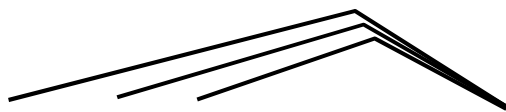


# Training for Water & Wastewater Treatment Operators

## Niche Profile

Prepared for the  
Northern Labour Market Information Clearinghouse

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**Northern Labour Market Information Clearinghouse**

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# **Training for Water and Wastewater Treatment Operators**

## **Introduction**

Fairview College has received a request recently for training courses for water and wastewater treatment operators and asked the Clearinghouse to investigate the feasibility of putting on such courses. This report looks at the training already available and the likely demand for further training in northern Alberta. In brief, while there is some interest in further training in the region, current demand would probably not support its delivery.

## **Methods**

This report is primarily based on interviews with people involved in the regulation of water and wastewater treatment facilities and in the training of operators. In addition, we have interviewed a selection of operators to hear their views. Fairview College is planning a survey of operators in their service area. To avoid duplication this report does not include a major survey component.

## **The Occupation**

According to Advanced Education and Career Development's Occupational Profiles (1995):

Water treatment plant operators control processes and equipment used to clarify, purify and disinfect surface or well water for human consumption. Wastewater treatment plant operators control processes and equipment used to treat domestic and industrial wastes to meet discharge standards.

Most operators work in municipal facilities, with others working in institutional, or industrial facilities. There are between 95 and 100 municipal water treatment facilities in northern Alberta and a similar number of wastewater treatment plants, along with some 50 or so facilities for schools, subdivisions, airports and industrial facilities. Water treatment and wastewater treatment facilities often operate side-by-side. Also, there is some overlap between school and municipal facilities listed in Alberta Environmental Protection's Facilities Survey.

Water and wastewater treatment facilities in Alberta fall under four categories of complexity, with corresponding levels of training and experience required for operators. AEP requires each facility to have at least one operator certified (or working toward certification) at a level to match the facility. The vast majority of the facilities in northern Alberta are in levels I and II, the two lowest levels. Operators of level I facilities need 12 years of education and one year of experience in order to take the certification exams. Level II operators need 12 years education and three years of experience. The education requirements can be lessened for those with more experience.

## **Training Available**

There are two sources of specific training for water and wastewater treatment operators in Alberta; AEP and NAIT. AEP, working with the Alberta Water & Wastewater Operators' Association (AWWOA), offers a series of "Continuing Education" and "Certification Exam Preparation Courses". The latter are designed to prepare operators to take level I and II certification exams. All of these courses are offered as one- to three-day seminars. Most of the same courses are available via correspondence. In addition, the AWWOA presents an annual Operators Seminar in Banff. The technical presentations at this seminar count toward the training component of the certification requirements.

NAIT is the only college in Alberta to offer a certificate program in water and wastewater treatment. They offer a one-year, full-time certificate program which includes a work component over the summer months. Courses from this program are also available part-time via distance delivery. Graduates of the NAIT certificate program do not automatically receive any certification from AEP but they are qualified to write the level I exam without further work experience.

## **Training Demand**

Most of the water facilities in northern Alberta are small, with one or perhaps two people operating both water and wastewater processes. Each facility is required to have one certified operator. Throughout Alberta there are approximately 3,000 water and wastewater treatment operators. The small population of the north, and the small, relatively simple water treatment facilities mean that there are probably about 200 operators in the North. Employment in this field is very steady. Once employed by a municipality an operator is likely to stay there. NAIT planners expect to see about 20 jobs available each year in Alberta. Those in the regulatory and instructional areas of this industry are concerned that they not over-train for an industry with limited demand for new workers.

The certification exam preparation courses offered by AEP attract about 100 students from across Alberta for the seminars and about 60 students via correspondence. Their continuing education courses, such as Hydrant and Valve Maintenance, usually fill the 25 spaces available. The AWWOA has found that there are too few potential students to make it feasible to create exam preparation courses for levels III and IV. Most of those who wish to be certified at the higher levels are graduates of the NAIT certificate program and/or have taken other related college or university training. Some may have to take correspondence courses from U.S. sources if they have taken all of the available courses from AEP and SAIT.

The Full-time technician program at NAIT has seen enrollment decline over the past few years from a peak of 26 students (23 graduates) in 1993 to 23 students (19 graduates) in 1997. Enrollment in the part-time, distance-delivery courses has also declined from 215 in 1993 to 105

in 1997 (the actual number of students is likely lower as each course a student takes is counted as a separate registration).

The AWWTOA offers a \$2,000 scholarship to members with one year of experience in utilities and who want to take the NAIT program but few people have applied for it.

In the past various northern communities have expressed interest in having training delivered in the North, but this has rarely been matched by actual demand for courses. AEP has received requests to deliver their courses at northern locations (Grande Prairie, High Prairie) but in each case the classes were cancelled due to low enrollment. Likewise, NAIT has sent proposals to communities in the north, particularly Metis Settlements and Indian Reserves, which have expressed interest in this training but little training has taken place.

More recently, Mackenzie Municipal Services asked municipal officials from the North Peace area about the demand for local training through Fairview College. The officials expressed definite interest, which may bode well for training demand as these are the people who will approve the expenditures for courses. The actual number of potential students still has to be determined.

Operators and officials contacted for this study agree that it would be helpful to have more direct instruction courses available in the North. Municipalities do send people out to Edmonton for some courses but budgets do not allow for as much as many would like. Many operators take courses via distance delivery but some courses just aren't available from Canadian sources and the completion rate of correspondence courses is lower than that for those with in-person instruction. Even so, two out of the three thought that the number of students would be too small to make local course delivery affordable. The one contact who is optimistic about the market for training in the region was unfamiliar with the distance delivery courses available from NAIT (he was also unimpressed with graduates of NAIT's full-time program).

## **Summary**

There is certainly an interest in water and wastewater treatment training in northern Alberta. Municipalities would likely support a higher level of training for their personnel if it were available locally and thus at a lower cost than that available currently. In addition, locally instructed courses might have a greater completion rate than those offered via distance delivery.

The actual demand for the training may not match the expressed need, however. Many communities have expressed interest in having WTO training in the North but the number of actual students has rarely supported course delivery. With a small number of operators in the region, the demand for any one upgrading course is not likely to be high.

## **Sources**

Alberta Advanced Education and Career Development, “Occupational Profiles: Water and Wastewater Treatment Plant Operator”, 1995.

Alberta Environmental Protection, Environmental Assessment Division, Municipal Water and Wastewater Branch, “Facilities Survey” January, 1998.

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## **Contacts**

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