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TOWNSHIP OF MOUNTJOY - 1964
DISTRICT OF COCHRANE

THE
ONTARIO WATER RESOURCES
COMMISSION
WATER POLLUTION SURVEY
OF THE
TOWNSHIP OF MOUNTJOY

1964

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Report on township of
Mountjoy, water pollution survey.

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Report

on

TOWNSHIP OF MOUNTJOY

WATER POLLUTION SURVEY

Division of Sanitary Engineering

Ontario Water Resources Commission

November 1964

INTRODUCTION

The purpose of this survey was to investigate and assess the magnitude of sanitary wastes gaining access to open ditches and watercourses in the Township of Mountjoy.

The Porcupine Health Unit personnel assisted in locating and sampling the major problem areas. The assistance obtained from the Health Unit staff is gratefully acknowledged.

The field work for the survey was initiated on November 23, 1964.

GENERAL INFORMATION

The Township of Mountjoy with a population of 2,634 is located in the District of Cochrane, west of the Town of Timmins. The residential population is considerably denser in that area of the township adjacent to Timmins.

Drainage from the township discharges to the Mattagami River which traverses the south, east and north areas of the township.

WATER SUPPLY

The water supply for the township consists of both private well supplies and a municipal water supply.

The municipal water supply which serves the built-up south-east portion of the township is owned by the Vallee Construction Company Limited. Water from the Mattagami River and a well is chlorinated prior to being pumped to the distribution system.

SANITARY WASTE DISPOSAL

Septic tank systems and privies are utilized for the disposal of sanitary wastes.

A house to house sanitary survey was made by the Porcupine Health Unit in 1962, of the built-up area of the township. In the area bordered by the Mattagami River on the south, Park Street on the north, Norman Street on the west and Ronald Street on the east, 193 houses were inspected. Septic tank systems were utilized by 148 houses, the remaining 45 had outdoor privies. Sixty-three or approximately one-third of the inspected houses were noted to have defective septic tank and/or sink waste disposal systems creating public health nuisances. As a result of that survey the installation of municipal sanitary sewers was recommended. It was also recommended at that time that further building in the above mentioned area be prohibited until such time as sanitary sewers could be provided.

The above mentioned area is a low flood plain area located in an oxbow in the Mattagami River. This peninsula was completely flooded in the spring of 1961. Lot sizes are generally 40 feet by 100 feet, many containing more than one house. The dense housing conditions, the heavy clay nature of the soil and the poor drainage in this area has made the installation of satisfactory septic tank disposal systems difficult.

Investigations in this area revealed that contaminating wastes were gaining access to the street drainage ditch system. This was particularly evident at sample locations M-3, M-7 and M-8. It was reported that the ground-water supply in this area was not a dependable drinking water supply. These polluting wastes collect in the road ditches which drain to the Mattagami River.

MATTAGAMI HOTEL

The Mattagami Hotel owned by Mr. O. Vaillancourt consists of 26 motel units, three apartments, a 180-seat lounge, a 225-seat cocktail bar and a 48-seat dining room. Hotel wastes are directed to a two-chamber 4500-gallon concrete septic tank. The septic tank effluent is directed to a tile field containing 4000 feet of weeping tile. This tile field is underdrained and discharges to a roadside ditch on the north side of Riverside Road.

INDUSTRIAL WASTES

Industry is not predominant in the township and there appeared to be no industrial waste problems at the time of this survey.

The Vallee Construction Company Limited is located on Riverside Road. There were no industrial wastes discharged from this property.

MUNICIPAL SEWAGE DISPOSAL

The Township of Mountjoy is presently negotiating to provide municipal sanitary sewers for the built-up portion of

the township. The proposed system would direct sanitary wastes by gravity to a sewage pumping station from which it would be pumped to the Timmins water pollution control plant.

REFUSE DISPOSAL

Refuse from Mountjoy Township is disposed of at the Town of Timmins refuse disposal site located in Ogden Township. Refuse is burned regularly at this site but no cover is provided.

SAMPLE ANALYSES

Samples were collected from the Mattagami River, the Mountjoy River and from streams and drainage ditches. Frozen conditions prevented the sampling of several watercourses and drainage ditch outfalls where domestic wastes were suspected.

All chemical samples were submitted to the Ontario Water Resources Commission laboratory in Toronto. The bacteriological samples collected were examined in the Department of Health Regional Laboratory in Timmins.

The OWRC objectives for surface waters in Ontario are as follows:

5-day Biochemical Oxygen Demand (BOD) -not greater than 4 ppm

MF Coliform - not greater than 2,400 coliforms per 100 ml

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

are obtained:

5-day BOD - not greater than 15 ppm

Suspended Solids - not greater than 15 ppm

DISCUSSION

Sampling locations and other pertinent data are located on the appended map. The laboratory results of samples collected during this survey are appended to this report in Table I.

The results of samples collected from the Mattagami and Mountjoy Rivers during this survey were within the objectives of this Commission. An organized sample programme was conducted by the Porcupine Health Unit of the Mattagami River at the municipal water works intakes and the bathing area. The 1964 sample results are appended in Table II of this report. The total coliform concentrations of 13 of the 29 samples collected were in excess of the OWRC objective for surface waters used for recreational purposes in Ontario. Over 65 per cent of the samples contained E.coli organisms which indicates pollution of intestinal origin.

The excessive BOD and high suspended solids concentrations observed in samples collected from drainage ditches in the area were indicative of the domestic wastes which gain access to this storm drainage system. Bacteriological coliform concentrations were also excessive in the creek and ditch samples.

SUMMARY & CONCLUSIONS

A water pollution survey was conducted in the Township of Mountjoy on November 23, 1964.

The residential population was more concentrated in that area of the township immediately west of the Town of Timmins. This survey was therefore centered around this built-up portion of the township.

Investigations revealed that domestic wastes were gaining access to the storm drainage system as a result of malfunctioning private waste disposal systems. Contaminating wastes from the Mattagami Hotel disposal system were discharged to the Riverside Road drainage ditch. These wastes are contained in the street ditches which drain to the Mattagami River.

Inadequate surface drainage, poor absorbent quality of the soil and the limited space available over a considerable portion of this subdivided and built-up area has prevented the proper construction and function of private septic tank systems. The installation of municipal sanitary sewers would alleviate this waste disposal problem.

The laboratory results of samples collected from the Mattagami River during this survey were within the objectives of this Commission. However, samples collected by the Porcupine Health Unit staff during an annual sample programme often contained excessive coliform concentrations. It is


reasonable to assume that contaminating wastes are gaining access to the river in this area.

RECOMMENDATION

Municipal sanitary sewers should be installed in the Township of Mountjoy as soon as possible so that the wastes can be treated at the water pollution control plant in Timmins, thus, terminating the practice of discharging untreated wastes to the drainage ditches and watercourses.

All of which is respectfully submitted,

District Engineer:


H. Browne

Approved by;

K.H. Sharpe, Director

Prepared by: W.C. Stevens

SOURCE: See below

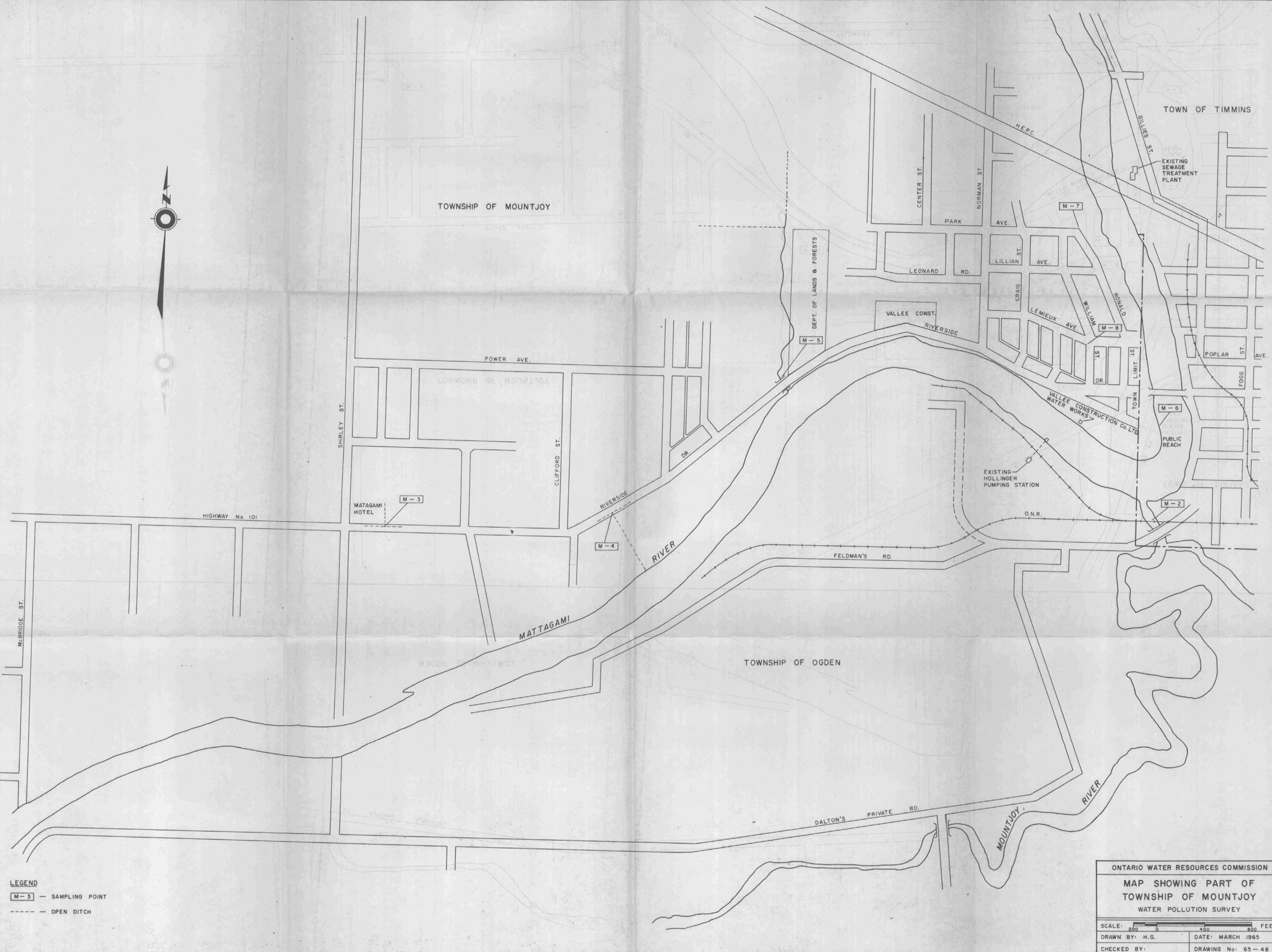
TABLE I

Lab. No.	5-day BOD (P.P.M.)	Solids (P.P.M.)			Lab.No.	Total Coli- form Organisms	E.coli
		Total	Susp.	Diss.			
11479	2.0	120	3	117	5451	43	0
11480	2.2	134	2	132	5452	210	0
11481	20	310	20	290	5447	24,000,000	2,400
11482	1.5	288	2	286	5446	7,500	23
11483	1.7	256	3	253	5453	75,000	23
11484	1.6	114	2	112	5450	75	0
11485	25	906	336	570	5448	24,000,000	240
11486	150	698	154	544	5449	24,000,000	23
11479	M-1	Mattagami River at Spruce Needles Golf & Country Club					
11480	M-2	Mountjoy River at Mattagami River below railway bridge					
11481	M-3	Mattagami Hotel discharge to north side of Riverside Rd.					
11482	M-4	Ditch - discharge to Mattagami River at culvert south side of Riverside R					
11483	M-5	Creek - adjacent to Lands & Forests property at cement culvert - north side of Riverside Rd.					
11484	M-6	Mattagami River at Mattagami River swim area					
11485	M-7	Drainage ditch at north corner of Park Ave and Ronald St.					
11486	M-8	Drainage ditch at south corner of Lemieux Ave. and William St.					

TABLE II

Bacteriological results of samples collected from the Mattagami River by the Porcupine Health Unit staff.

<u>Location</u>	<u>Date(1964)</u>	<u>M P N</u>	
		<u>Total Coliform Organisms</u>	<u>E.coli</u>
Intake- Hollinger Pumphouse- Town of Timmins	July 13	39.0 plus	39.0 plus
	July 20	150.0	93.0
	July 27	9300.0	0.0
	August 5	1100.0	0.0
	August 10	46,000.0	46,000.0
	August 17	4600.0	23.0
	August 24	750.0	0.0
	September 9	750.0	0.0
	September 14	1100.0	240.0
	September 21	4600.0	0.0
	October 5	46,000.0	0.0
Intake- Township of Mountjoy municipal water works(Vallee Construction Co. Ltd.)	July 10	--	39.0 plus
	August 5	4600.0	240.0
	August 10	240,000.0	24,000.0
	August 17	2400.0	240.0
	September 9	2400.0	0.0
	September 14	2400.0	240.0
	September 21	110,000.0	23.0
	October 5	15,000.0	23.0
Mattagami Beach (Swimming Area)	June 22	240.0	23.0
	June 29	2300.0	24,000.0
	July 6	240.0	0.0
	July 13	4000.0	93.0
	July 20	240.0	3.6
	July 27	--	240.0
	August 5	150.0	23.0
	August 10	240.0	0.0
	August 17	150.0	23.0
August 24	350.0	0.0	



LEGEND
M-3 — SAMPLING POINT
--- OPEN DITCH

ONTARIO WATER RESOURCES COMMISSION
MAP SHOWING PART OF
TOWNSHIP OF MOUNTJOY
WATER POLLUTION SURVEY

SCALE: 0 200 400 800 FEET
DRAWN BY: H.G. DATE: MARCH 1965
CHECKED BY: DRAWING No: 65-48