



Central Utilities supplies campus

Let there be light, heat, and water

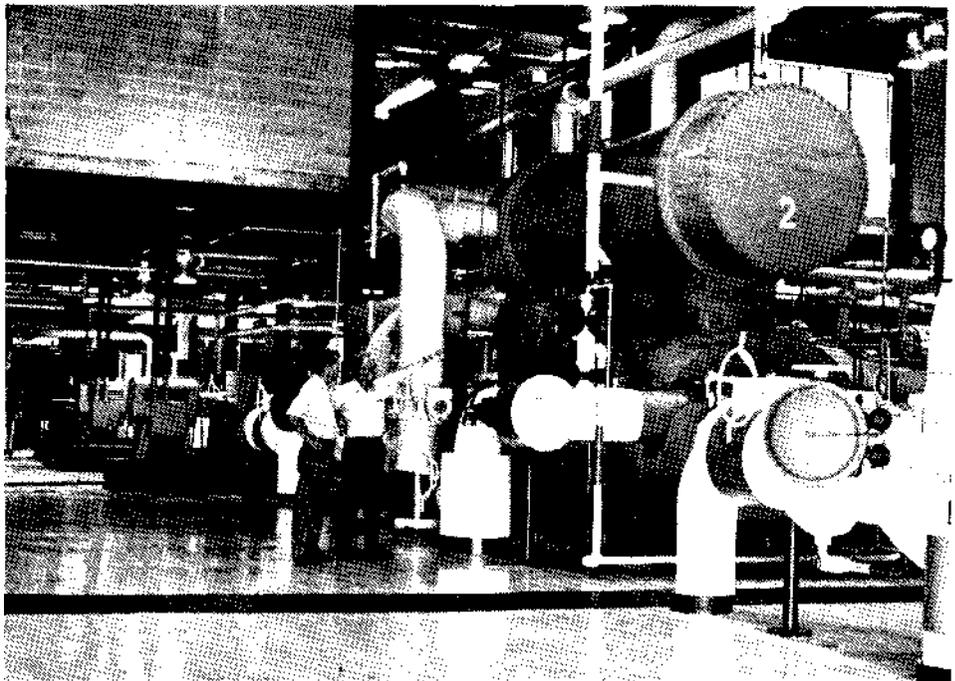
There's a whole world beneath our feet.

It's a world of dark passages and tunnels, pulsing with the substances our society above must have to sustain itself. Underneath the University's walkways and lawns, cables bear electricity. Pipes carry steam for heating, cold water for air conditioning, processed water for drinking, and de-ionized water for laboratory experiments.

These lines reach every corner of the campus. Their heart, however, is the Central Utilities Plant, supervised by chief engineer Harry Parkinson, assistant chief engineer Daz Leather, and a staff of 15 men, and located on Powerhouse Lane.

Let there be light—and power! is perhaps the first demand. As a result Central Utilities takes in electricity from the Guelph power grid, transforms it from 13,800 to 4,160 volts for the University's older buildings, and distributes it to all parts of the campus. Should this power source fail, two giant diesel motors are on standby, each able to produce 1,600 horsepower in electricity. When put into use, the roar of these motors must be the loudest thing on campus. Doubtless they could wake sound sleepers, in classrooms and study halls all over the University.

During the hot, dog-days of summer comes the demand: let there be coolness! And coolness is supplied by three chilled water units, which provide cold water for the air conditioning systems found in the University's newer buildings. On recent hot days the units have produced the equivalent of 4,300 tons of ice a day—and that's ice enough to cool a lot of drinks.



Giant machines, which supply such university needs as drinking water, cold water for air conditioning, and steam heat, loom above chief engineer Harry Parkinson, right, and staff member Leo Curtis of the Central Utilities Plant. Beside them is a chilled water unit, one of three which can produce the equivalent of 4,300 tons of ice per day.

The units pipe out water, 7,500 gallons per minute, chilled to 42°F., to University buildings. In these buildings, the water cools air which is then blown, by fans, through rooms to air condition them. In a large room, such as the Music Room in the Arts Building, the entire volume of air will change ten times in an hour,

says Mr. Parkinson.

Warm water returns to the chilled water units. It is cooled through a refrigeration process something like that used to chill beer in our own refrigerators—by means of the evaporation of

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Most courses filled, many applicants refused admission

Some 500 applications from students meeting the university's minimum requirements have had to be turned down this semester because of lack of space. These formed about 10 per cent of the 4,900 applications received from qualified students.

A total of 7,837 applications for full-time undergraduate studies were received, says Ron Heath, Associate Registrar, Admissions. Of these 4,435 were accepted and 1,995 have confirmed that they intend to register at Guelph.

A total of 6,554 undergraduate and graduate students are expected to register this month, compared to 6,070 last September.

All programs have now been filled with the exception of the Bachelor of Science in Engineering, and the Associate Diploma Program in Agriculture.

The largest number of new students (640 out of the 1,800 students expected in semester one) will enrol in Bachelor of Arts programs. Eighty-eight per cent of them are coming

directly from grade 13.

Enrolment in other semester one programs is as follows: Bachelor of Science, 398; Bachelor of Science in Agriculture, 264; Bachelor of Applied Science (Family and Consumer Studies), 148; Doctor of Veterinary Medicine, 80; Bachelor of Science in Physical Education, 68; Bachelor of Science in Engineering, 46; Bachelor of Commerce (Hotel and Food Administration), 34; Bachelor of Landscape Architecture, 25; and Associate Diploma 125.

NEXT WEEK AT GUELPH

THURSDAY, SEPTEMBER 3

Exams DEFERRED EXAMS — Room 224, Arts. All day.

SUNDAY, SEPTEMBER 6

Freshmen ORIENTATION TENT OPENS ON FRONT CAMPUS.

MONDAY, SEPTEMBER 7

Freshmen INTERNATIONAL STUDENTS' ORIENTATION — 9th floor lounge, Arts at 3 p.m.

TUESDAY, SEPTEMBER 8

Freshmen GENERAL ORIENTATION — begins and continues through to Sunday, September 13.

WEDNESDAY, SEPTEMBER 9

Registration ALL SEMESTER STUDENTS REGISTRATION, continues Thursday and Friday, Physical Education building.

Visitor DAIRY QUEEN OF ENGLAND & WALES tours campus.

Meeting POLLUTION PROBE, Room 105, Physical Science. 8 p.m.

THURSDAY, SEPTEMBER 10

Course RURAL ASSESSORS COURSE, Room 318, Arts. All day.

Fashions INTERNATIONAL DARJEELING EDUCATION ASSOCIATION, presents Indian and Canadian Fashions. St. Michael's Hall (opp. Waterloo Lutheran University). 8 p.m. Tickets at \$2. available by phoning 821-6237.

Meeting GUELPH GROCERY CO-OP MEETING. 8 p.m. CIAG building. All welcome.

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liquid freon. The freon is then compressed, and cooled by a second stream of water, until it returns to liquid form.

This second stream of water goes through that peculiar waterfall system that one sees (and hears) along Powerhouse Lane. The water, which has heated up from passing near the freon, is cooled by being run down a 40-foot-high cooling tower. Water pours over this cascade at a rate of 12,000 gallons per minute, producing the rushing sound of a miniature Niagara Falls. And the cooling tower, if properly enhanced, could no doubt become a scenic attraction—just as Niagara Falls could become the centre of a vast air conditioning system.

The University also demands water, both for drinking and for distillation. This comes from five subterranean wells. Water to be used for distillation is de-ionized, then pumped through pipes to the laboratories where it is used. Drinking water is processed and stored in reservoirs below the tennis courts near the East Ring Road. Then it is pumped from its place beneath the earth, to the University's water tower. The tower holds 50,000 gallons of water 140 feet above the campus, creating the water pressure needed to make the taps and drinking fountains throughout the University work.

In winter we make another demand on the world below—we need heat. For this, four boilers, the largest of which is two stories high, supply steam. The boilers can together produce 250,000 pounds of steam per hour, says Mr. Leather. At the moment, however, only one is

in operation. Within it one sees a roaring inferno of mauve flame. Above the boiler are white, asbestos-covered pipes that carry steam to University buildings, where it is used to make that essential of modern life—hot water. Combustion products are expelled through a 200-foot high smoke-stack.

Efficient regulation appears everywhere in this world of machines. Charts continuously record the intake of gas, and output of steam from the boilers. Instruments measure the temperatures of the water streams around the chilled water units. Automatically, pumps go into operation whenever pressure in the pipes for water gets too low.

Other equipment allows the adjustment of air conditioning and ventilation systems in different buildings from a central point. Such automatic controls are present throughout the Central Utilities Plant.

In the world below, everything, it seems, is well-ordered and effective, according to the highest standards of modern civilization. We needn't worry about a thing down there.

Now, if we could just do something about things up here....

The News Bulletin is published by the Department of Information and edited by Mrs. Betty Keeling. Copy for the next edition must reach the editor, Room 361, McLaughlin Library, not later than Thursday, September 3, 1970.

Dr. Douglas heads United Appeal University division

Dr. R. J. Douglas, Microbiology, has been named Chairman of the University Division of the 1970 Guelph United Appeal.

The University Division is a major unit in the United Appeal campaign, just as the University itself is a vital part of the community, says Wayne Scott, Vice President of the Guelph United Appeal Board in announcing the appointment of Jack Douglas to head this committee.



R. Douglas

A native of Toronto who served in the RCNVR, Jack Douglas graduated from OAC in 1949. Graduate study at Guelph and Michigan State lead to specialization in serology and immunology. He has been a member of the faculty of the Department of Microbiology since 1950, except for leave to pursue graduate study.

Interested in his community, Dr. Douglas has served five years on the Guelph Township School Board, and two years on the Guelph Area TB Association. He is also a past chairman of the campus faculty association.

Attention - parents of pre-schoolers

Winnie the Pooh Cooperative Nursery School has openings for three and four year olds. Call Mrs. Van Dongen, 824-3923 or Mrs. Hamilton, 821-1287.

HELP! They want animals

Two Zoology faculty members are making a survey of all mammals present in Waterloo and south Wellington Counties. However, they need help.

They would appreciate hearing from anyone who traps a small mammal or has a cat that has captured one. The number to call is 824-4120, Extension 3712, and ask for Professor Anne Dagg. She also requests that the person mark the exact spot where it was found.

Professor Dagg says that the animal will be picked up promptly, but suggests that it be kept in a plastic bag in a cold place.