The Voice of the Nature and Outdoor Tourism Industry Since 1929.

March 4th, 2021

The Honourable John Yakabuski
Minister of Natural Resources and Forestry
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Subject: Resource-Based Tourism Industry's Concerns About Aerial Spraying

Dear Minister Yakabuski,

On behalf of our Board of Directors and the Resource-Based Tourism Industry, Nature and Outdoor Tourism Ontario (NOTO) would like to submit the following position with regards to aerial spraying. NOTO's membership primarily consists of lodges, resorts, and outfitter who offer hunting, fishing and other outdoor experiences across Ontario's remarkable wilderness. Outdoor tourism and forestry have co-existed on the landbase for over a century and are two of the top economic drivers in Ontario. We know that it is a challenge at times to ensure that resources are managed for both important sectors. We would like to draw your attention to concerns that outfitters across the province are raising about the impacts of aerial spraying on our valuable natural resources.

MNRF's Pest Management Strategy focuses on a risk-based proactive approach which involves evaluating the risk of an outbreak of forest pests, establishing a response plan, and allocating resources appropriately through the removal of infested trees and through spray programs. This is meant to increase the focus on integrating and coordinating forest pest management across all jurisdictions and will support more timely and targeted action during a pest outbreak.

Based on what our industry has been seeing on the ground, it appears that MNRF continues to spray forests in a proactive manner, even without the threat of a severe pest outbreak in some Forest Management Units. NOTO would like to highlight the importance for collaboration and communication between MNRF, municipalities and individual/private owners of forests when it comes to pest management initiatives.

It is important to note that not all pest outbreaks negatively impact forests. Our industry would like to know how MNRF will apply a risk-based proactive approach in the next round of Forest Management

Plans. We are worried that being too proactive may lead to unwanted consequences. Native pest outbreaks have a role in keeping forests healthy and resilient. Moderate outbreaks when combined with natural forest disturbances (weather, wind, fires, etc.) help create ideal conditions for new growth. Increasing proactive spraying programs may cause our forests to become less resilient to natural disturbances and pests (including invasive species) thus increasing the need for intervention and increasing costs.

The resource-based tourism industry has mixed feelings on the use of pesticides in Ontario's forests. While we understand the need for pesticides to prevent the establishment/outbreaks of invasive species, we do not approve of the forestry industry proactively spraying the forests as a method to guarantee future wood harvests to control/kill other vegetation to allow newly planted trees to prosper. These pesticides, while effective against pests, eliminate species found in the understory of the forest on which several animals feed on such as deer, moose and bears. These pesticides also impact fish. Some specific observations shared by both outfitters and by First Nations include moose and deer being absent from areas that have been sprayed with herbicides, as well as a lack of understory growth (which is the primary food source for these species). Several First Nations in Northeastern Ontario also reported that these pesticides have harmed many plants commonly used in traditional medicines.

In the paper Ecotoxicology or Glyphosate and Glyphosate-Based Herbicides-Toxicity to Wildlife and Humans, there are several studies listed that reveal that glyphosate and its formulations are considered to have genotoxic, cytotoxic, and endocrine disruption properties and may also be the causative agents of reproduction abnormalities in both wildlife and humans. Glyphosate have also been shown to interfere with CYP enzymes involved in digestion and disrupts the biosynthesis of amino acids by gut bacteria in humans and wildlife. This adversely affects the body over time and the impact manifests over that time as inflammation damages cellular systems leading to gastrointestinal disorders, diabetes, heart disease, obesity and infertility to name a few.

The average half-life of glyphosate in soil is anywhere between two months to years. Glyphosate in freshwater ecosystems has an average half-life of two to ten weeks. When glyphosate undergoes degradation, it produces aminomethylphosphonic acid (AMPA) and carbon dioxide, both of which reduce pH when dissolved in water. However, pH and temperature are known to affect the stability of glyphosate in water. A study conducted on rainbow trout shown that glyphosate was more toxic at higher test temperatures and at different pH ranges. Toxicity increased remarkedly as young fish entered the early swim-up stages. Applications in lentic situations, where dissolved oxygen levels are low, or temperatures are elevated could be hazardous to young rainbow trout.

NOTO recommends MNRF consider a phase-out approach and use alternative methods for pest management. Looking to other provinces, there are several examples on how other provinces have started phasing out glyphosate and moved to other methods for the prevention and control of pest outbreaks:

- In British Columbia, pest control methods are determined on a case-by-case basis. Glyphosate, biological control (sheep and insects) and prescribed burns are the primary methods of pest control. The impact on human safety & the environment (recreational resources, fish & wildlife) as well as the economics of the treatment are considered before selecting the treatment method to meet required reforestation requirements.

- In Manitoba, municipalities, industrial vegetation management (including forestry), golf courses, etc. must apply for permits to spray. Public consultation occurs when someone applies for a permit to allow individuals to ask questions, express concerns and/or file for a spray exclusion zone (buffer zone).
- In Newfoundland and Labrador, licensed individuals/businesses primarily use biocontrol by using bacillus thuringiensis serotype kurstaki (Btk) bacteria. Btk is regarded as environmentally safe as its toxicity is essentially limited to its target pest. Humans, wildlife and beneficial insects are unaffected by this pesticide.
- In Saskatchewan, they use non-toxic pesticides. Some areas are prepared and planted with seedlings, while others may be disturbed with equipment to encourage regrowth or left to regrow naturally.
- Since 2001, the province of Quebec has banned the use of pesticides in their forests. They now use intensive silviculture and ecosystem-based management. Early reforestation (tree planting) is the use of tall planting stock and intensive mechanical release brings crop trees to the free-to-grow stage without use of herbicides. While these methods are a little more expensive, they also created more jobs in the forest industry and cause less harm to the forest ecosystem.

The resource-based tourism industry would like MNRF to consider other methods of pest management that would eliminate the need for the aerial spraying of pesticides. These pesticides harm the ecosystem on which our industry depend on (i.e. bear, moose, deer, bird habitat and subsistence, fish health, forest understory health and growth). We encourage the Ontario Government to look at other provinces and implement other methods of pest control such as intensive silviculture and ecosystem-based management, biocontrol, or even a permit system to ensure pesticides are only used in response to invasive species or severe outbreaks which pose a significant threat to the overall health of the forest ecosystem.

As always, we are available to meet with you and/or your staff at your convenience to work toward a solution.

Sincerely,

L. Marcil

Laurie Marcil
Executive Director

cc. Honourable Jeff Yurick, Minister of Environment, Conservation and Parks
Honourable Greg Rickford, Minister of Energy, Northern Development and Mines