

Greater Moncton Pest Control Commission

Interim Program Report – August 9, 2007

Program Discussion

The annual mosquito control program is entering its last month of operations and it continues to be successful in providing adequate comfort levels for residents of Moncton, Riverview and Dieppe. Surveillance activities started on April 25th with larviciding starting soon after on April 27th. This is a contrast from last year where the program started very early on April 11th.

The number of students hired this year was decreased by two. This resulted in a contingent of six staff committed to mosquito control and two staff assigned to activities such as the nesting bird survey and stream monitoring. The reduction in staff was not a result of budget constraints but an attempt to be more efficient in the use of our human resources. We use two two-person crews for the large marshes and two one-person crews for smaller sites who periodically combine to survey the large park areas. For the first one and a half months we had a veteran employee work with us which helped us overcome the challenge of new staff obtaining their proper biting fly certification from the Province. The new crew design has proven to be very successful and the staff has done an excellent job maintaining adequate surveillance and control of their assigned sites. Any of the difficulties we have had in meeting emergence deadlines have been a result of inadequate technology as opposed to lack of personnel. New application technology is being researched for possible inclusion in the 2008 budget.

The start date of the program was more typical than last year. Rainfall for April was below normal resulting in less water in the marshes. Rainfall for May was also below normal but not to the same extent and very similar to rainfall received in 2006. As the marshes re-flooded we experienced a larger emergence than typical which required a large amount of larvicide. A second order of larvicide was placed to replenish our inventory. Normal precipitation was received in June and slightly below normal in July.

Adult mosquito collection started on June 6th. Indications are that we are achieving better results in 2007 than in the previous year. This is most prominent during the spring and early summer where collections show up to a 30% improvement. Data collected from the traps are subject to many variables, the most significant being weather conditions on the collection night. Humidity levels and wind can skew trap results greatly. An additional site was added to the list this year at the western limits of Riverview on Ritchie Rd. This is well outside of any of our control areas and serves as reference point for our control efforts.

This particular site is predominantly affected by a nearby Duck's Unlimited Wetland and adult populations are normally high in early summer and then taper off due to the natural breeding cycles of mosquitoes in that type of breeding habitat.

The nesting bird survey has two very capable employees who are experiencing encouraging results. A total of 334 nests have been located, identified to species and tracked to measure the success of the brood. A detailed report of their work will be included in the Commission's Annual Report.

A revised method of tracking the costs of the program is being introduced this year. In the past, river marshes that front a municipality were attributed to the municipality. In order to better represent where the work we do is actually carried out we have identified what marshes lie outside of a municipality and have tagged them as being inside either Moncton, Coverdale or Dorchester Parishes. This will be a help in understanding the regional characteristics of mosquito breeding and control as well as reveal what areas are demanding the most resources.

Due to the revised crew assignments in 2007, the surveillance lists are typically completed before the end of the week. Slack time is utilized to continue creating an inventory of catch basins in each of the municipalities. Each catch basin is located with GPS, the type of structure is classified and the depth of the sump is measured. Approximately 2300 basins have been collected so far this season.

Program Statistics

Weather

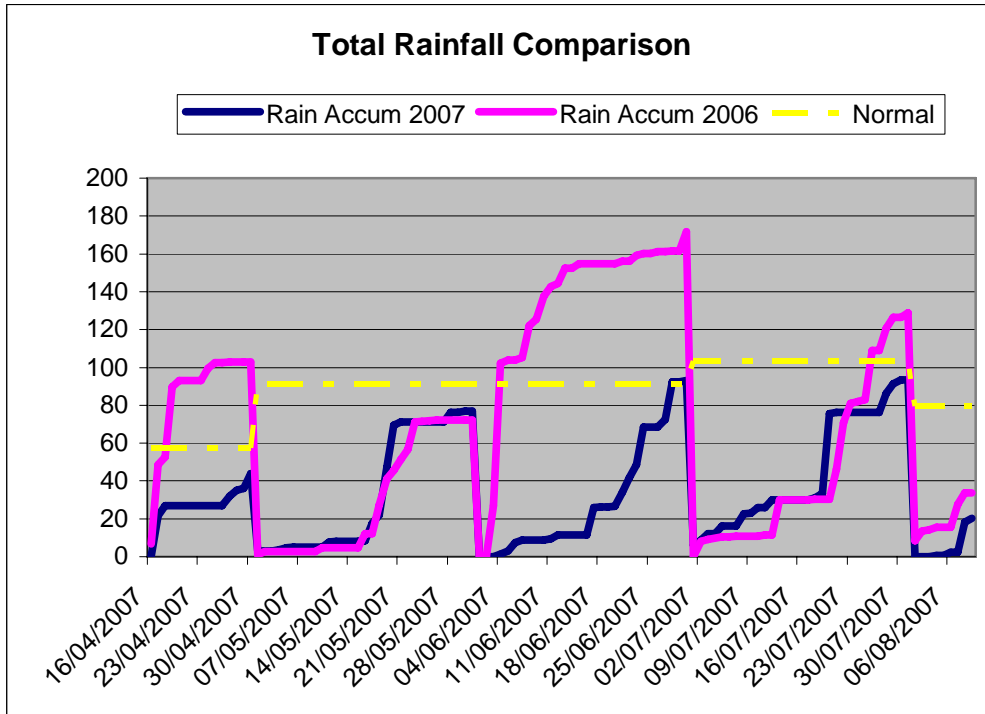


Figure 1: Accumulated rainfall amounts for the spring have been below normal. A period of rain ending May 21st resulted in a large larviciding effort. Rainfall in June and July have been normal and then slightly below normal.

Program Jurisdictions

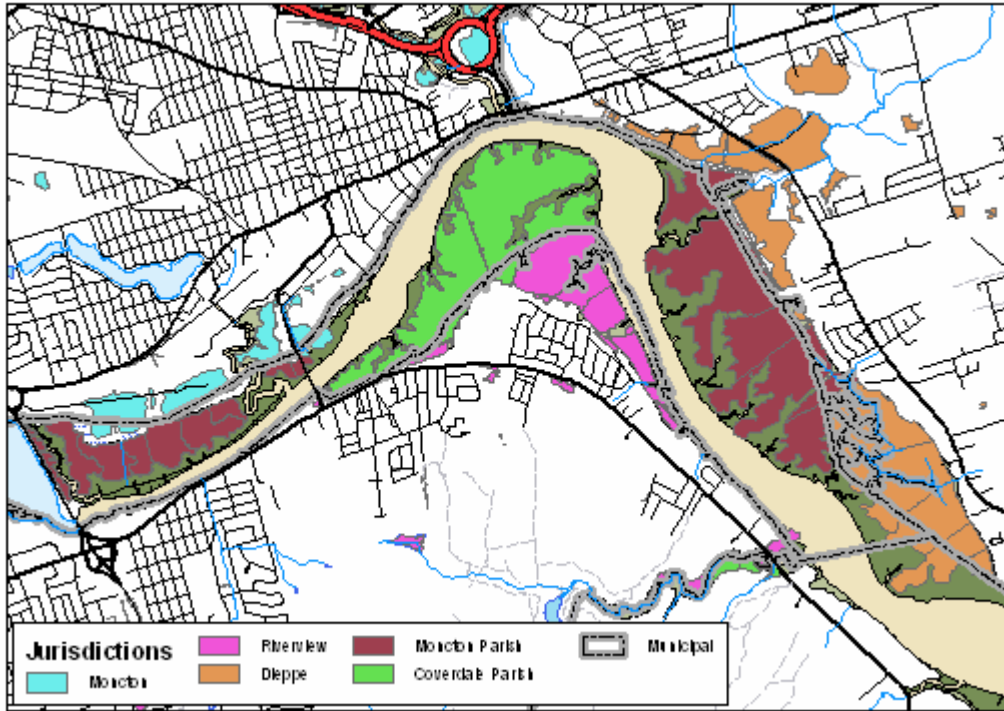


Figure 2: Breeding sites that cross boundaries are assigned based on where the dominant breeding pools are located. The majority of the river marshes are within the limits of the Parishes as opposed to the Municipalities.

Breeding Activity

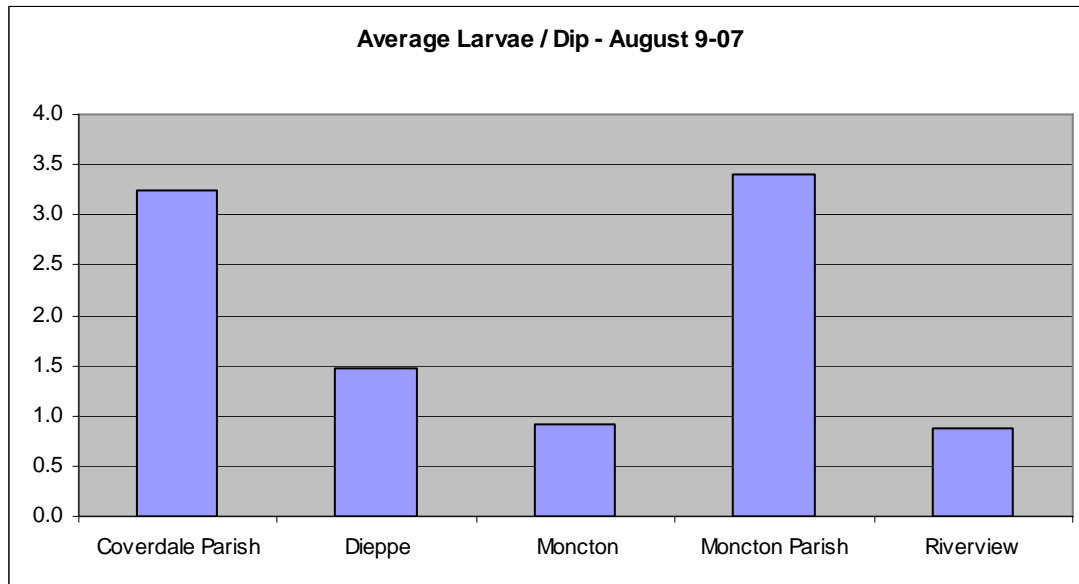


Figure 3: The scale in this chart indicates the average amount of larvae found per dip in each inspection site or station as opposed to entire breeding site. This reflects the number of larvae based on a surface area unit and does not reflect the production of total area of the whole breeding site.

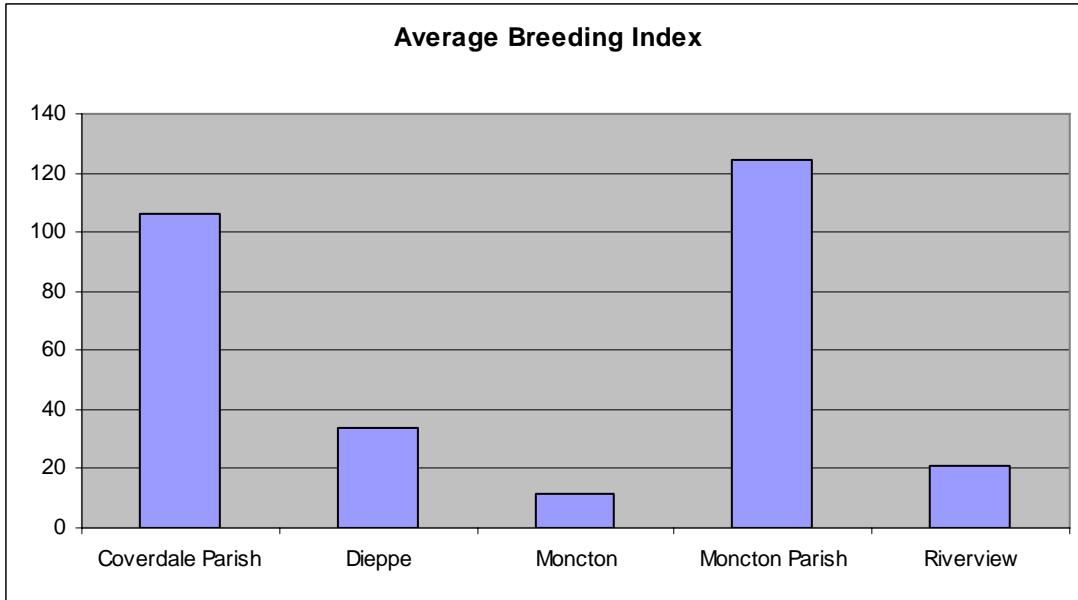


Figure 4: This chart portrays the average Breeding Index (BI) for each jurisdiction. The BI is a product of the average larvae found per dip and the number of sampling sites in the area. This reflects the total breeding contribution of each site.

Larvicide Use

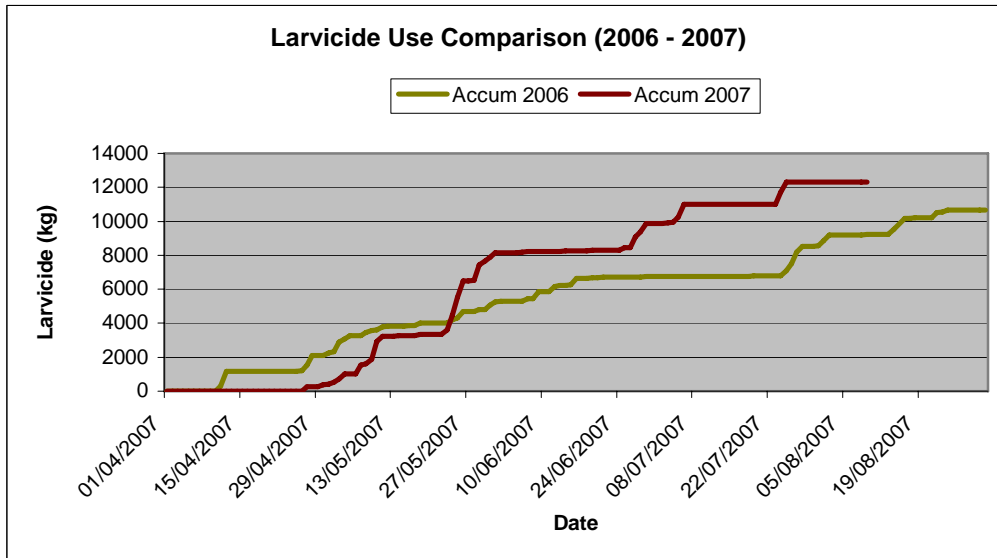


Figure 5: While the season start was more typical, the rate of larvicide use has been much higher in 2007 due to a large period of rain in the third week of May.

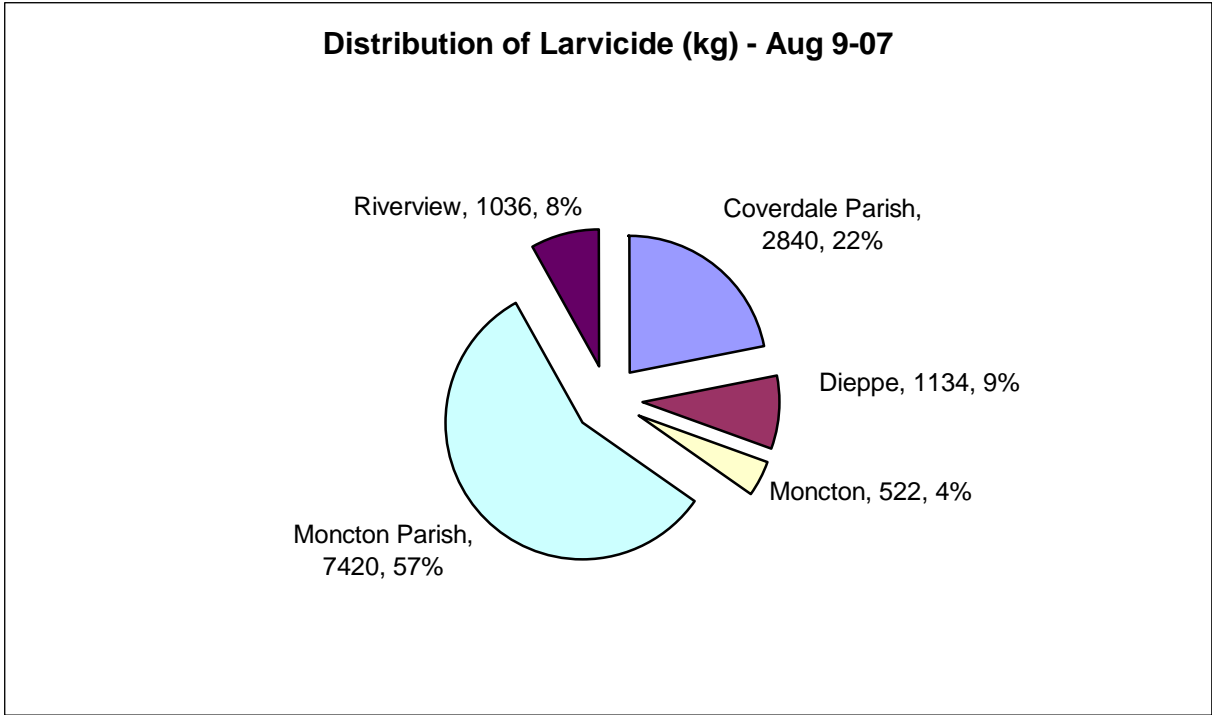


Figure 6: Many of the most productive breeding areas are within parish limits.

Project Hours

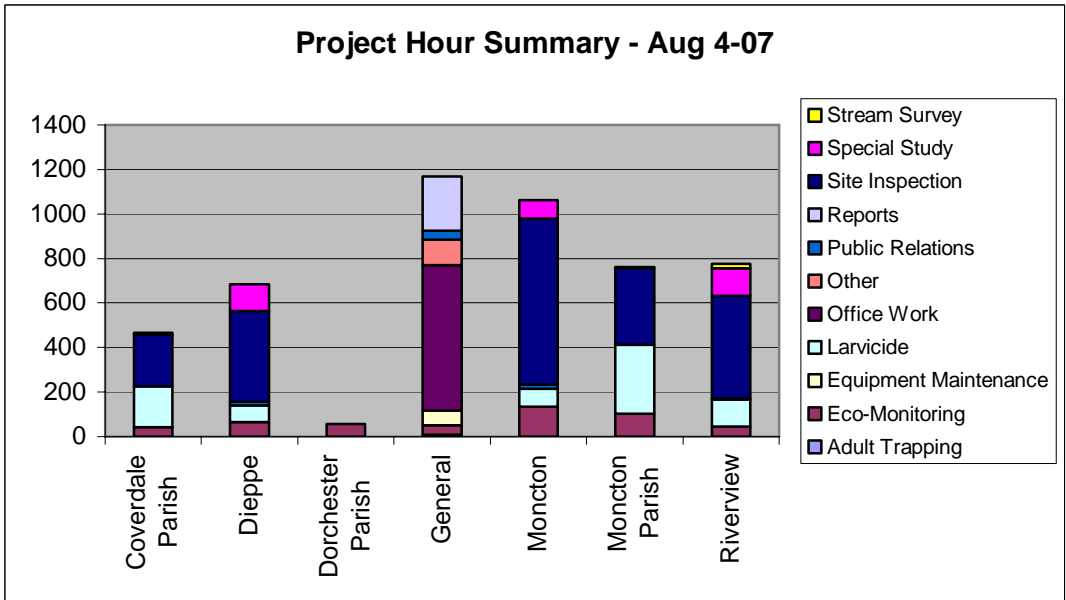


Figure 7: Project hours do not include those of management.

Mosquito Counts

