

# Summary Report of City of Port Colborne Plan to Delay Roadside Mowing For the Year of 2016

This is the second year of roadside monitoring that I performed for Port Colborne's Environmental Committee on the trial area for delayed roadside mowing. I still continued the same monitoring practices I performed the previous year. Which includes measurement of vegetation height, possible seed dispersal from roadside plants onto neighbouring farmer's fields, plant identification, and Monarch Larva density counts.

The first mowing was scheduled to start the week of May 23<sup>rd</sup>, which was earlier than previous years. Based on my observations, having consistent year to year mowing scheduling times will be beneficial to the roadside habitat. If the first mowing date is scheduled at the middle of June, there will be two benefits; encouraging spring flowering plants to complete their bloom cycle and cutting back vigorous plant growth. Mowing that is performed at this time will still allow Common Milkweed growth for the Monarch Butterfly arrivals that come in mid July.

Still the same 36 species of flowers were identified along the roads as well as new species such as Evening Primrose, and Viper's Bugloss. Interesting note, I counted Common Milkweed plants along these roads and found counts were significantly higher than the previous year of monitoring. I'm thinking that the delay of the summer cut encourages growth of species that multiply through underground runners.

I still performed observation of seed development, and still had the same results that Thistles are the only species that their seeds can be blown into neighbouring farmer's fields. This is a heavy concern for organic farmers who cannot use conventional spraying methods to control these species on their crops.

This year I'm hoping to use other methods to controlling Thistle along the roads. I will try additional cutting of thistles in concentrated areas, spot spray application of acetic acid, scraping of soil and sowing ground cover seeds in bare areas. All methods will be discussed with the organic farmer who is located on Weaver road.

Another idea I wish to try is changing the actual width of the vegetation cut that is performed in June. Instead of having approximately 8 to 10 feet of roadside being cut with the addition of an extended mowing arm on the tractors, I'm asking that they only use the deck mower to cut along the edge of road. I believe this will allow a possibility of a natural hedgerow of flowering vegetation from the deepest part of the ditch. This natural hedgerow could provide a natural buffer to prevent unwanted seeds to be blown in nearby fields. When the final mowing is performed in fall, the full mowing cut (with extension arm) will be done to control seed dispersal from this hedgerow. Another idea is for the final mowing cut in fall is to not cut off as much vegetation, meaning keeping the actual mower blade higher off the ground level than usual. I'm interested to see if trying this method will reduce the amount of cut

vegetation left in the ditch to decompose, therefore could reduce any potential blocking of the natural drainage of the ditches.

In recent years the awareness of the decreasing wild bee populations is a concern for environmentalists, farmers and researchers. Recent studies have determined that the main cause of their decrease is habitat loss. I would like to expand my study this upcoming season to have actively involved residents in providing a 'Pollinator Strip' along their roadside ditch. All that is required of residents that are willing to help out is for them to leave at least a 4 foot strip uncut for the season. I will also be installing different styles of native bee habitats along their strip to help identify which native bees are using the roadways. The cost to the resident is nothing, and requirements and possible outcomes will be explained clearly to the resident prior to the establishment of the strip and wild bee habitat. I will cover the costs personally for the bee habitats for this trial period because this is primarily research study for me. I have however asked the Environmental Advisory Committee to help by covering the costs for a small native bee sign that will be posted along the strip for awareness and educational purposes.

And finally, Monarch counts for the season along roadsides was very low, numbers I found were consistent with the overall North American Monarch counts of 2016. Numerous reasons could explain why the low numbers, primarily it is because of the drought like weather conditions and the bad winter storm that happened in Mexico earlier in the year. However not to be discouraged, insect populations are known to fluctuate and hoping this year we have more moderate temperatures which will benefit the monarch habitat. This is an overall summary which I have discussed with EAC members; it will also be discussed at the Council Meeting on April 24, 2017.