



CITY OF PORTLAND
Parks, Recreation & Facilities Department
Ethan Hipple, Director

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Parks, Recreation & Facilities Department
Alex Marshall, Parks Director

To: Mayor Snyder and Members of the City Council

From: Alex Marshall, Parks Director

Date: January 26, 2021

Re: February 10, 2021 Workshop on Brown Tail Moth in Deering Oaks and a Treatment Plan

I. Introduction

The following information is provided in support of the City Council Workshop on the Browntail Moth infestation within Deering Oaks Park.

Browntail Moths (BTM) are an invasive species first seen in Somerville, Massachusetts in 1897. Within 17 years the invasive species had spread from Connecticut up the coast to Nova Scotia and as far inland as mid-Vermont and upper New Hampshire. Spraying, clipping, tree removal, a federal quarantine and even parasitoids were enacted to control them. It was likely weather and fungus that eventually collapsed the population in the 1920s. The population retreated to Cape Cod and some islands off Casco Bay, where a resurrection began in 1988. Eleven years later they were seen from Kittery up to Gouldsboro and inland to Augusta. In 2004/2005 the population collapsed again due to cool wet spring weather. The population remained in the Brunswick area and has since been expanding across the State.

II. Concerns

Browntail Moths are a concern for human health as they have tiny, poisonous hairs that can cause a dermatitis reaction similar to poison ivy on sensitive individuals. This reaction can last from a few hours to a couple days depending on the individual and their sensitivity. These hairs become prevalent once the caterpillars emerge from their webs in late April or early May and begin feeding on foliage. The caterpillars will have molted at least five times from their first feed in the spring until they cocoon and emerge as moths in mid-July. It is within that period that these poisonous hairs are most rampant, with the abundance of these shed skins between instars (developmental stages). Even the cocoons are covered with the poisonous hairs. Wind, mowing and raking can agitate these hairs into the air, especially during drought conditions where the hairs do not have a chance to work themselves into the ground. These hairs can stay active for 1-3 years. The moths will proceed to lay 200-400 hair covered eggs that will hatch in August and begin feeding on foliage until winterizing within a communal single leaf nest at tree-top branch tips.

Browntail Moths are also a concern for the health of native trees like White and Red Oaks, Birch and Fruit trees. Deering Oaks consists primarily of Heritage White Oaks and the moth population has accelerated to a level where we could see extensive canopy defoliation if not treated swiftly. Over the past few years, staff have attempted to manage the BTM population by clipping nests and injecting infected trees with a pesticide. However, due to the 2020 drought,

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the population grew to a size where those techniques are no longer effective. Their impact on the health of the Parks' trees, and the Park itself, is increasingly negative and problematic.

The defoliation caused by BTMs can lead to branch dieback within just a couple years. This will lead to the death of many of the Parks' trees, including its heritage Oaks, over the next few years unless we intervene now.

After a recent survey of the trees within Deering Oaks Park, The Maine Forest Service and City staff recorded 313 of 316 trees surveyed to have Browntail moth nests on them. Three heritage oaks recorded over 1,000 nests each, 2 oaks have between 500 and 1,000 nests, 23 oaks have between 100 and 500 nests and 285 oaks range from 1 to 100 nests across their canopy.

III. Course of Action

Staff are recommending to treat the infested trees by means of ground spraying/misting into the canopy during the first week of budbreak (the week of May 20). During the time of actual treatment, we will close the park to all guests for at least one day following the pesticide application. Per the Pesticide Use Ordinance, chapter 34-5 subsection d, this treatment plan is exempt and will not require a waiver.

Staff are recommending that events such as the Farmers Market are moved to alternate locations for 6 weeks, starting the week of May 17 and ending July 2.. Staff are working with the Farmers Market Organization on a relocation to another location during this period. (A diagram of a proposed temporary space in Payson Park is enclosed.)

Staff are also working to find a suitable location for the Wednesday Market, which typically resides in Monument Square but was held in Deering Oaks in 2020 due to COVID spacing requirements.

City Parks staff is committed to ensuring that these modifications are feasible and effectively communicated to the public.

