Resource-Based Tourism Industry's Concerns About Aerial Spraying

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About NOTO:

Nature and Outdoor Tourism Ontario (NOTO) is a membership-based, advocacy organization which represents the resource-based tourism (RBT) industry in Ontario. NOTO's membership primarily consists of lodges, resorts, and outfitters who offer hunting, fishing and other outdoor experiences. There are approximately 1300 RBT businesses in Ontario, with approximately 1050 RBT businesses located specifically in Northern Ontario.

NOTO was founded by a group of tourism operators in March 1929 to create an organized voice for the resource-based tourism (RBT) industry in Northern Ontario. Our organization's purpose is the represent the interests of the RBT industry by impressing upon Government the need to protect our pristine Northern wilderness which offer world-class outdoor experiences. Over 90 years latter, Government relations remains in the center of NOTO's focus. NOTO maintains ongoing communication with political leaders and senior civil servants and lobbies all levels of Government to ensure their policies and regulations help the outdoor tourism industry in Ontario grow and prosper.

Background

Resource-Based Tourism Operations on the Landscape

Over 95% of Northern Ontario's land mass is considered Crown Land. There are many industries that exist in Ontario's publicly owned forest. This includes forestry, prospecting and mining, trapping, baitfish harvesting and the resource-based tourism industry (RBT). The RBT industry includes businesses such lodges, camps and outposts which offer a vast array of products and services. These products include world-class hunting and fishing experiences, canoeing, wildlife viewing, cycling, horseback riding, snowmobiling, ATV riding, winter activities such as ice fishing, skating, cross-country skiing, ice climbing and more. RBT operators provide these unique experiences on a commercial basis to both residents of Ontario and guests from outside the province, including the US market.

This means all of the industries and activities listed above all occur on the same land base and consideration for each of these industries must be taken while developing policies and regulations.

Value of the Resource-Based Tourism Industry

Prior to the onset of the pandemic, the RBT tourism industry in Northern Ontario generated $400 million annually in tourism spending and supported 8,000 jobs. All indicators at the beginning of 2020 showed the industry was poised to surpass these numbers. As we look to recover from the pandemic, we must ensure that Ontario's RBT industry is poised to offer unique products located in Northern Ontario's pristine wilderness. This includes world-class hunting and fishing experience, which can be negatively impacted by aerial spraying.

Changes on the Land

The forestry industry is by far one of the largest contributing factors to changes on the land base. The processes of harvesting, renewing, and maintaining Ontario's forests substantially change vast areas during the life cycle of a working forest. Depending on the location of the harvest blocks, access roads, and aerial spraying events, our RBT operators can be substantially impacted as well.

Many RBT businesses are impacted by forestry activities and many are concerned about the impacts of aerial spraying on our valuable natural resources. As forestry activities disrupt nearby wildlife habitats, operators can see the changes that occur on the land base. Some smaller species become more prevalent while big game species such as deer, moose and bear tend to disappear. Operators have also noted that big game (moose, deer, bear), tend to disappear for up to five years following an aerial spraying event, which impacts their guests hunting success rates. All of this has a long-term impact of the future environmental, social and economic value of the site.

MNRF's Pest Management Strategy

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 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.

RBT Operators Sentiment on Aerial Spraying and Impacts They Are Seeing

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.

Various Studies on Glyphosate

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 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 that 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.

A study conducted on rainbow trout showed 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.

These are just some examples of studies that highlight the negative impacts of glyphosate on fish and wildlife.

NOTO's Recommendation – Phasing-Out Aerial Spraying

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), 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.

Summary

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.

Contact:

Laurie Marcil, Executive Director of NOTO
laurie@noto.net
705-499-7556