

**LEGISLATIVE ASSEMBLY OF THE  
NORTHWEST TERRITORIES  
5<sup>TH</sup> COUNCIL, 33<sup>RD</sup> SESSION**

**RECOMMENDATION TO  
COUNCIL NO. 10-33**

**TABLED ON NOVEMBER 17, 1966**



October 25, 1966.  
Confidential - Not  
for release before  
tabling during the  
33rd Session of  
Council.

**NORTHWEST TERRITORIES**

RECOMMENDATION TO COUNCIL NO. 10-33  
(Second Session, 1966)

*Tabled on November 17, 1966*

POLICY FOR THE PROVISION OF WATER SUPPLY AND SEWAGE  
DISPOSAL SERVICES IN THE NORTHWEST TERRITORIES AND YUKON

DISPOSITION

Tabled	To Committee	Accepted as Read	Accepted as Amended	Deferred (to Session)	Rejected	Noted not Considered

POLICY FOR THE PROVISION OF WATER SUPPLY AND SEWAGE  
DISPOSAL SERVICES IN THE NORTHWEST TERRITORIES AND YUKON

Aim

1. The aim of this paper is to present a revised policy and program for the provision of water supply and sewage disposal services in the Northwest Territories and Yukon for inclusion in the Federal-Territorial Financial Agreements commencing April 1, 1967.

Background

2. Community water supply and sewage disposal are a local matter and therefore a provincial responsibility under the B.N.A. Act. In practice provinces pass this responsibility on to municipalities or other local governments. Some provinces help with loans for major construction but there is no pattern of direct assistance.

3. Notwithstanding the delegation of this responsibility to local authorities, provinces retain the responsibility for legislation in the field of sanitation in the interests of public health.

4. In southern Canada, physical and climatic conditions generally are such that contamination does not become a problem until the community is large enough to afford proper water and sewerage systems. In practical terms, pit privies and septic tanks can be used with little danger in small southern communities. In northern Canada, however, problems of sanitation arise at a very much earlier stage of community growth and the means to overcome them are generally very expensive. In addition, health facilities are limited and living conditions primitive, emphasizing the need for proper sanitation.

5. Recognizing this, a pattern of assistance for such facilities in northern communities has developed over the years. This pattern was drawn into a formal statement of policy by the Interdepartmental Committee on Federal-Territorial Financial Relations in 1962.

Present Policy

6. The present policy as contained in the Report of the Inter-Departmental Committee on Federal-Territorial Financial Relations in 1962 provides for assistance in the following form to unorganized communities in the Northwest Territories. The Report made no provision for assistance to municipalities.

7. The present policy provides for the following:

(a) The Federal Government will pay 100% of the capital and operating costs to service its own installations including Crown Owned housing.

(b) The Federal Government will pay 50% of the capital and operating costs to service Indians and Eskimos with the balance payable by the Indians or Eskimos themselves or from Federal Welfare funds to the extent that the people themselves are unable to pay.

(c) The Territorial Government will pay 50% of the capital and operating costs to service everyone not covered by (a) and (b) with the balance paid by the users or from Territorial Welfare funds to the extent that the users are unable to pay.

(d) These subsidies by the Federal and Territorial Governments will be reduced to whatever extent necessary to ensure that the annual cost

to an average user of a piped water and sewerage system does not fall below \$150 per year and to an average user of trucked or similar system, below \$50. In very high cost areas the cost to the consumer can, of course, be well above \$150 and \$50, despite the application of the 50% subsidy.

(e) Users will pay for internal plumbing systems and for connections to piped systems where necessary.

#### Implementation of Policy

8. For the reasons outlined below, this policy has not been fully implemented at any location. Its basic principles, however, have been used under varying circumstances and the experience gained has resulted in the development of the policy now proposed.

9. Specifically, the partial systems at Rae and Providence were built as an outcome of this policy. Piped systems at Hay River, Watson Lake and Mayo are being built in accordance with the principles expressed in the policy. These principles, too, have been used in connection with the development of trucked services in the Arctic.

#### Defects of Policy

10. The main difficulty in implementing the policy as it was written has rested in the poverty and diversity of the communities. 90% or more of the people cannot afford more than a small part of their share of the capital and operating costs and some can pay nothing. In addition, the difficulty of distinguishing between Whites, Indians, Metis and Eskimos would have made the apportioning of welfare costs difficult even if the staff had been available to determine what the user could afford and what should be given as welfare.

11. While the intent of the policy, to deliver water to each dwelling and to remove the sewerage from it, was laudable and, as a long term aim, sound, it was not practicable. Many homes are still not equipped for the service or are not yet sited so as to be accessible.

12. The cost sharing arrangements are unnecessarily difficult to administer and become quite complicated in places like Fort Smith when extensions to an existing system are proposed. Furthermore these same difficulties of administration tend to inhibit the assumption of responsibility by local authorities.

13. Problems have also developed in assessing costs to be charged for services supplied from expensive systems already developed, e.g. Fort Simpson. Strict application of the formulas would have made charges impossibly high.

#### Evolution of Proposed New Policy

14. One of the first things noted in the application of the present policy was that the monthly amortization cost of the capital facilities was nearly always equal to or less than the monthly operating costs. This observation led to the adoption of a slight change in the application of the cost sharing formula. Under this change, the capital costs of the facility are borne by the responsible governments while the operating costs are borne by the consumers, provided that the government's share does not exceed 50% of the calculated monthly capital and operating costs.

15. It was also noted that above the tree line federal interest were predominant in that by far the largest part of the population is Eskimo or civil service, both of whom are a federal responsibility under the policy. Below the tree line, whilst a considerable Indian Affairs interest is present, the Territorial interest predominates. From this observation developed the conclusion that the Territorial Government should handle the capital financing for projects below the tree line while the Federal Government should handle it for those above.

16. From the situation prevailing in the unserved area at Inuvik, developed the concept that the pick-up of sewage in plastic bags or in cans should be performed as a free service in the interests of public health. The service centre concept had been tried and had failed. Similarly, since the water side of the service was workable and has in fact operated successfully in many other places, it was concluded that a free water point accessible to all was desirable to accommodate those who could not nor would not pay for a delivery service. Along with these two basic free services a water delivery and liquid sewage pick-up service was developed to service those who could afford and wanted something better. This was divided into two parts: one for those who lived in houses equipped with pressure systems and sewage collection tanks and who wanted all the benefits of modern conveniences and the second for those who would rely on the free sewage pick-up but who wanted and could pay for a minimal water delivery. The first category was served by a trucked service, the operational costs of which were borne by the consumer and the second by a water delivery service up to 180 gallons per week for which a charge of only \$5 a month has been made. This \$5 represents simply the added cost of making the delivery and does not cover the share of total overhead costs of the system which could be attributed to such deliveries.

17. From a study of the Hay River water and sewerage development where the total capital costs would, when amortized, have exceeded the 50% government share of capital and operating costs and from a study of piped services in other locations, came the concept of senior government responsibility for major capital facilities in the case of piped services and local responsibility for what might be called the local improvement portion of the facilities.

18. The proposed new policy incorporates all of these improvements which have evolved from experience with the original policy. It is believed that the new policy can be applied equally as well to organized communities as to unorganized communities, although some flexibility in terms of capital cost may have to be retained to accommodate exceptionally difficult physical conditions that might be encountered in a municipality.

#### Proposed New Policy

19. The Government of the Yukon Territory shall assume the responsibility for the provision of water supply and sewage disposal services to communities in the Yukon.

20. The Government of the Northwest Territories shall assume the responsibility for the provision of water supply and sewage disposal services to communities below the tree line in the Northwest Territories.

21. The Federal Government shall assume the responsibility for the provision of water supply and sewage disposal services to communities above the tree line in the Northwest Territories, until it becomes practicable to turn over this responsibility to the N.W.T. Government through an amendment to the 5 year agreement now proposed or through a later 5 year agreement.

22. In all cases, these services will be provided in the most economical manner possible and the selection of the appropriate system shall be governed by the principle that the monthly amortization of the capital cost shall not exceed the monthly operating costs.

23. Notwithstanding the intent to provide these services in the most economical way, the minimum system design standards shall be based on water quantities of 10 gallons per capita per day for dwellings not provided with pressure systems and 40 gallons per capita per day for those provided with pressure systems. The minimum acceptable sewage disposal system shall consist of pick-up by plastic bag or can. These minima shall also be maxima where economics dictate.

24. Insofar as is possible, systems shall be operated by local authorities who shall collect all revenue and provide for the continued operation of the systems in the normal way. As soon as practicable, ownership shall be transferred to properly constituted authority for a nominal sum.

25. In all communities where water supply and sewage disposal services are provided under this policy, the responsible government shall provide for and shall finance the following minimum services:

- (a) The pick-up and disposal of sewage in plastic bags or cans as a free service from all dwellings in the community requiring this service.
- (b) The provision of water points throughout the community from which water may be drawn at no charge by community residents. Quantities drawn from water points should be limited to 10 gallons per capita per day for private use only. Water points should be so distributed within the community so that each dwelling will be within 500 feet of a point.
- (c) The provision of a water delivery service for the delivery of minimum quantities of water at the incremental cost. "Minimum quantities" for this purpose shall be taken as 180 gallons per dwelling per week and the charge shall be \$5 per month unless the service can be provided for less. This \$5 represents simply the added cost of making the delivery and does not cover the share of total overhead costs of the system which could be attributed to such deliveries.

26. Apart from the above, the consumers shall pay for the operating costs of any service provided. Rates for the purpose shall be established in the normal manner all users paying their proportionate share of the costs. It may be necessary for any given system, particularly a piped system, to charge slightly less than the actual operating costs at the outset in order to encourage more consumers. Rates should be set, however, so as to balance costs at least within five years of start up in communities generally and within two to three years in the case of municipalities.

27. In circumstances where it is economic to install piped services, the responsible government shall bear the capital cost of the major facilities required but consumers will be called upon to pay for the services fronting their property, should the 50-50 cost sharing formula outlined in para. 22 so demand. Extensions to existing piped systems should be treated in the same manner, the extension being paid for by those whose property is thereby served or made capable of being served. Some modification of this principle may be necessary from time to

time because of local circumstances but it is suggested that a capital charge averaging not less than \$10 per foot front always be levied on fronting property for extensions unless it can be clearly shown that the actual cost prorated across all the property served is less.

28. Services developed under this policy shall be developed for the benefit of all members of any community. Particular care must be taken to avoid the appearance of special treatment being granted to any sector of the community.

#### Estimated Costs and Program for Implementation

29. Attached as Appendix 'A' is a program for the construction, operation and maintenance of the facilities needed in the Northwest Territories over a five-year period, commencing April 1, 1967. The Federal and Territorial cost shares are also shown.

30. It is proposed that the Territorial share for the Northwest Territories be incorporated into the five-year Financial Agreement commencing April 1, 1967.

31. It is proposed that a similar schedule be developed for the Yukon Territory by the Territorial Council and that this be incorporated into the five-year Financial Agreement commencing April 1, 1967.

#### Recommendations

32. It is recommended that the policy and program set out in this paper be adopted by the Federal Government and by the Governments of the Northwest Territories and Yukon.

## PROPOSED WATER AND SEWER SERVICES

## CAPITAL AND O &amp; M COSTS

1967 - 1972

CAPITAL COSTSUMMARY

YEAR	ARCTIC DISTRICT		MACKENZIE DISTRICT	
	N.W.T.	OUTSIDE N.W.T.	FEDERAL	TERRITORIAL
	FEDERAL			
1967 - 68	485,000	70,000	200,000	307,000
1968 - 69	445,000	171,000	175,000	218,500
1969 - 70	450,000	100,000	175,000	267,500
1970 - 71	364,000	49,500	81,000	252,500
1971 - 72	282,000	8,500	19,000	226,500
sub-totals	2,026,000	399,000	650,000	1,272,000
TOTALS	3,075,000			1,272,000

OPERATION & MAINTENANCE COST

1967 - 68	811,000	61,000	70,000	437,500
1968 - 69	909,000	107,000	104,000	464,000
1969 - 70	998,000	138,000	109,000	489,500
1970 - 71	1,111,000	163,000	115,000	509,500
1971 - 72	1,201,000	179,000	117,000	545,000
sub-totals	5,030,000	648,000	515,000	2,445,500
TOTALS	6,193,000			2,445,500

Revised : sept. 21, 1966



SETTLEMENT	1967 - 1968		1968 - 1969		1969 - 1970		1970 - 1971		1971 - 1972	
	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M
ARCTIC BAY	-	-	-	-	100,000	10,000	50,000	20,000	-	25,000
BAKER LAKE	100,000	25,000	50,000	26,000	-	26,000	-	27,000	22,000	28,000
BROUGHTON ISLAND	80,000	25,000	80,000	26,000	-	26,000	-	27,000	-	28,000
CAPE DORSET	-	25,000	-	26,000	80,000	26,000	42,000	27,000	25,000	28,000
CLYDE	-	-	-	-	80,000	10,000	80,000	20,000	-	25,000
CORAL HARBOUR	80,000	25,000	80,000	26,000	-	26,000	-	27,000	-	28,000
ESKIMO POINT	75,000	25,000	-	30,000	-	32,000	-	33,000	-	34,000
FROBISHER BAY	-	55,000	-	56,000	-	57,000	-	58,000	-	59,000
GRISE FJORD	-	500,000	-	550,000	-	600,000	80,000	650,000	-	700,000
IGLOOLIK	80,000	10,000	80,000	20,000	-	25,000	-	26,000	-	27,000
PANGNIRTUNG	-	26,000	-	27,000	100,000	28,000	22,000	28,000	25,000	29,000
POND INLET	40,000	25,000	40,000	26,000	25,000	27,000	-	30,000	-	32,000
PORT BURWELL	-	-	75,000	20,000	50,000	25,000	-	26,000	-	27,000
RANKIN INLET	-	40,000	-	41,000	-	42,000	10,000	43,000	50,000	44,000
REPULSE BAY	-	-	-	-	-	-	80,000	20,000	80,000	25,000
RESOLUTE	-	10,000	-	10,000	10,000	12,000	-	12,000	-	14,000
WHALE COVE	30,000	20,000	40,000	25,000	5,000	26,000	-	27,000	-	28,000
TOTALS	485,000	811,000	445,000	909,000	450,000	998,000	364,000	1,111,000	282,000	1,201,000

SETTLEMENTS NOT CONSIDERED THIS PERIOD

BEICHER ISLAND      LAKE HARBOUR  
CHESTERFIELD INLET      PADLET  
HALL LAKE      PADLOPING ISLAND

revised : june 8, 1966

ARCTIC DISTRICT - NORTHERN MANITOBA & NEW QUEBEC 5 YEAR FEDERAL-TERRITORIAL FINANCIAL PERIOD, 1967-1972

WATER & SEWER SERVICES

SETTLEMENT	1967 - 1968		1968 - 1969		1969 - 1970		1970 - 1971		1971 - 1972	
	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M
<u>NORTHERN MANITOBA</u>										
AKUDIUK	-	5,000	-	5,000	-	6,000	-	6,000	-	7,000
<u>NEW QUEBEC</u>										
BELLEN	-	6,000	-	8,000	-	9,000	-	10,000	-	11,000
FORT-CHIMO	50,000	25,000	66,000	27,000	-	30,000	16,000	32,000	-	35,000
INOUCDJOUAC	-	6,000	-	8,000	75,000	10,000	33,500	25,000	-	27,000
IVUGIVIK	-	-	75,000	10,000	25,000	25,000	-	27,000	-	30,000
MARICOURT	-	6,000	10,000	8,000	-	9,000	-	10,000	-	11,000
PORT-NOUVEAU-QUEBEC	-	7,000	10,000	9,000	-	10,000	-	11,000	-	12,000
POVUNGNIYUK	20,000	16,000	10,000	20,000	-	25,000	-	26,000	-	28,000
SAGLOUC	-	10,000	-	12,000	-	14,000	-	16,000	8,500	18,000
TOTALS	70,000	61,000	171,000	107,000	100,000	138,000	49,500	163,000	8,500	179,000

SETTLEMENTS NOT CONSIDERED THIS PERIOD

HOPES ADVANCE BAY      POSTE-DE-LA-BALEINE - QUEBEC GOV'T

KOARTAK

SETTLEMENT	1967 - 1968		1968 - 1969		1969 - 1970		1970 - 1971		1971 - 1972	
	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M
AKLAVIK	-	20,000	-	22,000	-	22,000	-	23,000	-	23,000
ARCTIC RED RIVER	15,000	1,000	-	1,000	-	1,500	-	1,500	-	2,000
FORT FRANKLIN	20,000	1,500	-	2,000	-	2,000	-	2,500	-	2,500
FORT GOOD HOPE	-	2,000	-	2,000	-	2,000	-	2,000	200,000	25,000
FORT McPHERSON	6,000	40,000	-	40,000	150,000	45,000	18,500	45,000	17,500	45,000
FORT NORMAN	-	25,000	-	27,000	-	27,000	3,000	28,000	-	28,000
FORT PROVIDENCE	-	30,000	-	30,000	-	32,000	-	32,000	3,000	35,000
FORT RESOLUTION	-	-	100,000	15,000	100,000	25,000	-	25,000	3,000	25,000
FORT SIMPSON	15,500	70,000	100,000	75,000	17,500	77,000	6,000	78,000	-	80,000
FORT SMITH #	-	15,000	-	15,000	-	16,000	-	16,000	-	17,000
HAY RIVER #	6,000	15,000	-	15,000	-	16,000	-	16,000	-	17,000
INUVIK	17,500	48,000	18,500	48,000	-	49,000	-	49,000	-	50,000
TRUCKED UTILIDCR +	-	75,000	-	76,000	-	77,000	150,000	78,000	-	80,000
MORPHY	215,000	38,000	-	38,000	-	38,000	-	40,000	-	40,000
NORMAN WELLS #	3,000	4,000	-	4,000	-	5,000	-	5,000	-	5,000
RAE	3,000	35,000	-	36,000	-	36,000	-	37,000	-	37,000
SNOWDRIFT	-	1,500	-	1,500	-	1,500	-	1,500	-	1,500
WRIGLEY	-	1,500	-	1,500	-	1,500	75,000	15,000	-	15,000
YELLOWKNIFE #	6,000	15,000	-	15,000	-	16,000	-	16,000	-	17,000
<b>TOTALS</b>	<b>307,000</b>	<b>437,500</b>	<b>218,500</b>	<b>464,000</b>	<b>267,500</b>	<b>489,500</b>	<b>252,500</b>	<b>509,500</b>	<b>226,500</b>	<b>545,000</b>

SETTLEMENTS NOT CONSIDERED THIS PERIOD

ENTERPRISE LAC LA MARTRE  
 FORT L'JARD NAHANNI BUTTE  
 FORT RELIANCE ROCHER RIVER  
 JEAN MARIE RIVER

+ SYSTEM OPERATED (1966-67) BY N.C.P.C.  
 COSTS COMPLETELY RECOVERED BY RATES

# MINIMUM WATER AND SEWAGE PICKUP SERVICES  
 TO SUPPLEMENT EXISTING TOWN OR COMPANY  
 SYSTEM

revised : sept. 21, 1966

## MACKENZIE DISTRICT - ABOVE TREE LINE

## 5 YEAR FEDERAL-TERRITORIAL FINANCIAL PERIOD, 1967-72

## WATER &amp; SEWER SERVICES

SETTLEMENT	1967 - 1968		1968 - 1969		1969 - 1970		1970 - 1971		1971 - 1972	
	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M	CAPITAL	O & M
CAMBRIDGE BAY	200,000	30,000	-	32,000	-	32,000	-	33,000	-	34,000
COPPERMINE	-	15,000	100,000	20,000	100,000	25,000	-	27,000	-	28,000
HOLMAN	-	-	75,000	25,000	-	25,000	6,000	27,000	-	27,000
TUKTOYAKTUK	-	25,000	-	27,000	75,000	27,000	75,000	28,000	19,000	28,000
TOTALS	200,000	70,000	175,000	104,000	175,000	109,000	81,000	115,000	19,000	117,000

SETTLEMENTS NOT CONSIDERED THIS PERIOD

BATHURST INLET

PELLY BAY

CAPE PARRY

SAGHS HARBOUR

GJOA HAVEN

SPENCE BAY