REVIEW IN REVIEW

Our "Merveilleux" Mrs. Peterson... Phyllis Lee Peterson who makes her Review debut on page 15 (My Merveilleux Montreal) has had a crush on Montreal as long as she can remember. Her family has lived there for four generations, since those days when her great-grandmother resided on Marlborough Street near the waterfront. The little frame house still stands, its insides stripped out and full of scrap iron. Her mother, now 80, remembers the leisurely days when neighbours kept peacocks on green lawns spreading down to the St. Lawrence and she got up early to pick mushrooms that had grown overnight.

Mrs. Peterson has been writing 15 years and has sold almost a hundred short stories, articles, TV scripts and one children's book. Her writing helps put two sons through school; already one is in university engineering. When his mother can steal a moment from her typewriter and dish towel, she riffs nostalgically through her copy of the McGill Daily—and dreams yet another facet of her abiding love affair with Montreal.

Pyramids, Prairies and Pat... As evidence of her peripatetic life as an oil wife, Pat O'Brien (in private life, Mrs. David Durling) produced a photo of herself astride a camel beside the Egyptian pyramids. Now that she's comfortably settled in Regina with her pipe line company husband, Pat hard-sells ride camels but she's found this, her first magazine article, almost as nerve-wracking. It took more than a hundred interviews, telephone calls and letters to former neighbours, and many nights of careful writing, to revise and amplify the vivid memories on page 6.

Our Cover... Artist Ken Zealley isn't a boating fan ("I'm unathletic as all get-out," he confesses), but a neighbour makes up for his lack of enthusiasm. Ken goes in for sports cars so the two teamed up for a cover to launch the boating season. His imagination ran a bit wild but it's been like that ever since he started his 15-year art career painting women's dresses in a catalogue. In soccer moments at his Toronto studio, he prefers to illustrate children's books.

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PHOTO CREDITS: Page 2, Rosemary Gilliat; pages 10-19, Hans Ehrlich; pages 20-21, Mike Services (top) and Prairie Farm Rehabilitation; page 22, Imperial Oil (top), Ontario Dept. of Planning and Development; page 29, Glenbow Foundation.

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EDITOR: ROBERT COLLINS

IMPERIAL OIL REVIEW

An experiment in understanding

Complete support between this country's English and French-speaking peoples has long been the dream of Canadians of both races. It would seem to be the first requisite of true national, spiritual or economic. An important step toward such understanding would be for each group to have a working knowledge of the other's language.

This is a formidable but not insurmountable problem. One approach to it is proposed by Canadian author and educator Hugh MacLean (see page 2). Another approach—not inconsistent with MacLean's—is now being examined by the Association Canadienne des Educateurs de Langue Francaise, a national organization with membership in all provinces.

Like Dr. Wilder Penfield of McGill (see: "The Man Who Maps The Human Mind", April Review), AECF believes that the method of teaching is the key to a second language. Assuming that there are four distinct learning processes in a new language—understanding, speaking, reading and writing—the association is convinced that understanding should be the first objective.

For one thing, it is easier. A child understands the spoken word of his mother tongue well before he learns to speak. He learns to read and write later. Why not apply this same logical method to a second language?

With no new signs or grammatical rules to memorize, and none of the infuriating obstacles that go with trying to speak in an unfamiliar tongue, AECF feels that understanding would come relatively quickly.

Having achieved this, reading, speaking and writing the new language could come later and more readily. But, says the association, in theory these phases of learning would not be strictly necessary. If all French-speaking Canadians perfectly understood spoken English, and if English Canadians were as well understood French, each could communicate with the other in his own tongue.

To test the validity of these theories, AECF will soon begin a four-year experiment, facilitated by a $4,300 annual grant from Imperial Oil. During those years, English will be taught by the "understanding" technique to two successive groups of students through Grades 3 to 7. The method will be applied in 40 schools with a total of some 1,300 students. Results will be compared with similar classes where English is taught by the traditional method.

It is at this point an experiment—the first of its kind. But if it proves worthwhile we may see one day the Canada envisioned by AECF president Roland Vanier, where "everyone will be understood by all."
Hugh MacLennan says:  

**FRENCH IS A MUST FOR CANADIANS**

The old proverb about people who live in glass houses applies perfectly to me when I write about bilingualism in Canada. I can’t blame my fellow Canadians of the English language for being unable to speak French because I speak it brokenly myself, and my ears are painfully slow to catch it from others. I read French reasonably well, but that is not the same thing at all. In a country like ours I should be able to speak it almost as well as English. My inability to do so is a constant shame to me, and I recognize it as the greatest educational handicap in my entire life.

To remedy that loss now would require at least six months, possibly a year. I would have to live with a French family and reduce my thinking processes to the elementary ideas which would be the only ones I could express in a language I have yet to master. At my time of life—I am 53—I cannot afford that year or half-year, nor can I afford the temporary retrogression it would impose on my mind.

So the handicap abides, debarring me from reaching a true equality with my French-speaking friends. Being Montrealers, their English is as good as my own, and I cannot practice my broken French on a bilingual Canadian without mutual embarrassment.

I am also debarred from participating with courtesy in many of the gatherings where most of the company is Canadian. Surely it is improper to require a dozen men and women to forsake their own language for the benefit of the one person in the room who cannot speak it. Beyond this, my weakness in the senior language of Canada is a private poverty, for French is the most precise instrument of speech the world has known since the death of ancient Greek.

If I speak at some length about my own case, it is only because I am typical of so many English-speaking Canadians. Barely three percent of them born outside the province of Quebec are bilingual. I would not be surprised if many of that three percent had either a French-speaking parent or had been living side-by-side with Canadian families when they were young. Certainly they could not become bilingual in any English-language Canadian public school. In this land of ours, more than nine times out of ten, the bilingual person is either an immigrant or a Canadian who speaks English.

The reasons for this situation are various, and once again my own case is a good illustration. I grew up in Halifax, a city where no French is spoken. When I went to school, instruction in that language did not begin until Grade IX. Too little of it came too late to do any good. It was taught without conversation by teachers who, I suspect, would have had difficulty ordering a meal in a Paris restaurant.

After two years of plodding along in the grammar of a living language taught as though it were dead, I abandoned French and took up Greek. I could not carry both French and Greek in the same curriculum and, on the whole, this was a wise decision. I was to learn a lot of Greek, but I could not have learned how to speak French in the system then in use in Nova Scotia.

Always I hoped that a chance of learning French from French-speaking people would come, but it never did. When I was a student in Europe it was essential for me to learn German for my research work. This precluded the chance of learning French in a French family.

Later, to my surprise, I found myself a resident of Montreal, and here the situation was curious. In Montreal there is no apparent need to learn French in order to communicate; the Montreal Canadians all speak English, at least the ones you meet in stores and buses. Nor, in my case, was there any opportunity to master the language. I was now very busy working often night and day on two professions simultaneously. Time passed and I reached middle age.

The best I could do was to use scraps of time to study French grammar and for a few years go to an instructor twice a week for French conversation. It was better than nothing. I learned to read with reasonable fluency probably no contemporary Canadian writer is more prolific, more vigorously "Canadian" or has achieved more distinction in his field than Montreal's Hugh MacLennan.

Since 1931 his five novels and two books of essays have won an unprecedented five Governor-General's medals, including the 1959 award for fiction. A third book of essays will be published this year. He is a frequent contributor to leading Canadian and American magazines and has won the Lionel Trillium gold medal for "achievement in imaginative or critical literature."

A one-time Matrimor and a Rhodes scholar, MacLennan was for many years a Montreal teacher and is now an associate professor of English at McGill University. From his deep understanding of and affection for French-Canada, come these provocative views on bilingualism. They stem from "thought points for every Canadian."

*The Montreal Review, June 1950*
and to speak it after a fashion. Nor do I mean to suggest that it is impossible for a person to acquire French at middle age. It would do much good if more of us tried. But two difficulties usually defeat us.

In middle life most men are too occupied with their professions and businesses to find the necessary time. Two cabinet ministers in two separate federal governments have lamented to me the fact that although they would sooner acquire French than almost anything else, their 16-hour working day leaves them no opportunity.1

There is the further difficulty that when a man has grown up it is much harder to learn a foreign language, and it is especially hard to learn French.

Few Canadians seem to realize the truth of this latter sentence. The difficulty with French stems from its perfection, and this can be seen when you compare it with English. The spelling of English is horribly confusing to foreigners because the spelling was set before the pronunciations established themselves. But English grammar is much easier than French grammar, and the standards of speech in North American English are so low that the language of the average North American can almost be called a lingua franca.

We English-speaking North Americans tolerate sloppy sentence structures, overwhelming doses of slang, a general vagueness of expression and a lack of style which make many of us sound uncouth even to foreigners who have had to learn English as a second language.

With French this is not the case. There seems to be no basic French as there is a basic English or a basic German. You can get by in German and English with a very small vocabulary, but in French you have to speak the language pretty well in order to speak it at all. This makes French exceptionally difficult for an adult to pick up.

Finally, French is more difficult to catch with the ear than English or German because of the liaison within the phrase and the extreme rapidity with which a Frenchman can deliver himself of a group of personal pronouns. When I served as the sole English-speaking member of a Montreal Conseil des Arts, I well remember an occasion when a Canadian colleague read the minutes. They were printed before me and I was reading them to myself, but as he ran through them I realized he could speak almost as swiftly as the eye could follow the printed word.

For these reasons I say feelingly that the achievement of a true bilingualism in Canada is not going to come easily. But we can expect it to be better than we are doing now. The matter is so important to our national existence that the most radical plans should be considered for improving the situation.

This first point—that bilingualism is vital to our national existence—is not self-evident, as anyone known who has followed the attempts of educational boards to introduce conversational French into the curricula of an English-speaking province. Recently in Ontario, where a partial attempt was made, the cry went up: "What is the use of French if we don't live in Quebec?"

The use is two-fold. On the one hand, the study of a language like French is rewarding in itself and gives a supplemissive training to an English student in the precise handling of his own language. On the other hand, an increase in bilingualism may well be the sole measure which can save Canada from absorption by the United States.

This country of ours is a dual one or it is nothing: the essence of Canadian nationality lies in this very fact, that it is a political fusion of the two elements in North American history which refused to belong to the United States. More than we realize, we Canadians of both languages are committed to the Canadian experiment. I teach the young three hours a week, and I know from experience that Canada means much more to them than a place where they can earn a living and raise families. The young from our ancestors for a home of their own may not be visible in today's high-pressure prosperity, but it lies underneath the surface.

If any Canadian politician went to the electorate with an annexion program he would be annihilated at the polls. To be, at least to an extent,

Hugh Ainsworth says:

French is a must for

Canadians
Home is where the rig is

Meet the women who follow their oil-seeking husbands into some of the loneliest, coldest and moodiest corners of Canada

by Pat O'Brien

Thirteen years ago in a Persian garden a nice young man asked me to marry him. The morning breeze off the old Euphrates gently touched the date palms. Through a small opening in the roses I could see the familiar outline of a tank, low in the water. (Its cargo was paying for my job as a nurse in an oil company hospital at Aberdeen.) And I heard myself repeat the words of Ruth, "Whither thou goest, I will go." I've been going ever since.

I am a Canadian oil wife and moving is part of my life. In 13 years we have moved 15 times. Our present stop is Regina, our last was Edmonton, our next—who knows? Each move seems to be a little more disorganized than the last, usually due to a new baby or a few added pets. My husband, David, who is a pipeline, claims that to move with six children, a dog, two hamsters and 30 guppies is 42 times harder than with one child, two teddy bears and a turtle. Which is sound logic, even if it's poor mathematics.

In western Canada there are up to 20,000 men associated with the oil business who are liable to move at short notice. Trudging cheerfully behind them are their wives and families, a modern tribe of nomads. We have our share of worries but more than our share of excitement and rewards.

Six months before I blissfully committed myself to love, honor and follow, a great discovery in far-off Alberta changed the entire Canadian oil industry and, incidentally, the lives of future oil wives like me. On that memorable February day in 1947, after years of probing dry holes, an Imperial Oil drill

and eels out of homemade play dough; slopped in soap suds and finger paint, and generally had a whole of a time. By evening, the children were worn out and glad to wind off to bed. I came out of that motel in the spring as lean as a mother bear but, thanks to my kitchen, only half as fecoid.

Next to housing, the big bugbear for most oil wives in water. In some villages water for washing is hauled from the nearest slough and drinking water is stored in a cistern and sold, like milk, on a ticket basis. One tall blonde, who'd already shaken a Saskatchewan village by sauntering around in toroudo caps, caused further astonishment by complaining that the water was making her ill. Her husband found two rats in the cistern. The blonde, sure now she had the Black Plague, went into hysterics. In no time the village doctor was deluged with calls. But no one became seriously ill. After a few days, the fuss died down—especially when it developed that the blonde was expecting twins.

For other wives the hugabug is mud or laundry. The rich prairie soil, when wet, is as tenacious as the people who live on it. Winnie McGreivy, whose husband is now division drilling superintendent for Imperial in Edmonton, laughed about the early days in Redwater and "the women stepping out to tea, complete with white gloves and knee-high rubber boots." Mary Robinson, whose tall husband, Joe, is an Imperial geophysicist in Regina says, "It wasn't so much the mud but the everlasting diapers all over the place. Joe was forever hanging himself on the clothesline." Which reminds Vern Hunter that for years he "never had a meal without a wet diaper slipping into the face."

There are still other problems that defy classification. Arlene Hanna—Murray is Imperial's division engineer in Regina—opened her refrigerator one hot day in Estevan to find 10 little black enoles nearly curled around the butter and eggs. When she recovered, her daughter Karen explained, "But Mum, it was so hot outside for the poor little things."

Although most of the trials of the transient oil wife can be solved by
happy heart, there are some which have their roots in fundamental economic problems.

J. H. (Juno) Staveley, popular ex-mayor of Weyburn, Sask., is something of an expert on these. Three years ago, the quiet countryside around Weyburn rumbled with the stompede of oil rigs and all their accompanying paraphernalia—including the wives and children. It was these that created the serious problems.

Mr. Staveley talks about—"extraordinary programs for sidewalks, sewer and water main extensions, new subdivisions, additional capital expenditures for educational facilities, expansion of public utilities—and all these to be provided immediately . . . ." A gradual influx of people into a small town is a very different proposition from a sudden wholesale invasion of families who, at the spur of an oil well, may be up and gone again. Time after time small towns cope with this tremendous responsibility.

The city fathers of Weyburn worked hard at these problems. Their success was partly due to three factors. They immediately provided fully serviced trailer parks for the initial wave of oil men. Next, before building sub-divisions, they tried to use every available lot within the city, reducing the need for additional public utilities. Finally, in co-operation with the oil industry, they planned step-by-step expansion of more permanent facilities as the extent of the boom became clearer and revenues increased.

While towns such as Weyburn grappled with their headaches, the oil wives—in addition to their physical discomfiture—often faced a delicate and intolerable situation in other areas: the resentment of the community.

"It nearly broke my heart," says Maxine Harding, "when a member of a town council informed us the first day we arrived that we weren't wanted in his town.

Why did some communities resent oil people? Sometimes because of their natural conservatism. Sometimes it was our own fault. Many long-settled women honestly feel that our gypsy existence doesn't provide the social roots and lasting friendships so important to a family. One local dowager told me she thought oil wives were 'tumbleweeds.' The occasional breezy oil wife, dressed in slacks and driving her own car, openly criticized the local way of life and didn't help matters.

Unfortunately, too, the advance guard of oil workers sometimes included a few boisterous swaggerers who flaunt 20-dollar bills under the noses of the local farmers. One civic official who experienced this calls it "the arrogant attitude created by a pair of heavy boots, a wide belt and a leather jacket." Such men, removed from the influence of home and family, are of course not peculiar to the oil industry. Yet they have a bad impression.

The oil wives accepted this adverse attitude as a challenge. "To be accepted, we had to prove ourselves in every community," Dean Hunter says. To do this—and yet not appear "to run things"—they volunteered to help in church, school and community projects. Noel Robertson, whose husband Harry is Imperial's production superintendent in the Souris Valley area, is a member of Estevan's School and Collegiate Boards. Kay McCaskill—husband Jack is now production superintendent for Imperial in the Peace River district—was the first woman elected to the school board in Dawson Creek, B.C. Edith Christian, whose husband Ed is a pipe line general manager in Edmonton, has been foremost in such efforts as the Community Chest and mental health campaigns. A host of other oil wives are in Women's Institutes, Home and School Associations and church affairs everywhere.

Once the zeal of the oil folk blotted out their memory, The congregation in Redwater bought a small church in a sad state of disrepair. One Monday morning the oil men decided to move it to a better location. All week the local men shingled and painted while the wives provided refreshments and scrubbed pews. On Sunday morning, the whole congregation turned out to bask in the minister's congratulations. Half an hour passed and he didn't appear. Suddenly one man leaped to his feet. "Holy Moses," he shouted, "we forgot to tell the preacher we moved the church!"

Around Edmonton they'll never forget oil wife Mary McCrae who has since moved to Ontario with her husband. In 1947, on a visit to an American clinic with her seven-year-old son, Jimmy, a cerebral palsy victim, she remarked that Alberta had no cerebral palsy clinic. "Then why don't you do something about it?" demanded a doctor. Mary looked at her only son, helpless on the couch beside her. Her chin went up. "I will," she said. Back in Edmonton she put her friends to work, ran a "Personal" ad in the Edmonton Journal, and asked everyone she met if they knew of any of the "forgotten children." Within a year she had discovered enough parents of cerebral palsied children to meet in her basement and form the Edmonton Cerebral Palsy Association. A year and a half later, Mary had her clinic, built and maintained by the Alberta government.

A recent communal project is the Oil Service Club, organized in Regina in 1958 to raise funds for a "Holiday Home" where crippled children can receive care and treatment. It now has 12 western chapters with approximately 100 members. The Club's main source of funds is the Next-to-New Shop in Regina which sells used clothes, shoes and jewelry mostly donated by club members and supported by voluntary effort.

Naturally oil wives don't spend all their time fund-raising. For instance, Arlene Hannah started a Slimmerama in her basement in Estevan, not only to improve girls' figures but to improve neighborhood relations. Although Arlene had no gymnastic experience, she received a lot of help from oil wife Noel Robertson who was once a member of the Edmonton "Grads" world-famous girls' basketball team. The transcambuses' main social organization is the 2,000-member Oil Wives International with 17 branches in western Canada, two in South America and four in the United States. The idea started with Dean Hunter who set up the first group in 1951 in Edmonton. After spending weeks alone in a strange place "while your husband sits on a well," she knew only too well that women of the oil industry need an occasional evening away from home.

The object of the Oil Wives International is "to be strictly social, to foster good fellowship and understanding among the womenfolk of the oil industry and afford them an opportunity to dress up, attend a dinner meeting, meet old friends and make new ones without a care in the world."

And so we do. And at times like those—some of the best times in the life of a wandering oil wife—we can even see the humor in frozen sewer pipes.
Seaport, sophisticate, refinery centre, bastion of history and enchantment—Montreal is all these to all men. In this portfolio of words and pictures, we salute Canada’s liveliest and most delightfully complex city.

Canada’s biggest, most bewitching and wonderfully cocooned city is getting ready to burst into a Brave New World: where swish glass skyscrapers soar 600 feet above her skyline, expressways lace through smudgy tenements, new industrial smokestacks belch on the horizon, bridges spring from island to mainland, jet planes touch down from London, Paris and Berlin, and a seaport croaks with new flocks of cargo ships.

It’s all part of Montreal’s insatiable appetite to be all things at once: the gracious old French lady of Canadian history and the muscle-bulging Mr. America of 1984. A $200 million building spree is stirring her 318-year-old heart. Comparatively speaking, there’s nothing like it in North America. Within a few blocks of downtown Dominion Square, half a dozen buildings—at least two taller than any in the world outside the U.S.—will launch 30 and 40 dizzy storeys above the reckless tumult of 5,000 taxicabs, the confusion of two million French-English tongues, and the grey spires, plum domes and arches familiar of the old skyline.

“We’re outpacing New York,” boasts an architect who helped plan 42-storey Place Ville Marie.

Still on the drawing boards are: another half-dozen “little” skyscrapers (the 15 to 20-storey variety); sweeping plans to beautify and recant two historic lower-town squares; five new hotels to accommodate the growing convention trade; a gigantic concert hall costing up to $15 million; a hangar-sized television centre for CBC’s French-language network; a $35 million bridge to span the St. Lawrence River; and—hopefully—a new professional sports stadium and at least two expressways.

Within two years, the transformation will begin to show up in the business section: a futuristic chessboard of elegant plazas with colored fountains, carefully-manicured flowerbeds, broad malls lined with luxury apartments and shade trees, and in the background, the massive glass palaces.

Montreal’s metamorphosis was sparked four years ago by the office Goliath to be known as Place Ville Marie. Costing $25 million more than New York’s famous $100 million Rockefeller Centre, this cross-shaped tower (with a prestige entrance for each of its four major tenants) will have 1.5 million square feet of office space and will straddle and eventually hide the eyesore railway tracks leading into the CNR’s Central Station.

Its underground anatomy will include a moving sidewalk (carrying pedestrians from St. Catherine Street to the station concourse through a tunnel of arcade shops), a separate station entrance for trucks and double-level parking for 2,000 cars. At street level the square will face McGill College Avenue which is to be widened into a 120-foot apartment-lined mall running south from fashionable Sherbrooke Street.

The projected changes have already given Montreal heart spasms. Frontage along eight-lane Dorchester Boulevard zoomed from $10 to $50 a square foot. The Bank of Montreal, in the midst of erecting a 22-storey office on old St. James Street, abruptly lopped six storeys off its plans when it heard Canadian Industries Ltd. would put up a 34-storey office building with space to rent on Dorchester, Windsor Plaza, a newcomer to the space race, will overlook Place Ville Marie’s cruciform by one storey.

When the three largest skyscrapers open their doors they’ll gobble up some

By Michael Pengelley
60,000 paper-thumming men and women—many as in St. John's, Nfld., or Three Rivers, Que. What this will mean at rush hour: Montreal's harassed traffic department doesn't dare think. It could create a pedestrian jam as spectacular as the new buildings.

Such headaches, however, are typical of Montreal—a Jekyll and Hyde metropolitan of mixed-up motives, alternating ambitions, flamboyant dreams and often bitter realities. Everywhere is conflict and incongruity. A 300-foot lighted cross gazes down benevolently from Mount Royal on the sinful glitter of neon-lighted burlesques and sleazy nightclubs as well as the massive basilicas and historic cathedrals.

On the south side of Place d'Arms stands Notre Dame Church, two towering monuments to the famous Notre Dame Cathedral in Paris—but only a quarter the size. A street's width away stands the Altride building which, to some visitors, looks like a miniature version of New York's Empire State building. A few blocks east in the heart of Place Jacques Cartier rises a bit of jolly England; a statue of Nelson which, according to rumor, was erected on impulsion when resident Britons learned of his mounting victory at Trafalgar. Stranger of all is the tomb of James O'Donnell, the architect of Notre Dame: his Irish Protestant remains lie in holy repose beneath its Roman Catholic altar. Such anomalies set Montreal apart as the world's most unpredictable city.

The banana-shaped island itself is a contradiction. Thirty-two miles long by ten wide, it blocks one of the world's greatest inland waterways, as the fat lady at the far, its location has helped make the city a financial center, transportation terminus and, of course, a seaport. Yet Montreal pays dearly for this natural advantage at a cash-fall for ocean traffic. The new Champlain bridge, once of nine, will cost about $35 million. Power lines are another heavy expense. And recently a Chamber of Commerce report on water pollution quoted a complaint that Lake St. Louis visé with Hamilton Bay for the title of the world's largest and most beautiful "septic tank."

Worst of Montreal's basic griefs is the immovable object that dominates her very center—a 750-foot volcanic plug known as the "mountain." While summer symphony concerts and the whispers of young lovers mingle with the clip-clop of its horse-drawn carriages, city planning director Roméo Mercier wonders whether the mountain is "a jewel or an albatross on Montreal's back."

Under its brow, squeezed into a mile-long neck of land against the languorous St. Lawrence, Canada's largest urban population drives 300,000 cars and trucks—more vehicles than all the rest of Quebec. Yet today, more than three centuries after Montreal was settled and named Ville Marie by French explorer Paul Chomedey, Sieur de Mausonneuve, not a single road traverses the island directly north and south. Drivers have to dodge up and around the mountain over a disjointed pattern of roads to reach the south shore.

The downtown section is an almost hopeless congestion of narrow streets, hilly-skerker parks and hodge-podge squares that send automobiles shooting off in different directions and tempt motorists to commit suicide. City traffic experts estimate it would cost $300 million to straighten out the downtown streets for present traffic—not counting for the 900,000 vehicles expected by 1980. Elaborate plans for at least three expressways have been drawn up but, so far, they are only dreams.

"There is no traffic solution," means one city official. "The best we can do is try to alleviate an unpleasant situation.

Other plans have been hashed and rehashed to find fast transportation for non-motorists: a motorway which would circle the base of Mount Royal and an enlargement of the CNR tunnel through the mountain (with a rapid transit system added). Such schemes would require financial aid from the province and perhaps the federal government.

Even the traffic problem can't dim Montreal's enthusiasm. It seems a relatively minor debit in the face of her enormous assets. She is:

-producer of more manufactured goods than any other Canadian city.

—hub of Quebec's multi-billion dollar natural resources.

—Canada's favorite entertainment and convention oasis.

—the country's biggest retail market.

Ever since Jacques Cartier sailed up the St. Lawrence in 1534 to discover the island blocking the way, Montreal has been the unchallenged terminus for land and ocean trading routes. A fugacious report issued by a McGill study group once forecast that serious traffic would bypass Montreal and close Canada's greatest port. But today $65 million worth of improvements see nearing completion along the 13 miles of crouching sheds, piers, jetties and grain elevators. And one day the port may stay open all year, instead of the present eight months. A fleet of seafarers might keep the channel open, if seaway traffic made it economic.

Whatever happens, the port's future is bright. In 1959, first year of the seaway, the net registered tonnage entering and leaving Montreal leaped from 10 million to over 16 million.

The new iron ore docks at nearby Conception handled 10 million tons, solidifying Montreal's command of heavy industry. Already seven steel companies have plants in operation in the area, under construction or on the drafting boards.

Grain is the top waterfront item (800 million bushels one year). Next is oil. Crude oil comes from South America and the Middle East by tanker and pipe line to Montreal's east end "refinery row" where six refineries cast their geometric shapes against the sky. Their 280-000 barrels of product per day—everything from aviation gasoline to asphalt—flow out to feed the city, the province and fringe areas of Ontario and the Maritimes.

As with all other kinds of cargo, water transportation is cheaper for crude oil. It costs less to bring crude to Montreal from overseas than to transport it from western Canada for pipe line. Consequently, refining western Canadian crude in Montreal, as has been suggested, would inevitably be more expensive. This would mean...
among other things, that customers would have to pay more for their products. Thus, while seeking and finding other markets for western oil, companies such as Imperial consider it more economic at present to refine foreign crude at Montreal.

Ocean traffic has had another effect on the oil industry: an increased demand for bunker fuel. Imperial handles two-thirds of Montreal's bunkering market which last year increased approximately 50 percent. Ships get their fuel at the company's dock opposite the refinery or from the Imperial Welland, a tanker that roams the waterfront. In addition, this year, the Imperial Ottawa is servicing ships.

While the seaway gets the headlines, Montreal continues to be Canada's rail headquarters (CNR and CPR). The air headquarters for the International Civil Aviation Organization and the International Air Transport Association are here; so are a dozen overseas airways branches. Montreal expects to be the major jet-liner centre in Canada. In five years an estimated 90 percent of the fuel supplied at the improved $20 million Dorval airport will be for trans-continental and trans-ocean jets.

There are factors (including the major-revenue-producing electronics, aircraft, distilling and textile industries) that last year turned out $4 billion worth of goods—a billion more than runner-up Toronto. And all around lie the riches of Quebec—iron ore, lithium, asbestos, pulpwood, nickel, copper, zinc, gold, silver and sulphur.

These are the ingredients of Montreal's "brave new world." Add to them the Montrealer's innate enthusiasm (which already has him comparing his city to New York and Chicago) and you can guess what's happening to Sieur de Maisonneuve's "Ville Marie."

"Montreal is going to be not merely a big city," says Valmore Frattston, economic and tourist development director, "it will be a great one."

By Phyllis Lee Peterson

Why mine? Because I was born there. Because so much of my time, thought, labor, energy have been spent within its limits. Because I know and love it well. For me, as for two million others in Canada's greatest metropolis, there's no place quite like it. The city of mountain and river is a part of me—and I am forever its own.

An urban community inspiring this kind of affection in its citizens is usually feminine. New York is a gaudy minx in glass and chrome; Paris the age-old coquette entrancing, beguiling. London's a stately dowager commanding respect; Toronto's the farm girl turned stripteaser and now settling gratefully into respectability. Montreal is all women to all men, running her own untrammeled gamut from grande dame on the slopes of Mount Royal to barefoot boyden on the waterfront.

She speaks two languages, blends two
cultures, combines varied ways of thought and life to produce something unique on this continent. On Sherbrooke Street she traces Victorian grandeur, on Ste. Catherine she clinics a chariot plate. She wears a ring in western suburbs. In new faubourgs to the east she hangs a worker's long-johns on the clotheline against a background of open fields. She's as modern as tomorrow, as ancient as her story.

I love her for her old streets and old-world settings, for stone towers that saw the frioquets, I love her for her quick-paced progress, new buildings and boulevards, streamlined structures mushrooming overnight to change the skyline. Most of all I love her for Gallic spice and flavor, Anglo-Saxon tradition, lusty enjoyment and urban lack of inhibition. For my money she is the most truly sophisticated—perhaps the only sophisticated—city in Canada.

Worldliness here is no gene, no Johny-come-lately growth and glare of neon. Instead it springs from deep wells of kindness, tolerance, respect for the individual and another's viewpoint. Montreal's oldest families are French, often tracing their line to original colonists. The conquest in 1739 brought the English and Scots. United Empire Loyalists made this home after the Revolution. Southerners after the American Civil War. Tragic Irish found refuge from potato famine and ship fever from pogroms in Europe. (Montreal's Spanish and Portuguese Synagogue in 1771 was the first in Canada, the only synagogue in this country for almost a century. The city crowd has the largest Canadian-Jewish population.) Since 1945 we've attracted more than our share of immigration.

Out of this brief brew of non-conformity and customs has come the Montrealer, a special breed of Canadian.

On the surface he's cool, cautious and conservative. Beneath he's friendly, assure enough to make a good living with an innate instinct for the four things money provides. He is also imbued with a fervent love for his city and its people—inordinately, perhaps, but there just the same.

Within the past quarter-century, the two dominant races have drawn closer. Once, St. Lawrence Boulevard cut the city like a knife, cleaving two separate airtight worlds—French-speaking to the east, English to the west. Although this preference for domicile still exists, there is more mingling today. Theatre at Graisans Gelinas' Comedie Canadienne or La Poulaie on St. Helen's Island attracts us all, regardless of language. At the Bata Shoe Museum, Rachel Mary Stuart at Her Majesty's Theatre, I'll likely find French seatmates. The same holds true for exhibitions at the Montreal Museum of Fine Arts or music at Plateau Hall.

For business reasons and from sheer necessity, the overwhelmingly French-speaking majority has always been the more bilingual. New Anglo-Saxon receive is cracking as we realize we've got a lot to gain from Gallic flair, imagination, joie de vivre. My French compatriots have discovered they're really we're not endangering provincial autonomy if they attend and enjoy a party in an English home. Bilingualism on both sides is no longer an airy ideal but concrete fact. The result is a new awareness, an understanding.

What has brought about this steady increase in interchange and the breakdown of old suspicions? Maybe the war or the present-day whirlwind of progress? Perhaps the economic and family life on the home front. Here is the greatest influx of persons in the world, infused with new vitality as the entrance to the St. Lawrence Seaway, is the St. Lawrence Lock with its lift of 15 feet, first of seven locks and four gigantic dams that form the inland path for ships from sea to lakeshead.

In winter, harbor and seaway die. With spring comes resurrection, and the city dreams its dreams of year-around ice-free water. Why not? Montrealers have a way of making dreams come true. They caught the vision of a passage from the Atlantic when they dug their original canal to bypass the Lachine Rapids. Today that vision is staggering reality.

Standing at the harbor with its miles of piers facilities, grain elevators, track and sidings, I feel its hubbub fade. The mists of time roll back to 1642 as few tiny sailing ships beach on this island-forest. Led by the soldier-governor Maisonneuve, 60 French colonists disembark and set up a future town of a city by attending Mass at a crudely-erevcted altar. The lilacs of France are planted firmly in the wilderness while from the trees, painted Indians watch bemoaned.

That was the beginning. A town springing up behind log walls that slowly gave way to stone. By 1721 Ville Marie boasted 7,000 inhabitants. By then it was called Montreal. Carpenters, artists, tillers of the soil, nobility, soldiers, traders inspired by furs, martyrs inspired by the cross, reckless adventurers to whom the New World beckoned, all lived in what is now the Old Quarter bounded by McGill Street and St. Lawrence Boulevard, Commissioners Street on the waterfront, St. James in the heart of the financial district.

The rectangle is still a maze of cobble streets twisting up to the modern rise. Climbing these tortuous ways I think of settlers who died to an Iron Age war: of sanity seems like Justice Mance, who founded the hospital, and Marguerite Bourgeois, Montreal's first schoolmistress, of ex-patriate Madame Le Salle who followed the Mississippi to the Gulf of Mexico; of valiant Frenchmen who unknowingly fathered cities of America. Montrealers, all of them—little-known and less sung.

Seigneurs and habitants, swashbuckler and fur-trader—their memory lingers. I find it in its ancient pitch-roofed buildings wedged between warehouses on original streets named after the saints; in remnants of thick walls burrowed through by stone-lined passageways; in newspaper reports of excavations that unearth escape tunnels to the river. Perhaps nowhere is this past more vividly merged with the present than in the area south of City Hall. Sometimes on a weekday about nine a.m. I slip down for the sheer joy of watching Bonsecours Market in action.

Everything is light, color, movement, noise. Living the life of the street. Monuments are row upon row of track, carts, jolopies stacked with produce. Farmers and their wives are shoddy huggers, wearing me with everything from carrots to crockery. Flower-sellers make pots of color that cascade down the cobble hill to merge into the scarlet and gold and green of fresh vegetables displayed on the pavement.

In the old market-building I can buy a live rabbit or fowl to be killed on the premises, stock up on feastable or cheese fish that swarm in the St. Lawrence the night before. Nials are pring with thyme and chives, vivid with dried sheepskin rugs. There's maple syrup in spring, knitted mittens in winter, as the Market follows the seasons. And everywhere there's the sparkling stench of fish.


"After pas voulez faire repeu? Le gaz has plus beau. Je always weaker. Then, arms full of gladisool or more beets than I'll eat in six months (bought for 90 cents), I round out the morning with a visit to the near Church of Notre Dame de Bonsecours. This is the Mariner's Shrine built in the site of Ville Marie's first chapel. Its floor is roughy worked by generation of seamen and farmers, its canopies of logs and vines hung to ensure safe voyage.

Around this church with its quaint campanile lies the storied Quarter, once all there was of the city. The Intendent's Palace stood high by during the French Regime. No did windmills to grind grain and serve as salty ports against Indian menace. Somehow, walking the winding ways of historic Bonsecours, it doesn't seen so long ago. . . .

At the top of the marketplace and around the corner is the Chateau de Ramezay, a favorite retreat for myself and
small boys on hot summer days. My son once told a dear old soul of his three August visits to this museum-place.

"That's very nice," she appraised.

"Your mother must want you to learn history."

"Now," he explained, "she just want- ed to get us cooled off!"

Which was true enough to hurt. The Chateau's exhibits are fascinating—a model of Jacques Cartier's first ship up the St. Lawrence, Champlain's garden gate from France, the great bell of Louisebourg, Wolfe's letters and slate, the site where Benjamin Franklin sat when he tried to persuade French Canada to join the Revolt of the Colonies.

But it is downstream in massive stone vaults, chill even in Montreal heat, that the past comes alive. Looking at kettles and domestic implements, fireplaces and bake-ovens, candlesticks, lamps, fleur de lis, and one impediment of colonial daily living, I can almost see the ladies of New France making homes in the wilderness. And I think of Marie Charlotte de Ramay[e], first châtelaine of this house of 1706. She bore 16 chil- dren, entertained nobility, doused satin slippers through when she led the cavalcade, and died widowed and penniless a few years before her only surviving son was forced to sign the official capitulation of Quebec to the hated English. Laughter

and tears, sorrow and joy, still cling to the Chateau . . .

History is always close in Montreal. Place d'Armes in the heart of the financial district was once the market and social centre for the town growing be- hind walls. Facing it is the city's parish church, Notre-Dame Cathedral Basilica. In 1672, the adjacent Jesuit Seminary has seen almost three cen- turies, its arches ceiling still holding the clock brought from France in 1701.

Although England now proudly garrisoned the peninsula of the island in 1759, no one has ever really comprised this city. Like China it absorbs its victors to make them particularly its own. Early Scots, for instance, became ardent Montrealers. One of them was James McGill, ex- Glaswegian and North-west fur trader, who left his country estate and £10,000 in 1813 to found the great English-speaking uni- versity that bears his name. Which brings us north to Sherbrooke Street, more history that set its wall on hundred- s of almost scattered around the globe.

Oldest walked the McGill campus. So
ded Stephen Leacock who taught me economics. The captain—named physical building dreamed around the turn of the century by Sir William Macdonald. Montreal tobacco king, is still slightly simulations from English Mansley experiments in 1906 when he succeeded in splitting the atoms with homemade equipment that cost only 900. There is change at McGill, as every- where else. New buildings, new degrees, new students. Yet through the Thirties still linger in the arts build- ing, the maze old University, Evantrity Hall around the corner on University Street. And passing the Roddick Gates I find myself peering hopefully into young- sters with notebooks under the arching elms. As if I might see the ghosts of ones I knew, the ghost of the girl who was me. Remember, I remember. . .

Sherbrooke Street, too, remains some- thing special. The Elegant Mile stands firm between Union and Guy, studded with the mansions of forgotten millionaires. The greystone fortresses of railway

kings and the occasional robber baron are steadily losing out to exclusive shops and boutiques, sheet-glass and metal office buildings—but Victorian glory dies hard. Georgian terraces tug but stay up. Three Protestant churches in converted Gothic, the Montreal Museum of Fine Arts in gnarled Greek, set the scene for the Mile. A Van Horne still holds the last basement, dead-end in a rambling manor-

victoria containing one of Canada's finest private art collections. Wine stewards still blow corkscrews off bottles in the Mount Royal Club designed by Stanford White. And when the stone horse trough opposite the Ritz disappears with its two bronze lions heads spouting water for thirsty dogs, something will die in the heart of the Montrealer.

I love Sherbrooke Street not just for the Mile but for its 32 miles running almost the length of the island and roof- ed by trees. I love its East End, as French as Marcheiles with junk-packed living, Gaiety succour and outside suburban railway stations. I love Lafontaine Park for sparkling-eyed children and colored fountains, and the Jardin Botanique for not one garden but scores set in 260 acres open to the public.

I love Sherbrooke's western reaches for two waterfront towers built in 1877 outside the Grand Seminary near At- water and, further west, for suburbs as English as coves and cramps. This includes my own backwater of West- mount where the rich live high on the mountain, I live far below, old ladies call police when a boy throws a snowball, and you can smell the tea brewing every afternoon at four.

I enjoy shopping in off-beat Montreal emporia like the Chez Shoppee on Union Avenue where I end it, if I want- ed, trundle a wheel of Edam out a bar- ren. And in worse, wonderful places on Laggaisheirnt Street where we always buy firecrackers in May for the greatest bang of being in Chinatown. Or in stores so English they smell of tweed and old leather, and in Dupuis Freres which sells tennessies (French-Canadian meat pies), serves beer and wine in its public restaurant and does in white-coated men loading serenely dynamite on horses on September orders.

My soul expends on good dining— seafood at Patez on De Souza, Sunday smorgasbord at the Ritz, special- ies of the house topped with coffee and cappuccino at any one of a hundred tucked- away Lucullus shrines. Lately I find myself taking out-of-town to Mother Martin's for its excellent food at moder- ate prices and because it's one of the last strongholds of the English chrys- tine before Deury's disappeared.

For if the Montrealer is "big city" in his thinking and unmatched vitality, he's just as unabashedly "small-town" in his nostalgia for vanished landmarks. He is proud of Montreal's growth. He claims vociferously for solutions to traffic that's choking downtown—but a familiar res- traint comes, an old house where Ed- ward VII stayed making way for a sky- scraper, can affect him like surgery. Let one civic authority mess cutting down elms or running a road over Mount Royal's sacred parkland and the outraged public roars. We are, I suspect, inexcusably sentimental—she says my con- versation yesterday with a native-born taxi driver on our ride along De Creeker.

"They've torn down most of the Wind- sor Hotel," I said with a sigh for Pauzey Alley, "the city's changing . . ."

"Oui, madame. She's change all the time," he turned to me in a burst of gen- uine. "Are you know what? She name she's change, the worse I'm glad."

Me too. I thought in a pall of gloom to Westmount. But helping me out and accepting his 20-cent tip as though it were dollars, he flashed me a smile—that wonderful giving Montreal smile I can't describe to the outsider.

"Iniquez-vous pas, madame," he told me, "Cest comme chez nous."

And of course he's right. Biking on the mountain, church bells by the river. Sunlight on stoved stone, street lamps springing up against duck like peals on grey velvet. History, and the future. A thousand facades, a thousand undeniabilities—and always a Gaelic smile to lift the heart.

Madame isn't ignorant herself. A city with these will be forever chez nous -

and home.
THE IMPORTANCE OF BEING WET

Ever hear of hydrologic cycles, houses that re-use sewage water or plans to desalt the sea? You’ll hear of these and many more in the mounting struggle to control and preserve our most precious asset.

By Bob Fenner

Right now you may flinch at the thought of taking a bath in converted sewage water. But in the home of the future this could be commonplace. An experimental house with a unit to purify and re-use sewage has been designed—part of man-kind’s continuing struggle to keep from running out of water.

No substance on earth is more precious than water. All life depends on it. The average human is 60 percent water and needs about five pints per day to keep healthy.

Yet, paradoxically, no substance is so taken for granted or used so carelessly. Canada’s surface is seven percent water. Our average annual rainfall ranges from eight inches in the driest areas to about 100 on the B.C. coast.Yet so voracious is our collective thirst that sometimes use water faster than nature can replace it.

Canada goes on an 850 billion gallon drinking and using spree every day. Farmers need 500,000 gallons to grow a ton of hay (under irrigation) and 17,000 for each bushel of wheat. A paper mill uses as much water as a city of 50,000. It takes 65,000 gallons to make a ton of steel.

A certain amount of industrial water is returned to the source after usage but this, in turn, raises pollution problems.

No governments and industry are locked in a continuous, urgent battle with nature and the wastefulness of man, to keep enough pure water in the right place at the right time.

The most critical areas have been the rain-scarce prairies and central Canada with its heavy population and industry. With storage dams, reservoirs and pipe lines to lakes, we have headed off a potential water shortage in Ontario and irrigated a million acres of once-arid prairie. An additional 500,000 acres will be irrigated by the South Saskatchewan River Dam now under construction.

But E. F. Durante, chief of hydrology for Prairie Farm Rehabilitation (a federal body better known as PFRA), says water is still Saskatchewan’s mo st critical problem and will be the limiting factor in future industrial and agricultural development. Many other parts of Canada, with sufficient water now, will soon face a fight to meet rising demand.

Out of the sudden concern for our water resources have come several discoveries and a few pitched battles. There is disagreement, for example, over the relative merits of dams, lake pipe lines and wells as sources of water. And the time-honored theory that tree planting conserves water has been discarded.

Dr. Jack Farrar of the University of Toronto forestry department, says trees are greedy water users. Cutting them down, at least on flat land, would increase the amount of water in the ground.

Whether this applies to hilly country is still controversial. Some sort of cover on hills, plus such techniques as contour bowling, does increase the ground water. However, a meeting of water experts in Toronto last fall concluded that trees may do too good a job of holding snow: they delay melting in the spring. Then rains and warm weather dump the entire winter accumulation into the watershed at once, often causing floods. Low shrub-bery might do a better job.

No one suggests that we should cut down all trees; the water problem is more complex than that. All water comes from a chain reaction called the “hydrologic cycle.” It evaporates from land and water surfaces, then falls back as rain, sleet and snow. Some of this runs off the surface into streams. Of the water that seeps into the ground, some goes into growing plants, some evaporates and the rest—known as ground water—sinks further into the ground where it collects in formations called “aquifers.” Eventually, ground water works back into streams and occurs where it evaporates and rejoins the cycle.

Man can tip the cycle by catching water as it falls, pumping it out of the ground or piping it from rivers and lakes. But if many people and much industry settle where there is insufficient rainfall and few aquifers, or where rivers and lakes are low or heavily polluted, there will be water shortages.

At one time Brantford, Ont., which is supplied by the Grand River, was so short of water that some washrooms in upstream Galt facetiously displayed signs reading: “Please flush the toilets.”
Brantford needs the water.” Storage dams have since increased Brantford’s water supply.

Rising water consumption can create a vicious circle. If water supply is increased with new wells, dams or pipe lines, more industry and people move in—which eventually overloads facilities and the process starts all over again. Or the community rations water—a temporary solution used in many areas across Canada every summer.

Almost as critical as water shortage is pollution. Because water can purify sewage, it’s cheap and easy to dump waste into lakes and rivers. But if the water is shallow or the current slow, raw sewage may wash back onto beaches.

Furthermore, there is a limit to the amount of sewage a body of water can purify before it turns into an open sewer. Dr. D. V. Anderson, who heads the Great Lakes Geophysical Research Group, says Lake Erie has reached this stage. If the lake is to be used as a source of water for washing or drinking, it warns, cities bordering it must install additional purifying equipment.

Industry is increasing its efforts to reduce pollution and water waste. To conserve water in British Columbia, more than 700 storage dams have been constructed—many privately owned.

Imperial Oil has been conserving water and installing anti-pollution equipment at its refineries since the turn of the century when separators were installed at Sarnia to take oil out of refinery waste water. In recent years four to five percent of the cost of new refinery projects was for pollution prevention. When the company built its new petrochemical plant at Sarnia in 1958, $2 million of the total $28.5 million cost went into a system to treat and reuse waste water. As well as conserving water this system prevents polluted water getting into the St. Clair River.

At Regina refinery Imperial draws water from its own wells, holds it in a storeroom pending its use in the aid of a cooling system. The refinery is connected to the city supply for emergency use only.

At Halifax, although there is no shortage of fresh water, Imperial uses the abundant ocean supply, after overcoming the problem of salt concentration and mussel growth on pipes and tanks.

How much trouble, expense and sheer misfortune is water shortage to Canadians? Nobody knows but some cases have been documented:

- During the 1930s drought conditions undermined Saskatchewan wheat production and turned an average 11.6 bushels per acre as opposed to 23.3 in a bumper crop year. In some areas production hit a low of 2.6 bushels, while 250,000 settlers struggled out of water.
- Before the Alberta Water Resources Branch built a system of dams and canals in the Peace River area, the town of McLaughlin basked watered in by trains. Other villages trucked in water by the barrel and delivered it out by the bucket.
- The city of Regina supplements water from local wells by piping more from a lake 35 miles away which, in turn, needs constant replenishing from a river 70 miles beyond. Even then the supply is inadequate. In Saskatchewan industry uses sewage instead of water in its manufacturing process.
- In some areas—parts of Quebec for example—low water in the river has caused hydroelectric shortages.

Canada’s fight for water began 60 years ago in southwest Alberta, a corner of a vast triangle sprawling across the prairies which the pioneer English geologist, Palliser, described as desert that would not support settlement. Here, individual farmers, private companies and later the provincial government tapped the waters of the Bow and other rivers for irrigation. Today, 500,000 acres of “desert” supports a highly profitable mixed agriculture.

In 1935, against the background of direal grain crops, Prairie Farm Rehabilitation was formed to deal with the problems of prolonged drought. It has helped build more than 50,000 farm dugouts to catch rain water, set up community pastures and helped drought-ridden farmers move into new irrigation projects.

Ontario’s thirsty population and industries began growing during the 1930s. Today the Ontario Department of Planning and Development contributes half the cost of dams and other projects undertaken by conservation authorities. The Ontario Water Resources Commission ensures the maintenance of public water supplies and arranges low-interest financing for municipal water projects, owning these projects until the municipality pays for them. With 56 percent of Ontario’s population dependent on water from lakes and rivers, the commission is in the midst of a $2.4 billion works and sewage disposal program.

Several other provinces have similar organizations. The Prairie Provinces Water Board was formed in 1948 to calculate the amount of water taken for irrigation and power projects from rivers crossing provincial boundaries. The task ahead of these organizations is complicated by economics (a farmer may be short of water), facilities in the lower reaches of rivers are often available to other farmers and men’s belief that water rights are sacred and not negotiable.

In Ontario, solutions hinge on such seemingly unrelated factors as whether St. Lawrence Seaway traffic stops at Hamilton or pushes on through the Welland Canal. Delays at the canal and inadequate locks in the lower lakes may stop seaway traffic at Hamilton. In this case growth will take place in a “platinum strip” running close to Lake Ontario from Oshawa to Niagara Falls—within easy pipe line range of the lake.

If, however, seaway traffic moves into the lower lakes, southern and central Ontario agriculturists say that both rivers and ground water won’t meet demand; some lake pipe lines will be needed.

Some planners hope industry and housing developments won’t pile up annual dryness, but will produce more work on the farmland. If Ontario has to rely increasingly on imported food, prices will go up. Furthermore, a heavy concentration of industry would be dangerous in the event of nuclear attack.

Georgian Bay and Lake Huron contain more water than other Lake Erie or Lake Ontario and much of the surrounding area is poor farmland. For their reasons it will be necessary if Ontario’s growth shifts inland.

Whatever the situation or location, A. K. "Aid Water"" ground water section, thinks expensive pipe lines, dams and reservoirs should be used only as a last resort.

Watt says some municipalities don’t properly exploit their ground water resources. Once he heard a farmer say, "This dam site regarded, in part, as the solution to the area’s water shortage. He found the crew deeply concerned.

"What’s up?" asked Watt. "We were digging a test hole," said one, "and hit this terrific vein of water. Don’t plug it so we can get on with the dam!"

Imperial Oil Review, June 1960

Well water at Imperial’s Regina refinery is cooled for use; the city supply is rarely tapped

Dams even out the flow of rivers and may, like this one at Ontario dam, create a play area for young skiers.

Imperial Oil Review, June 1960

Communities can search for water the same way companies search for oil. Using the geological approach, plus information collected by oil exploration parties, the Saskatchewan Research Council fast summer discovered a promising supply of ground water.

Watt also points out that a ground water reservoir costs nothing, is less likely to be polluted and does not evaporate. Contrary to Canada’s over-all ground water level is on the decline although it may be in specific areas. The supply is replenished with every rainfall and if it is ever used, flooding can occur.

Dams have advantages, nevertheless. They even out the flow of rivers and create parks and conservation areas which are increasingly necessary since algae keep people away from beaches.

The pipe line proponents back up their case by arguing that lakes are the only fresh water source that cannot be depleted in the foreseeable future. Planners feel that pipe lines encourage unwanted urban spread.

While the lakes vs. rivers vs. ground water debate goes on, water engineers talk of such ultimate solutions as artificial rainfall and desalinating sea water.

The last has been researched by the United States and the United Nations, but is presently uneconomic. The 13 million gallons of de-salted water being produced daily in the world cost up to $2 a thousand gallons. If cheap atomic power becomes available, distilled sea water might sell for as little as 20 cents per thousand gallons.

A successful de-salting process could be useful in Saskatchewan where, 3,000 feet underground, the Weyburn formation. Oil companies have hit up to 40 barrels of salt water a minute when leaching wells in the area.

Then there’s “rain-making”—a technique almost as old as the rain. Around the turn of the century a California rain maker named Charles Harfield set up towers on hills, mixed four-smelling chemicals and sent a yellow vapor wafting skyward. This process allegedly produced occasional showers, two disastrous floods and at one time. Once Harfield was even hired to go to Alberta, where he obligedingly rained on the plains near Medicine Hat.

He discovered the principle of “noodling” clouds, still under investigation. At Val d’Or, Que., the National Research Council is experimentally seeding clouds with silver iodide crystals. Definite results aren’t yet available but experiments in B.C. and the U.S. indicate that in hilly country seeding will increase rainfall by 10 to 15 percent.

Still other developments in the search for water are completely unfeasible. For instance, nine years ago a graduate student from Massasauga Institute of Technology designed the self-contained house that would purify sewage water and use it for heating and washing. The gallon of drinking water per person needed each day could be delivered by tank car.

And there’s always “water witching,” which continues to claim adherents for the convincing reason that it sometimes works. In southern Manitoba two years ago, engineers failed to find water but professional “water witch” Norj Malinsky, armed with a metal rod and a mysterious box, discovered a supply.

For the home handyman or do-it-yourselfer, here’s a simple recipe for witching:

Cut out a V-shaped twig of apple or willow. Grab the arms of the V firmly and cross it against a given area. When you feel a pull on the twig you are over water, and can call for the drilling crew.

Just one word of caution: witching often works for неделю.
Saskatchewan's Flying Firemen

by Jim Bowes

Twelve hundred feet below a forest fire was raging. In the final tense seconds, the smoke jumpers checked their 'chutes once more, then waited for the bail-out signal . . .

"Cut!"

White-helmeted Frank Tomkins' shout from deep inside the belly of the Norseman came bounding up to the cockpit. Pilot George Horne reined in the aircraft to a step above stalling speed and held a steady course.

Instantly, the red football helmet topping the grotesque, padded form of Dennis Lowing, a 29-year-old from Saska- toon, disappeared through the hatch in the plane floor. His static line jerked. Tall John Beauty, twin parachutes bulging like huge carbuncles, plunged after him. And Saskatchewan's smokejumpers—the only parachute-borne fire fighters in Canada—were back on the job.

As Horne pushed the fast-equipped Norseman into a steep, climbing turn, Barry Moyer and Lloyd (Rudy) Riel- ling, themselves due to jump in less than 60 seconds, gazed through the windows at the 28-foot nylon canopies floating far below.

The pink tints of a northern Saskatchewan sunrise shimmered across the parachutes as they scudded before a 20-mile-an-hour wind. But the watchers in the plane were more concerned with the panorama on the ground—their problem for the day. Columns of grey-black smoke, crazily cross-stitched with threads of multi-colored flame, sprang up from a forest of spruce, poplar and white birch.

For Jumpmaster Tomkins and the four-man crew, the day had begun three-quarters of an hour earlier with the shattering screech of a siren at forestry headquarters in La Ronge, a cluster of fishing camps and prospectors' cabins 167 miles north of Prince Albert.

Men tumbled from a two-storey-frame barracks on the shore of Lac La Ronge.

Tomkins ran for the radio room across the road to pinpoint the fire. Crew leader Ruelling and his men beat a tattoo with their heavy jump boots on the wooden walk leading to the seaplane dock. The Norseman, tethered to the foot of the dock, roared to life. Swiftly, the jumpers "suited-up" in bulging, heavily-padded jump pants, helmets and steel-meshed face masks, heightening the "other-world" effect with a wrapping of criss-cross harness for two parachutes—one for emergency.

The stocky, dark-complexioned Tomkins pumped down the dock. Through heavy goggles he took a final look at the Imperial Oil wind sock fluttering languidly in an eight-mile-an-hour wind atop the smokejumpers' command post. "Okay," he said, "let's go.

Fifteen minutes after the siren sounded, the tough shock troops of Saskatche- wan's Fire Control Service were making a beeline towards a lightning-set blaze to the northwest.

In 12 years, these skymen have drop-
ped to 150 fires in 140,000 square miles of woods and 586 fires taken on another 175 after landing on nearby lakes. They have sniffed out scores of fires that might have burned for days before local crews could reach them. Burned-over acreage slumped to an annual average of 49,000 acres in 1947, compared to 200,000 during 1941-50.

The smokejumpers cost Saskatchewan $590,000 a year, but they have paid for that price, says Fred Warburton, of Prince Albert, superintendent of the province's smokejumping school. "Nobody can estimate how much they've saved us," he says. "It's probably in the millions.

In spite of the impressive Saskatchewan record, other provinces have shed away from jumpers, preferring to airift fire crews in fixed wing aircraft or helicopters. For several years, in fact, the respective managers of smokejumpers and helicopters have caused hot behind-scenes arguments among forestry men in provincial capitals. One top forestry official in another province says flatly, "The smokejumpers are spectaculär but the helicopter is better." In Alberta, protection officers say that helicopters eliminate the need for men who are skilled in both parachuting and fire fighting.

Warburton sees the helicopter as an ally, not a replacement, for smokejumpers. He predicts that a highly mobile team of "birds" (helicopters) and birdmen will be the next big development in Saskatchewan's fire fighting technology.

Saskatchewan's smokejumpers got airborne after a Royal Commission on Forestry in 1946 recommended drastic measures to save forests ravaged by fires and overproduction during the war years. Noting that heaviest fires lost occurred in areas inaccessible to ordinary means of transportation, the commission urged a close look at the U.S. Forest Service's smokejumper units.

Jumpers had been used effectively, particularly in the western mountain states, since 1939. Their jumping techniques, developed at the forest service's smokejumper base in Missoula, Mont., so impressed the U.S. Army that it adapted the training program for use at the famed wartime parachute school at Fort Benning, Ga.

H. J. L. Phelps, then Saskatchewan's minister of natural resources, despatched aides to Missoula, received a glowing report and ordered formation of the Saskatchewan unit.

Unlike nowadays when the depart-

The plains skimmed down towards the muskeg. Lowing and Beatty were already on their feet, unzipping their suits, gathering in their parachutes. Two huge toadstools puffed up in the centre of the swamp and quickly withered: Rufilng and Motyer were down.

"Good drop, Frank," the pilot called.

The jumpmaster grinned. Then he was back at the hatch, flinging out the colored cargo parachutes with portable water packs, hose-equipped power pump and walk-talkie radio tied to the shrub lines. Hoine coasted down to 150 feet. Tomkins kicked showers and axed through the opening, dropped a fistful of pelaks (a combination axe and narrow tooth hoe) and watched them arc into the cooling sun.

Rufilng's voice crackled over the radio from below: "We should be able to hold it but you'd better get that land crew moving fast."

"Roger," said Tomkins, and, to the pilot, "Take her away, George."

While the Norman returned to La Ronge, the jumpmaster said, "These lightning fires usually come in twos or threes. We've got to get back fast to be ready for the next one."

He peered through the glass. "They can do that 'pack-out' to that lake on your right," he called. "We'll pick them up there."

Sometime in the next 12 or 14 hours, depending on when the overland crew arrived, the sooty, tired firefighters would cram their parachutes and equipment into 80-pound packs, and trudge through two miles of bramble and muskeg to the rendezvous point. At that, it wouldn't be a bad pack-out compared to others. (Len Morin, a five-year veteran at 25, still winces at the memory of his first trek out: "Sixteen miles of muskeg and tamarack windfiill. It took us two full days to make the trip. We had to come over the last 400 yards of muskeg on our hands and knees").

Inside the plane, the tension of the "drop" vanished. Tomkins, a 35-year-old Metis from Jussard in northern Alberta, smoked his first cigarette of the day. Tough, smart and a natural leader, Tomkins quit school to go to work at 16. For 10 years, he worked in northern logging camps, on fishing boats, and at mink ranching. He married in 1952, began "thinking about security" and chose smokejumping.

In six years, he made more than 50 jumps. He was named jumpmaster in 1958: the respected leader of the high-spirited 12-man team.

"We've about 90 percent in his hands when we make a jump," said Alex Toporowski, who roamed western Canada with oil seismic crews before turning in his tin hat for a smokejumper's heli-
met. "Frank doesn't make mistakes,"

Tomkins rarely has a chance to jump now. But he is remembered as a jumper who couldn't get enough of his dangerous trade. He sometimes tried for extra jumps by offering $10 to trade places with a buddy assigned to duty watch. One spring, as Sunday afternoon diversion, he jumped from light planes over the Prince Albert airport, diving through space for 10 or 12 seconds before yanking the ripcord. The fire control service put a stop to the hop when another smokejumper fell from 3,500 to 300 feet before his emergency 'chute cracked open.

Why does a man become a smokejumper?

"It's not the pay. And it's strictly seasonal work," he says. (A first-year man starts at about $100 a month with veterans drawing up to $340. Except for Tomkins, the jumpers are hired only for the fire season with no guarantee of winter employment.) "I suppose it's the thrill of the jump and the special pride a man takes in belonging to an outfit like this."

A strong, rarely talked-about loyalty knits the jumpers together. It shows up in the salty reminiscences which crop up nightly in the combination dining-recreation room. Dominating one wall is a huge wooden carving of two crossed parachutes: the unit's unofficial coat-of-arms. It was carved by a prisoner at Prince Albert Penitentiary who was impressed by the smokejumpers' feats of derring-do.

Here, in the evening, the crews re-

member men like Danny Nolan, now a Whitehorse fireman, who took probably the strangest route to the smokejumpers' Hall of Fame. On a demonstration jump over the Waskesiu golf course, his regu-

lar 'chute failed. His reserve 'chute dropped him in a tree unharmed. Strug-

gling free, he stopped on the fairway and was coked by a golf ball. He was laid up for two days.

H. C. "Doc" Mynard, a Prince Al-

bert doctor and a smokejumper during his college years, once illustrated the spirit of camaraderie which lingers on for years. Weed reached him that crew chief Stan Schneider was bleeding badly after slashing a tendon in his wrist on a jump. Although out of practice and a little poorly, Doc prepared to jump at night to the injured man's aid. Then a U.S. Air Force helicopter, working on the Mid-

Canada radar line, landed in a clearing cut by Schneider's crew mates and flew him to hospital.

In smokejumping, the uncertainties of the jump pole beside the hazards of the forest. "We never know for sure what we're going to land in," says Tomkins. "The woods are pretty good for tree landings but windfall can be dangerous. The really tricky stuff is an old burn with tree trunks sticking up like spears."

Surprisingly, a broken thigh has been the most serious injury. No smokejumper has landed in the flames but there have been some close calls. In 1950, Reel-

ing rolled into a ponderous fresh "burn" and singed his parachute and the seat of his jump pants.

There is a dull side to the smokejumper's job, too. Any day the fire haz-

ard is "low," the jumpers do odd jobs: husking road culverts into place or build-

ing a new fence around the La Ronge cemetery.

But memories of the dull moments fade. Most of the veterans are back for spring training camp, with a sprinkling of eager recruits.

"We've only washed out two," says Tomkins. "After a couple of jumps, most recruits are like the rest of us—addicts who can't get off the stuff."

THE PERSISTENT MR. PATRICK

To most western Canadians the name "Waterton" refers merely to a national park, a quiet little hideaway tucked among the Rockies in the extreme south-

west corner of Alberta. Only a few oil historians are aware that this—not Turner Valley—was the birthplace of commercial oil production in Alberta.

Even fewer know of the discoverer, a persistent man named Allan Poyntz Patrick, or of the peculiar clue that led to his finding: a bandage on an Indian boy's injured leg.

In July 1879, Patrick, a Dominion government land surveyor from Ottawa, was surveying a huge tract extending 100 miles from the Highwood River (just south of Turner Valley) to Waterton. With him was Lafayette French, whose double-barreled proficiency of trapper-trader made him a most desirable companion in those lonely parts.

One day at an Indian camp they no-

ticed a boy with a crudely bandaged leg. "Let's see if we can make him more comfortable," said Patrick. He stooped to unstrap the bandage and suddenly noticed that it was soaked with oil. By this time southwestern Ontario's oil fields were relatively well-known in the east and Patrick sensed the importance of the "medicine."