



THE
ONTARIO WATER RESOURCES
COMMISSION
WATER POLLUTION SURVEY
of the
POLICE VILLAGE OF EARLTON

1964

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ONTARIO WATER
RESOURCES COMMISSION

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REPORT ON

a

WATER POLLUTION SURVEY

of

the

POLICE VILLAGE OF EARLTON

November 24, 1964

**Division of Sanitary Engineering
Ontario Water Resources Commission**

INTRODUCTION

A water pollution survey was made in the Police Village of Earlton on November 24, 1964, to investigate the discharge of sanitary and industrial wastes to open ditches and drainage courses.

The assistance received from the staff of the Timiskaming Health Unit during this survey is gratefully acknowledged.

GENERAL

The Police Village of Earlton, located in the central portion of the Township of Armstrong has a population of 731 which represents over half of the township population.

The police village is in a low plain area in which heavy clay overburden prevails. Drainage is predominately westerly to Evanturel Creek, although the southern portion drains to a tributary of the Wabi River.

WATER SUPPLY

The water supply for this municipality is obtained from private drilled well supplies. A number of these privately-owned water supplies serve more than one dwelling. In a sanitary survey conducted by the Timiskaming Health Unit in 1961 it was established that three of the supplies serviced

more than five private residences. In accordance with The Ontario Water Resources Commission Act, privately-owned water works used to supply water for more than five private residences "shall at all times be maintained, kept in repair and operated in such manner and with such facilities as may be directed from time to time by the Commission".

It was reported at the time of this survey that several water supplies in the community had tested "doubtful" during previous sampling for bacteriological examination.

WASTE DISPOSAL

Individual septic tank disposal systems are utilized for the disposal of sanitary wastes. Sub-surface disposal systems in this area are installed under the direction of the Timiskaming Health Unit. The heavy clay nature of the soil combined with a high water table and poor drainage has resulted in many malfunctioning disposal systems. Sanitary wastes were gaining access to the street ditches and to a storm sewer along the north side of Main and Concession Streets. These wastes reportedly stagnate in the ditches creating insanitary conditions. The Timiskaming Health Unit recommended the installation of municipal sanitary sewers as a result of the 1961 sanitary survey.

PROPOSED SEWAGE WORKS

It is understood that a municipal sewerage system is under active consideration by the township for this police village. This proposed sewer system would direct all sanitary wastes by gravity to a sewage pumping station located west of the village from which the wastes would be pumped to a waste stabilization pond located in Lot 8 of Concession IV.

INDUSTRIAL WASTE DISPOSAL

(a) Dionne Cement Block Factory

There were no waste disposal problems at this industry at the time of this survey.

(b) Earlton Creamery

An average of 250 producers ship approximately 900 gallons of cream per day, six days a week during the summer months. Shipping is reduced to two to three days a week during the winter months. Reportedly, 650,000 pounds of butter are produced per year.

Processing wastes such as cooling and wash waters are directed to the Main Street storm sewer. Buttermilk is stored in a 300-gallon storage tank and is collected daily by the producers.

Two drilled well supplies provide the water for the creamery and for 18 homes in the area.

SAMPLE ANALYSIS

Samples were collected for chemical analyses at the OWRC Laboratory in Toronto. Bacteriological samples were examined at the Ontario Department of Health Laboratory at Timmins.

Adequate protection for surface waters should be provided, except in certain specific instances influenced by local conditions, if the following waste discharge concentrations are obtained:

5-day Biochemical Oxygen Demand -
not greater than 15 ppm

Suspended Solids - not greater than 15 ppm

Phenol - not greater than 20 ppb

The results of the samples collected during this survey and a map indicating sampling locations and other pertinent information are appended to this report.

DISCUSSION

The frozen conditions prevented the sampling of street drainage ditches during this survey. The Main Street storm sewer was discharging at the time and samples were collected from the catch basin at the intersection of Concession Street and North Avenue and from the storm sewer outfall west of the village.

Results of these samples exceeded this Commission's objectives for wastes of this nature in both suspended solids concentration and BOD. The bacteriological coliform concentration of 240,000 coliforms per 100 ml of water tested is also excessive.

The abovementioned wastes discharge to Ewanturel Creek which flows in a northerly direction to the Englehart River.

SUMMARY & CONCLUSIONS

On November 24, 1964, a water pollution survey was conducted in the Police Village of Earlton.

A combination of poor drainage, a high water table and poor absorption qualities of the soil has resulted in the malfunction of individual septic tank disposal systems. The doubtful quality of water in several well supplies in the area is believed to be a result of this waste disposal problem. The installation of a municipal sewage disposal system would no doubt alleviate the sanitary waste disposal problem as well as reduce further contamination of water supplies.

This municipality is at present actively considering a municipal sewage system for the Earlton area. From the results of this survey it is concluded that a municipal disposal system should be installed without delay.

RECOMMENDATION

It is recommended that this Commission be kept informed of all progress in the development of this sewage project.

All of which is respectfully submitted,

District Engineer: _____

S. E. Salbach
for H. Browne

Approved by: _____

K. H. Sharpe, Director

Prepared by: W. C. Stevens

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SEWAGE ANALYSIS

MUNICIPALITY: Police Village of Earlton
Township of Armstrong

SOURCE: Drainage

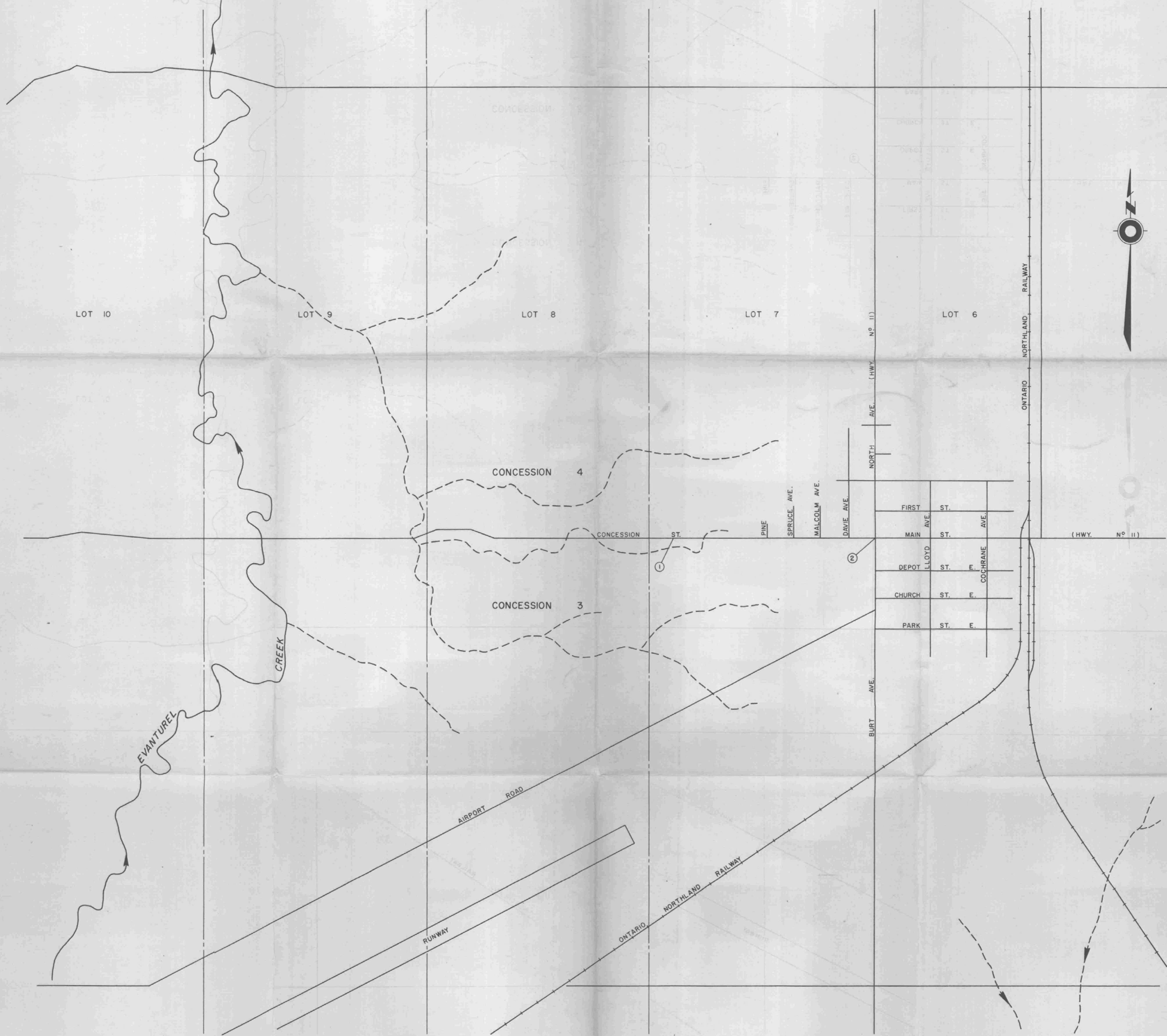
Date Sampled: November 29, 1964

By: W.C. Stevens

| <u>Lab. No.</u> | <u>5-day BOD (PPM)</u> | <u>Total</u> | <u>Solids (PPM)</u> | | <u>Phenols in ppb</u> | <u>Bacteriological Examination</u> | |
|-----------------|------------------------|--------------|---------------------|--------------|-----------------------|------------------------------------|---------------|
| | | | <u>Susp.</u> | <u>Diss.</u> | | <u>Total Coli-form Organisms</u> | <u>E.coli</u> |
| 11588 | 37 | 698 | 24 | 674 | 5 | 240,000 | 23 |
| 11590 | 124 | 804 | 65 | 739 | 18 | 240,000 | 23 |

11588 - (1) Storm sewer outfall - west end of Concession Street

11590 - (2) Catch basin at intersection of North Avenue and Concession Street



LEGEND
 ② - SAMPLING POINT

| | |
|---|-------------------|
| ONTARIO WATER RESOURCES COMMISSION | |
| POLICE VILLAGE OF EARLTON (AND SURROUNDING AREA) | |
| SAMPLING POINTS | |
| SCALE: 0 1/8 1/4 MILES | |
| DRAWN BY: A.R.S. | DATE: MARCH, 1965 |
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