Mosquito breeding habitat distribution in and around Rotary Park and Fox Creek (St-Anselme, N.B.)

Introduction

Following the 1997 spray season, a problematic situation seemed to have developed in and adjacent to St-Anselme Park (St-Anselme). To verify this, the Commission decided that a mapping analysis of the mosquito breeding habitat in the area was needed.

During the past three years the field crews have monitored an increase in flying mosquitoes within the St. Anselme Park. Field monitoring indicated that the drainage pattern had been greatly altered within the Park and that stagnant water ponds were developing within the park. These stagnant ponds have been identified as prolific breeding areas for mosquitoes. During the past summer we undertook a systematic evaluation of the park area in order to identify impediments to the natural drainage system.

Materials and Methods

Cartography

The mapping portion of this study was completed with the aid of aerial photos acquired from the City of Moncton, Engineering Department and New Brunswick Geographical Information Corporation (N.B.G.I.C.) (photo # 96100-150 96/8/12 21-1 1:35 000 L-35). The fieldwork was accomplished primarily by foot with the assistance of an all terrain vehicle (ATV) supplied by the City of Moncton. Map realization was completed with a computer assisted mapping program (Canvas 5.0.2).

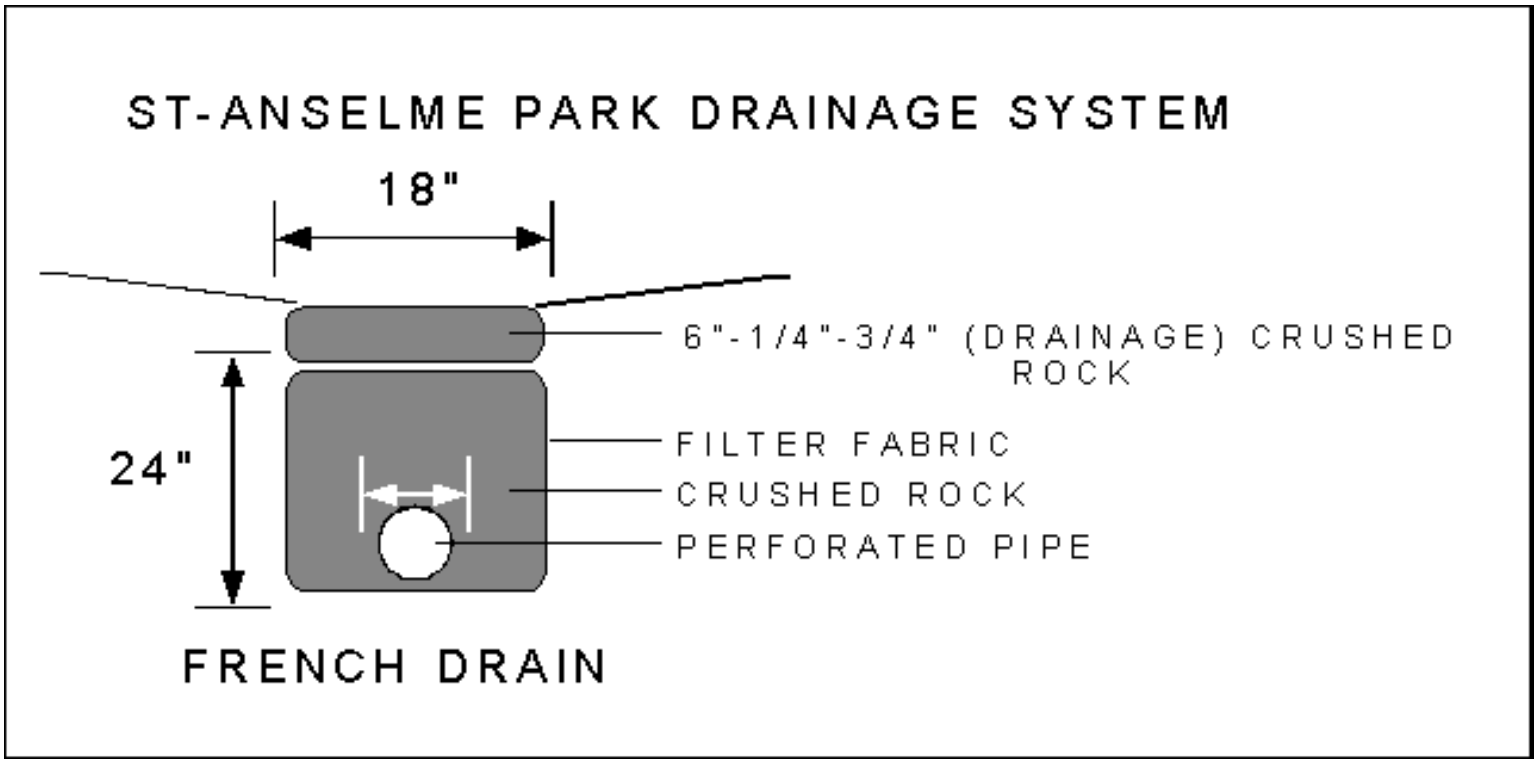
Summary of Results

F*ox Creek*

Due to the difficult access of this area, it has not yet been integrated into the Commission's spray program. The results of this study indicate that the majority of the mosquito problems in the park originate from these areas. The isolated water ponds are difficult to detect because of the very thick overlying brush, which covers the flood plain. In order to effectively control these problems we will need to allocate many more resources to the park area.

Trail Drainage System

Since 1997, the Community Services Department of the Town of Dieppe has been working on the draining of the trail system of St-Anselme Park. The addition of the drainage system has provided a significant improvement in eliminating the water retention areas. This has significantly reduced the mosquito breeding area, however, additional work should be allocated to the elimination of the swales within the park in order to further eliminate these mosquito breeding areas.



Forested Areas

The forested area within the park continues to provide numerous breeding areas.

This isn't specific to the St. Anselme Park. It remains the greatest impediment to mosquito control within the wooded area. However, the changes to the drainage patterns within the park continues to increase the breeding area.

Other areas of interest

It should be noted that a private property overlooking and sloping into the park on the southwestern side has been clear-cut this spring. The clear-cut area could possibly cause erosion within this area and silt run-off could reach the streams and cause additional siltation which will increase the mosquito breeding potential during the warm summer months.

-

Conclusion

Although a great majority of the St-Anselme Park area contains many favorable mosquito breeding habitat, the primary breeding habitat seems to be concentrated along Fox Creek. Special attention should be allocated to the forested area inside the borders of the park during the next spray season as they provide prime breeding habitat. The addition of French drains to the trail system is another area of concern. Due to budget constraints, the completion of accompanying swales by the Town of Dieppe has been curtailed. Additional swales would certainly assist the functionality of the French drainage system.

If possible additional funds should be allocated for the completion of the drainage system. If the drainage system is not closely monitored it could prove to be a significant breeding area for mosquito larvae in the St. Anselme area.

As the Park is subjected to high traffic levels during the summer it does place a significant strain on our field staff and budget.

otary Park/Parc Rotary

eater Moncton Pest Control Commission
ommission de désinsectisation du Grand Moncton

ICAL DRAINAGE
CH IN THE PARK

CH BASSIN LEADING TO
INAGE DITCH AND CULVERT

ONE OF THE MANY TRAILS IN THE PARK

Arena A.J. LeBlanc

Ch. Melanson Rd.

Ch. Bourque Rd.

Église St-Anselme Church

Rue Amirault St.

Rue Roberval St.

Ruisseau Fox Creek

Ch. Fox Creek Rd.

Marché St-Anselme Market

0 100 200 300m

LEGEND

- ROAD (PAVED)
- TRAIL (BLUE) 1,3Km
- TRAIL (RED) 2,2Km
- TRAIL (GREEN) 2,8Km
- CONIFEROUS FOREST
- PRIVATE PROPERTY
- MARSH/ INTERMITTENT MARSH
- TRAIL(SLEIGH RIDE)
- FRENCH DRAIN
- POTENTIAL MOSQUITO BREEDING HABITAT
- PARK BOUNDRIES
- P PARKING
- CLEAR-CUT

Bourgeois 1998