor's tax map number (not by specific property address).

12. What types of education and outreach are planned?

The ordinance includes a robust education and outreach section in recognition that a meaningful reduction of pesticide use depends on the understanding of residents and local businesses about what is allowed and how they can transition to organic land care practices. The Sustainability Coordinator will work with the PMAC to develop and implement an education and outreach program with the following components:

- a community-based social marketing campaign targeting City households and businesses
- promotion of professional education and training on organic land care practices for licensed applicators
- distribution of information and news about City practices
- SPC-TV public service announcements
- news releases and news events
- tax bill inserts
- posters and brochures made available at City events and applicable locations
- trainings, workshops, and demonstration projects
- targeted outreach to schools
- any additional methods deemed appropriate by the PMAC

The PMAC will also work directly with retailers that sell synthetic pesticides to:

- Provide educational training for all retail store employees
- Implement a toolkit of educational materials and signage in stores to help consumers understand the ordinance and alternatives to prohibited pesticides

13. How much will education and outreach cost and how will it be funded?

Education and outreach is expected to be funded through the Sustainability Office's operating budget, grants, and through partnerships with local and national organizations who are already promoting and educating people about organic land care practices as part of their mission. See the Preliminary Education & Outreach Plan.

14. What have other communities done in Maine and beyond?

There are only three examples of jurisdictions that have banned pesticide use on public and private property; Takoma Park, MD, Ogunquit, ME, and Montgomery County, MD. Several local and national jurisdictions have enacted legislation or adopted policies to reduce or eliminate pesticides in coastal areas or on public property. Over two dozen jurisdictions in Maine have pesticide ordinances. The town of Harpswell prohibits the use of the insect growth regulators (IGRs) diflubenzuron and tebufenozide and the aerial application of all IGRs and any insecticide whose product label indicates that it is harmful to aquatic invertebrates. The town of Scarborough eliminated (with exemptions) pesticide use on town-owned property and encourages the elimination of pesticides on private property through education. The town of Rockland only allows pesticides approved for organic use or exempt from EPA registration (similar to our proposed ordinance) on town-owned land. Many other communities have adopted Integrated Pest Management programs (IPM).

15. Will lawn and turf quality deteriorate because of the ordinance?

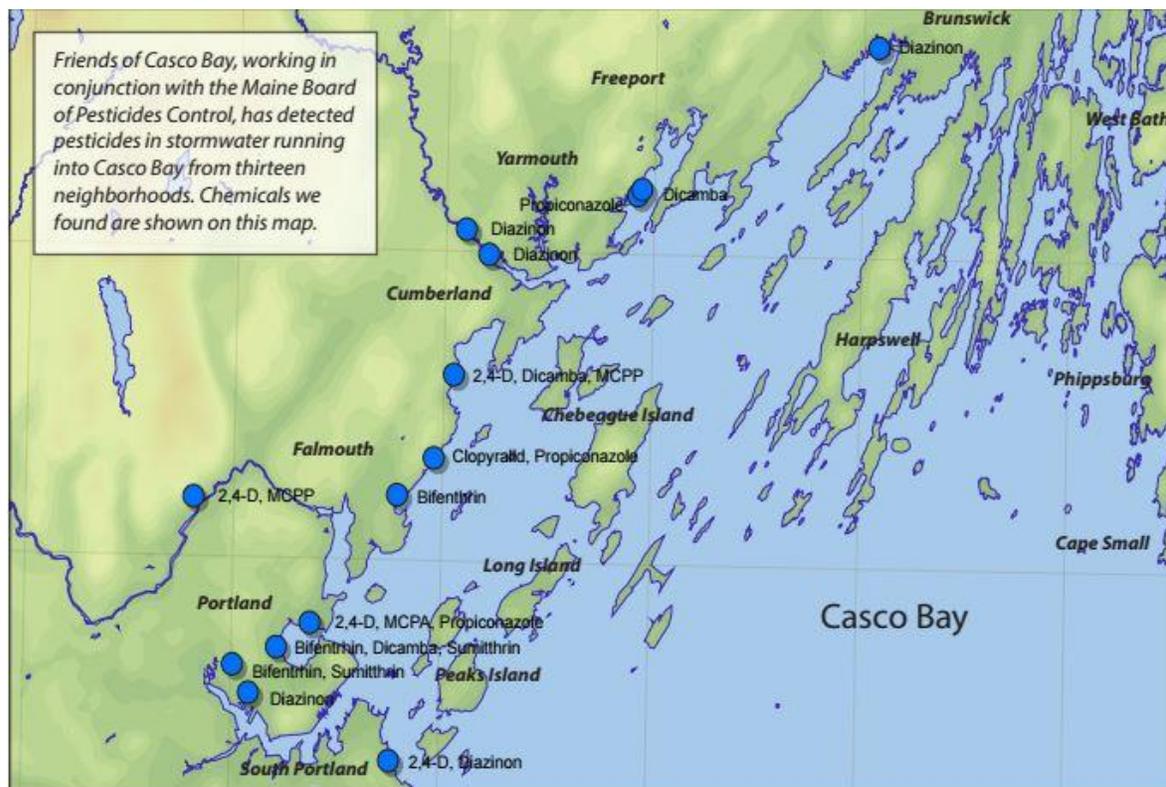
Organic land care is a soil-based approach that results in healthier, more resilient plants and can meet peoples' expectations for a lush green lawn. The goal is to build the soil biology that is part of nature, use the natural processes that release nutrients, which are taken up by plants. Natural fertilizers can be used to feed and improve the soil, increasing its capacity to keep plants strong and resistant to diseases and infestations. Accompanied by proper aeration, mowing height, and watering practices, a healthy turf system will crowd out weeds and retain water.

16. Are synthetic pesticides really a problem? What data do we have that indicate a cause for concern?

For over 25 years, Friends of Casco Bay has been working to improve and protect water quality in Casco Bay, using scientific data as a critical component of its advocacy and education efforts to reduce threats to the health of the Bay.

In 2001, Friends of Casco Bay tested stormwater for pesticides at Drew Road, a South Portland waterfront neighborhood. They found diazinon and 2,4D, a component of “weed and feed” products flowing into Casco Bay.⁵

Having met their goal to establish the presence of pesticides in stormwater runoff in that location, Friends of Casco Bay’s staff continued its sampling in other communities all around the Bay. As this map illustrates, Friends of Casco Bay sampled stormwater runoff to test for the presence of the most common pesticides in lawn care products and found detects at numerous locations.



⁵ [A Changing Casco Bay: The Bay Where You Work and Play Is at Risk](#), Friends of Casco Bay, 2014.

The goal of this effort was to establish whether pesticides were flowing into coastal waters from communities that border the Bay to confirm that these products were migrating into the water. This data was used to bolster Friends of Casco Bay's outreach program called BayScaping, which explains how--and why--we need to change our lawn care practices to reduce the amounts of pollutants that may end up in the Bay.

In another instance, Maine Board of Pesticides Control sediment sampling results from 2008-2010 showed findings of Bifenthrin and Sumithrin in Portland and South Portland.⁶ Initial results of 2014 sediment samples detected Bifenthrin and Cypermethrin.⁷ All of these sampling results indicate only a presence of pesticides. Even though concentration benchmarks cannot be established, the trends established in each sample site indicate the continued release and presence of pesticides.

The United States Geological Survey (USGS) has conducted much more robust and extensive water quality monitoring studies over the past two decades at numerous locations throughout the country in urbanized settings similar to South Portland. The results from these studies indicate that urban land uses often result in the exceedance of Aquatic Life Benchmarks (ALBs)⁸. According to a [2006 USGS report](#), pesticides were detected in 97 percent of urban stream water samples across the United States, and exceeded human health and aquatic life benchmarks 6.7 and 83 percent of the time, respectively.

In terms of human toxicology, we know that pesticides affect peoples' health. The "Pesticide-Induced Disease Database," maintained on Beyond Pesticides' website, cites independent scientific studies that link pesticide exposure to a range of diseases, from cancer, reproductive problems, compromised immune and nervous systems, respiratory illness, Parkinson's, Alzheimer's, and learning disabilities.

17. Are organic pesticides safer than synthetic pesticides?

Materials allowed under the federal organic standards are subject to a much more rigorous review than those used in conventional systems, taking into account the adverse effects associated with the chemical's life cycle (production through use and disposal), their

⁶ "[Sediment Monitoring for Pesticides](#)" presentation, Mary Tomlinson, Maine Board of Pesticides Control, 2014.

⁷ "[Interim Report on the Environmental Risk Advisory Committee Study of Pesticides and Lobsters](#)," Maine Board of Pesticides Control, 2015.

⁸ USGS defines water quality benchmarks as threshold values against which measured concentrations can be compared to help assess the potential effects of pesticides on water quality (and aquatic life) in hydrologic systems.

compatibility with the ecology, and the need, given the availability of alternatives. The assessments for allowed materials in the National Organic Program have resulted in the prohibition of nearly all synthetic pesticides with the exception of soaps, essential oils, sulfur, and copper.

18. Are organic pesticides safe?

Allowed materials in the National Organic Program are the most strictly regulated synthetic and natural materials on the market. With that said, pesticides are design to prevent, destroy, repel, defoliate, or mitigate pests and should be handled with caution.

19. Are all synthetic pesticides hazardous?

Not necessarily. The Environmental Protection Agency maintains an exemption for "minimum risk" pesticides, which pose little to no risk to human health or the environment. Several synthetic pesticide products have qualified for this exemption. Additionally, some synthetic materials are allowed under the National List of Allowed and Prohibited Substances and subject to standards of review that are tougher than those required for pesticide registration under FIFRA.

20. Aren't pesticides regulated for safety by the EPA and MBPC?

Yes, pesticides are regulated for safety by the EPA and MBPC. However, the "unreasonable adverse effects standard of federal pesticide law" allows the U.S. Environmental Protection Agency (EPA) to establish allowable harm and uncertainty associated with adverse effects to people, wildlife, and the environment. Independent scientific findings have raised serious questions about the effectiveness of current regulations governing pesticide use including the lack of testing of chemical mixtures, synergistic effects, and regular noncompliance with product label directions. The risk assessment process used by EPA to register pesticides does not fully protect the most vulnerable, children, elderly, and those with pre-existing medical conditions that can be made worse by pesticide exposure.

21. Why are we providing an exemption for golf courses?

The high stress nature of the land use and the closely cut greens of golf course playing surfaces make these areas more challenging to maintain with conventional pesticides. There are currently very few examples of golf courses that are being managed with organic systems. While the same soil health practices are required to manage a golf course, a lawn, or a playing field, golf courses may require a longer transition, given the intensity of pesticide use, the condition of the soil, and the playing surface management requirements.

Therefore, the ordinance exempts playing surfaces (with Audubon certification) and provides for a longer phase-in for golf courses.

22. If our goal is to reduce toxics in our environment, why not go with Integrated Pest Management (IPM)?

The proposed ordinance is consistent with an Integrated Pest Management (IPM) decision making process that seeks to identify the pest problem and resolve it by determining the underlying causes and then utilizing mechanical, biological, and structural approaches, with pesticides only as needed. The definition of IPM is broad and there is no oversight or guidance on the use of pesticides. In fact, while IPM was established to stop the prophylactic use of pesticides and limit toxic materials, many have embraced the term while using toxic pesticides for pre-emergent treatments and on a routine basis. An organic land care approach follows the IPM process, emphasizing soil health to support healthy plants, and delineating a set of allowed pesticides as needed.

23. Instead of banning the use of most synthetic pesticides, why can't we just implement an education and outreach campaign?

Education and outreach, while important, does not ensure adherence to, nor does it incentivize, organic practices. It is often difficult for the business sector to transition its operations unless it is clear that there will be a change in practices required by law. With the ordinance in South Portland, and the requirements in place, the business community will respond to ensure full implementation of an organic systems approach to turf management. In short, an ordinance will set the standard.

24. Will local businesses be adversely affected?

Quite the opposite. There is a large area for growth following the ordinance's implementation. A study published in the journal *Environmental Health*⁹ identified many accomplishments associated with the implementation of a pesticide ordinance in the City of Toronto. The results show an increase in the number of lawn care companies, a high level of public awareness of the law, a substantial decrease in the number of households applying pesticides, increases in the use of natural lawn care methods, and a very small number of required enforcement actions.

⁹ ["Municipal bylaw to reduce cosmetic/non-essential pesticide use on household lawns - a policy implementation evaluation,"](#) Donald Cole, et. al., *Environ Health*. 2011; 10: 74, 2011.

25. Were landscaping professionals consulted in drafting the ordinance?

Yes, staff met on several occasions with landscaping professionals and their representatives while drafting the ordinance. In fact, the City has reached out to numerous stakeholders, and consulted with numerous experts, in the process of developing the policy including policy makers, advocates, practitioners, and land care professionals to develop the draft ordinance. Jay Feldman, Director of Beyond Pesticides and Chip Osborne, President of Osborne Organics have worked with staff as consultants.

SOUTH PORTLAND PROPOSED PESTICIDES USE ORDINANCE

Preliminary Education and Outreach Plan

This preliminary plan is a draft, intended to highlight existing resources and present options for education and outreach to the community once the ordinance passes.

Goal:

To educate the community about organic land care practices.

Target Audience(s):

- Residents
- Businesses
- Retailers

Key Message(s):

Messages should be crafted to educate each target audience in a way that is meaningful, relevant, and action-oriented. We can hone in on what is most relevant to each audience by meeting with existing groups such as neighborhood associations, talking with people at events, and conducting surveys.

Here are some core points that may be highlighted:

- Pesticides have detrimental effects on human health and the environment.
- The purpose of South Portland's ordinance is to safeguard the health and welfare of our community including children and pets who are the most susceptible to pesticides' harmful effects.
- Organic land care practices including mowing at higher levels, topdressing with compost, over-seeding, etc. will reduce the need for pesticides and fertilizers.
- What to ask your lawn care professional.

Leveraging Partnerships:

Several organizations promote organic land care practices as part of their mission and already have outreach programs and materials we can tap into including:

- > Friends of Casco Bay (FOCB)
Collects water quality data, has "BayScaping" campaign education & outreach materials
- > Cumberland County Soil and Water Conservation District (CCSWCD)
Works with municipalities, retailers, residents, and schools to promote "YardScaping" through education & outreach materials, service learning projects, and behavior change campaigns
- > Maine Organic Farmers and Gardeners Association (MOFGA)
Can provide technical guidance, has education & outreach materials, hosts events
- > Northeast Organic Farming Association (NOFA)
Publishes education and outreach materials, conducts trainings in organic land care, hosts conferences
- > Maine Board of Pesticides Control
Can report on water sampling and sales data, can provide technical guidance and training
- > Beyond Pesticides
Can provide policy guidance, help build a website, and potentially fund trainings and pilot projects

Methods of Delivery:

It will be important to deliver the key messages in a variety of ways and multiple times.

Type of outreach	Examples of existing resources
Print materials & videos	<ul style="list-style-type: none"> • MOFGA Fact Sheet # 7 Establishing and Caring for an Organic Lawn • NOFA booklet Introduction to Organic Lawns and Yards • FOCB flier Does your lawn care professional BayScape?: Ten questions you should ask • FOCB flier BayScaping: Seasonal tips for green yards to keep Casco Bay blue • CCSWCD Fact Sheets: Grubs, Ants, Mowing, Fertilizing, Overseeding, etc. • Documentaries: “Making the organic lawn care transition with HGTV's Paul Tukey” and “A Chemical Reaction” • MBPC brochure Yardscaping for a Healthy Maine
Trainings, workshops, events	<ul style="list-style-type: none"> • NOFA Maine accreditation course in Organic Land Care • NOFA online certificate course in Organic Lawn Care • MOFGA Common Ground Fair • CCSWCD residential lawn care workshops
In-person outreach	<ul style="list-style-type: none"> • neighborhood association meetings • civic/community groups • local fairs
Demonstration projects	<ul style="list-style-type: none"> • Maine YardScaping Partnership demonstration garden (Back Cove Trail, Portland) • Identify and facilitate Permablitz opportunities • Locations that showcase City practices
Websites with helpful databases	<ul style="list-style-type: none"> • Organic Materials Review Institute (searchable list or download of products compliant with organic regulations) • Washington State Dept. of Agriculture Organic Food Program (searchable list of products compliant with organic regulations) • Beyond Pesticides website (listing of pesticides with key information)



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JULIE A. ROSENBACH
Sustainability Coordinator

Type of outreach	Examples of existing resources
Retail displays, signs, staff guidance	<ul style="list-style-type: none"> • Puget Sound model and Pesticide Reduction Retailer Toolkit • CCSWCD retail program
Signs, buttons, stickers	<ul style="list-style-type: none"> • FOCB "Bayscaping" sign • Protect South Portland "Another Bee Safe Yard" sign
School presentations, service learning projects	<ul style="list-style-type: none"> • CCSWCD program with Falmouth & Portland schools

Funding Options:

Education and outreach is expected to be funded through the sustainability office's operating budget, grants, and through partnerships with local and national organizations.

Program Evaluation:

Education and outreach can be evaluated on two levels:

1. Are people seeing and understanding the message(s)?
2. Are people taking the action(s) prescribed?

Options for assessing results include:

- follow up survey(s)
- tracking product sales at the retail level
- obtaining water quality data as is practical



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JULIE A. ROSENBACH
Sustainability Coordinator

To: David H. Critchfield, Conservation Commission Chair
From: Julie Rosenbach, Sustainability Coordinator
CC: James H. Gailey, City Manager
Joshua Reny, Assistant City Manager
Fred Dillon, Stormwater Program Coordinator
Sarah Neuts, Parks Superintendent
Date: July 7, 2016
Subject: Answers to Conservation Commission questions regarding the proposed Pesticides Use Ordinance

This memo is a follow up to our May 23rd meeting with the Conservation Commission to review the proposed Pesticide Use Ordinance. In preparation for that meeting, we sent the commission the latest draft at that time of the ordinance and a memo describing the changes made to that draft following the first reading on April 4th (these were posted in the packet for the [April 20th City Council Special Workshop](#), which was canceled).

Since our meeting with the Conservation Commission we have updated both the ordinance and our memo describing proposed changes since first reading. Both of these documents– prepared for the next City Council Workshop on August 8th – are included with this memo. (See "ORDINANCE - Chapter 32 Pesticide Use Ordinance 06-13-16 Working Draft.pdf" and " CC memo for workshop 4 on 8-8-16.pdf")

During the Conservation Commission meeting, staff reviewed how we went about our year-long process to develop the ordinance, our key considerations, and the changes we are proposing to the latest draft. We also discussed how our guiding principle (and primary directive from the Council) was to establish a more protective community standard that exceeds federal and state standards. This is based on what is known about pesticides by regulatory agencies and in the independent scientific literature and also in light of unknowns and uncertainties. The uncertainties stem from incomplete testing of active ingredients and full formulations, lack of data on potential health and environmental outcomes, and no assessment of interactions of chemical mixtures and synergistic effects. The goal to reduce community pesticide use on turf and outdoor landscapes is proposed in the context of available and effective practices and products that do not rely on toxic chemicals.

A second and equally important overarching principle for our efforts was the precautionary approach, which seeks to avoid harm to health and the environment by stopping the use of toxic pesticides on turf and outdoor landscapes. Many of the questions submitted suggest that “we do not know enough to act,” posing questions about levels of exposure, areas of greatest impact, quantification of harm, and allowable levels set by the U.S. Environmental Protection Agency (EPA), rather than characterizing the limitations of knowledge on pesticide safety that should be known but were not evaluated prior to use. That is why we see historically numerous pesticides that have

been widely used for many decades before being taken off the market as agencies catch up with the science.

The questions submitted to the City often illustrate the limited knowledge that regulators have about the dispersal of pesticides in the environment, and the full ecological and human health effects. These questions tell us, perhaps, that we know less than we should. An example of this problem occurred earlier this year when the Environmental Protection Agency (EPA) addressed the release of its preliminary risk assessment on the most widely used neonicotinoid insecticide imidacloprid, a persistent chemical found in water, soil, and plants that is very toxic to bees. As EPA noted in its executive summary: , “Bees may also be exposed to imidacloprid through other routes, such as contaminated surface water, plant guttation fluids, honey dew, soil (ground nesting bees), and leaves; however, there is high uncertainty regarding the importance of some of these exposure routes, and the Agency lacks information to understand the relative importance of these other routes of exposure and/or to quantify risks from these other routes.” Meanwhile, the independent scientific literature has identified these routes of exposure as significant.

Finally, there is ample evidence that pesticides known or suspected to be toxic are not necessary to manage turf and outdoor landscapes to expectations. The experience of communities and landscapers that use proper soil management practices to nurture soil biology is that toxic pesticides are unnecessary. Weeds are typically a symptom of a problem, rather than the problem that needs to be killed. With proper aeration, over-seeding, organic compatible soil fertility that feeds the soil, and proper mowing and watering, we create more resilient plants that are less vulnerable to disease and infestation.

These are the overarching points in support of the ordinance. Below, we offer detailed responses to the “A” list of questions submitted to staff on June 12th by the Conservation Commission.

1. Does Staff know which synthetic pesticides the City currently is using, that would be banned under the proposed ordinance?

A list of all pesticides used by the Parks Department for outdoor applications in 2015 is attached as **Appendix 1**. The proposed ordinance allows EPA registered pesticides that are (i) permitted synthetic materials at 7 CFR 205.601 [and prohibited natural materials at 7 CFR 205.602] under the U.S. Department of Agriculture’s National List of Allowed and Prohibited Substances or (ii) classified as “minimum risk” by the EPA under FIFRA 40 CFR § 152.25(f)(1) or (2), which includes both synthetic and natural materials.

If synthetic pesticides do not fit into (i) or (ii) above, they will be banned under the ordinance language. None of the pesticides listed on the Parks Department summary report would be allowed for use unless applied through an exemption or waiver. All pesticides regardless of registration classification are prohibited from use within 75 ft. of a body of water.

2. Does Staff support the concept of measuring whether or not this ordinance, if passed, would - to paraphrase the first WHEREAS - "affect positive change" in South Portland? In other words, does Staff have a scheme to help the City determine whether environmental quality (or our quality of life) has gotten better under the ordinance?

The overall goal of the ordinance to "affect positive change" is focused on reducing pesticide use on turf and outdoor landscapes that have known adverse health and environmental effects or uncertainties related to these effects. In this context, the ordinance reduces pesticide exposure through air, water, and land to people, particularly the most sensitive community members, such as children, the elderly, and those with pre-existing illnesses or diseases. Peer-reviewed scientific studies conducted by independent academic scientists have identified significant hazards associated with the use of toxic pesticides. There is a robust body of toxicological and epidemiological evidence that links exposure to toxic pesticides to elevated health risks. Much of this peer-reviewed science is catalogued and cited in the Pesticide Induced Diseases Database, accessible here: <http://beyondpesticides.org/resources/pesticide-induced-diseases-database/overview>.

Given the limitations of federal and state pesticide regulatory agencies in adequately protecting residents and the environment from the hazards associated with pesticide use, the South Portland ordinance will affect a change in pest management approaches through the use of effective alternative practices and products. As noted in the imidacloprid example above, EPA has limited capacity to assess environmental harm and is unable to evaluate all the potential exposure patterns for bees. (See [Preliminary Pollinator Assessment to Support the Registration Review of Imidacloprid](#) at p14, 1.4 Exposure Assessment.) The ordinance creates a framework for exceeding existing restrictions on use and exposure, rather than seeking to meet a specific quantitative standard that has known limitations.

The reporting requirements to be conducted by the Pest Management Advisory Committee (PMAC) in the current draft under Sec 32-4(B)(vi) and (vii), will enable a tracking of pesticide use. Should funds become available to conduct studies that provide a quantitative baseline to measure the effect of the ordinance, such a review may include, in addition to an analysis of the pesticide use data mandated to be collected under Sec 32-8, surveys of resident awareness of the ordinance and its requirements, surveys on changes within the organic and conventional lawn care industry, exposure assessments, and water quality testing.

3. In light of decision to exempt certain applications in current draft ordinance, has Staff made any assessment whether residential or commercial pesticide use is more prevalent, with potential for greatest impact on South Portland's urban impaired streams?

The ordinance focuses on the use sites, not the specific user of toxic pesticides. The primary area of concern is the unnecessary harm associated with use on turf, landscapes, and other outdoor areas, rather than compliance with product label instructions. The use sites identified in the ordinance,

whether managed by a commercial operator or by residents, represent areas that contribute to runoff, drift, and non-target exposure. The use patterns under restriction in the ordinance are generally referred to as cosmetic or aesthetic pesticide use, as distinct from uses that are intended to protect public health or the environment, or produce food. Commercial, residential and public turf and landscapes all fall under this scope, given the range of land use in South Portland. Exempt categories within the ordinance relate to public health and non-aesthetic uses of pesticides.

Analytical data is very limited for South Portland's urban impaired streams. Monitoring conducted by the Maine Board of Pesticides Control has identified the presence of certain pesticides in Trout Brook but the agency is reluctant to place much emphasis on the relative concentrations of these chemicals due to complications with the analytical procedures. However, a 2014 study published in the journal *Challenges* analyzes changes in the detection of herbicides 2,4-D, dicamba, and mecoprop in urban streams after the implementation of a non-essential pesticide ban in Ontario, Canada. Results show that concentrations decreased from 16% to 92%, depending on the stream and herbicide. Although the study was not able to determine whether the source reduction came from residential or commercial pesticide use, prior surveys indicate that the three pesticides tested accounted for 51% of the total amount of pesticides used by professional lawn services in the province. The study concludes that decreases in urban stream concentration of these herbicides was a likely result of a combination of restrictions on sale and use, as well as increased public awareness of pesticide issues.

While the data is pouring in on intersex species in waterways that surround urban and suburban areas and there are certainly a mix a factors, the contribution of runoff from suburban landscapes is seen as an important contributor. In [Suburbanization, estrogen contamination, and sex ratio in wild amphibian populations](#), the authors from Yale University's School of Forestry and Environmental Studies and the U.S. Geological Survey (USGS) find the following: "While there is evidence that such endocrine disruption can result from the application of agricultural pesticides and through exposure to wastewater effluent, we have identified a diversity of endocrine disrupting chemicals within suburban neighborhoods. Sampling populations of a local frog species, we found a strong association between the degree of landscape development and frog offspring sex ratio. Our study points to rarely studied contamination sources, like vegetation landscaping and impervious surface runoff, that may be associated with endocrine disruption environments around suburban homes."

3b. Do you think that is an area that should be explored? Fred provided some information on Trout Brook in an April 29 email to DHC on two sampling events, 2009 sediment and 2015 stormwater. What were the results?

Additional stream monitoring would be a helpful component of an analysis that could be commissioned by PMAC or another entity based on the availability of funds. Any pesticide monitoring effort should include a careful consideration of sampling program design to account for a variety of factors such as location (outfall vs. in-stream) weather (wet & dry), seasonality (spring, summer, fall) and land use (residential, commercial, institutional, etc.), among others.

4. Has Staff actually reviewed medical and/or environmental case studies which support first four “WHEREAS” Statements?

First whereas: WHEREAS, the State of Maine is one of only seven states, and the District of Columbia, that allows local government to restrict the use of pesticides, and so this is an opportunity for the City to affect positive change.

A U.S. Supreme Court decision in 1991 upheld the rights of localities to restrict pesticides under federal pesticide law, the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). (See [Wisconsin Public Intervenor v. Ralph Mortier et al.](#) [501 U.S. 597 (U.S. Sup. Ct. 1991)].) In this case, the Supreme Court ruled that, “We hold that FIFRA does not pre-empt the town of Casey’s ordinance regulating the use of pesticides.” Since that time, 43 state legislatures have preempted local jurisdictions’ authority by state law, while seven have chosen to affirm or retain local authority.

An evaluation of state preemption as it relates to localities’ ability to enact pesticide laws can be found here:

<https://www.beyondpesticides.org/assets/media/documents/lawn/activist/documents/StatePreemption.pdf>

Second whereas: WHEREAS, the United States Environmental Protection Agency (EPA), the Committee on Environmental Health of the American Academy of Pediatrics, the National Academy of Sciences, and the President’s Cancer Panel have all concluded that exposure to many synthetic pesticides is linked to reproductive disorders, birth defects, learning disabilities, neurological disease, endocrine disorders, and cancer;

The American Academy of Pediatrics’ (AAP) report can be read here:

<http://pediatrics.aappublications.org/content/early/2012/11/21/peds.2012-2757>

“Children encounter pesticides daily and have unique susceptibilities to their potential toxicity. Acute poisoning risks are clear, and understanding of chronic health implications from both acute and chronic exposure are emerging. Epidemiologic evidence demonstrates associations between early life exposure to pesticides and pediatric cancers, decreased cognitive function, and behavioral problems.” (Abstract)

Also see: American College of Obstetricians and Gynecologists report on environmental chemicals and reproductive health: <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Exposure-to-Toxic-Environmental-Agents>

“Prenatal exposure to certain chemicals has been documented to increase the risk of cancer in childhood; adult male exposure to pesticides is linked to altered semen quality, sterility, and prostate cancer; and postnatal exposure to some pesticides can interfere with all developmental

stages of reproductive function in adult females, including puberty, menstruation and ovulation, fertility and fecundity, and menopause.” (Abstract)

President’s Cancer Panel Report on Reducing Environmental Cancer Risk:
<http://deainfo.nci.nih.gov/advisory/pcp/annualReports/>

“Leukemia rates are consistently elevated among children who grow up on farms, among children whose parents used pesticides in the home or garden, and among children of pesticide applicators. Because these chemicals often are applied as mixtures, it has been difficult to clearly distinguish cancer risks associated with individual agents.” (p44)

“Fertilizers, herbicides, and pesticides used for residential and other landscaping purposes (e.g., parks, golf courses), in some represent a considerable component of water contamination because they seep into groundwater and run off into streams, rivers, and other drinking water supplies. About a quarter of the pesticides used annually in the U.S. are for landscaping purposes. Landscaping workers who apply these chemicals to lawns and other non-agricultural sites can sustain high levels of exposure, with cancer risks similar to those of farm workers. Homeowners can be exposed to fertilizers, herbicides, and insecticides when mowing residential lawns after chemicals have been recently applied and by handling and applying chemicals themselves. Children may be exposed when playing in areas where chemicals have been applied. In addition, individuals can be exposed to these chemicals by swimming in or eating seafood from contaminated bodies of water.” (p56)

Third whereas: WHEREAS, the EPA acknowledges, along with the esteemed Mt. Sinai Children’s Environmental Health Center, that children, with their still-developing bodies and brains, are especially vulnerable to the harmful effects of lawn and garden pesticides; and children’s behavior (e.g., hand to mouth interactions, proximity to the ground, walking or running through lawns instead of paved sidewalks, especially where there are none), exposes children to far more contact with lawn pesticides than adults;

See “Pesticides and Their Impact on Children: Key Facts and Talking Points”
<https://www.epa.gov/sites/production/files/2015-12/documents/pest-impact-hsstaff.pdf>

“Due to key differences in physiology and behavior, children are more susceptible to environmental hazards than adults.”

“Children spend more time outdoors on grass, playing fields, and play equipment where pesticides may be present.”

“Children’s hand-to-mouth contact is more frequent, exposing them to toxins through ingestion.”

See letter from Phillip Landrigan, M.D. in support of a similar ordinance in Montgomery County (attached as **Appendix 2**).

Fourth Whereas: WHEREAS, many synthetic pesticides are harmful to pets, wildlife, including threatened and endangered species, soil microbiology, plants, and natural ecosystems;

Harmful to Pets:

Studies find that dogs exposed to herbicide-treated lawns and gardens suffer a doubling of their chance of developing canine lymphoma (1) and may increase the risk of bladder cancer in certain breeds by four to seven times (2).

(1) [Hayes, H. et al., 1991. "Case-control study of canine malignant lymphoma: positive association with dog owner's use of 2,4-D acid herbicides." *Journal of the National Cancer Institute*, 83\(17\):1226.](#)

(2) [Glickman, Lawrence, et al. 2004. "Herbicide exposure and the risk of transitional cell carcinoma of the urinary bladder in Scottish Terriers." *Journal of the American Veterinary Medical Association* 224\(8\):1290-1297](#)

Harmful to Wildlife (including endangered species):

Fifty years after the herbicide atrazine was first registered, an [EPA preliminary ecological risk assessment](#) (April 12, 2016) of the widely used herbicide identified risks that had been brought to public attention by independent peer-reviewed science decades ago, yet not acted upon by the agency. EPA now concludes that atrazine poses risks to fish, amphibians, aquatic invertebrates, and even birds, reptiles and mammals. Data on the adverse effects of this chemical on amphibians was brought to light by University of California, Berkeley, professor and scientist Tyrone Hayes, Ph.D. Dr. Hayes began his atrazine research in 1997 with a study funded by Novartis Agribusiness, one of two corporations that would later form Syngenta. Novartis discontinued support for Dr. Hayes research after being presented with his findings.

However, with this new EPA risk assessment, EPA finds that chronic exposure levels of atrazine at or above 5ppb lead to reproductive effects in fish, and exposures to levels of 3.4ppb for 60 days or more can impact aquatic plants' productivity, structure and function. The agency acknowledges that the observed impacts occur at levels below those that have been found through environmental monitoring, as well as at EPA's safe drinking water standard (3ppb). [Studies by Dr. Hayes](#) and others have shown that concentrations as little as 0.1ppb impact hormone function in organisms and turns tadpoles into hermaphrodites- creatures with both male and female sexual characteristics. The story of Dr. Hayes' experience with Syngenta, captured in a New Yorker article [A Valuable Reputation](#), illustrates the importance of preventing to the extent possible exposure to turf and landscape pesticides.

A 2015 study shows that when fish larvae are exposed to pesticides through water contamination from runoff, they can develop swimming abnormalities as they grow, making them an easy target for prey and impacting their survival rate.

[Renick VC, Anderson TW, Morgan SG, Cherr GN. Interactive effects of pesticide exposure and habitat structure on behavior and predation of a marine larval fish. *EcoToxicology*. 2015;24:391-400](#)

USGS has identified widespread appearance of intersex fish in largemouth bass in the Northeast United States. This disturbing phenomenon has been associated with the use of pesticides. According to the USGS press release for the study, “Estrogenic endocrine-disrupting chemicals are derived from a variety of sources, from natural estrogens to synthetic pharmaceuticals and agrochemicals that enter the waterways. Examples include some types of birth control pills, natural sex hormones in livestock manures, herbicides and pesticides.”

[Iwanowicz, L.R et al. 2016. Evidence of estrogenic endocrine disruption in smallmouth and largemouth bass inhabiting Northeast U.S. national wildlife refuge waters: A reconnaissance study. *Ecotoxicology and Environmental Safety*. 124:50-59.](#)

By EPA’s own admission, whooping cranes “will stop to eat and may consume arthropod prey” that may have been exposed to 2,4-D in fields sprayed with Enlist Duo (a mixture of glyphosate and 2,4-D), and that in sufficient amounts, this exposure can be toxic to the cranes. Similarly, EPA’s own analysis found that the Indiana bat would likely suffer from reproductive harm resulting from the consumption of 2,4-D-contaminated prey, as a direct result of EPA’s approval of Enlist Duo.

<http://earthjustice.org/sites/default/files/files/2015-2-6%20Motion%20to%20Stay%2024D.pdf>

A 2012 study showed Roundup’s ability to induce morphological changes in amphibians. After three different species were exposed to Roundup, results showed body changes in the creatures similar to if they were reacting to the presence of a predator. The study noted, “Collectively, these discoveries suggest that the world’s most widely applied herbicide may have much further-reaching effects on non-target species than previous considered.” Changes in the make-up of the ecological communities can affect the balance of pests and predators, and lead to pest outbreaks.

Reylea, Rick. 2012. New effects of Roundup on amphibians: Predators reduce herbicide mortality; herbicides induce antipredator morphology. [Ecological Applications](#). 10.1890/11-0189.1

A report released by the American Bird Conservancy found that widely used neonicotinoid insecticides, well-known for their impacts to declining pollinator species, also effect bird species. In fact, the report found that a single kernel of coated corn seed was enough to kill a songbird.

http://abcbirds.org/wp-content/uploads/2015/05/Neonic_FINAL.pdf

Studies on systemic neonicotinoid insecticides (which move through the vascular system of the plant and is expressed through pollen, nectar and guttation droplets), in the context of little or no action from state and federal officials in the turf and landscape context, highlight the role that South Portland can play in protecting the health of the ecosystem.

See [What the Science Shows](#) for more information.

Harmful to Soil Life:

Mycorrhizae fungi within soil are relied on by most plants for nutrients and moisture. One study (1) reported that exposure to pesticides inhibits mycorrhizae colonization and found that the accumulation of nitrogen, phosphorus, and potassium (NPK), necessary elements for plant health, was lower in pesticide-treated plants compared to control plants. Another study (2) found that

spore germination and cell growth of mycorrhizae, *Glomus mosseae*, was adversely affected by pesticides used in agriculture, and in some cases, at much lower concentrations than are approved for use.

- (1) [The impact of pesticides on arbuscular mycorrhizal and nitrogen-fixing symbioses in legumes](#)
- (2) [Mycorrhizal fungi in ecotoxicological studies: Soil impacts of fungicides, insecticides and herbicides.](#)

Earthworms are excellent indicators of soil health, and provide vitally important ecosystem services by aerating the soil, cycling nutrients, and increasing microbial activity. A study on worms demonstrated the detrimental effects that pesticides can have on soil biota, finding that chronic and/or acute exposure to glyphosate and/or [mancozeb](#) promotes neurodegeneration in GABAergic and DAergic neurons in *Caenorhabditis elegans*, a type of roundworm.

[Exposure to Glyphosate- and/or Mn/Zn-Ethylene-bis-Dithiocarbamate-Containing Pesticides Leads to Degeneration of \$\gamma\$ -Aminobutyric Acid and Dopamine Neurons in *Caenorhabditis elegans*.](#)

Harmful to Plants:

Pesticide sprays can directly hit non-target vegetation, or can drift or volatilize from the treated area and contaminate air, soil, and non-target plants. In addition to killing non-target plants, pesticide exposure can cause sublethal effects in plants. Phenoxy herbicides, including 2,4-D, can injure nearby trees and shrubs if they drift or volatilize and move off the target site to leaves. Exposure to the herbicide glyphosate can severely reduce seed quality. It can also increase the susceptibility of certain plants to disease. This poses a special threat to endangered plant species. The U.S. Fish and Wildlife Service has recognized 74 endangered plants that may be threatened by glyphosate alone.

[Aktar MW, Sengupta D, Chowdhury A. Impact of pesticides use in agriculture: their benefits and hazards. *Interdisciplinary Toxicology*. 2009;2\(1\):1-12. doi:10.2478/v10102-009-0001-7.](#)

Harmful to Natural Ecosystems:

Since the term “ecosystem” refers to all of the plants, animals, fungi, protozoans, bacteria and other organisms that live in the same area, the data shows that pesticide use harms natural ecosystems because it can adversely affect all organisms living in an area.

An international panel of researchers, the Task Force on Systemic Pesticides, has found that systemic pesticides like neonicotinoids “...impact all species that chew a plant, sip its sap, drink its nectar, eat its pollen or fruit and these impacts cascade through an ecosystem weakening its stability.” The authors continue: “The large scale bioavailability of these insecticides in the global environment at levels that are known to cause lethal and sub-lethal effects on a wide range of terrestrial, aquatic and soil beneficial microorganisms, invertebrates and vertebrates, poses risks to ecosystem functioning and services provided by terrestrial and aquatic ecosystems including soil and freshwater functions such as litter break down and nutrient cycling, food production, biological pest control, and pollination services.” See <http://www.tfsp.info/>

5. Could Staff provide the Commission with the FOCB water quality testing data that supports this Whereas provision?

Most or all of the FOCB water quality testing data for pesticides was conducted in close partnership with the Maine Board of Pesticides Control, which was responsible for coordinating and funding the analyses. City staff has some of this data, but it might be better to request it directly from the FOCB and MBPC along with an explanation of the results to avoid potential miscommunications.

5b. Is Staff aware of pesticides in any discharges from South Portland storm sewers since 2001?

The only stormwater outfall pesticides monitoring effort of which City staff is aware was conducted for a single outfall for a single rain event in the summer of 2015. The MBPC has not yet released the results.

6. Regarding the storm water data Staff is referring to in this Finding, which pesticides exceeded EPA toxicity thresholds?

Diazinon (detected at 2.6 ppb) in South Portland is considered dangerous to aquatic life. EPA aquatic life criteria for this chemical is 0.82 for chronic and acute effects (all in ppb). Other pesticides tested by MBPC / FOCB do not have aquatic/human benchmarks under the Clean Water Act. However, the level of a pesticide by itself does not tell the entire story about the implications of chemical exposure. First, it represents one snapshot in time, and is not indicative of seasonal trends in pesticide loading. Second, the criteria does a poor job of capturing the sub-lethal effects of pesticide exposure, which can result in long-term harm yet not kill species outright. Next, MBPC's / FOCB's sampling data only looked at outflow into Casco Bay and did not analyze what was passing through urban streams. Thus, it cannot ensure that there are not higher levels of pesticides flowing through urban streams. Lastly, the overall intent of the legislation should be considered. As discussed above, the goal of this ordinance is not simply to have data points fall within certain quantitative thresholds or benchmarks, which at the federal level are inherently lacking in their ability to address the full range of possible harmful effects. Rather, the intent of the ordinance is to exceed minimum requirements and institutionalize safer practices that preventively protect water quality, human health and the environment.

As cited above, consideration should be given to the robust independent data analyzing the effect of pesticide ordinances, such as the [2014 study published in the journal *Challenges*](#) that shows concentrations of common herbicides 2,4-D dicamba and mecoprop decreased from 16% to 92%, depending on the stream and herbicide after the Ontario cosmetic pesticide ban was put into place.

6b. Has staff calculated the expected pesticide concentrations in Casco Bay waters based on the storm water discharge measured concentrations?

Staff has not determined expected pollutant loads for pesticides or other contaminants commonly found in stormwater primarily because of the time, expense and effort required to do so. DEP has done some limited pollutant load modeling in support of the Trout Brook restoration project but it did not include pesticides. As noted by Bob Pitt in his [Stormwater Effects Handbook](#), characterizing pollutant loads is not a trivial undertaking:

“Given the complicated nature of the problem, where diffuse inputs contain multiple stressors which vary in intensity with time (and often in areas which are simultaneously impacted by point source discharges or other development activities, e.g., channelization), it is difficult to define and separate stormwater effects from these other factors. To accomplish this task requires an integrated watershed-based assessment approach which focuses on sampling before, during, and after storm events.” (preface)

Because of these difficulties, the current MS4 permit does not require ANY analytical monitoring of stormwater discharged from outfall pipes. Likewise, the Total Maximum Daily Loads and corresponding Watershed Management Plans for South Portland’s urban impaired streams rely upon impervious cover thresholds as surrogates for the suite of pollutants commonly found in polluted stormwater runoff. However, in addition to limited pesticides monitoring, South Portland has gone “above and beyond” by conducting stream and stormwater analyses for nutrients, metals and bacteria.

Again, the goal of this ordinance is not simply to have data points fall within certain quantitative thresholds or benchmarks, which at the federal level are inherently lacking in their ability to address the full range of possible harmful effects, but to go beyond minimum requirements and institutionalize safer practices that protect water quality, human health, and the environment.

7. If synthetic pesticides are known to have damaging effects on human health and welfare, as stated in the Purpose, shouldn't the stated purpose of this ordinance be to eliminate all synthetics, not "significantly" curtail their use?

In citing the Code of Federal Regulations (CFR) for the National List of Allowed and Prohibited Substances under OFPA, there is an acknowledgement that synthetic substances that are compatible with organic systems, deemed essential, and do not cause adverse effects to health and the environment may be allowed. For that reason, while there is a default against the use of synthetics under 7 CFR 205.601, there is some allowance based on the criteria cited above, in addition to the "minimum risk" synthetics allowed under FIFRA.

The ordinance curtails the use of pesticides and reorients consumers and businesses toward an approach that focuses on preventing, rather than controlling pest problems. There is an established body of literature and awareness that the use of toxic pesticides can be replaced by a combination

of cultural practices and least-toxic products that in most cases eliminate the need for synthetic pesticide use. The same principles that have been successfully applied to organic food production systems has been applied to organic turf and outdoor landscape management. Thus, the focus of the ordinance is on eliminating the use of toxic pesticides for “turf, landscape, and outdoor pest management.” Such uses are generally referred to as cosmetic or aesthetic and are distinct from uses that are intended to protect public health or the environment, or produce food, all of which are exempt under the ordinance.

The ordinance does apply a true “ban” or “elimination” of pesticides to applications within 75 ft. of a water body. In so doing, it acknowledges the importance and fragility of riparian areas and applies restrictions on pesticide use across the board for all pesticide use including “allowed” pesticides under the ordinance.

8. Will PMAC have an annual budget?

Currently, it is not envisioned that the PMAC will have an assigned budget. Rather, this group will work closely with the Sustainability Coordinator and other partners to fund, develop, and implement education and outreach materials and programs. In addition to the sustainability program’s operating budget, a preliminary list of potential partners and funding resources is attached as **Appendix 3**.

8b. If so, what budgetary range has Staff considered?

Beyond funding the public education and outreach campaign, implementation for most of the ordinance should be accomplished through existing City operations budget and resources. As the City of Reno, Nevada [noted](#) in its staff report on implementing its pesticide-free parks program, “There will be no cost implications as staff will implement changes within its adopted budget.” Herbicides are currently used in Reno parks to control weeds in planter areas, baseball infields and decomposed granite areas, and around fence lines, trees, signs, and other similar installations. The city estimates it spends approximately 1.4% of total maintenance time applying herbicides, and 4.1% of time using manual or mechanical weed control alternatives. To implement the program, the Parks Department indicates it will discontinue herbicide use and test alternative strategies that may include the use of organic products, burning, or additional manual or mechanical weed control. The Department does not expect the total time spent on weed control to differ because of the change in practices.

South Portland’s Parks Department is currently piloting organic products and will be developing a full plan to transition to less toxic organic pesticides and change their management practices. This plan will form the basis of future annual operating budget requests.

9. In developing a draft ordinance, did Staff consider a scenario in which the PMAC approves a waiver, then a resident files a BI/PD claim against the City for injury?

The use of the synthetic pesticides under a waiver agreement would still be guided by federal law, and any claimant would be required to follow label directions on the pesticide, as registered or exempt from registration. Misuse and other violations of a pesticide label instructions are violations of federal and state law. Should an injury occur by use under the label, the user of a pesticide is accountable to all relevant state and federal laws, as well as toxic tort claims.

This scenario has not occurred in other localities that have passed similar ordinances.

9b. Similarly, did Staff consider the inverse scenario, in which a waiver is denied, and the applicant seeks damages in court?

As per Sec 32-6(A), a waiver is to be granted in “situations that threaten the public health and safety or for the control of invasive species that pose a threat to the environment...” Anyone denied a waiver may seek a prompt appeal.

South Portland and local communities across the country pass laws that residents could claim will reduce aesthetic or economic value. The same could be said for zoning restrictions that deny applicants permission to pursue a course rejected by the community. In this case, there are proven alternatives to achieve aesthetic expectations. Some communities have banned the use of coal tar sealants. (In fact, there were bills introduced in the two most recent legislative sessions to ban the use of coal tar sealants on a statewide basis in Maine and there are likely to be similar efforts in the future). Presumably, individuals or businesses may want to seek damages for their inability to use a product that could prevent them from creating a nice aesthetic appearance for the driveway on their property. However, because alternatives exist, and these laws are meant to affect a change to safer practices, individuals have simply sought out and employed alternatives to their use, rather than resort to litigation.

The local jurisdiction is empowered to restrict behavior in many areas for a social good, including protecting public health and the environment. The decision to adopt a local standard should not be solely determined by the threat that a claim will be brought against that standard.

10. Are there any “Allowed Products” that would meet the definition of synthetic?

Yes, however under the U.S. Department of Agriculture’s National List of Allowed and Prohibited Substances in organic production, synthetic substances are prohibited unless specifically permitted. This approach, which requires that man-made synthetic substances undergo rigorous review, requires a robust analysis of a material’s human health and environmental impacts, compatibility, and essentiality within an organic system. Compatibility is an important criterion because it recognizes that synthetic substances that harm soil biology and ecosystems are undercutting natural nutrient cycling. This cycling, enhanced by a healthy ecosystem, reduces the need for the introduction of additional pollutants into the turf system or landscape, such as synthetic water soluble nitrogen and phosphorus, that cause plant vulnerability to disease and infestation and the

pesticide treadmill effect.

10b. If so, what are these products? If not, what is the purpose of this provision of the draft ordinance?

The National List of Allowed and Prohibited Substances can be viewed here (see §205.601 *Synthetic substances allowed for use in organic crop production*): <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=9874504b6f1025eb0e6b67cadf9d3b40&rgn=div6&view=text&node=7:3.1.1.9.32.7&idno=7>

The list of 25(b) exempt materials under FIFRA can be viewed here: <https://www.epa.gov/sites/production/files/2015-12/documents/minrisk-active-ingredients-tolerances-2015-12-15.pdf>

Two independent organizations, the [Organic Materials Review Institute](#) (OMRI) and the [Washington State Department of Agriculture Organic Food Program](#) review and list products which are determined to be in compliance with the National List of Allowed and Prohibited Substances. Both of these organizations maintain databases on their websites, which can be searched by product, generic materials, company name, product name, or product type.

11. Why did staff exempt Sable Oaks Golf Course from the draft ordinance?

Privately-owned golf courses like Sable Oaks are not completely exempt from the ordinance. The ordinance, including the allowed pesticide list, will apply to all lands managed by privately-owned golf courses save for the playing surfaces. The playing surfaces are exempt because the playing conditions necessary for these areas are difficult to transition to an organic system. Golf course tees and greens are inherently highly stressed areas, and must be kept short, and mowed often. This prevents the grass from developing deep roots, a basic component of a healthy turf system. In turn, the grass becomes more vulnerable to pests and disease. While there are limited examples of organic golf courses, it makes sense to allow for the transition of these areas and encourage them to move toward more natural practices through pilot sites. Once the other components of a healthy turf system are in place; good soil structure and pore space, a thriving soil microbial community, and lack of toxic inputs, as well as cultural practices that include proper aeration, watering, and judicious applications of natural fertilizers, it makes sense to require golf courses to meet the standards of the law.

Cornell University and the State of New York are conducting a long-range study with the intent of developing practices to reduce pesticide use at Golf Courses. They are currently 9 years into the study and have made many findings on Best Management Practices that are being implemented at courses throughout the region. However, after 9 years of study, they have determined that it is not yet possible to maintain a playable surface without at least minimal use of synthetic pesticides as part of an Integrated Pest Management plan.

11b. Does staff know what quantities of synthetic pesticides would be covered under this exemption?

Attached as **Appendix 4** is a report of the types and quantities of pesticides used by Sable Oaks in 2015 as submitted to the Maine Board of Pesticides Control.

12. Why did Staff exempt tees at South Portland Municipal Golf Course?

On the municipal golf course only tees and greens are exempt because on other playing areas the City uses different types of grasses which have less strict management needs such as higher mowing requirements. Nationally there are very few examples of golf courses that are being managed successfully without some synthetic pesticide use because of the strict requirements of the playing surfaces for the sport.

13. What was Staff's thinking around blanket exemptions for certain portions of golf courses.

See question 11 response.

14. Has Staff considered the impact of a 5-day review period on non-paid citizen Waiver Committee members of PMAC?

Staff will consider and propose a process to review waivers if members of the Waiver Committee are indisposed.

14b. What happens if they cannot reach a conclusion in five days?

Waivers cannot be issued unless the Waiver Committee acts.

15. How does staff foresee handling multiple waiver applications for the same product/chemical? Consolidation into a class review? Would granted and denied waivers be published online?

It is understood that waivers will be evaluated on a case-by-case basis and block/class reviews of waivers for specific products will not be permitted. Applications for waivers could be made online through a public process with transparency. Similarly, it is understood that decisions on waivers will be made available to the public.

16. Has staff considered a range of cost estimates for the PMAC education and outreach budget under section C?

There are numerous mechanisms for low-cost education and outreach. The City of Takoma Park created a Safe Grow webpage that provides the public with the background on the law and steps that people can take to comply and transition to organic management practices. Numerous

organizations have volunteered their expertise to conduct community meetings to educate the community, including residents and commercial service providers, on the law and management practices for turf and landscapes that meet community expectations (also refer to question 8).

16b. Is the less-than-\$1000 fiscal note realistic/ Has staff created budgetary estimates?

The less than \$1,000 fiscal note is standard language for ordinances which can be passed without fiscal requirements. As stated in earlier questions, any financial impacts for implementation, education, and outreach are expected to be funded through operating budgets, partnerships, and grants. Montgomery County, MD, which recently passed a similar ordinance, allocated \$100,000 to its education and outreach campaign. However, Montgomery County has a population of over 1,000,000 people. South Portland, with roughly 25k residents, should only need to spend a proportional fraction of that amount on education and outreach. If \$1 for every 10 residents is a good rough estimate, \$2,500 is a reasonable cost estimate for S. Portland. As stated above, with volunteer support, there are opportunities to engage in alternative, low-cost outreach that would fulfill Sec 32-9.

17. Why did Staff determine that the Sustainability Coordinator would have primary enforcement responsibilities under this ordinance?

The most recent version of the ordinance assigns the Code Enforcement Officer, in coordination with the Sustainability Coordinator, to provide enforcement of the ordinance. Infractions are viewed as opportunities to assist in the transition to practices that are in compliance with the law. Fines have been removed and replaced with assistance and reporting by the City on the nature of infractions and how they were resolved. The familiarity of the Sustainability Coordinator and the opportunity to provide education, information, and access to expertise to assist in an alleged violator's transition will be the focus of ensuring compliance.

17b. Did staff consider other enforcement options? If so, what other options and why did these options get ruled out?

The ordinance places soft penalties on individuals in order to effect a change in management practices among residents. It is the intent of staff to use more carrots rather than sticks – a focus on education and outreach, and the benefits of organic systems to health and the environment, will result in broader compliance with the ordinance rather than the threat of fines.

The experience of Montgomery County, MD's deliberations on this issue is instructive. In an interview with a local NPR station, Chair of the Council George Leventhal was posed the following question and responded with the statement below:

“Does the county in fact have any kind of enforcement mechanism?

Number one, I recollect when recycling became a legal mandate, which it has been for many years, and the recycling rate has increased dramatically, and the same kind of thing was said. Neighbors

would be ratting on neighbors and that it'll create hostile conditions in neighborhoods. And if anyone puts a glass jar in the trash that the garbage police would come out. And none of that happened. But what did happen was that the people understood how to separate their waste and to make sure that a waste stream that was recyclable can be recycled. I'd be surprised if anyone in Montgomery County has ever been fined for putting the wrong waste object in the wrong waste receptacle. And I don't think there will any need to vigorously enforce this pesticide legislation. I think we're talking about public awareness and public education consistent with most of the laws in this area that we've passed. If I lit a cigarette in the elevator in your building today, Kojo, I wouldn't be arrested, and I wouldn't be fined, but it's the wrong thing to do and I wouldn't do it. And we've broadly understood that smoking in the workplace just isn't appropriate --even though there isn't really any enforcement and it's against the law."

18. Under what provisions of the PMAC duties would the PMAC be issuing orders or notices?

PMAC may issue acceptance or denial of a waiver under Sec 32-4(B)(ii). PMAC may issue notices under Sec 32-4(B)(iii) as part of the outreach campaign with the sustainability coordinator. PMAC may issue notices when, under Sec 32-4(B)(vi), the summary report is submitted to the City Council. PMAC may issue notices when, under Sec 32-4(B)(vii), recommendations are submitted to the City Council and Sustainability coordinator.

19. Has the staff developed enforcement scenarios, as part of an assessment of projected workload associated with this ordinance?

The staff envisions utilizing opportunities for education as the focus.

19b. If so, what assumptions has Staff made regarding enforcement – act on referrals only, spot checks, etc?

As with other communities, we expect this ordinance to be driven by residential referral. That does not mean that neighbors will be tattling on neighbors. As mentioned above, the goal is not to focus on citations and fines, but educate residents about the benefits of organic land management.

Ontario, with a population of 13.6 million people, should be instructive on enforcement of a pesticide ordinance. Since the cosmetic pesticides ban came into effect, there have been only five cases with convictions related to the cosmetic pesticides ban. All the convictions are related to the application of banned pesticides to residential properties by lawn care companies or the illegal sale of banned pesticides.

20. If commercial applicators continue to apply banned products at a residential location, who would be charged with a violation? The applicator, the resident, or both?

Because the law deals with application of pesticides, in such a case the commercial applicator would be the violator. The applicator, as the user of the product, is responsible for complying with the restrictions on product use.

20b. Is Staff knowledgeable about the Takoma Park, MD violation procedures? Will South Portland's violation procedure be similar?

During deliberations over Montgomery County's ordinance, a Takoma Park Councilmember testified in favor of the ordinance and indicated that enforcement has not been a significant issue. According to the City's program coordinator only nine (9) warning letters have been issued in Takoma Park since their ordinance took effect in January 2015.

21. How would the ordinance address the purchase of plants by South Portland retailers that have been pre-treated with neonicotinoids.

Many retailers receive plants that have been grown from seed that is pre-coated with neonicotinoids, from a nursery either in or outside of the country. To ensure that residents of South Portland were not purchasing plants that have been treated with neonicotinoids, the legislation would have to include an amendment to disallow their sale. Staff have concluded that this is outside the purview of this ordinance which focuses on pesticide use, not sales. In addition, many of the large retailers have committed to phasing the sale of planted treated with neonicotinoids in the coming year.

22. What is the basis for the Staff estimate that annual implementing cost for the ordinance would be less than \$1,000

As mentioned above, the staff believes it can launch this program with very little in the way of additional resources.

22b. Would Staff provide the Commission with copies of budget estimates for PMAC, enforcement, and City Hall staffing requirements?

See discussion above. Based on the experience of other communities such as Ogunquit, ME and Takoma Park, MD staff are not anticipating an overwhelming increase in City resources to conduct education and outreach and enforce this ordinance. These tasks will be part of the Sustainability Coordinator's position.

23. Has Staff reviewed the risk of banning a synthetic pesticide for which there is no documentation that such pesticide is adversely impacting human health or the environment?

Staff believe that taking toxic chemicals out of turf and landscape management, given the known hazards of pesticide use and exposure established by the independent scientific literature, as well



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Sustainability Coordinator

as the uncertainties, creates a benefit for the community, not a risk. Staff believe that the restrictions in the ordinance enhance protection of public health and the environment and will offer benefits in turf management, such as reduction in the use of hazardous materials and synthetic fertilizers like water soluble nitrogen and phosphorus, improved water retention in turf systems, elevated carbon sequestration, and protection of biodiversity.



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Appendix 1

A list of all pesticides used by the Parks Department for outdoor applications in 2015

**Commercial Applicator Annual Summary Report
2015**

City of South Portland
33 Pitt Street
South Portland, Maine 04106
Telephone# 767-7670

Master Applicators
S. Neuts 16686
E. Perruzzi 47776
W. Faustman 49042
C. Buteau 48035

Pesticide Brand Name	Total Pounds Undiluted Formulation	Total Gallons Undiluted Formulation
Momentum		0.75
19-0-0 w/Dimensiion	450 lbs	
Low Odor Triplet		0.0164
Quinclorac	0.1625	
Prosecutor		0.66
Quali-Pro Imidacloprid 2F Insecticide		.20 gal
SeaPro Corp Pentathlon* DF Disposable Granules Fungicide	12	
Primera One T-Methyl 4.5		2.50 gal
Primera One Improdine 25E Fungicide		6.64 gal
Primera One Chlorothalonil 720 SFT Fungicide		10.65 gal
Rotam Offset 3.6 Fungicide		1.01 gal
Nitrile Pro Turf Fertilizer w/Malett0.20% Insecticide Imidacloprid 0.20%	25	
Roundup Pro Max		1.35

This report covers applications performed by all company licensees.



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Appendix 2

Letter from Phillip Landrigan, M.D. in support of a similar ordinance in Montgomery County

July 21, 2014

Dear Montgomery County Council Members:

Thank you for the opportunity to submit testimony in support of Safe Grow Montgomery's campaign to eliminate cosmetic lawn pesticides in Montgomery County.

I am a pediatrician, epidemiologist and Dean for Global Health in the Icahn School of Medicine at Mount Sinai. I am also Professor and Chairman of the Department of Preventive Medicine, Professor of Pediatrics and Director of Mount Sinai's Children's Environmental Health Center, a designated World Health Organization Collaborating Centre in Children's Environmental Health.

For many years beginning in the early 1970s at the Centers for Disease Control and Prevention (the CDC), I have conducted research in public health, and I have published this research extensively in leading peer-reviewed journals including *The New England Journal of Medicine*, *The Lancet* and *Environmental Health Perspectives*. My research has focused on understanding the impacts on children's health of exposures to toxic chemicals. I have recently edited the first ever *Textbook in Children's Environmental Health*, a volume of 700 pages and 60 chapters, authored by 85 scientists from five continents and published by Oxford University Press. My biographical sketch is attached to this testimony.

Children are uniquely vulnerable to the health effects of pesticide exposure.

Application of pesticides for cosmetic purposes results in human exposure through contact with grass, soil, and other surfaces. Additional exposure can result from drift from spray applications. Pesticide exposures can have toxic effects on health.

Children are especially vulnerable to pesticides, because their age-appropriate hand-to-mouth behaviors, their closer proximity to the ground, and their higher breathing rates place young children at increased risk for pesticide exposures compared with adults¹. The Centers for Disease Control and Prevention has found that children age 6-11 have higher levels of common pesticides in their bodies, indicating higher exposure². Furthermore, some pesticides can pass from mother to fetus during pregnancy and breastfeeding. These are very troubling findings due to the exquisite vulnerability of the fetus and early neonate to toxic exposures^{3, 4}.

Children's vulnerability to chemical pesticides is further magnified by the rapid growth and development of their nervous systems and other bodily organs as well as by their immature detoxification mechanisms, which make it very difficult for infant to break down and excrete pesticides after they have been exposed. These factors place infants and children at increased risk for harmful effects of pesticide exposures, which may be permanent and irreversible⁵. Additionally, because of their young age, children have more future years of life and therefore more time to develop chronic diseases that may be triggered by environmental exposures in early life.

Health Effects of Pesticide Exposure. Acute exposure to pesticides can lead to asthma exacerbations, cough, shortness of breath, nausea, vomiting, eye irritation, and headaches⁶. Additionally, pesticide exposure early in life is associated with increased risk of certain cancers⁷⁻⁹, birth defects^{10, 11}, reproductive defects^{12, 13}, asthma^{14, 15}, and cognitive and behavioral problems¹⁶⁻²⁰.

The association between pesticide exposure and impaired neurodevelopment in children is not surprising. Pesticides are deliberately designed to be toxic chemicals. A large number of pesticides have been deliberately engineered to attack cellular targets in the nervous systems of insects. Given that many of these same cellular targets are present in the human nervous system, children are highly vulnerable. For example, children with prenatal exposure to the organophosphate pesticide chlorpyrifos show decreased intelligence, smaller head circumference at birth, which is a marker for retarded brain growth, and changes in the brain that are evident on MRI, indicating that changes in brain structure have occurred²¹. Notably, the exposure levels measured in these studies are similar to those detected in the general public, indicating that even low levels of exposure from household use can be detrimental.

Early life exposures to commonly used lawn and garden pesticides such as glyphosate, 2,4-D, and permethrin, are associated with cancer²², neurotoxicity²³, and endocrine disruption^{24,25}.

Finally, greater than 95% of most pesticide formulations consist of "inert" ingredients. Recent studies suggest that these "inactive" compounds may in fact be more toxic than the active ingredient^{26, 27}. Because inert ingredients are not listed on the label and testing to assess safety is minimal, the health effects of these compounds are difficult to evaluate²⁸.

Preventing the Health Hazards of Pesticide Exposure. The adverse health effects that result from pesticide exposures are highly preventable. A ban on the cosmetic use of pesticides in Montgomery County will have positive effects on a wide array of health outcomes.

Historically, policy changes in pesticide regulation have successfully reduced exposures among the population. For example, after the EPA ban on residential uses of chlorpyrifos, there was a ten-fold reduction in maternal and umbilical blood levels of chlorpyrifos²⁹.

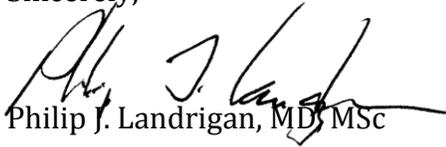
Several U.S. states and municipalities have banned cosmetic application of lawn pesticides in public areas that are utilized by children. The ban on cosmetic herbicides across nearly 80% of Canada has contributed to significant reductions in their use without negatively affecting the lawn care industry³⁰. Levels of the three most common pesticide chemicals dropped by 80% in urban streams in Ontario following the ban³¹.

A 2005 analysis calculated that pesticide use in the U.S. results in \$10 billion in total damages annually, of which an estimated \$1.1 billion could be accounted for by impacts on public health³². These indirect costs greatly outweigh the expense of integrated pest management and other non-toxic lawn care methods.

Conclusion Children are at risk for pesticide exposures at daycares, schools, on playing fields, playgrounds, and other public areas where lawn pesticides are routinely applied—a risk that could easily be reduced by legislation that would restrict the use of synthetic lawn pesticides in Montgomery County. I urge you to take steps to protect the health of your constituents by supporting a ban on the cosmetic use of pesticides.

Thank you for your consideration.

Sincerely,



Philip J. Landrigan, MD, MSc

Attachment

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Appendix 3

A preliminary list of potential partners and funding resources for education and outreach

Pesticides Use Ordinance
Education and Outreach – Preliminary List of Potential Partners & Resources

Friends of Casco Bay

BayScaping, water quality data, education & outreach materials

Protect South Portland

Education & outreach materials, newspaper articles, workshops, events, yard signs

Resilience Hub

Workshops and events, consulting, projects

Beyond Pesticides

Funding, education & outreach materials, policy guidance

Osborne Organics

Training workshops, pilot projects, technical and policy guidance

Cumberland County Soil and Water Conservation District

Yardscaping, education & outreach and behavior change campaigns

Maine Organic Farmers and Gardeners Association (MOFGA)

Education & outreach materials and events, technical guidance

Natural Resources Council of Maine (NRCM)

Education & outreach materials and events, policy guidance

South Portland Land Trust

Engaging the community

Sable Oaks Golf Course

Case studies, educational events

Maine Board of Pesticides Control

Data, education & outreach materials, training, technical guidance

Community Garden Collective

Community engagement, demonstration projects

Environmental Protection Agency

Local Environmental Education grants

Maine Department of Economic and Community Development
Community Development Block Grant

Colleges and Universities

Data, assistance with evaluation of ordinance implementation

Maine Audubon

Education & outreach material

Local Businesses

Community engagement, education and outreach materials, modeling best practices

Rotary Club

Community engagement

University of Maine Cooperative Extension Service

Training, educational materials, technical guidance

New England Pest Management Association

Training, educational materials, technical guidance

Casco Bay Estuary Partnership

Water quality data, education & outreach materials, identifying grants



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Appendix 4

A report of the types and quantities of pesticides used by Sable Oaks in 2015 (as submitted to the Maine Board of Pesticides Control)

Report Year 2015

Commercial Applicator Annual Summary Report

MAR 25 2016

Master Applicator's License Number 43310
 Master Applicator's Name MATTHEW A TENEYCK
 Company Name SABLE OAKS GOLF COURSE
 Address 505 COUNTRY CLUB DR S PORTLAND, ME 04106
 Telephone #

If this report covers applications performed by all company licensees, please check here.

If no applications performed, please check box and return to the Board. Please convert all application data to pounds or gallons of "undiluted" pesticide applied

Target Site	Pesticide Brand Name	EPA Registration Number	Total Pounds Undiluted Formulation	Total Gallons Undiluted Formulation	Total Area Treated (Ac, Sq Ft, #trees/homes/pets)
Golf Greens	Scott's Fungicide 6	538-159	373.75		183,931 Sq. Ft.
Broccoli	Phosdrin 4EC	5481-412		7.1	57 Ac.
Wall Void	Empire 20	6217-145		0.16	20 Homes
Dogs	Fleas-No-More	624-467		3	1378 Dogs
Paper Machines	Quaticide	435-981		350	5 Machines
Greens + Approaches	Chlorpyrifos 5PC 4	228-624		3.5	3.4 Acres
Greens + Approaches	Daconil Action	100-1364		12.25	9.4 Acres
Greens, App, + Fairways	Propiconazole 14.3	66222-41		14.55	39.23 Acres
Greens, App, + Tees	Medallion SC	100-1448		2.12	10 Acres
Greens + Approaches	Insignia SC	7969-290		2.9	12 Acres
Tees	TM 4.5	66222-134		5.63	5.2 Acres
Tees	4.5 Flowable	73545-13-70506		3.75	2.6 Acres
Greens, Tees, Fairways, App.	Chlorothalonil 720 SFT	60063-7		80.3	60.4 Acres
Greens, Tees, Fairways, App.	Bifenthrin Nursery 7.9F	53883-05-73220		4.23	22.37 Acres
Greens + Approaches	Fosetyl-AI 80 WDG	66222-161	88		6.8 Acres
Greens + Approaches	Iprodione 25E	66222-214		8.0	6.8 Acres
Fairways	Curalan EG	7969-224	37.5		13.77 Acres
Greens + Approaches	Mefenoxam 2 AQ	66222-216		0.58	3.4 Acres



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Mayor

DON GERRISH
Interim City Manager

EMILY F. CARRINGTON
City Clerk

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Jensen Baird Gardner & Henry

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District Five
BRAD FOX

At Large
MAXINE R. BEECHER

At Large
THOMAS E. BLAKE

IN CITY COUNCIL

ORDINANCE #2-16/17

THE COUNCIL of the City of South Portland hereby ordains as follows:

Section 1. Findings.

WHEREAS, the State of Maine is one of only seven states, and the District of Columbia, that allows local governments to restrict the use of pesticides, and so this is an opportunity for the City to affect positive change;

WHEREAS, the United States Environmental Protection Agency (EPA), the Committee on Environmental Health of the American Academy of Pediatrics, the National Academy of Sciences, and the President's Cancer Panel have all concluded that exposure to many synthetic pesticides is linked to reproductive disorders, birth defects, learning disabilities, neurological disease, endocrine disorders, and cancer;

WHEREAS, the EPA acknowledges, along with the esteemed Mt. Sinai Children's Environmental Health Center, that children, with their still-developing bodies and brains, are especially vulnerable to the harmful effects of lawn and garden pesticides; and children's behavior (*e.g.*, hand to mouth interactions, proximity to the ground, walking or running through lawns instead of paved sidewalks, especially where there are none), exposes children to far more contact with lawn pesticides than adults;

WHEREAS, many synthetic pesticides are harmful to pets, wildlife, including threatened and endangered species, soil microbiology, plants, and natural ecosystems;

WHEREAS, the City has five streams designated by the Maine Department of Environmental Protection (MEDEP) as "urban impaired" for failing to meet state water quality standards primarily due to adverse impacts from surrounding development;

WHEREAS, all of these “urban impaired” streams drain to Casco Bay, which is widely recognized as a natural asset of significant ecological and economic value;

WHEREAS, water quality testing by Friends of Casco Bay has demonstrated that pesticides are known to migrate off lawns and other properties and flow into the Casco Bay estuary;

WHEREAS, in some cases these pesticides were detected in stormwater flowing into Casco Bay in amounts that the Environmental Protection Agency has determined may be harmful to fish and other aquatic life;

WHEREAS, scientists have stated that crustaceans, including amphipods and lobsters, face numerous risks from pesticide exposures, even at low levels;

WHEREAS, the use of pesticides known or suspected to cause serious health problems is not necessary to create and maintain green lawns and landscapes, given the availability of viable alternative practices and products;

WHEREAS, many citizens desire to be protected from exposure to pesticides in the air, water or soil that inevitably results from chemical drift and contaminated runoff; and

WHEREAS, a growing number of communities and municipalities are embracing a precautionary approach to the use of pesticides in order to adequately protect people and the environment from their harmful effects.

Section 2. The text of Chapter 32, “Pesticide Use Ordinance,” of the “Code of Ordinances of the City of South Portland, Maine” be and hereby is enacted as shown below (additions are underlined):

Chapter 32

PESTICIDE USE ORDINANCE

Sec. 32-1. Title.

This ordinance shall be known as the “City of South Portland Pesticide Use Ordinance.”

Sec. 32-2. Purpose.

The purpose of this ordinance is to safeguard the health and welfare of the residents of the City and to conserve and protect the City’s waterways and natural

resources by curtailing the use of pesticides for turf, landscape and outdoor pest management.

Sec. 32-3. 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:

Broadcast application. The spreading of pesticides over an entire area.

Commercial Agriculture. The production of crops for sale, crops intended for widespread distribution to wholesalers or retail outlets and any non-food crops.

EPA. The United States Environmental Protection Agency.

FIFRA. The Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136 *et seq.*

Golf course. An area of land laid out for playing the game of golf with a series of 9, 18 or more holes. Mini-golf courses are not considered golf courses.

Golf course playing surfaces. The tees, fairways, greens and roughs of a golf course.

Golf course non-playing areas. Areas of golf courses that are not golf course playing surfaces, such as lawns, driveways, paths, patios, trees, shrubs, ornamental plantings and gardens.

Inert ingredient. Any substance (or group of structurally similar substances if designated by the EPA), other than an active ingredient, that is intentionally included in a pesticide product.

Invasive Species. A plant or insect that is not native to a particular ecosystem, and whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive species include those plants listed under the Maine Department of Agriculture, Conservation and Forestry's Natural Areas Program as currently invasive, potentially or probably invasive, and highly likely but not currently invasive, as well as those insects listed by the Maine Forest Service as threats to Maine's forests and trees.

Natural, organic or "non-synthetic." A substance that is derived from mineral, plant, or animal matter and does not undergo a "synthetic" process as defined in the Organic Foods Production Act, 7 U.S.C. § 6502(21), as the same may be amended from time to time.

Organic pest management. An extension of the principles and practices of organic agriculture to the care of turf and landscape.

Person. Any individual natural person, partnership, joint venture, society, association, company, club, trustee, trust or corporation; or any officer, agent, employee, or personal representative of any thereof, in any capacity acting either for her or himself or for any other person under either personal appointment or pursuant to law.

Pest. This term shall have the same meaning as the term set forth in 40 C.F.R. § 152.5, as the same may be amended from time to time.

Pesticide. Any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest; any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant. It does not include multicellular biological controls such as mites, nematodes, parasitic wasps, snails or other biological agents not regulated as pesticides by the EPA. Herbicides, fungicides, insecticides and rodenticides are considered pesticides.

Pests of significant public health importance. Pests listed by the EPA, in conjunction with the U.S. Department of Health and Human Services and the U.S. Department of Agriculture, as pests of significant public health importance.

Preemptive application. The application of pesticides as a measure against something possible, anticipated or feared, *i.e.*, as a preventive or deterrent measure.

Public utility. Any transmission and distribution utility, telephone utility, water utility, gas utility, or natural gas pipeline utility that is subject to the jurisdiction of the Maine Public Utilities Commission.

Synthetic. A substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring sources, except that such term shall not apply to substances created by naturally occurring biological processes.

Water body. Any great pond, river, stream or tidal area as those terms are defined in the City's Zoning Ordinance, Chapter 27 of the Code of Ordinances.

Wetland. A coastal or shoreland freshwater wetland as those terms are defined in the City's Zoning Ordinance, Chapter 27 of the Code of Ordinances.

Sec. 32-4. Pest Management Advisory Committee (PMAC).

(A) Composition; appointment; terms of office.

The Pest Management Advisory Committee (PMAC) is hereby established. The PMAC shall consist of seven members as follows:

- (i) The City's Stormwater Program Coordinator;
- (ii) One practicing agronomist appointed by the City Council;
- (iii) Two Maine Board of Pesticides Control-licensed landscape professionals, at least one of whom has experience in organic land care management and is accredited by the Northeast Organic Farming Association in Organic Land Care, each appointed by the City Council; and
- (iv) Three resident or taxpayer representatives appointed by the City Council.

The terms of office of the six PMAC members appointed by the City Council shall be three year terms, except that the initial appointments after the establishment of the PMAC shall be such that the terms of office of no more than two members shall expire in any single year. The terms of office for the City employee PMAC member shall be for as long as the employee holds said employment position.

(B) Duties.

The duties of the PMAC include serving in an advisory capacity to the City Council and the Sustainability Coordinator to oversee this ordinance through the following:

- (i) Advising the City Council and the Sustainability Coordinator of any problems encountered or amendments that may be required to achieve the full and successful implementation of this ordinance;
- (ii) Reviewing and acting upon waiver applications when applicable;
- (iii) In coordination with the Sustainability Coordinator, developing and implementing outreach and education as specified in this ordinance;
- (iv) Seeking the participation, advice and counsel of experts in the fields of organic turf and landscape management, maintenance of trees and shrubs, and organic pest protocol;
- (v) Encouraging broad community participation, from parents, schools, advocates, and local arboriculture and landscaping businesses, in the activities of the PMAC;
- (vi) Reviewing annual data and issuing a summary report annually to the City Council;
- (vii) On or before May 1, 2019, and every three years thereafter, conducting an evaluation of this ordinance, including a review of pilot project results and reporting data, and providing recommendations to the City Council and the Sustainability Coordinator for any ordinance amendments it deems appropriate; and

(viii) Additional responsibilities as may be deemed necessary by the City Council.

(C) Officers, meetings and records.

(i) The members shall annually elect a chair from their membership. If not provided to the PMAC by the City Manager, the members shall also annually elect a secretary for the purpose of taking minutes and related duties.

(ii) All meetings of the PMAC shall be open to the public. Notice of each meeting shall comply with the City's notice policies and Maine's Freedom of Access Act.

(iii) A quorum shall consist of four members.

(iv) The PMAC shall meet regularly.

(v) Minutes shall be kept of all meetings with a copy filed with the City Clerk. An annual report of the PMAC's activities shall be submitted to the City Council in March of each year.

(vi) The chair and one other member, at least one of whom must be a Maine Board of Pesticides Control-licensed landscape professional, shall serve as the Waiver Committee, authorized to review and decide waiver applications. The PMAC shall annually designate the two members who shall serve as the Waiver Committee for the ensuing year.

Sec. 32-5. Applicability of Ordinance.

(A) Allowed and prohibited pesticides.

Subject to the applicability dates set forth in Sec. 32-14 herein, for turf, landscape and outdoor pest management activities in the City, the following shall apply:

(i) Synthetic substances are prohibited unless specifically listed as "allowed" on the U.S. Department of Agriculture's National List of Allowed and Prohibited Substances (the "National List");

(ii) Non-synthetic substances are allowed unless specifically listed as "prohibited" on the National List;

(iii) Pesticides determined to be "minimum risk pesticides" pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and listed in 40 C.F.R. § 152.25(f)(1) or (2), as may be amended from time to time, are allowed; and

(iv) The use or application of pesticides (whether natural, organic, "non-synthetic," synthetic or otherwise) within 75 feet of of a water body or wetland is prohibited.

(B) Exempt pesticides.

- (i) The following activities or materials are exempt from the provisions of this ordinance (and so are allowed):
 - (a) Commercial agriculture;
 - (b) Pet supplies, such as shampoos and tick and flea treatments, when used in the manner specified by the manufacturer;
 - (c) Disinfectants, germicides, bactericides, miticides and virucides, when used in the manner specified by the manufacturer;
 - (d) Insect repellents when used in the manner specified by the manufacturer;
 - (e) Rat and rodent control supplies when used in the manner specified by the manufacturer;
 - (f) Swimming pool supplies when used in the manner specified by the manufacturer; and
 - (g) General use paints, stains and wood preservatives and sealants when used in the manner specified by the manufacturer.

- (ii) The following applications are exempt from the provisions of this ordinance (and so are allowed):
 - (a) Specific health and safety application – Prohibited pesticides may be used to control plants that are poisonous to the touch, such as poison ivy; pests of significant health importance such as ticks and mosquitoes; and animals or insects that may cause damage to a structure, such as carpenter ants or termites;
 - (b) Golf course playing surfaces application – Prohibited pesticides may be used on non-City owned golf course playing surfaces and on the tees and greens of City-owned golf courses provided that the course is designated through Audubon International as a Certified Audubon Cooperative Sanctuary;
 - (c) Invasive insect application – Prohibited pesticides may be used to control the Emerald Ash Borer, Asian Longhorned Beetle, Hemlock Woolly Adelgid, Browntail Moth and other insects identified as invasive by the Maine Forest Service; and
 - (d) Right-of-way spraying – Prohibited pesticides may be used by a public utility that maintains a right-of-way through the City.

Sec. 32-6. Waivers.

- (A) In situations that threaten the public health and safety or for the control of invasive species that pose a threat to the environment, persons may apply to the PMAC for a waiver from the provisions of this ordinance prior to the use of a prohibited product or prior to the conduct of a prohibited application.

(B) The waiver application shall be filed with the PMAC, on a form prescribed by the PMAC, and shall include the following: the proposed location(s); details on the timing(s) of use, substance(s) and amounts to be applied; date(s) of application; management plan that excludes broadcast and preemptive applications; a pest identification and threshold report; and reason for requesting the use/application of a prohibited pesticide. In order to approve a waiver application, the PMAC must first find that all of the following criteria are met:

- (i) A situation exists that threatens the public health and safety and/or where invasive species pose a threat to the environment;
- (ii) The applicant has carefully evaluated all alternative methods and materials;
- (iii) The applicant will, to the greatest extent practical, minimize the impact of the application on abutting properties; and
- (iv) The grant of the waiver will not be detrimental to the public health, safety or welfare.

(C) Waiver applications must be filed with the Waiver Committee, with a copy provided to the Sustainability Coordinator. The Waiver Committee shall act upon a waiver application within five business days of receipt of a completed application. Both members of the Waiver Committee must agree that approval of the application is appropriate in order for the application to be approved; otherwise, the application is deemed denied.

(D) In approving any waiver application, the Waiver Committee may prescribe conditions and safeguards as are appropriate to further the purposes of this ordinance. The decision of the Waiver Committee shall be in writing, with copies provided to the applicant, PMAC, Sustainability Coordinator and City Clerk.

(E) A person aggrieved by a decision of the Waiver Committee shall have five business days to appeal the decision of the Waiver Committee to the City Manager. The appeal shall be in writing and shall state the basis for the appeal. The City Manager shall act upon the appeal within three business days of receipt of the appeal. The decision of the City Manager shall be in writing, with copies provided to the appellant, PMAC, Sustainability Coordinator and City Clerk.

Sec. 32-7. Public Notifications and Signage.

If prohibited pesticides are to be used/applied through an exemption pursuant to Sec. 32-5(B)(ii) or through an approved waiver application pursuant to Sec. 32-6, the following posting requirements shall be complied with by the property owner or applicator.

(A) The owner or applicator shall post warning signs in compliance with this ordinance. These signs must be posted before application activities commence

and left in place for at least 48 hours after actual application or until expiration of the restricted entry interval or reentry time indicated by the pesticide label, whichever is longer.

(B) All signs shall be at least five inches high and four inches wide in size. Signs shall be attached to the upper portion of a dowel or other supporting device so that the bottom of the sign is not less than 12" and the top of the sign is not more than 48" above the ground. The signs shall be of rigid, weather resistant material substantial enough to be easily read for at least 48 hours when placed outdoors.

(C) All notification signs must be light colored (white, beige, yellow or pink) with dark, bold letters (black, blue or green). They shall have lettering that is conspicuous and clearly legible.

(D) The sign must include the following:

- (i) The word "CAUTION" in 72 point type;
- (ii) The words "PESTICIDE APPLICATION" in 30 point type or larger;
- (iii) The Maine Board of Pesticides Control designated symbol;
- (iv) Any reentry precautions from the pesticide labeling;
- (v) The name and telephone number of the entity making the pesticide application;
- (vi) The date and time of the application; and
- (vii) A date and/or time to remove the sign.

(E) All notification signs shall state the chemical and trade name of the pesticide, the date to be applied, the length of time to remain off the treated area as indicated by the pesticide label, and a phone number of the responsible party for more information.

These requirements are in addition to any requirements that may also apply to State of Maine licensed applicators subject to the Maine Board of Pesticides Control rules regarding public notification.

Sec. 32-8. Reporting by State of Maine Licensed Applicators.

In addition to complying with the Maine Board of Pesticides Control rules regarding record keeping and reporting requirements outlined in Chapter 50 of the Code of Maine Rules, all State of Maine licensed applicators are required to submit to the City Clerk an annual summary report on or before February 1 relating to the preceding calendar year. The report shall contain the following information for applications performed in the City in the prior calendar year: target site, pesticide brand name, EPA registration number, total undiluted formulation (in pounds or gallons), and total area treated as listed and as amended on the Commercial Applicator Annual Summary Report required by the Maine Board of Pesticides Control.

Sec. 32-9. Outreach and Education.

- (A) The Sustainability Coordinator or his/her designee shall publish notice of this ordinance in a newspaper of general circulation in the City upon adoption of this ordinance and shall provide periodic notice of this ordinance to identified retailers and lawn, garden, and tree-care providers serving South Portland as well as to churches, schools, and other institutions in South Portland.
- (B) The PMAC shall prepare and publish materials designed to educate the community about the role of pesticides in the local environment and the benefits of organic pest management. This outreach shall include: a community-based social marketing campaign targeting City households and businesses; promotion of professional education and training for State of Maine licensed applicators; distribution of information and news about City practices through South Portland internet and web-based resources; SPC-TV public service announcements; news releases and news events; tax bill inserts; posters and brochures made available at City events and applicable locations that serve the public; workshops, trainings, and demonstration projects; targeted outreach to schools; and any additional methods deemed appropriate by the PMAC.
- (C) The PMAC shall also develop a program to work directly with retailers that sell pesticides in South Portland to:
- (i) Provide educational training for all retail store employees who recommend and sell pesticides for use in the home and garden, highlighting the following:
 - (a) federal, state, and local pesticide regulations;
 - (b) principles of organic pest management;
 - (c) pesticide toxicity and health and environmental concerns;
 - (d) proper pesticide display and storage; and
 - (e) the role of personal protective equipment, pesticide poisoning symptoms, and emergency procedures in case of spills.
 - (ii) Implement a toolkit consisting of educational materials and signage (i.e., posters, signs, stickers) that can be customized, printed, and placed in stores to help consumers understand this ordinance and alternatives to prohibited pesticides.

Sec. 32-10. Violations.

Any person violating any of the provisions of this ordinance or failing or neglecting or refusing to obey any order or notice of the Sustainability Coordinator

and/or the PMAC issued hereunder shall be subject to enforcement action as provided herein.

Sec. 32-11. Enforcement.

It shall be the duty of the Code Enforcement Officer to provide investigative assistance and to enforce the provisions of this ordinance in collaboration with the City's Sustainability Coordinator. The Sustainability Coordinator shall work with alleged violators of this ordinance to bring them into compliance by providing the individual(s) with educational materials and advice on the use of less toxic chemicals to achieve their desired results. The Sustainability Coordinator will maintain a listing of complaints of alleged violations of this ordinance and how they were resolved. The listing will include the nature of the complaint, a summary of the situation and a brief description of how each complaint was resolved. This information will be reported on the City's website in aggregate by Assessor's tax map number and not by specific property address or Assessor's lot number.

Sec. 32-12. Severability.

Should any section or provision of this ordinance be declared by the courts to be invalid, such decision shall not invalidate any other section or provision of this ordinance.

Sec. 32-13. Conflicts with Other Ordinances.

Whenever a provision of this ordinance conflicts with or is inconsistent with another provision of this ordinance or of any other ordinance, regulation or statute, the more restrictive provision shall control.

Sec. 32-14. Effective date; Applicability dates.

This ordinance shall become effective pursuant to Section 225 of the City Charter. In order to allow time for residents and businesses to become familiar with the requirements of this ordinance, the prohibitions on the use of certain products and/or applications (and the related public notification, signage and reporting requirements) shall be phased in as follows:

Phase One: Commencing May 1, 2017, the provisions set forth in Sec. 32-5 on the use or application of certain pesticides for turf, landscape and outdoor pest management activities shall apply to City-owned property (but not to any golf course).

Phase Two: Commencing May 1, 2018, the provisions set forth in Sec. 32-5 on the use or application of certain pesticides for turf, landscape and outdoor pest management activities shall apply to private property (but not to any golf course).

Phase Three: Commencing May 1, 2019, the provisions set forth in Sec. 32-5 on the use or application of certain pesticides on certain portions of golf courses for turf, landscape and outdoor pest management activities shall apply to all golf courses.

Fiscal Note: Less than \$1,000

Dated: August 15, 2016