

## 2022 Pelham Spongy Moth Egg Mass Surveys

### Summary of Results

BioForest conducted spongy moth egg mass surveys in the Town of Pelham from January 16 to February 7, 2023. A total of 133 plots, including 58 street tree plots and 75 forest plots, were assessed in the towns of Fenwick and Fonthill, and in the rural areas surrounding them. In each plot, field staff inspected oak trees or other suitable host trees for spongy moth egg masses. Old and new egg masses were tallied separately to produce a ratio of new:old egg masses for each survey zone. New egg masses were measured, where possible, to calculate the average new egg mass length for comparison with previous surveys.

Overall, the spongy moth population in Pelham has declined significantly from the levels seen in the previous three years. This is a reflection of the success of the recent aerial spray programs conducted by the Town and is consistent with the overall trend seen in other areas of southern Ontario in 2022. For the most part, trees in Pelham are expected to experience nil to light defoliation in 2023. However, there are some isolated pockets where infestations are slightly elevated and where moderate defoliation is expected in 2023 (Figure 1). None of the areas surveyed throughout Pelham are forecast to experience Heavy or Severe defoliation. For reference, the defoliation forecast map from last year is attached (Figure 2).

The forests and street trees in Fenwick are forecast to experience nil to light defoliation in 2023. Only 5% of the egg masses observed in forests and 0.8% of the egg masses observed on street trees in Fenwick were new. The forests and street trees in Fonthill are forecast to experience mostly nil to light defoliation in 2023, however one forest plot at the east end of town on Merritt Road is forecast to experience moderate defoliation. Only 1.4% of the egg masses observed in forests and 2.7% of the egg masses observed on street trees in Fonthill were new. The street trees in the rural areas of Pelham are forecast to experience nil to light defoliation in 2023, and only 3.7% of egg masses observed in these areas were new. The forests in the rural areas of Pelham are mostly forecast to experience nil to light defoliation in 2023, however, four plots are forecast to experience moderate defoliation. These plots are in mostly in the areas just northwest of Fonthill, with one area located just north of Fenwick. Only 2.9% of the egg masses observed in the rural areas of Pelham were new. On average, new egg masses measured 30.96 mm, which is considered large and indicates that while the spongy moth population has declined from its peak, there is a potential for population growth.

Due to these results, **an aerial spray program is not recommended for 2023**. Targeted ground-based treatments for individual trees may be recommended in the forthcoming report, but no wide-scale action is required. Annual monitoring surveys are recommended in order to quantify changes in the abundance and spread of spongy moth in Pelham.

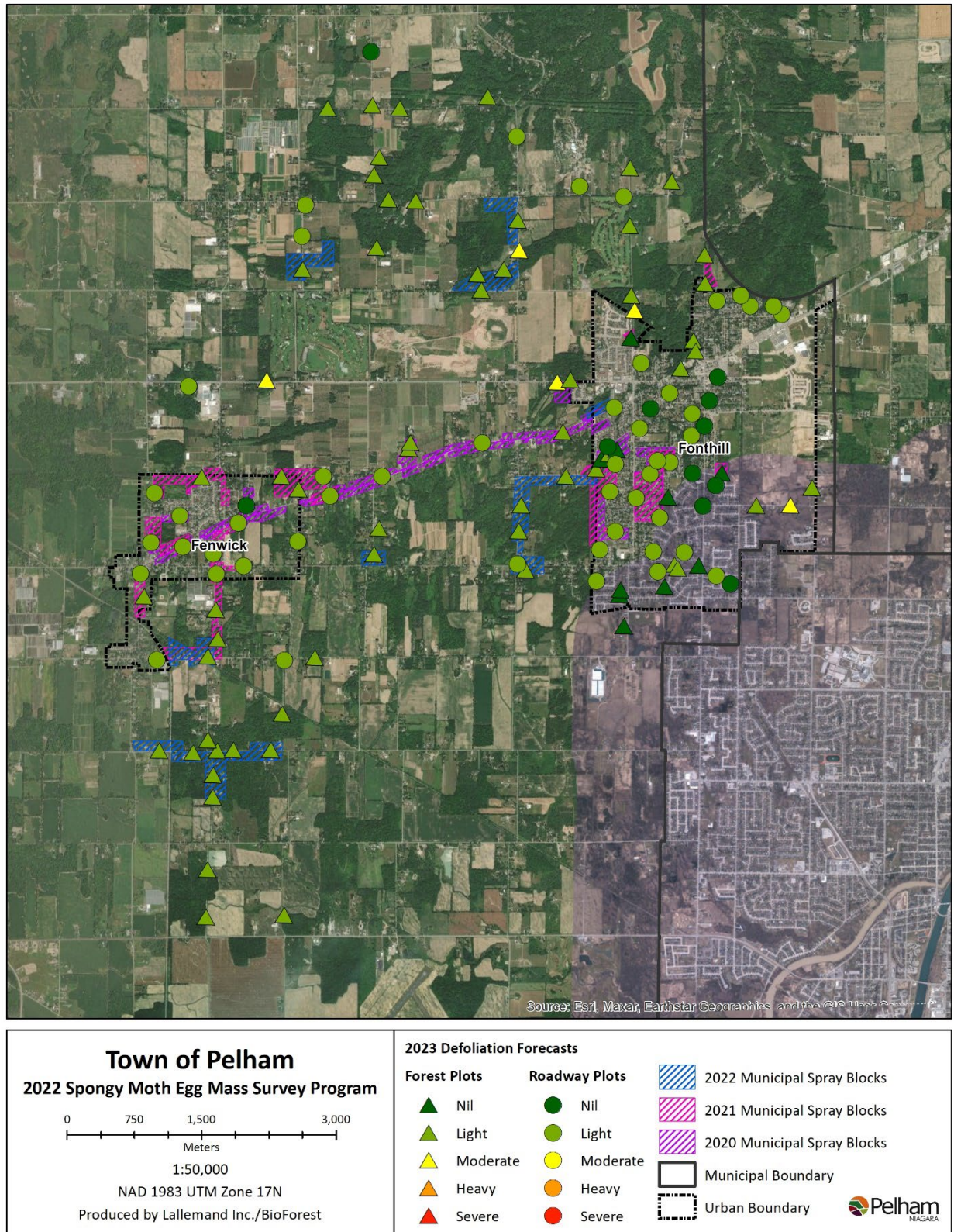


Figure 1: 2023 defoliation forecasts for forest and roadway plots in the Town of Pelham. Spray block boundaries (2020-2022) are illustrated in shaded areas.



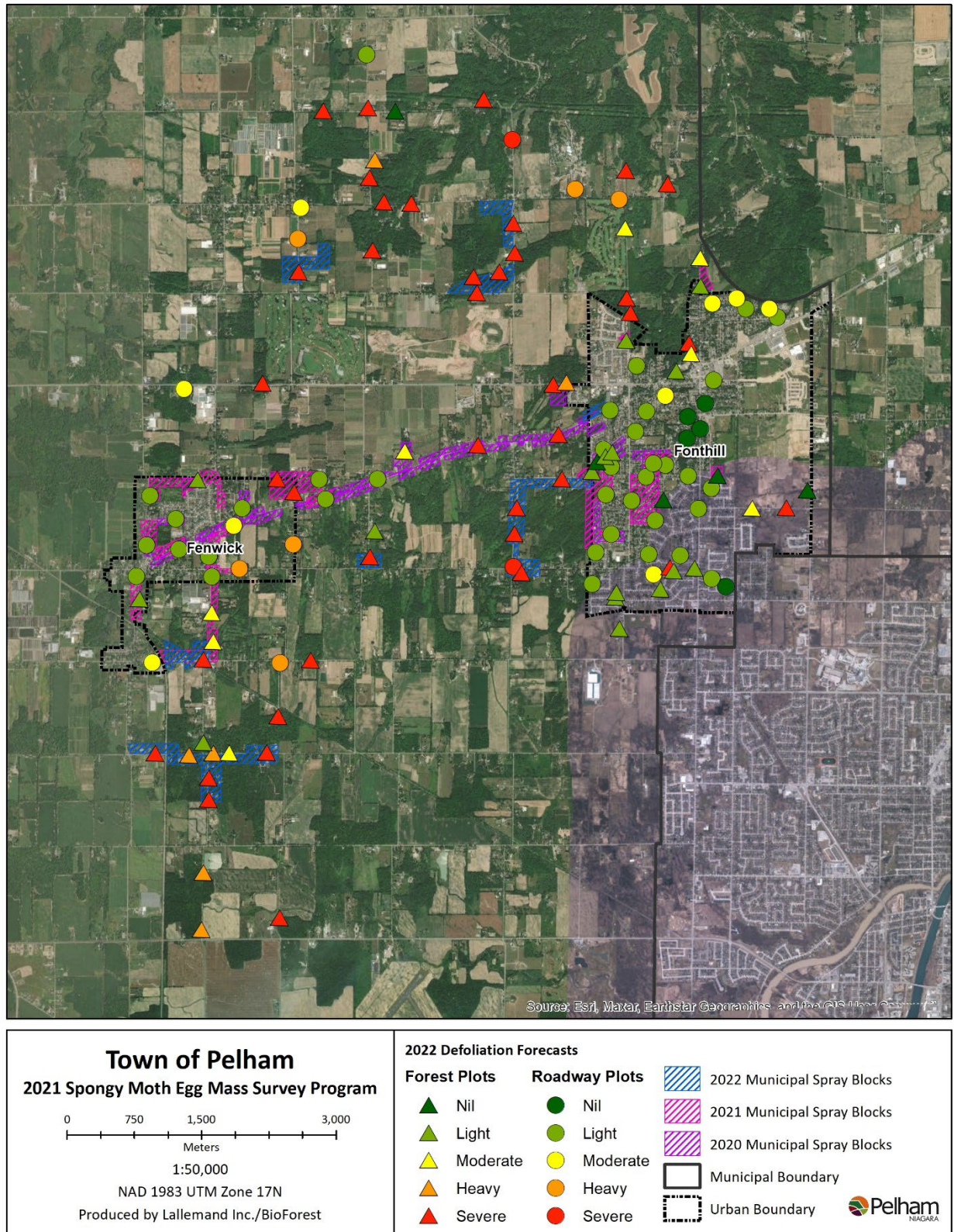


Figure 2. 2022 defoliation forecasts for forest and roadway plots in the Town of Pelham. Spray block boundaries (2020-2022) are illustrated in shaded areas.