

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

**RECOMMENDATION TO  
COUNCIL NO. 11-33**

**TABLED ON NOVEMBER 17, 1966**



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**NORTHWEST TERRITORIES**

RECOMMENDATION TO COUNCIL NO. 11-33  
(Second Session, 1966)

*Tabled on November 17, 1966*

A STUDY OF LAUNDRY FACILITIES IN  
SMALL COMMUNITIES

DISPOSITION

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

## A STUDY OF LAUNDRY FACILITIES IN SMALL COMMUNITIES

A study has been conducted at the request of the NWT Council at the January, 1966 Session on the setting up of laundry facilities in small communities.

The study is broken down into five parts-

- (1) Introduction
- (2) Appraisal of existing facilities
- (3) Comparison of various methods of laundering
- (4) Summary
- (5) Appendix

### (1) Introduction

The Department has had no hard and fast rules for providing laundries in Northern Settlements.

The need for such facilities was recognised particularly when the Department embarked on its first program of supplying housing for Eskimos.

The houses provided under this program were small single room houses with no provision at all for bathrooms or laundry rooms.

As the Northern educational program developed, and more and more children started attending school, it became increasingly evident that there was a great need for the provision of bathing and laundering facilities in settlements. At the same time it was also apparent that body cleanliness and clothing cleanliness required special education programs aimed at the child and adult levels.

Several small bathhouse laundries were provided to help fill the needs of the people. Most of these were developed by Departmental staff working with the local communities and small amounts of money were supplied from Department funds to set up these facilities; in one or two cases bathhouse-laundry buildings were designed and built from scratch but more generally arrangements were made to modify existing buildings to serve the purpose.

The cost of water, fuel for heating, and electric power for the bathing and laundry equipment, was generally paid for using Departmental funds.

The new Eskimo rental housing program provides much larger houses (complete with bathroom) and an adequate ration of fuel oil which will go a long way to meeting the bathing problem in future. It would appear, however, that there is a continuing need to provide better laundering facilities, with particular emphasis on the drying process.

### (2) Appraisal of Existing Facilities

An appraisal has been made of existing laundry facilities at small settlements. It has not been possible to produce cost figures for operating the laundries because under our system of accounting operational charges of this sort form part of the overall administrative operational costs.

#### Baker Lake

The bathhouse laundry at this site has not worked very well. The local people were slow to accept the responsibility for operating and maintaining the facilities. Because the building was not supervised

damage was done by children and the facilities generally neglected. With the formation of a local Community Council a gradual change in attitude has been observed and the situation is improving.

#### Rankin Inlet

It has very good facilities and because of excellent supervision is providing excellent service. Financial support is being afforded from Community Development Funds. One great advantage at this site is that the laundry has an ample supply of pressurized water available in the building. The building is a spare building acquired after the closure of the mine. The cost of turning the building into a laundry was \$2,300 from development funds and the annual operating costs (excluding the cost of water and electric power which is supplied free by the Department) approximates \$3,000 per year.

#### Coppermine

Organised by the Community Association with guidance only from the Departmental staff. Working extremely well and the residents consider the bathhouse-laundry a valuable contribution to community betterment.

#### Cambridge Bay

Working very well and much appreciated by the residents. The bathing arrangements are inconvenient mainly because of the distance residents have to walk to and from.

#### Cape Dorset

The Bathhouse is not used by adults. The children use the bathhouse through a program initiated by the teachers. The laundry is working very well and is administered by the Women's Association of St. John's Anglican Church. They have appointed a local caretaker and charge 50¢ to do a wash or 25¢ for women whose husbands do not have steady employment. The money collected is retained by the caretaker as wages.

#### Pond Inlet

Operates on an average for 16 hours a day under the management of the Area Council. The equipment was purchased from community development funds and the Council has hired a man to haul ice and dispose of garbage who is paid from these same funds.

#### Tukoyaktuk

The Bathhouse laundry was designed and built by D.P.W. as a project. The operations were very poor to start with due to many varied problems. An alternative bathhouse laundry was set up in the school and with teachers supervision worked well. The adult education has now paid off because the proper bathhouse laundry is working very well. The facilities have recently been extended by the addition of a 512 onto the building which will provide extra laundry space.

### (3) Comparison of Various Methods of Laundering

In order to compare the various methods of laundering it was decided to limit the comparison to four main methods:-

- (a) Washing by hand and air drying in the home.
- (b) Washing by machine and air drying in the home.
- (c) Washing by machine and machine drying in the home.
- (d) Coin operated automatic washing and machine drying in a commercial centre.

In each case figures have been compiled for the washing of 12 lbs (dry weight) of laundry.

Regardless of which method of laundering is established, clean hot water in varying amounts will be required to do the washing and about the same amounts of dirty water will have to be finally disposed of. The most primitive method will require more manual labour and will take longer to do. The most sophisticated method will do the work more quickly and, generally, do the washing more efficiently, usually at the expense of using more water which eventually has to be disposed of, and by using electric power (which is costly) to take the place of manual labour, of which there is no shortage.

Because water is required for all methods, it is well to consider this item carefully. In the average small settlement, water is usually obtained near the settlement, sometimes in the form of ice, and the problem is to transport the water from that place to the places in the settlement where water is required to be used and this is usually an expensive operation.

For the purpose of this study it has been assumed that water delivery will be by means of a tank truck. Domestic water is normally stored within the houses, usually in 45 gallon drums, from where it is ladled out by hand into the pot, pan, bathtub or other utensil where it is required. Domestic waste water is usually disposed of by allowing it to drain out in the vicinity of the building foundations. Rarely do any people take the trouble to carry away, by hand, waste water for disposal to a safe area; under very adverse weather conditions this practice becomes impossible even if it is desirable.

For the purpose of costing comparisons, this study presumes that delivered water will cost 3 cents/gallon to be delivered, and when considering the case of a communal coin-operated automatic laundry, it has been presumed that the cost of pumped-out disposal of waste water will also cost 3 cents a gallon. This unit price is the lowest contract price of water paid by I.A. & N.D. at large well-organized settlements. Normally, the cost at smaller settlements will be more than 3 cents per gallon.

Pumped-out disposal may not be necessary in the case of the communal laundry. It might be possible to so site a communal building that disposal by a gravity pipeline would be feasible permitting disposal at negligible cost. The calculations in the Appendix have provided for pumped-out disposal but the extra costs of such disposal can be readily ascertained under the appropriate column for "Waste Water Disposal".

The methods are discussed below and are all based on a common load of 12 lbs of dry laundry. Comparative results are tabulated in Appendix I.

(a) Washing by hand and air drying in the house

This is the method of doing laundry in most small settlements. Water is delivered to 45 gallon storage drums as required at 3 cents/gallon.

Water is boiled on top of the oil stove which provides heat for the house, heat for cooking, and heat for hot water. There is little extra cost involved when heating water because the stove is also required for house warming.

However, for the cost comparison the full cost of heating the water has been considered.

A total of 3 gallons of boiling water will be required for the entire wash supplemented by seven gallons of cold water. A total of about 8 gallons of dirty water is left for final disposal with approximately 2 gallons being retained in the laundry for air drying.

Comparative costs, etc., are shown tabulated in attached Appendix I.

(b) Washing by Machine and air drying in the house

This method of washing is the next progression to more modern methods and is the way a large percentage of Canadians do their laundry, except that the Eskimo will normally use delivered cold water, heated on the top of the stove.

The normal full load for one cycle of machine washing is 12 lbs. One filling will require about 10 gallons of hot water added to 10 gallons of cold water for washing, and another 10 gallons of cold water for rinsing.

A machine washer combines a wringer and the finished clothes are wrung more dry than by hand and will therefore dry much quicker.

A total of 10 gallons of hot water is used for the entire wash supplemented by 20 gallons of cold water. A total of about 29 gallons of water is left for final disposal with approximately one gallon being retained in the laundry for air drying.

Comparative costs, etc., are shown tabulated in attached Appendix I.

(c) Washing by machine and machine drying in the house

This method of washing and drying is the next progression to more modern methods and, where the cost of electricity is not prohibitive, more and more Canadians are adopting this method.

Clothes are washed and wrung out as in (b) above and the water requirements are identical. The only difference is that the wet clothes instead of being hung out for natural drying are placed in an electric dryer for machine drying.

Comparative costs, etc., are shown tabulated in attached Appendix I.

(d) Coin Operated Automatic Washing & Coin Operated Machine Drying in a Communal Building

This method of washing is the most modern and most sophisticated and is coming into general usage in cities where apartment living and other changes have made the operation of this type of laundry a paying proposition.

A building will be required to house the washing machines and dryers and to provide space for preparation for washing and unloading space for the dryers. The same building would house the cold and hot water equipment.

If a building is designed specifically as a laundry, provision will be made within the design for properly drained floors sufficiently strong to bear the loads required by the installed machinery. The size of the building will depend on the number of washing

machines and dryers required. Such a building can be built for from \$10-\$15 per sq. ft.

If a surplus building is used as a laundry a sum of money will normally be required to modify and strengthen the floor. The cost of the modifications would be to the order \$3-\$5 per sq. ft.

Automatic washing machines require a cheap and pressurized cold and hot water supply. Pressurized water systems in small northern settlements can be obtained by the installation of small independent shallow well package systems which draw their water usually from under floor storage tanks which are kept replenished by water delivered from tank trucks.

A shallow well package system consists of a pump motor assembly with hydrocel system which includes a pressure switch, pressure gauge, shallow well kit and pump to hydrocel fittings.

This apparatus produces pressurized cold water. For automatic washing purposes part of the pressurized cold water is normally piped into an electric hot water tank where the temperature of the water is raised to about 145°F by means of one or more electric immersion heaters. Separate hot and cold water supplies are then connected to the automatic washing machine.

The machine is coin operated and will usually provide for one hour of operation by the insertion of a quarter (25 cents) or for 20 minutes of operation by the insertion of a dime (10 cents).

In small communities in the North where the cost of electricity and the cost of water are very high, the coins placed in the meters would provide only a small proportion of the cost of operation. Use of large coins would make the use of automatic washers prohibitive. In some settlements the high cost of water and heat might easily make it cheaper to buy a new garment than to launder it by this method.

Comparative operating costs, etc., are shown tabulated in attached Appendix I.

#### 4. Summary

In summary the communal laundry concept has been well accepted by communities and where local co-operation exists, works well but is expensive. Where there is poor co-operation they fail miserably.

The capital costs of providing a building suitable for communal laundry purposes in small settlements would approximate \$6,000-\$10,000, which amortized over a period of 15 years would cost from \$50.40 to \$83.99 per month. The capital cost of equipping such a building would approximate \$600, which amortized over 7 years would cost approximately \$8.75 per month.

An approximation of the total operating costs has not been made for reasons given; however, the operating costs per 12 lbs of dry wash has been assessed and is shown in the Appendix. These operating costs do not include amortization costs, cost of buildings and equipment maintenance, costs for building heating, costs for electric lighting and labour costs. These miscellaneous costs would vary settlement by settlement and depend on many variables, that can only be established once a laundry is in operation.

The study has revealed that it is very difficult to establish the average amount of laundry that is required by the average Eskimo family. The needs vary from settlement to settlement and are influenced, to a large degree, by the amount of contact that the Eskimos have had with Southern Canadians and to the degree that the Eskimo has adopted the southern habits.

As an example of this problem the needs of the Eskimos at Frobisher Bay were compared with those at Grise Fiord. At Frobisher Bay we find that the Eskimos have adopted southern clothing, particularly for children. Many Eskimo families now use the same type of beds as most other Canadians including, pillows, pillowslips, sheets, blankets, etc. Consequently, the laundering of bedding forms a large part of the Eskimo laundry load at Frobisher Bay. The requirements of the family of the Eskimo who is in regular employment at Frobisher Bay will approximate the requirements of the average other Canadian family there. The less fortunate Eskimos, not in regular employment at Frobisher are too poor in many cases to have changes of clothing that will permit soiled items to be laundered.

At Grise Fiord, the Eskimos are still dressed in their more traditional forms of clothing much of which cannot be laundered. There is much less evidence of the adoption of the more conventional southern mode of sleeping which requires the use of washable bedding; greater use is made by the Eskimos of seal skins, caribou hides, etc., which cannot be laundered. The amount of laundry in the Eskimo family at Grise Fiord is, therefore, only a small proportion of that required by other Canadians living there, because of the different living habits.

The total requirements at any one settlement will normally not be known until a mode of laundering has been introduced for a reasonable period. There appears to be no easy way of predetermining the quantities that will be involved at any particular settlement. No attempt has, therefore, been made in this study to take into account the amount of laundry that will be required to be done.

Costs of operation of these facilities are in excess of what the community can afford without assistance, so even if the facility were provided free out of community development funds, a continuing subsidy would be needed.

To develop a total policy for laundering at this stage would be difficult if not impossible. The main problems to be overcome first are those of providing cheaper fuel, electric power, and water. Low maintenance and efficient utilization of cheaper fuels, power and water are prerequisites to any serious attempt to adopt southern laundry standard practices for the remote northern areas.

### Recommendations

The Commissioner recommends that no further bathhouse laundry installations be constructed until:

- (a) more operational experience is gained with those already built
- (b) stronger local organizations are available to operate bathhouse laundries
- (c) some of the problems of water supply and sewage disposal are eliminated or reduced.



APPENDIX I

TABLE OF COMPARATIVE COSTS, ETC., OF  
WASHING & DRYING CLOTHES IN  
SMALL SETTLEMENTS

	(a)	(b)	(c)	(d)
Mode of Washing & Drying	Washing by Hand and air drying in the home.	Washing by machine and air drying in the home.	Washing by machine and machine drying in the home.	Coin Operated Automatic Washing & Machine Drying in a Communal Centre

QUANTITY OF LAUNDRY

LBS. (Dry Weight)	12 lbs.	12 lbs.	12 lbs.	12 lbs.
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COLD WATER SUPPLY

Quantity of Cold Water Used (includes any heated water).	10 Gals. (Unpressurized)	30 Gals. (Unpressurized)	30 Gals. (Pressurized)	42 Gals. (Pressurized)
Unit Price of Water (Cents per Gallon Delivered)	3¢	3¢	4¢	4¢
Cost of water used.	\$0.30	\$0.90	\$1.20	\$1.68

HOT WATER SUPPLY

Quantity to be heated	3 Gals. (212°F)	10 Gals. (145°F)	10 Gals. (145°F)	15 Gals. (145°F)
Average unit price of Fuel Oil (Cents/Gal.)	30¢	30¢	30¢	30¢
Average unit price of Electric Power (Cents/KWH)	12¢	12¢	12¢	12¢
Cost of Heated Water By Oil	3¢	5.5¢	5.5¢	8.2¢
Cost of Heated Water by Electricity	-	44¢	44¢	66¢

WASTE WATER DISPOSAL (TO BE INCLUDED IF NO PIPED GRAVITY SYSTEM AVAILABLE)

Unit price of water disposal (¢/Gallon)	-	3¢	3¢	3¢
Amount of Waste Water for Disposal (Gals.)	8 Gals.	29 Gals.	29 Gals.	41 Gals.
Cost of Water Disposal	0	\$0.87	\$0.87	\$1.23

APPENDIX I (Cont'd)

	(a)	(b)	(c)	(d)
Mode of Washing & Drying	Washing by Hand and air drying in the home.	Washing by machine and air drying in the home.	Washing by machine and machine drying in the home	Coin Operated Automatic Washing & Machine Drying in a Communal Centre
<b>WASHING</b>				
Length of Time for Washing (Minutes)	45 Mins.	40 Mins.	40 Mins.	30 Mins.
Cost of running washing machine (Excluding Soap, Detergents & other Washing Materials)	0	4.2¢	4.2¢	2.3¢
<b>DRYING</b>				
Length of time drying	3-8 Hours	2-6 Hours	30 Mins.	30 Mins.
Unit Price of Power for drying (¢/KWH)	-	-	12¢	12¢
Cost of Drying	0	0	30¢	30¢
<b>TOTAL OPERATING COSTS (Using Oil for H.W.)</b>	<b>33¢</b>	<b>\$1.87</b>	<b>\$2.47</b>	<b>\$3.31</b>
<b>TOTAL OPERATING COSTS (Using Elect. for H.W.)</b>	<b>-</b>	<b>\$2.25</b>	<b>\$2.85</b>	<b>\$3.89</b>
<b>LIST OF CAPITAL EQUIPMENT REQUIRED</b>	1 Gal.Kettle 2-5 Gal.Tubs 1 Hand Scrubber 1 Laundry Board	1 Washing M/C 1 Set Laundry dry Tubs 1 Oil Fired or 1 Elect. HW Heater	1 Pumping Unit 1 Washing M/C 1 Set Laundry Tubs 1 Electric HW Heater or 1 Oil Fired Heater 1 Elect. Dryer	1 Pumping Unit 1 Auto Washer 1 Elect. Dryer 1 Electric H.W.Heater or 1 Oil Fired Heater
<b>APPROXIMATE CAPITAL VALUE OF EQUIPMENT</b>	<b>\$19.50</b>	<b>\$260.00</b>	<b>\$400.00</b>	<b>\$590.00</b>