1910-1970
Retrospect in the Diamond Jubilee Year
The Public Utilities of Cochrane, Ontario
by Harold A. Wills

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FORWARD

As the Town of Cochrane celebrates this year the Diamond Jubilee of its incorporation in 1910, the thoughts of every citizen will be turning to its history. It is impossible to look at that history without being impressed by the growth, comfort, health, safety and prosperity of the community.

It seems appropriate therefore that the users and owners of Cochrane's public utilities should be provided with this history capsule a booklet in which an attempt has been made to capture the lights and shadows of the past sixty years. The project was originally undertaken in response to an invitation from the Ontario Municipal Electric Association, speaking for the A.M.E.U. and Ontario Hydro, as well as itself, to prepare a history of the local electric utility for preservation in the Hall of Memory, established at the Sir Adam Beck Niagara Falls No. 1 generating station in Canada's Centennial year. Your Commission feels that it should not be filed away there only, but that copies should be made available to the people of Cochrane also.

It is your Commission's hope that it may be found interesting, informative, and of sufficient value to be kept in every Cochrane home.

THE PUBLIC UTILITIES COMMISSION OF COCHRANE

F. Fasano, *Chairman*

March 20, 1970

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INTRODUCTION

Communities in Northeastern Ontario have a unique place in the province's history. For the most part they came into existence at the turn of the century, long after the southern part of the province had been hewn out of the wilderness, and before the contemporary generation of planned communities had been sired by natural resource availability or highway routing.

These Northeastern Ontario settlements and towns had their birth in farm development, railroad building, mineral finds, exploitation of the forests, or combinations of these. Cochrane, the most extreme northeasternly of these communities, came to be as the chosen site of the junction of the Temiskaming and Northern Ontario and the National Transcontinental railways (now Ontario Northland and Canadian National), with farm-forest development springing therefrom, at the close of the first decade of the 20th century.

Railway rights-of-way and facilities, and farm clearings, were hacked out of the bush as the way had been cleared for settlement in Upper Canada a century before, with the consequence that two centuries of technological and social change in Southern Ontario have been telescoped within 60 years in Cochrane. The purpose of this paper is to trace

the pattern of the development of the generation and use of electricity in those six decades. For reasons which will become clear, however, all the town's utilities have been more closely integrated than in most areas, and as it is impossible to separate electrical from other services, their histories are being traced together.

SHELTER AND FUEL

The field being thus enlarged from necessity, it may be worth enlarging it still further, if briefly, by noting how the history of the shelter and fuel of the inhabitant has been telescoped also. The memory of pioneer residents can carry them back to the tents of the railway surveyors and the log shacks of the first permanent and transient dwellers in the period 1905 to 1908. An interesting aspect of the pioneer period, however, was that shelters of wood construction for both homes and commerce paused only briefly for the log construction period. Once the T.&N.O. track reached the junction point (indeed as soon as it became possible to haul loads by team from the advancing railhead), dressed lumber as well as tarpaper and other building supplies could be brought into the new forest clearing, to supplement the locally sawn product for sale in a lumber yard the first produce of local industry, although imported saws and gas engines were used. The roads were mud and tree stumps, or corduroy; the sidewalks, when built, plank. Builders who could afford it added a lath and plaster exterior. Builders who had to do so made do with the wood of packing cases to finish their shacks.

The almost exclusive use of wood for construction was to contribute to the series of frightful fire disasters which plagued the community in its first 20 years. Many of these fires originated in the wooden structures, the extremely low winter temperatures, as one factor, requiring hot fires. It is significant that the second by-law passed by the town council after the bad local fire of 1910 (By-law No. 21, Sept. 7, 1910) was designed to regulate chimney construction. The even more destructive fires were those which originated in the surrounding bush, and swept into the vulnerable streets of wood buildings and slash-strewn partly-cleared lots, into the lumber yard and saw mill on the town's fringes.

As building material, concrete became second choice for more substantial buildings, and brick was imported from Southern Ontario by those who had capital for institutional structures and homes. There has been no local source of

bricks, then or now. The use of galvanized iron for accessory buildings and of the modern synthesized building materials has in the past half century followed the modes of the South.

As for fuel, wood monopolized the market at first, followed by coal, which, although widely used, was costly. The extra 500 or 600 miles from the lake ports piled up transportation costs on imported grades, although Alberta coal was competitive. High cost was not the only disadvantage. In 1918 wartime scarcity of coal was so severe that the use of electricity, produced here at the time by coal-fired furnace, had to be rigidly rationed. Towards the end of World War II a different, and perhaps more surprising kind of fuel shortage threatened the community. The manpower shortage on one hand, price controls on the other, squeezed the supply of wood which was still the basic fuel for many homes. Surrounded by bush, the community suffered a severe fuelwood famine. The town council had to enter the business, buying wholesale on tender not only for its relief recipients but for many of the general public whose normal sources of supply had dried up.

Fuel oil made rapid inroads into both wood and coal once oil heating “caught on”. But the trend was halted abruptly when the Trans-Canada pipeline was routed through Northern Ontario and brought Western Canada natural gas to this and other communities. As natural gas entered into competition with electric power for domestic and industrial use, Hydro, provincially and locally, fought back by seeking a part of the domestic and commercial and institutional heating market, and the electric home is now completing on the frontier the fuel cycle which started with the wood monopoly.

Now these basic housing conditions and fuel trends had a determining effect upon the town’s utilities. The railway surveyors had chosen a site for their junction point what the Indians had called the “Little Lakes Camping Ground”. Scenic Lake Commando became the center of the townsite, and smaller lakes to the north and south justified the early Indian name. The great Abitibi and Frederickhouse rivers are eight and six miles to the east and west respectively. There is no water source at a higher level than that of the townsite, so any municipal water distribution system would have to involve pumping from springs, lakes or wells. (Although this was not recognized at first, the small lakes were limited in their capacity to meet the water demand.) Pumping required power. The distance from the rivers made their use for sewage disposal impractical, and for the first few years the sewage was left to nature to dilute in the chain of small lakes to the north. A water supply system had to be designed not only for the normal

reasons of health and convenience, but to provide some slight weapon with which to meet the always imminent threat of fire.

The town's original water supply came from the lakes for washing, from wells for drinking. There were some private wells, but by 1909 there was in use a commercially operated well on the south side of Railway street, alongside what was originally a railway office building and is now the community center. A massive padlock controlled the pump handle, and for a small fee any citizen could borrow the key and pump his drinking water, the stronger individuals or those with industrious children carrying two pails suspended from a neck yoke. At that time the well was open. Later a well house was built above it. This survives, although the well itself and others like it were capped when piped water became available. The lake water was transported, by those not content with pails, in large barrels, which were taken to the lake shore on team-hauled stone boats, filled, and taken home.

Lighting was basically by candle and coal oil lamp, Cochrane skipping completely the era of manufactured gas illumination which at the turn of the century was the last word in cities for domestic and street lighting.

Many businessmen were not willing to wait for a socially-owned source of horsepower, and installed their own gasoline engines. Whatever quality of service these rendered to their owners they were not popular with the neighbours, and on September 1, 1910, the town council adopted a resolution requiring that the exhaust of gasoline engines within the town limits be muffled to make the least possible noise. The constable was instructed to notify all offenders.

The only possible source of hydro electric power nearby was in the Long Sault Rapids, on the Abitibi River, 10 miles due north of the town, which enthusiasts claimed could produce 63,000 h.p. This was long regarded as a potential asset. In December 1910 council asked Sutcliffe & Neelands of New Liskeard, who had been retained as municipal engineers, to survey the site and report. In August 1912 council instructed the town clerk to make application for the right to develop it, but nothing came of these efforts.

BIRTH OF MUNICIPAL UTILITIES

Construction of the T.&N.O. Railway north from North Bay, by a commission appointed and financed by the Ontario government, actually began in 1902. As Laurier pushed the project for building the National Transcontinental Railway, to be routed through Northern Ontario and Quebec, through Parliament in 1903, the T.&N.O. Commission

was thinking of linking with it, and began exploration and location survey north from New Liskeard. By 1907 its main line had reached Matheson, and on February 28th of that year a contract was awarded for the extension of the line to effect a junction with the N.T.R., Quebec City to Winnipeg. T.&N.O. steel reached Cochrane, and on November 26, 1908, an auction sale of lots in the new townsite was held, the first train bringing 600 sightseers, reporters and potential bidders for land. Some construction had already started to meet railway needs, and the first settlers had come in to the area ahead of the track.

The town was incorporated January 1, 1910. Municipal records (such as council minutes, the first assessment roll, and the by-law texts) are missing from that date to August 10th, presumably destroyed in the big local fire of that summer. In these first months, however, the ratepayers had approved a by-law to borrow $25,000 to be spent in clearing streets, digging drains and building wooden sidewalks. Taxable assessment was $301,275. Water sources were Normal Lake, south of the townsite, and Commando Lake in its centre.

On November 24, 1910, the town council invited Mr. Frank B. Graff of Cobalt to attend its next meeting, and a utilities program took shape quickly. Mr. Graff represented the Cobalt Power Co. Ltd., later known as the Northern Ontario Light & Power Co. Ltd. While Sutcliffe & Neelands were asked to submit plans for a water system for the entire townsite, a proposal from A.J. Pattison for a telephone franchise was studied. By February 16, 1911, council and the general public were in agreement that $50,000 should be borrowed for waterworks and sewerage system, and a proposal from the Cobalt Power Co. was being studied by which lighting would be provided, also power for pumps for a waterworks and fire protection.

On March 2, 1911, By-law No. 28 was given first readings. It authorized a $50,000 6 per cent debenture borrowing for construction of sewers and waterworks. At the same meeting an agreement with the Cobalt Power Co. was approved for submission to the voters. This agreement granted a 10-year franchise to run from April 1, 1911, permitting the erection of poles and wires for conveyance of electricity, the company undertaking to erect and maintain a street lighting system. Rates for street lighting and maximum charges for domestic and commercial users and motors were set out. Realistically preparing for an early power shortage, it was agreed that power for motors could not be used before 6 a.m. or after 5 p.m. in November, December, January and February, or before 7 a.m. and after 6 p.m. during other months. The company was obligated to supply electricity for lights to any resident or

owner whose premises were within 300 feet of any line. The franchise was to be exclusive as to street lighting, but not exclusive for other services. After 20 years the town was to have the option to buy, or offer an extension of the franchise subject to arbitration of terms, but it could also buy before the end of the 20-year period.

The company also undertook to erect a satisfactory powerhouse, and to supply, erect, maintain and operate a motor-driven pump for the purpose of supplying the Corporation with water through the town water distributing system, which was about to be constructed by the Corporation, such power house and machinery placed there to be subject to the approval of the town engineer. A second pump, to be known as a fire pump, was also to be installed, with capacity of not less than 1,000 gallons per minute. The first pump was to deliver if necessary at least 200,000 gallons of water every 24 hours, either into the mains or water tower as required. The town was to pay $200 per month for this water service.

The town undertook to supply the site for pump and power house, under a 10-year lease at nominal rental of $1.00 a year, subject to renewal along with the contract. This agreement assumed that the site would be at Spring Lake, just north of the town boundary, and the company would agree not to permit waste water to empty into Spring Lake, but to construct a pipe drain to carry off same through the outlet of the said lake. (On May 11th, however, council changed the source of water supply from Spring Lake to Norman Lake, south of the town, with Hector Lake nearby as a reserve).

Even this was not enough for one meeting. Council at the same time authorized submission to the ratepayers of an agreement under which Wm. J. Bauldry (townsite inspector and pioneer resident since 1908) would be given a telephone franchise. This would be exclusive for 10 years, and the fee for service within half a mile of the central office was to be not more than $20 per year for homes, $30 per year for business places. The system was to be in operation within six months of execution of the agreement. The town was to get four free telephones, and to have an option to acquire the system at the expiration of the franchise period, details to be set by arbitration if necessary.

This entire three-course menu was placed before the ratepayers at a gourmet's feast on April 4th, and the results left no doubt that the citizens wanted services. The results were:

By-law 28, for the borrowing of $50,000125 for, 3 against;

By-law 29, electric franchise and contract 124 for, 1 against;

By-law 30, telephone franchise 117 for, 9 against.

A week later all three by-laws were given third reading by council, and on May 11 application was made to the Ontario Railway and Municipal Board for validation of the borrowing.

DISASTER AND A NEW START

It was one thing to pass by-laws and sign agreements another to survive in the teeth of calamity. On July 11, 1911, fire swept into the town from the northwest, the consequence of many small land-clearing fires in the newly opening farm area in a dry period, which were merged into a flaming wall of disaster by a high wind. In three hours that afternoon the townsite was leveled except for some of the railway properties and three buildings. The conflagration swept south and west on a 20-mile front, and in the next week burned over 864 square miles, killing 73 people and causing property damage estimated at $3 million. This was the holocaust which became known as the Porcupine Fire.

A meeting of the town council the next day was naturally devoted to the most urgent problems of keeping the town and its people in being, but two weeks later the council adopted a resolution stating that it would be in the town's best interests that work in connection with the waterworks and sewerage be completed. Contract was authorized with the Toronto Iron Works for erection of a central feature of the system the water tower and tank in the centre of the charred townsite.

On November 2, By-law No. 46 authorized borrowing $38,500 from the provincial government on 4 per cent debentures. This was to provide for replacement of the public school building and furnishings, a gaol and furnishings, sewer pipe and plant, and sidewalks.

So swiftly did the work of building and rebuilding move ahead that by early September the power plant was put in operation and electricity supplied for lighting and power. The service was so limited, however, that in October council had to ask the company to supply customers from dark to daylight. The plant had been brought in from Cobalt, and an interested spectator recalls that its hundreds of parts were dumped on the ground like so much

rubble. Frank Graff brought order and power out of the chaos, erecting the plant in the new building on the shore of Norman Lake. Fine pea coal was burned to make coal gas, which ran the gas engines, which generated the electricity.

A description of the plant is given in a directory published as part of Central Electric Stations in Canada (1928). In it the Norman Lake plant was listed as auxiliary only, the town by that time buying its power from Abitibi, but the installation consisted of three Westinghouse gas engines (one of 200 h.p., and two of 100 h.p. each), three generators, and three exciter generators.

The power house was a frame structure with roughcast exterior and concrete floor. Its 15 or so years of active life were before the days of the automatic stoker, but processes were automated so far as possible. Coal was unloaded from the cars into a shed, or if there was a surplus supply, it was stockpiled nearby. An elevator whose shaft head was the highest part of the structure carried the fuel up, from which point it was fed into the gas generating furnace. The process did not involve coking, and the ash did not normally present a removal problem. Residents were free to help themselves from the ash pile, if they needed fill, and they did so.

Manager Frank Graff was provided with a house near the plant, which he occupied until about 1922, when he moved uptown to a house of his own. While a large instrument panel in the powerhouse carried the controls, the manager was on 24-hour duty, alert to any change in the sound of the engines or fluctuation of power, signals which would send him running to the plant at all hours of the day or night. If there was a drop in gas pressure, it could sometimes be corrected without too much trouble, but there was no reserve gas container, and when the worst happened, pressure, and hence power production, could only be restored by a major operation which took hours, emptying the furnace and starting from scratch.

Now and again the workers would suffer gas poisoning, and reel outside to throw themselves on the grass or snow. They worked in two 12-hour shifts, with a foreman or engineer and a fireman on each shift. In 1918 a foreman was paid $90 a month for his 12-hour shift, seven days a week. This was a princely wage; in 1911 the town foreman only earned $75 a month.

EXTENSIONS AND CHANGES

Although the town was in straitened circumstances, due to the fire-reduced assessment and the climbing borrowings, the laying of mains proceeded, and in October the power company was instructed to use them to give temporary service until the water tower was ready for use. Taps were installed at several spots in town, where householders could obtain water until house connections were made. Some street taps remained in use for the next 20 years, extension of the mains being a costly and therefore slow process. But many citizens were impatient, and By-law No. 45, adopted November 2, 1911, prohibited indiscriminate connection with the water mains and sewer mains.

Council was impatient too. Also in November, the Bauldry telephone franchise was transferred to the power company, which was given an additional six months to get the system operating, because of fire interruption.
By February 1912 street lights were on, and a by-law established a lengthy schedule of water rates, each type of service and classification of business having its separate rate. Initially there was a rather stiff penalty for the non-builder, a water frontage rate of 15 mills on the dollar of assessment being imposed. And pollution was a worry 60 years ago. The water rate by-law contained a clause intended to guard against pollution of Norman and Hector Lakes.

In June By-law 52 was passed, authorizing a fresh debenture borrowing of $30,000. This was to provide an extra $14,000 for extension of the waterworks system, and $16,000 to replace money spent on the sewer system. The ratepayers continued to be almost unanimous as to the need for services, and their ability to pay for them. This borrowing was approved 103 to 8 in a special vote on July 15th.

Between borrowings the town council wrestled with the problems of getting the services functioning. In January of 1912 it made arrangements with the power company to give four-hour-per-day water pressure of at least 200 gallons per minute, and in August demanded that telephone service be given in accordance with the terms of the franchise. Toronto Iron Works had failed to get moving on the water tank and tower, and the order was cancelled in August, but re-written in September when the company asked for more time. While the townspeople were proud of their electric service, it was a limited one, and the rates were high. Consequently many businessmen continued to use gasoline engines.

In the meantime it was found that the level of Norman Lake was falling and was likely to fail. The power plant couldn't be moved (one advantage of its location being proximity to a rail siding), but the pumps could, so in September 1912 it was decided to extend the watermains to Spring Lake, just north of town, to erect a pump house and piping for springs, and to take precautions to protect that lake. The power company was instructed to move the pumps from the old pumphouse to the new one; also to install a telephone there, and to connect and electric fire alarm to the fire hall.

The pumphouse built at that time is substantially unchanged half a century later, but then the water was drawn from springs or shallow wells, or the lake itself when necessary, a 10-inch main carrying it to the elevated storage tank, the lateral mains, and the railways. The railways used a great deal of water in the days of the steam locomotive. At one time the CNR pumped its own water from Lake Commando, but the level of the lake fell dangerously, and connection with the town system had to be made.

In December 1912 a contract was given for a second storey on the pump house. This was a tarpaper addition to house the pumpman. It was used for a few years, then abandoned, and demolished around 1939. The pump house at first was heated by a large camp stove, burning 30 wood.

All this work required a new borrowing of $15,000 described as necessary to obtain a permanent spring water supply and to provide for further extensions to the system (By-law No. 60). By-law No. 61 obligated the town to pay half the cost of a sewer to be built by the National Transcontinental Railway on the east side of Lake Commando at a rate of $500 per year for 10 years, without interest. The railway was to have the right to use the sewer without charge.

In addition to the power house at Norman Lake and the pump house at Spring Lake, the company had a small building on Sixth ave., adjacent to the site of the present PUC building. This housed the telephone exchange as well as the office.

The switchboard and phones were battery-operated, the home and store batteries requiring replacement every one to three years, depending on their use. To ring, the customer cranked a handle

By 1913 the municipal council was able to relax to the extent that it decided to do without the water commission which had been responsible for connections and collection of accounts, and to turn the work over to a committee of council. The town solicitor was asked to rule on the proper responsibility of the municipality in bringing water to the property line, and in May it was decided to pay property owners for digging, filling and piping from the water mains to the property line.

In August of that year one aspect of a problem which 10 years later was to cause a disaster was studied. Council ordered that necessary steps be taken to have the lake north of Spring Lake lowered, so that there would be no danger of contaminated water backing into Spring Lake.

In September there was a dispute with the power company as to the charge for pumping water, which had to go to arbitration. Wells were being sunk at Spring Lake, and in the following month council looked at a problem which nagged from year to year until 1969. This was providing an outlet from Lake Commando to permit lowering its level. Then it was referred to the public works committee.

1914

The year of World War I started with an attempt to face up to the heavy spending of the town's first four years. The council asked the Legislature to pass a private bill which would authorize a debenture issue to cover the floating debt which had resulted from spending in excess of amounts realized from earlier debentures for public works. An original request for $25,000 was later reduced to $22,500. The debentures were sold at 98 in May.
In April what was apparently designed as another step to remedy a past mistake was authorized. The power company was instructed to pump a reserve supply of water from Spring Lake south to Norman Lake.
In August the heavy 15-mill water frontage rate imposed in 1912 was repeated, and the year's tax by-law established the rate which is still effective four mills.

Friction between the municipal council and the municipal franchise holder was a normal fact of life. An account for a mere $133 had been unpaid so long that Mr. Graff warned he would stop pumping water the next day if it were not

paid. It was paid the next day. In January 1916 council ordered withholding of part of the street lighting payment, accusing the company of not living up to its contract to maintain dark-to-daylight service. Furthermore it accused the company of discrimination regarding rates and deposits.

During the summer and fall of 1915 the need for an improvement in the water supply was apparent, and in July the standing committee of council was instructed to study the situation at Spring Lake and report. By September this had led to acceptance of a proposal by Geo. King of New Liskeard for sinking two wells at Spring Lake, and in the following month council agreed that if the second well were satisfactory, King should proceed with a third. The normal consequences followed. In December By-law 134 was passed, covering borrowing of $5,500 on 6 per cent debentures against a Department of Health certificate. This was to cover a number of small water and sewer jobs in addition to the cost of the wells. By this time the town's net debenture debt had climbed to $181,573.

FIRE AGAIN

World War I was having its impact upon the struggling community, reflected in various ways, although seldom in official municipal action. By midsummer of 1916, however, the stage was being set for another of those catastrophes as destructive as the war itself upon little towns caught in frontline action. On July 29th substantially the same conditions which caused the 1911 conflagration sent a new wall of fire into Cochrane, now from the southwest, although there was fire all round. This time the emergency fire pumps at Norman Lake were ready, but the fire demon fought with all the cunning of a skilled warmaker. The volunteer firemen took their equipment to the northwest corner of the town to fight a diversionary blaze, and before they could disengage the lumber yard at the southwest corner had caught. A fire wind carried the flames into the freight sheds where gasoline and oil were stored, and when these exploded there was no stopping the onward rush until the heart had been burned out of the town. The flames had reached the new hospital when a sudden downpour saved it, the new public school and other sections not already destroyed. One of the gathering places for refugees was the pumphouse and its lake.

This disaster did not devastate Cochrane to the same nearly-total degree as that of 1911, but its death toll in the area as a whole was much greater, and in some other respects it ranked with the earlier one. It became known as the Matheson Fire, because on the same day it struck Cochrane it wiped out Matheson and five other communities.

At least 223 persons lost their lives; it burned nearly 1,000 square miles, and caused property damage estimated at $2,000,000. Even in Cochrane the cumulative effect, coming as it did only five years after the Porcupine Fire, had a worse effect upon morale and optimism.

Just before the fire, the town council had been working on a revision of the building by-law. Two days and four days after the disaster special meetings were held to rush through temporary amendments, imposing stricter controls on building practices in the reconstruction period. In May council had passed a by-law to make a special levy for patriotic purposes, but in the new circumstances it was decided charity should begin at home, and this by-law was repealed. (However, Ii October it did authorize a donation of $250 to the British Red Cross Society.)

In a series of meetings in the next few weeks there was discussion with the fire relief committee set up by the Toronto Board of Trade, temporary street lighting was arranged, Sutcliffe & Neelands were instructed to relocate and set grades for new wooden walks in the burned-out area, and the telephone company was requested to get a system operating without delay. Free gravel was offered to fire sufferers, and before the end of the year the voters were asked to decide whether half the 1916 tax levy on burned buildings should be rebated. Ratepayers were also asked to approve a new borrowing of $40,000, guaranteed by the province. This was to replace property destroyed by the fire sidewalks and waterworks plant and for other permanent improvements. As if by afterthought, in December, council decided to buy a new fire bell. (The fire hall was among the buildings burned, and one of the old public school buildings was acquired for fire hall.) The borrowing by-law passed 146-101, the tax rebate by-law 182-157.

In February 1917, Hydro was asked to send an engineer to report on requirements for duplicating the pumping system, and to inspect the electric system, and in the following month Hydro was further asked to estimate the cost of supplying power, due to uncertain service since the fire, and to study the excessive charges being made for power. By May the weather as well as other problems were sufficiently under control to permit going ahead with the sidewalk replacement program.

By the beginning of 1918 the town was compelled to stop worrying about the effects of fire in order to keep the home fires burning. The shortage of coal was extreme, and there was no relief in sight. The mayor was authorized to

issue a circular to power users; in order that the power plant might be kept running, a householder was not to be permitted to use more than two lights, and the power company was authorized to discontinue all service to any families using more. The rationing was to apply to every evening except Saturdays, and all street lights were cut except on Saturday evenings. Council was proved right in not expecting an improvement in the situation. By the end of August it was asking all coal users to notify the clerk of their estimated needs, and when Cochrane was given an allocation of 540 tons of anthracite, this was criticized as insufficient. To make matters worse even the allotted quantity was not being delivered, and winter was ahead. A resolution was forwarded to the fuel administrator, and by way of insurance the clerk was authorized in October to purchase up to 100 cords of fuel wood.

Ending the war did not immediately remove the threat of fuel famine, and in April, 1919, the new council authorized ordering coal at once for the next winter. There was another worry. Fire hazard south of the town near the power house was considered dangerous, and all offenders in town were warned that if they didn't clean up, the town would do so.

THE P.U.C. 1921

As the end of the first 10 years of the franchise period approached, decisions about the future had to be made. In September 1920 a series of by-laws was adopted, submitting to the ratepayers proposals that the property of the Northern Ontario Light and Power Co. be purchased for $65,000, and that the property of its subsidiary, the Cochrane Telephone Co., be purchased for $32,000, debentures to be issued and sold to finance the purchase. Following approval council acted swiftly to take over. It appointed Frank Graff to be superintendent of all services, light, power, telephone and water; and ordered three cars of coal to keep the power plant going. (For nearly 20 years operation of the utilities was not departmentized by function.)

These actions merely emphasized a point which was becoming increasingly apparent. Even with a private company operating some of the services, the municipal council has been constantly involved in operational details, and in running the water and sewer systems it was passing almost as many by-laws for appointing pumpmen, fixing their salaries, and authorizing extension of services, as it was passing for all the traditional operating fields of municipal government. In December 1920 the ratepayers were asked to approve the establishment of a public utilities

commission, to consist of the mayor and two elected commissioners. They approved by a vote of 377 to 33. Messrs Jos. Bradette and J.E. Desloges were elected commissioners, and they, with F.C. Ivy, newly elected mayor, formed the first commission. Third reading of the PUC by-law (No. 257) was given January 21st, 1921.

The council couldn't wash its hands of utility matters altogether. In February it had to borrow $5,000 to give the new commission working capital, and in April it revived the question of developing the Long Sault Rapids by writing to the Department of Lands and Forests about the requirements. In May it had to authorize a special levy of $8,456 to assist in paying utilities debentures. It transferred the waterworks to the PUC (but not the sewers) for a paper price of $50,000, and in the next month initiated proceedings to borrow $28,000 to pay for improvements to the telephone and electric light systems.

The new commission averaged weekly meetings for the first couple of months, starting with a preliminary organization meeting on January 12, 1921. The mayor was first chairman, and by lot Mr. Desloges received the two-year term, with Mr. Bradette, later to become an M.P. and still later a Senator, drawing the one-year term.
Mr. Graff was confirmed as manager at a salary of $250 a month, while staff was put on a three-shift basis with rates ranging for $80 to $160 per month. The phone operators were given an increase of $10 a month. Consumer rates were reviewed and new schedules adopted. Although water rates were increased by 25 per cent, those using street taps couldn't complains of their levies by modern standards they were required to pay only $1.00 per quarter.
Simply changing ownership didn't solve the problem of inadequate power supply as winter approached again. The east, west and central sections of the town were each scheduled to receive service two days per week, Sunday being reserved for churches. A petition of business men in November for more lighting was rejected, with the explanation that the commission wanted to deal fairly with all users. The best they could get was a request by the PUC to the town council to suspend enforcement of the early closing by-law so that stores could transact business on nights when they had electricity for lighting. Full service was not restored until the middle of 1922.

Behind the scenes in the commission's second year things did not move smoothly at all. J.W. Russell was the new mayor and chairman, while J.G. Yates replaced Mr. Bradette as the third member. (Mr. Bradette had been elected to council.) Mr. Graff was asked for his resignation and his request for an investigation was refused, whereupon all four

of the employees resigned. Two years and four managers later (January 1924) Mr. Graff was back in his old job at a higher salary, and the old staff was working again.

TYPHOID 1923

But things could never be quite the same again. In that interval the third of the supremely big disasters to strike Cochrane took a much worse toll of lives than the great fires and the cause was traced to the water-sewer services. In March 1923 a few scattered cases of typhoid were reported, but for awhile there was no general alarm. Then in epidemic proportions the killing disease spread.

During a severe cold spell in the winter a small ditch which carried the outflow from a small lake receiving raw sewage froze. The result was that this backed up into Spring Lake, from which the town's water supply was then being pumped, and eventually reached the water intake pipe. Fifty years ago, chlorination of water supplies was not as widely practiced as is now the case. The Cochrane analyses had always been quite good, and as the source of the water was isolated chlorination had not been considered necessary. Later study was to show that the water level of the lake had been drawn down by the severe winter weather and the reduction of underground flow into the lake. The combined result of all these conditions was a typhoid epidemic which ranks as one of the major ones to have occurred in Canada. There were more than 800 cases, in a population of 2900, and the death toll was variously reported at from 80 to 100. The uncertainty of the figures was due in part to the manner in which the disease spread. Cases as far afield as British Columbia and England were connected with the Cochrane outbreak, as Transcontinental trains took on ice and water in the town before the cause was established.

In the early weeks of 1924 there was an outbreak of scarlet fever, followed by several cases of smallpox, before the winter's victims of typhoid had even been buried.

Cochrane's costly experience was a lesson not only for the town, but for the nation. It emphasized the importance of protecting domestic water supplies from human pollution. In the past half century chlorination has become widespread, and it is the general practice now to treat all surface supplies that are to be used for domestic purposes.

From March 1923 on council and commission were increasingly absorbed in a series of efforts to get at the cause of the outbreak and their correction, with the co-operation of the provincial board of health, even while doctors, nurses and Red Cross organizers across the province aligned themselves with the townspeople, and relief funds came from many sources. The old water supply had to be replaced by deep artesian wells, a New York firm being employed for the sinking, and the first sewage disposal plant had to be constructed on Lily Lake, a pothole lake just inside the north boundary of the town. It was designed to use an activated sludge process, with capacity of 500,000 g.p.d.

In November of 1923 the new wells were taken over by the town and completion of payment authorized, although some trouble was experienced a few months later. (No. 1 well was carried to 108 feet, No. 2 to 150 feet.) The sewage disposal plant was completed in 1924.

A new series of borrowings was undertaken to finance these projects, along with extension of the sewer system, provision of emergency standby equipment for the water pumping station, and chlorination, and improvement of the telephone system.

The need for a better and larger power source was increased by the demands of motors for the pumping and sewage disposal systems, but new investment in the existing plant was postponed as relief came in sight from the outside. Hollinger Gold Mines had started construction of a 60,000 h.p. generating station at Island Falls, on the Abitibi River 40 miles north of Cochrane, with transmission lines. The project was taken over in 1925 by the Abitibi Electrical Development Co., a subsidiary of Abitibi Power and Paper, and transmission lines were erected from the Falls to Hunta, then east paralleling the CNR line to Stimson, and south to the Abitibi mill at Iroquois Falls. In 1926 connection with the Abitibi power system was made through a substation erected adjacent to the waterworks. It used three transformers each of 333 kva. Price negotiations continued for some time, the town balking at the proposed $50 per h.p. bills. It was not until 1933 that a firm price of $35 per h.p. was established. Abitibi had made some rebates in earlier years.

The town's spending for utilities and other facilities accumulated in debt of staggering size, and successive councils always dodged one problem. Storm sewers, when constructed, were frequently connected with the sanitary sewer

system or emptied into Lake Commando. The result in both conditions was the same. The storm water fathered by sewers and lake was routed through the sewage disposal plant, so that during flash floods and spring run-off the disposal process was drowned out and rendered inoperative. In such conditions untreated sewage continued to be swept out by the flood water into the lakes to the north of Spring Lake. Whether roof drains were connected with the storm or sanitary sewers, their water also found its way to the overtaxed disposal plant. Minor corrections were gradually made, but not until 1969 was one large, even though partial, remedial step taken.

In 1922 office facilities of town and commission were consolidated for a time; town clerk W.L. Warrell was named chief clerk of the PUC. In 1923 when R.C. Mortson succeeded W.L. Warrell as clerk, he also was named to discharge PUC duties. The PUC building, at the time, was little more than a shack on Sixth ave., which had been put together after the 1916 fire, but early in 1928 the commission initiated negotiations with the town which led to construction of the main part of the present building, and installation of a new telephone switchboard.

Liquidation of the original power house site was a gradual affair. In May 1926 the entire generating plant was advertised for sale, but it was not until 1937 that the contents were sold as scrap for $700, and the building was demolished in 1938. In June 1930 houses at the site were turned over to the town for administration. They were rented for several years and finally sold.

DEPRESSION

While the need to ration power had disappeared for a time, the commission found it necessary to husband its water in various ways. When the water rate schedule was revised in 1933 it was considered still desirable, rather than impose metering on a large scale, to continue relating water rates to uses. Thus a bakery was charged a minimum quarterly rate of $2 if it used two bags of flour a day or less, plus 80c for each additional bag. The barber paid $1.80 per chair, and the citizen who insisted on having his milk fresh from the cow was assessed 35c. Hours were fixed for lawn sprinkling, and householders were warned that use of running water to cool milk must be stopped immediately.

The well water was cold and pure, but it was hard and had a high iron content. As early as 1934 the commission was discussing this problem, but decided to postpone remedial (and costly) action – in depression years there were more vital matters to think about. However, the depression impact upon utilities was not entirely unfavourable. A borrowing of $50,000 in 1931 for sewers, water mains, grading and storm sewers covered an unemployment relief project to which provincial and federal governments each contributed 25 per cent, and other make-work projects helped with road work and park development.

One of the early victims of the Great Depression was the gigantic Abitibi empire, which went into receivership. In 1931 the commission once more approached Hydro as to the possibility of obtaining power from the publicly-owned system. The Hudson Bay Power Company, an Abitibi subsidiary, had commenced construction of a large plant at the Abitibi Canyon, some 25 miles below Island Falls, in 1930. Work was suspended in 1932, and in the following year the project had been taken over by the provincial government. It was completed in 1933 and has been operated since by the Hydro-Electric Power Commission of Ontario, for the first several years on behalf of the province. In that formative period, however, Hydro was not prepared to undertake local commitments, and in 1933 Cochrane entered into a new agreement with the Abitibi receiver.

The rates were sufficiently favourable that as a post-Christmas present, at the end of 1934, the commission rebated the light and power charges for December. This 13th bill in reverse was repeated in 1935, and then at the end of 1936 a reduced rate structure was approved. Staff shared with the customers in the cutting of the melon. In step with council policy, salaries had been reduced early in the depression period, and the cuts were restored in 1936-37. Frank Graff died September 3, 1939, after an illness of about a year, and an era ended. For most of 30 years he had been the man who kept the town's utilities running despite constant shortage of money.

HALF-WAY MARK

The transfer of utilities management when the commission was established in 1921 was in many respects more apparent than real. Aside from the fact that legally capital expenditures and borrowings could be made only on the credit of the municipal corporation, the town had to provide the commission with working capital in the organizational period. Then in emergencies such as that created by the typhoid epidemic, the fact that the water

system was under PUC management while the sewer system remained a town responsibility made joint solutions necessary, and later the town only, by the vote of the ratepayers, could make long-term commitments for power. Also, both in the epidemic period and in negotiations for power supply and rate, the provincial authorities had to be involved, and the proper body to deal with the province was the municipal council, not the PUC.

Aside from the experiment with consolidation of offices, work crews of the two bodies were occasionally borrowed by one from the other. The town's volunteer fire brigade had to use the hydrants which the PUC installed and maintained at the town's expense, and many citizens who had no indoor water installations used the street taps. Thus in February 1925, council felt it necessary to ask the PUC to investigate and report on complaints that hydrants and taps were occasionally frozen or out of order. A year later, with some trace of exasperation, council asked commission to install chlorination equipment that would work automatically.

Covetous eyes from outside were directed upon the municipally-owned telephone system, and in November 1927 the Bell Telephone Co. was actually given a 90-day option to purchase for $57,000. The Temiskaming Telephone Co. of New Liskeard came into negotiations. A nearly-even split of the ratepayers and disagreement as to price led to the collapse of conversations, but in April 1929 the ratepayers were asked to authorize sale of the system to the Northern Telephone Co., with franchise attached, for $30,300. When that fell through, a $19,000 debenture issue was sold to cover the cost of erecting the new exchange and office building and to improve the telephone system (By-Law 395). The old post-fire shack was sold for $50 in 1930. The telephone negotiations were handled largely by the council, not the commission.

On the other hand the commission at times loaned money to the council although the financial inter-relations of the two bodies were so involved that it became difficult to know who owed what to whom. Inevitable personal frictions developed now and again, leading to proposals on the council side that the commission be abolished. Council couldn't do this without authority from the ratepayers, who perhaps recognized more clearly than some of their representatives that the commission was freeing the councillors of an administrative burden, and that perhaps John Doe was safeguarded by the dichotomy of power.

The financial complications led to instructions in 1932 to municipal auditor C.M. Benson to prepare a special report on the status of town-commission accounts. His nine-page report indicated that from 1921 to 1932 the town had paid $295,000 to or on behalf of the utilities, but that at the end of the latter year there was a balance owing by the commission of only $1733, plus $9309 owing but not billed. By 1939 however, the town owed the PUC a substantial amount, which the commission wrote off gradually as follows: 1939 $3,000; 1940 $6,012; 1941 $9,341; total $18,353.

By the end of 1939 the net debenture outstanding was down to $49,772 on utilities account, divided as follows: light and power $15,477, telephone $15,498, waterworks $18,796.

The balance sheet showed fixed assets based on debenture debt incurred of $213,067, plus $49,723 created out of earnings. There was disagreement between the auditor and the new manager as to the realism of such figures. The 1939 earning by departments were given in the audit report as follows: power $39,506, telephone $12,310, water $17,590.

SECOND-HALF BEGINNINGS

The illness and death of Frank Graff coincided with the transition from depression to war, and also with a period of dramatic experiment in local politics. R.R. Mitchell resigned as mayor early in 1938, and in a special April election A.E. Wicks, one of the town's leading businessmen, but a novice in local politics, won as mayor against R.M. Smith, a former mayor. Wicks went back by acclamation in 1939 and 1940, and carried with him a sort of reform coterie in these two elections. Mayor Wicks was the single new man on the PUC, however, and the commission only went along with the council as far as it wanted to do so.

In March, 1939, E.E.W. Oke, a professional engineer with considerable municipal experience, was employed as town engineer and utilities manager, and simultaneously council and commission asked all their officials to submit their resignations to facilitate a consolidation of staffs. In the following month, however, the commission refused to adopt a list of officials and salaries as not being in accordance with the agreement, and a few days later adopted a resolution stating that it did not wish to be a party to the proposed amalgamation. It asked that Mr. Oke be made

responsible to the commission, while being made available to do town work, and with the town paying part of his salary. Both bodies in effect rescinded their requests for resignations, and the only new development to emerge from the crisis, aside from the Oke appointment, was a PUC proposal that the sewage system be placed under its control.

Early in 1940 the two bodies clashed head-on and council submitted to the ratepayers a proposal that the PUC be abolished. The outcome of a special poll on July 18, 1940, was decisive. The citizens voted 117 for abolition, 317 against. The next day Wicks resigned as mayor, E. Laflamme and A.V. Waters resigned as councillors, and a few days later councillors J. Lanning and E.B. Booth also resigned. This left only two new councillors in office M.A. Palangio and D.S. Revels. Election machinery was set in motion at once. J.M. Penney, who had had long experience as a councillor, was named mayor by acclamation, and Miss E. Dempsay, Messrs W.G. Martin, L. McKinnon and C. Thorning were elected to complete the council.

With the electricity cleared out of the political atmosphere, the two bodies resumed amicable relations, and a period of reconstruction of the utilities began, with the commission working on its electrical, water and telephone facilities, the town on its sewage disposal system, and Ernie Oke on all of them. A new compressor for the latter and other replacements were financed; a renewal of the electrical contract with Abitibi was negotiated for five years, from January 2, 1942; reorganization of the management structures, rates and physical systems proceeded steadily. By-law 642 in 1943 transferred care and operation of the sewage disposal plant to the commission, the town retaining responsibility only for the storm sewer, although the transfer did not receive approval of the ratepayers until February 1943.

WATER TREATMENT

Major changes in the water system might have been postponed until the end of the war, but serious deterioration in the efficiency of Nos. 1 and 2 wells and their pumps was apparent. Through 1944 exploratory work, plans and legal and financial details were pushed ahead for the sinking of two new 160-foot wells. Soon the project was expanded to include facilities for treating the water by chemical processes to soften it and reduce the iron content, and to provide an underground reservoir at the plant to supplement the elevated storage tank downtown. On February 14,

1945, a handful of ratepayers voted 112 to 88 for borrowing for the waterworks, 77 to 34 for transfer of the sewage disposal system to the commission.

The waterworks borrowing was for $128,000. The charge for sewage service was fixed as 75 per cent of the quarterly water bill, effective July 1, 1945, but this was reduced to the present 53 per cent in April, 1946.
No clear-cut division of responsibility between town and commission respecting the engineer had been worked out following the 1940 war, and internally there was friction between the manager, secretary and auditor. In August 1946 Oke tendered his resignation, but it was refused. He agreed to withdraw and some clarification of arrangements took place. But harmony was not complete. In the following year the town solicitor, former councillor and M.L.A., A.V. Waters, told the commission he would be unable to act for it as he was retained by the town. Later in 1947 Oke again resigned, and this time the resignation became operative.

Expiration of the power contract with Abitibi at the end of 1946 had been overlooked by everyone, including the company. To what extent this was due to negligence, due to sheer weight of work resulting from the water program, or due to the Nelson touch of applying a telescope to a blind eye, is not clear. In any case the company seems to have been as oblivious of the situation as the town. The matter would not have been really serious except for the fact that the power demand was overtaxing the substation transformers.

As early as 1936 the commission, with council approval, had purchased a fourth transformer as standby, but this could not help in the face of a continuing gap between public demand and the capacity of a three-transformer bank. Increasing population played only a minor role in the growth of demand. A rising standard of living, intimately related to the development of domestic and commercial electric appliances, brought into being a demand for the electric home lighted, powered, heated, cooled and safeguarded by clean and silent electricity. And the ending of the war released simultaneously the purchasing power and the producing power which made the satisfaction of this demand a possibility. With only limited need for industrial power, the town had developed a demand pattern which produced a peak use in December, when the early descent of darkness, extremely cold weather, and Christmas lighting for shopping and decoration, combined to cause high demand for residential and commercial uses. In September 1947 the commission warned customers not to expect too much from their off-peak water heaters until

new transformers could be installed. At the same time demand for telephones was running ahead of the switchboard capacity, and in December the commission decided it could accept no more applications for phones. The commission had begun efforts to obtain a new engineer-manager, but the matter was not pushed until R.R. Mitchell returned as mayor and chairman of the commission. At the first meeting in 1948 the town council was asked to negotiate with Abitibi for renewal of the contract which had expired a year before, and when no progress had been made by October the council was asked to authorize a delegation to meet the Minister of Lands and Forests in an effort to get a contract for an increased h.p. supply. Telephone users had to be asked to curtail their conversations to permit better service. Worst of all, the expensive new water plant, too heavy for unstable soil, was shifting, cracking, and even threatening to slide into Spring Lake. Fill operations on the shore were not helping, and it was suspected they might be making the situation worse. Secretary-treasurer Doug Turner had been ill, he returned to work in July only to resign and M. Hannan, who had been serving as assistant town clerk, was transferred to the PUC as secretary-treasurer. There was no discussion this time of consolidation of offices.
It was in the middle of this year of troubles that H.E. Brownhill was appointed engineer-manager, effective June 28, 1948. E.F. Roberts of Brantford, who had sunk the new wells and designed the water treatment plant and reservoir, was called back in November to advise on a fill program which was hoped would consolidate the shore line sufficiently to stop movement of the building. Eventually it was decided to drive piles off-shore, through the winter ice, anchor them to solid ground, and fill to create a new shore line. This held, and in the following 20 years very little additional shifting was noticeable. The rescue operations entailed an additional borrowing of $35,000 (By-law 692). In 1955, 8,000 yards of additional fill, obtained during the town's street paving program, was placed outside the poling to strengthen and protect it.

In October 1949 there was a breathing spell which permitted looking at the telephone problem again, and a $30,000 borrowing for extension of the system was approved. However, debentures were never issued. With the approval of the Ontario Municipal Board the program was financed through a three-year bank borrowing backed by total liquid assets of the commission.

Two important steps to improve employee relations were taken in 1950. In co-operation with the town a staff pension plan was arranged with a private carrier, commission and workers sharing the cost. And at the year-end a standard 44-hour week was adopted for all employees.

FIRST HYDRO CONTRACT

It was in August that Abitibi finally wrote to say that it would be unable to renew the town's power contract, its Island Falls power being needed for its own uses. Before the end of the year the HEPC and the Minister of Lands and Forests had come to the rescue in letters stating that solutions were being worked out. By April 1951 the solutions had taken shape. Hydro agreed to supply 60-cycle power (as previously supplied by Abitibi) to be brought from Kirkland Lake. The town would be served by a power line tapping the main Hydro line five miles south of Cochrane. Price would be $37.00 per k.w. or $27.50 per h.p., as compared with the $24.00 per h.p. paid to the end of 1951, when the rate went up to $27.50. Hydro was asked to estimate the cost of a new substation adequate for a 10-year projection of demand, and Abitibi was asked if the existing connections could be left after transfer to Hydro for possible use in emergencies. In October, on the basis of Hydro estimates, its engineers were asked to design a substation at an estimated cost of $83,000, and council was asked to borrow $105,000, presenting the borrowing by-law and contract to the electors at the same time.

The current crises being all under control in August, Mr. Brownhill resigned in that month. In October David Watt was named engineer-manager, but his tenure of office was brief. Less than three months later he was asked to resign. Little time was lost in replacing him, and A.A. Kidd of Kapuskasing was engaged as engineer-manager, effective July 1, 1952.

Increasingly in recent years the commission had been asked to extend its services beyond the town limits. It provided electric and telephone service to Hillcrest, a small residential subdivision in Glackmeyer township, eventually taking over the systems there, but was not prepared to finance water and sewer service beyond provision of a common tap. Neither was the township prepared to undertake costly extensions with extremely limited assessment. (The town and commission, in fact, because of the same formidable cost-assessment ratio, never even extended sewer service to low-lying parts of the townsite on its western fringe, and only gave water service when enough development was concentrated in one area to justify it.) The commission eventually undertook to extend telephone service about four miles south of the town, but left other areas to be developed by Ontario Northland Communications and Northern Telephone Co., service through the Cochrane switchboard being

provided for the latter. Water and sewer conditions were only made in exceptional cases where costs could be limited and the town council consented. Rural electric service was provided directly by Hydro, but it fed its power through the Cochrane substation, paying the PUC for transformation service.

The steadily increasing demand for telephones in town was difficult enough to satisfy, and within a few months the new manager was recommending addition of another section to the switchboard; once more the $10,000 cost was covered by internal loans. By the end of 1953 the commission began to phase out the old pie-plate style of street lighting reflectors, and to make more widespread use of improved lighting. One of the consequences of the switch to Hydro began to show up in connection with the street lighting costs, new accounting methods resulting in higher charges for the service rendered to the town, to the council's disgust. Even earlier the flat rate space heater service began to be phased out.

Future social historians might find it of interest that on July 20, 1953, the rate for local pay phone calls was increased from 5c to 10c; the increase was approved in September. Not only were more people talking over more phones, but they were talking over greater distances. In 1931 long distance earnings were $2,459, or 18 per cent of total telephone revenue; in 1969 they were $59,099, or nearly 40 per cent of total revenue.

Hydro took over power delivery on December 21, 1952, but the new substation with three 1000 kva transformers did not come into use until 1954. Costs ran considerably over the Hydro estimates, and in 1954-5 an additional $40,000 had to be borrowed to take care of these added costs and the 1955 capital program.

There were frequent power interruptions, of short duration for the most part, but in March 1956 there was a prolonged cut-off (in mid-winter darkness) due to damage to a pole south of town which carried the Cochrane lines. This led to more definite arrangements for standby power from Hydro, Spruce Falls and Abitibi, and ultimately to improvement of the Hydro transmission system. On the other hand the advantage of the Hydro tie had been proven in 1955. Water levels in Northeastern Ontario were exceptionally low, and power was obtained from the Southern Ontario system.

At the end of 1959 a new cost agreement with HEPC became effective setting an interim rate of $37 kw per annum, with rebates based on actual cost being made after the end of each year.

At the end of 1956 an experiment with mercury vapour lighting fixtures for street lighting had been authorized, and in the following year these became standard as improvements in the street lighting program could be financed. Also in 1957 a fourth 1000 kva transformer was installed at the substation for standby use, with provision for interlocking into the Abitibi system if needed.

In December of 1958 the peak demand reached 83.2 per cent of the rated transformer capacity, and Mr. Kidd recommended that while the system was still operating within safe limits, a second standby transformer should be purchased. (It was installed in 1959, and a third was purchased in 1960 completing a new bank, all bought from revenue, which expanded capacity to 6,000 kva.)
Of at least equal importance he recommended that consideration be given to changing the entire distribution system from 2300 to 4160 volts. The design of the old system (delta connection, no ground) had been causing some trouble, and involved some dangers. This major operation would have to be undertaken eventually. It was authorized, and designed by the engineer-manager so as to balance the load. Two work crews were borrowed from Hydro, and one local man was attached to each crew to explain the existing connections. The final changeover was accomplished in a single long day, the Cochrane staff completing the associated jobs later, after the Hydro men checked out.

In 1958 the National Union of Public Service Employees was certified as bargaining unit for most of the PUC (and town) employees, and negotiations led to the first union contract, signed in August. In 1959 a new three-year contract was signed; this was re-negotiated in 1962, again in 1965, and in 1968 a two-year agreement was signed.

COSTS OF GROWTH

The telephone system continued its growth pattern without interruption. At the beginning of 1956 there were 955 customers and a waiting list of 29. Purchase of two new sections for the switchboard was recommended, but before

this program was launched it was changed to one of purchasing four sections of manual board in use at Haileybury from Northern Telephone Co. Ltd. This required an enlargement of the office-exchange building.

This was only an interim program. For several years the desirability of changing to dial operation had been discussed, but by 1960 the change was considered to be feasible and almost mandatory. A system which 40 years before had been staffed by three girls looking after the office and exchange, with a boy on duty at night, had grown to require 13 full-time switchboard operators with extras on call as needed. Further extension of the single board for efficient manual operation would not be practical. On October 17, 1960, the commission asked council to arrange for a referendum to decide if the adoption of a dial system should be explored. The answer was favourable, and in 1961 the Northern Telephone Co. Ltd. was retained as consultants. By August four tenders for a system designed by that company had been received, the lowest being that of Northern Electric Co. Ltd. at $108,415. At a joint meeting of council and commission on October 10 council was told that it should be possible to finance a changeover without increasing rates, the revenue from an expanded system and wage savings resulting from the release of switchboard operators being sufficient to cover the cost of borrowings. Council agreed, and in December voting on a debenture by-law for $170,000 was 189 for, and 138 against. (The forecast proved accurate, and to 1970 no change in phone rates had been found necessary despite the large borrowing involved.)

The program itself underwent slight changes as it took physical shape, the most important being that instead of reconstructing the commission building, space was rented on long-term lease in the adjacent new Ontario Northland Communications building, which already housed the long distance facilities with which the Cochrane local system was connected. Arrangements were worked out by which the ONTC provided staff for information calls and for the special fire and police communication which had been developed in connection with the manual system. The contract finally signed with Northern Electric covered installation of a 1580-line, 2,000-terminal exchange for $105,405. Another era ended when the eight-position manual board and associated equipment was sold to Northern Telephone Co. for $1,000 in 1965.

In the broader utility field the most important innovation since the town's beginning came in 1955, when the Trans-Canada natural gas pipeline was routed along No. 11 Highway and brought a new fuel to most parts of Northeastern Ontario. Cochrane distribution franchise was granted to Northern Ontario Natural Gas Co., and while the PUC was

quite prepared to do battle with it as a competitor with electricity in many types of service, it was also ready to deal with it as a consumer when need arose. In future years it converted both its office building and the water pumping station to gas for heating.

The only major change in the commission itself was authorized in 1957, when the voters approved an increase in size from three to five members. This time there was no disagreement between council and commission, and the first five-man body was elected at the end of that year.

As early as 1954 pressure from the Porcupine Health Unit led to study of the desirability of fluoridation of the public water supply to help control dental caries. A preliminary cost estimate was rather high and nothing happened then. The question was revived in 1961. The cost estimates were lower, but a strong campaign against the proposal was organized, and when the voters were asked to pass judgment at the same time as they voted on dial phones they said no by 301 to 158.

ONE THING LEADS TO ANOTHER

What started out as a simple annexation to make more land available for residential use developed into one of the most powerful influences upon its utilities in the history of the Town. In 1956 Hugh subdivision, an unpopulated area between the northeast section of the town and the rest of Glackmeyer township, was taken into Cochrane. The first little revolution which ensued due to soaring costs of labour, materials and money, was a decision to resort to local improvement by-laws for future service extensions. In earlier years councils and ratepayers had rejected this method, and all borrowing except for school purposes had been on the total credit of the town. Now local improvement procedure was adopted as official town policy, not only imposing more of the cost for new services upon their direct beneficiaries, but providing council and commission with a potent defensive weapon against citizens wanting costly services. An indication of the effectiveness of this program was given in 1962, when the continuing, and not unjustified, agitation by property owners in the West Annex for sewer service caused council to ask the ratepayers if they wanted to borrow $160,000 for the purpose. The ratepayers rejected the proposal by 207 to 173, and as the assessment in the Annex itself was so low that a local improvement program would have taxed

these residents out of existence, the agitation died down for awhile. What finally evolved was a prohibition of further residential building in the Annex until sewers could be afforded.

The discussion attending these developments gave fresh life to the demand by residents of Hillcrest for water and sewer service. (As noted earlier, Hillcrest was a residential subdivision of small-size lots and insubstantial homes in Glackmeyer township, east of Hugh). The utilities commission had over the years been brought in to supply electricity, telephones and a street water tap for common use. Low assessment and the low-lying nature of much of the area would have made sewer service a costly proposition. In the early '60s the town agreed to sell water and sewer service at the boundary of the township, which would have to finance distribution systems and collect the rates. The proposal reached the stage of obtaining Ontario Municipal Board approval but only for a debenture issue on the credit of the entire township. At this the township balked, and the proposal died. In 1968 the subdivision was annexed to the town by OMB order, with the township consenting and the town dissenting. But to 1970 funds were still lacking to improve the service picture.

The more far-reaching effects of the Hugh subdivision annexation sprang from the fact that it made available for the first time in many years large new areas of land suitable for residential use and capable of being serviced, so it seemed, at reasonable cost. The only large-scale housing projects in town, since the National Transcontinental Railway had built a group of houses for rental to its employees on Transcona Heights, had been public housing project undertaken after World Wars I and II. Aside from these projects all housing, whether in single, duplex or multiple dwelling units had been constructed as separate projects by individual builders. Availability of land in Hugh subdivision immediately touched off a considerable amount of private building, which was kept under control as to location by application of the local improvement policy and firm service extension policies by commission and council. Also discussed were housing development projects involving re-subdivision by large-scale operators, but nothing had come of these up to 1970. What did prove to be a decisive factor in utility growth was the choice of a block of this land for a low-rental housing project by the Ontario Housing Corporation. Extension of electric and telephone services presented no problems, but water and sewer costs were sufficiently high that they could be justified only because the extension required also made it possible to service additional large parts for the subdivision. The mountainous stumbling block was a ruling of the Ontario Water Resources Commission that it would not approve extension of sewer service unless the over-taxed and obsolescent disposal system was replaced.

FIRE AND WATER

The water system almost simultaneously came into the problem category again. In October 1964 what was by far the town's largest and most important industrial plant, a plywood producer, was burned to the ground. The company was prepared to rebuild if it could obtain new financing and insurance, but these were made dependent upon a more adequate water supply. For many years the water distribution system on the east side of the lake had been unsatisfactory, and it was here that much of the new building had been taking place. The demand for improvement created jointly by the increasing residential building in the area and the needs of the plywood plant had to be met.

Although the size of the problem only became apparent gradually, what was required was an immense investment in water and sewer facilities to take care of present and future growth, and to replace obsolescent plant. The grants-in-aid structures for municipalities set up by the federal and provincial governments offered some help, but not enough to bring ideal solutions within the financial resources of the community. The water-sewer department of the PUC had always been financially the weakest of the departments because the expensive water treatment plant represented such a load of capital and operating costs that rates were high, and yet normally insufficient funds were available for expansion. The town's credit was strained by large investments in storm sewers, roads, sidewalks and schools. The combined result was that the Ontario Municipal Board was extremely cautious about approving additional borrowings, which for the most part would have to be repaid from the tax rates rather than from utility rates, and the outcome was a series of compromises between the needed and the possibly practical which once more mixed municipal and utility borrowings as thoroughly as had been the case 50 years before.
What was evolved eventually in engineering and financial and legal formulae was a program, financed to a limited degree by local improvement arrangements, partly by obligations repayable from utility rates, and largely by obligations repayable from tax revenues, which provided

- Water and sewer service to the proposed low rental housing project, and potentially to all Hugh subdivision.

- An improvement of the water distribution system for the whole east part of the town, including the Cochrane Enterprises Ltd. (plywood) mill, and new standby pumping facilities at the water plant.
- A separate standby pumping station able to draw water directly from Lake Commando, to be paid for over a period of years by the company but financed by the town.
- An entirely new sewage disposal system, using oxidation basin with aerating guns (to accommodate which the town purchased and later annexed a large farm on the north boundary). The old plant using the activated sludge system was scrapped.
- Finally, in 1968-9, when the new oxidation basin failed to function satisfactorily, a small pumping station to control the water of Lake Commando and to channel it so as to by-pass the basin. The town undertook this job without borrowing, the commission contributing $4,000 to the cost.

While the water and sewer systems were thus being substantially reconstructed, other utilities were not being forgotten. Steady improvement was made in the street lighting system, and a program to improve the quality of the electric distribution system was under way. A totally new system was designed for the West Annex, with the intention of extending it to the entire town gradually a second best from the standpoint of appearance to buried wiring. The town's official plan makes underground wiring the ultimate objective and as opportunity has arisen small sections of the system have been buried. While the 6,000-kva substation is operating at about 65 per cent capacity in 1970, studies looking to its replacement are under way. It may be relocated and decentralized by the use of mini-stations at strategic points.

Electric heat for homes, institutions and business places has been catching on. Even in the frozen north proper construction methods permit economical use of electric power for heating, and more structures are being designed to permit this. In the past decade there has been more experimentation with rates for this purpose than for any other in the electric department.

In 1968 something new arose in the long list of utility emergencies. Engineer-manager A.A. Kidd suffered a partial stroke from which he emerged completely blind. Following training by CNIB he was able to take up some of his old functions, and by 1969 a new managerial structure had been developed by which Mr. Hannan became secretary-manager and Mr. Kidd was retained as a consulting engineer.

Mr. Kidd's illness interrupted an experiment to reduce water treatment costs by largely eliminating use of chemicals and passing the water through a specially built aerator tank, designed not to soften the water but to control its iron contents. While early tests were promising, actual operation had to be suspended when a bacterial growth was traced to the tank. By the early part of 1970 decisions were reached to restore direct flow in the treatment process eliminating the use of the tank. During the tests, however, it had been found that a substantial reduction in the use of lime and alum could be made, reducing costs without affecting the iron removal process.

These developments coincided with a steady weakening in the efficiency of No. 3 well and by early 1970 decisions were reached to replace its pump and make further tests on the well.

Construction of a number of Department of Highways and Lands and Forests buildings just outside the southern boundary of the town made the use of septic tanks for sewage increasingly unsatisfactory, partly because of poor soil conditions. Direct connection with the town's sewer system was not possible, but in 1969 agreement was reached with the Department of Public Works, under which a pumping station and mains would be installed, the Department and town co-operating. This will permit not only connecting these buildings to the town's sewers, but may also serve some parts of the West Annex.

Unsolved by early 1970 was the problem of getting the new oxidation basin to function efficiently. Solids had already built up in the basin to such an extent that the process was not efficient, and a series of experiments in 1969 had not led to a practical method of remedying the condition. Further engineering studies were launched.

AFTER 60 YEARS

As Cochrane celebrates its Diamond Jubilee in 1970, the stature of its utilities may be measured by half a dozen figures:

	Electric Dept.	Telephone Dept.	Water-Sewer
Revenue for 1969	$309,506	$148,490	$105,446
No. of customers	1478	1995	1302

Hydro's January 1970 power bill was based on a 20-minute peak demand of 4715 kw.

Debenture debt at December 31, 1969 stood as follows:

Payable by Public Utilities Commission	-Water and Sewer	$ 119,402

	- Electric	$ 27,750
	- Telephone	$ 140,394
Payable by Town of Cochrane re water-sewer utilities		$ 271,725
Payable by Town of Cochrane for other purposes	- Roads	$ 86,547
	- Drainage	$ 38,057
	- Hospital	$ 2,000
Payable re Schools		$ 381,352
Total pincipal outstanding, including local improvement borrowings		$ 1,067,229

PUBLIC UTILITIES COMMISSION OF COCHRANE

PART 1 - MAYORS, BEFORE COMMISSION ESTABLISHED

1910- T.J. McManus
1911- T.J. McManus resigned October succeeded by W.S. Carter
1912- W.S. Carter
1913- W.S. Carter
1914- A.T.H. Taylor
1915- B. Rothschild
1916- B. Rothschild
1917- B. Rothschild resigned April succeeded by A.T.H. Taylor
1918- W.S. Carter
1919- W.S. Carter
1920- B. Rothschild

PART 2 - COMMISSION MEMBERS

1921-F.C. Ivy, chairman and mayor; Jos. Bradette, J.E. Desloges

1922-J.W. Russell, chairman and mayor; J.E. Desloges, J.G. Yates in October F.C. Ivy replaced Russell as member and acting chairman

1923-J.W. Russell, chairman and mayor; J.E. Desloges, G. Wingrove; upon resignation of Mr. Russell, R.J. Mackay received temporary appointmen as member and chairman; followed by J. Drinkwater, elected mayor, also chairman

1924-A.T.H. Taylor, chairman; J. Drinkwater, mayor; J.E. Desloges

1925-same as 1924

1926-same as 1924

1927-J. Lanning, chairman; F.C. Ivy, mayor; R.J. Mackay

1928-same as 1927

1929-same as 1927

1930-J. Lanning, chairman; R.R. Mitchell, mayor; R.J. Mackay

1931-R.R. Mitchell, chairman and mayor; R.J. Mackay, D.A Chenier

1932 same as 1931

1933-R.J. Mackay, chairman; R.R. Mitchell, mayor; D.A. Chenier

1934-R.J. Mackay, chairman; R.M. Smith, mayor; D.A. Chenier

1935-D.A. Chenier, chairman; R.M. Smith, mayor; R.J. Mackay

1936- R.J. Mackay, chairman; R.R. Mitchell, mayor; D.A. Chenier

1937-R.R. Mitchell, chairman and mayor; R.J. Mackay, E. Thorning

1938-E. Thorning, chairman; R.R. Mitchell, mayor; R.J. Mackay; in April Mr. Mitchell resigned as mayor, succeeded by A.E. Wicks

1939-E. Thorning, chairman; A.E. Wicks, mayor; R.J. Mackay

1940-E. Thorning, chairman; A.E. Wicks, mayor; J.A.K. Falby in September Mr. Wicks resigned as mayor, succeeded by J.M. Penney but councillor D.S. Revels was appointed to act for mayor on PUC

1941-J.A.K. Falby, chairman; J.M. Penney, mayor; E. Thorning; Mr. Thorning resigned and R.J. Mackay was appointed to complete term

1942-J.A.K. Falby, chairman; J.M. Penney, mayor; R.J. Mackay

1943-J.M. Penney, chairman and mayor; R.J. Mackay, G. Zahalan

1944-G. Zahalan, chairman; R.M. Smith, mayor; R.J. Mackay

1945-R.J. Mackay, chairman; R.M. Smith, mayor; D.S. Revels

1946-D.S. Revels, chairman; D. Rochon, mayor; G. Biggs

1947-G. Biggs, chairman; D. Rochon, mayor; G. Zahalan

1948-R.R. Mitchell, chairman and mayor; M. Owens, G. Zahalan

1949-same as 1948

1950-same as 1948

1951-same as 1948

1952-R.R. Mitchell, chairman and mayor; M.A. Palangio, G. Zahalan

1953-R.R. Mitchell, chairman and mayor; M.A. Palangio, W.G. Kelly

1954-M.A. Palangio, chairman and mayor; W.G. Kelly, L. Abernethy; Mr. Abernethy resigned and R.R. Mitchell appointed to complete term

1955-M.A. Palangio, chairman and mayor; R.R. Mitchell, W.G. Kelly

1956-G.J. Kydd, chairman; C.V. Sunstrum, mayor; W.G. Kelly; councillor L. McKinnon to act for mayor

1957-G.J. Kydd, chairman; W.G. Kelly; L. McKinnon as above

1958-Commission increased to five members G.J. Kydd, chairman; F. Fasano, mayor; W.G. Kelly, H.H. Warrell, M. Fingland. Mr. Warrell resigned; Mr. McKinnon appointed in place

1959-G.J. Kydd, chairman; F. Fasano, mayor; M. Fingland, W.G. Kelly, L. McKinnon

1960-G.J. Kydd, chairman; M.A. Palangio, mayor; M. Fingland, W.G. Kelly, L. McKinnon

1961-G.J. Kydd, chairman; M.A. Palangio, mayor; M. Fingland, W.G. Kelly, L. McKinnon, Mr. Kelly resigned; Mr. Fasano appointed

1962-G.J. Kydd, chairman; M.A. Palangio, mayor; M. Fingland, L. McKinnon F. Fasano

1963-G.J. Kydd, chairman; M.A. Palangio, mayor; M. Fingland, L. McKinnon F. Fasano

1964-same as 1963

1965-same as 1963

1966-G.J. Kydd, chairman; M.A. Palangio, mayor; M. Fingland, F. Fasano, R. Bradette

1967-M. Fingland, chairman; M.A. Palangio, mayor; F. Fasano, G.J. Kydd R. Bradette

1968-M. Fingland, chairman; M. Hotte, mayor; F. Fasano, G.J. Kydd, R. Bradette

1969-F. Fasano, chairman; M. Hotte, mayor; M. Fingland, R. Bradette, G.J. Kydd

1970-F. Fasano, chairman, M. Hotte, mayor; R. Bradette, M. Fingland, K. Rochon

QUARTER CENTURY CLUB

Established October 17, 1960, to recognize employees with service of 25 years. Named at that time:

Joseph Rose - May 1, 1920 - 40 years

Henry Osmar Sr - April 1, 1930 - 30 years

Miss Olive Gardner - June 1, 1934 - 26 years

Named December 18, 1961

Pete Georgeoff - June 15, 1936 - 25 years

Wm. J. Beadman - March 16, 1937 - 25 years

Henry Lewchuk - April 15, 1937 - 25 years

Before establishment of Club, W.J. Ruckwood was honoured on retirement at age 70 in 1949; served since 1917 - 32 years.

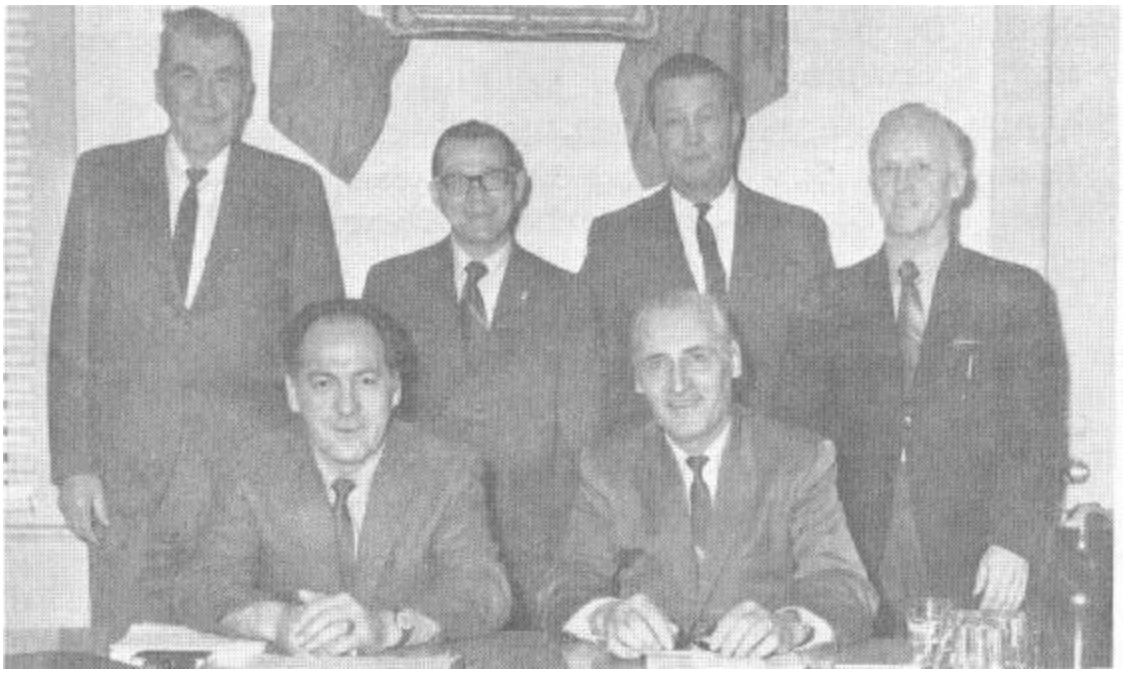
COCHRANE TOWN COUNCIL – 1970

Rear row, left to right - Councillors Geo. Rhodes, Marcel Claveau, C.V. Sunstrum, Marc David.

Seated, left to right - Clerk Treasurer, L.J. Adshead, Mayor M. Hotte and Councillor Phil Bradette.

N.B. - Councillor J.A. Fortier is absent through illness.

COCHRANE PUBLIC UTILITIES COMMISSION – 1970



Standing, left to right - Commissioners Murray Fingland, Ken Rochon, Roland Bradette and Secretary-Manager Marty Hannan.

Seated, left to right - Chairman Frank Fasano and Mayor Maurice Hotte