HEO SECTOR PARTNERSHIP STUDY
EXECUTIVE SUMMARY

Acknowledgements

The following are the members of the Heavy Equipment Operators Sector Partnership Steering Committee. We would like to acknowledge the work of the Steering Committee members; their insights and guidance were appreciated through the course of this study.

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Heavy Equipment Operators Sectors Partnership Project

by

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

- In the past decade, the heavy equipment industry in Saskatchewan has undergone major changes. Shifts in demographics, fluctuating workloads and a shrinking labour pool have posed some significant challenges to owners, operators and employees alike. Emerging technology and competition from other provinces for skilled labour is adding to the difficulty in recruiting and retaining qualified staff.

- A crucial component in the roadmap for the future of the heavy equipment sector will be training and development initiatives. As companies are forced to adapt to the changes in the industry, their training demands will also need to be adjusted.

- Through a partnership effort that encompasses industry, manufacturers, suppliers, training providers and the different levels of government, there are opportunities to provide effective and efficient training in Saskatchewan.

- The study is a snapshot of the current industry. Although the report focuses mainly on training needs for heavy equipment operators, it also includes relevant information on heavy equipment mechanics.

- The study is not intended as a training curriculum guide; it merely provides recommendations for the future as identified by the people who work in the industry. Any overall strategy for changes to training must incorporate the whole picture of the industry as it exists now, and as it is projected to be in the years ahead.

2.0 METHODOLOGY

Gathering information for the report was done in three separate stages before being combined into a final report format:

1) A literature review (available as a separate document);

2) Surveys of Heavy Equipment Operator Employers;

    - A telephone poll of 211 industry operators conducted by Anderson-Fast Consulting. Of those contacted, 71 responded; and

- A survey via email of 235 rural municipalities throughout Saskatchewan. Sixty of these RMs responded.

(The results from these surveys are also available as separate documents).

3) Focus Groups

- Four focus groups were set up to gather qualitative data. They were scheduled for North Battleford, Prince Albert, Regina and Weyburn. Unfortunately, there were no participants in North Battleford and only one showed up for the Prince Albert focus group. Despite the poor showing in these two areas, the focus groups in Regina and Weyburn were very successful. In total, approximately 20 people participated from all areas of the industry, including contractors, heavy equipment operators and heavy equipment mechanics.

- The focus groups were recorded on audiotape and from that, a sampling of the most relevant comments was transcribed into print.

The wide-ranging methodology used in gathering information for the report helps identify the positive and negative things currently happening in the industry and the challenges facing heavy equipment operation in the years ahead.

3.0 KEY FINDINGS

LITERATURE REVIEW:

Occupation Description

- Heavy Equipment Operators operate heavy equipment used in: the construction and maintenance of roads, bridges, airports, gas and oil pipelines, tunnels, buildings and other structures; surface mining and quarrying activities; landscaping; material handling works; and land clearing and similar activities.

- Heavy Equipment Mechanics are identified as a trade to provide mechanical maintenance on heavy equipment.

Heavy Equipment Operator Employment by Industry

- The industries most likely to employ heavy equipment operators are highway and heavy construction, other service industries and site work.

Employment Information

Gender

In 1996, only one percent of all heavy equipment operator and mechanics were female. Women remain severely under-represented in the industry's workforce, especially in contrast to the Canadian workforce as a whole.

Age

Only 14 percent of the people in the industry are under the age of 24. Statistics show most are in the 25-44 year age range.

Employment Income

- The average income has actually decreased since 1995, when it was $31,700. Although it was lower than the average income for heavy equipment operators nationally ($36,100), it was on par with the provincial full-time average income for all occupations ($31,402).

- Heavy equipment mechanics were averaging $34,700 per year in 1995, which was on par nationally. There is a wide range of incomes among heavy equipment mechanics, and those working in Regina and Saskatoon typically earn more than their counterparts outside the two major centres.

Heavy Equipment Operators

- The nature of work for heavy equipment operators is highly seasonal with unstructured hours of work. In Saskatchewan, less than 40% of all heavy equipment operators were employed on a full-time basis in 1995.

Heavy Equipment Mechanics

Heavy equipment mechanics don't face the same seasonal employment rates as heavy equipment operators. In 1995, when less than 40 per cent of operators were working full-time, over 65 percent of the mechanics held full-time positions.

The Future of the Industry

- There is growing optimism within some industries that employ heavy equipment operators. For example, the forest sector alone is predicting 5,000 to 10,000 new jobs alone, many of which will create a demand for trained equipment operators and mechanics.

- The Commercial and Industrial Sector is also projected to grow.

Shortage of Workers

- The Saskatchewan Sector Study Summary identified heavy equipment operators as the second most vacant or underskilled occupation in the construction sector, second only to trades labourers.

- Projections indicate that the need for heavy equipment operators will increase through projects in Northern Saskatchewan and a highway revitalization program for the province as a whole.

- The year 2007 has been identified as a turning point in the heavy equipment operator sector as significant numbers of workers start to retire.

Employment Income

- Income levels vary across the province with higher levels in the south. This likely reflects the year-round nature of employment in the oil patch. Most other heavy equipment operators are seasonal workers, with the vast majority of their income earned between April and October.

The Nature of the Work

- Working conditions and terms of employment are fairly standard across the province as the hours of work range from 8-12 hours per day, six days a week, with periodic down time due to adverse weather. In the warmer weather, crews often work six or seven days straight, and often for more than 10 hours. Travel away from home for extended periods is very common.

Current Training

- Current training for heavy equipment operators is generally in the form of on the job training provided by the employer.

- Heavy equipment technician/ mechanics training is a combination of in-class and field training that provides a minimum number of hours of work experience. Heavy equipment technician/mechanics is a designated trade incorporated into the apprenticeship system. As such, mandatory training and hours of work are essential components in achieving journey status.

Training Institutions Overview

Heavy Construction Association of Saskatchewan Inc. (HCAS)

- The HCAS is an industry association that provides safety training to individuals working within the roadbuilding and heavy construction industries.

Operating Engineers Training Institute Saskatchewan (OETIS)

Saskatchewan Insitute of Applied Science and Technology (SIAST)

Heavy Equipment Operator

- SIAST offers a Heavy Equipment Operator Training Certificate program with various training modules including Crawler, Scraper, Backhoe and Front-End Loader. Because SIAST no longer owns machinery for training, the client must find machinery to work on, usually on a cost recovery basis for rent/lease.

Heavy Equipment Mechanics

- Heavy Equipment Mechanics (Technicians) is a designated trade in Saskatchewan. Students not interested in certification can still take technical training.

Northlands College

Forestry

- Northlands College offers a variety of forestry-related programs in response to industry needs. It is highly dependent on joint venture funding initiatives with industry or other agencies.

Mining

- Training-to-employment programs prepare northerners for work in the mining sector. Many of these programs are delivered in partnership with technical institutes such as SIAST or the Northern Alberta Institute of Technology (NAIT).

- Other Regional Colleges broker all or part of SIAST Programs based on a needs basis.

Other Provinces

British Columbia

- Heavy Equipment Operator training is available in a number of locations in B.C., although Malasapino University College is the only publicly-funded post-secondary institution.

Alberta

- The only public institution in Alberta to offer Heavy Equipment Operator training is Keyano College.

- Private sector trainers also play a significant role in Heavy Equipment Operator training. A group called the Advanced Heavy Equipment and Safety Training Group provides instructors to train on-site, using the client's own equipment.

Western United States

- A strong trend is developing within the United States that accentuates the need for training partnerships between private industry and training institutions.

- Private trainers exist throughout the U.S. They offer flexible training on-site, and will provide detailed training in specific areas. Some states have recognized the role of contractors in the training process and will offset their training burden by increasing the value of the contract.

RESEARCH PROJECT KEY FINDINGS:

Employment Groups

In the Anderson-Fast phone survey, contractors were asked to identify some of their workplace demographics. In the sample gathered through the survey, it was discovered that:

a) almost half (47%) employ between one and five people of Aboriginal ancestry. Approximately 10 percent employ Aboriginal senior managers and 12 percent of the companies involved some degree of Aboriginal ownership.

b) Only one-quarter (25%) had employees who are visible minorities.

c) Almost half (48%) of respondents do not employ people with disabilities, and another 38 percent were unsure, so it could be as little as 14 percent of respondents that do have employees with disabilities.

The Outlook for Future Employment

- In the surveys of contractors and municipalities, respondents identified staff recruitment as a major concern. Over 73 percent were very concerned and 83

percent identified the lack or loss of skilled workers in Saskatchewan as the predominant obstacle in recruiting personnel.

- The problem of a worker shortage is particularly evident in the rural municipalities.

- Participants in the focus groups reiterated a fear that the pool of skilled labourers in Saskatchewan seems to be shrinking.

Nature of the Work

According to participants in the focus groups, the nature of work is making it difficult to attract and retain workers. Younger workers, in particular, are more concerned about family time than in putting in long hours away from home. This seemed to be more of a frustration for contractors over the age of 45 than for younger contractors.

Employment Insurance

- Almost all of the participants agreed that the EI system is driving employees away from the heavy equipment sector. Apparently, the government doesn't recognize the seasonal nature of the work and forces the heavy equipment operators to apply for alternate work. Once these people find jobs in other industries, or in other provinces, they are lost to the Saskatchewan industry altogether.

Training in the Saskatchewan Industry

- In the industry and rural municipalities surveys, on the job training was by far the most common, with other training methods falling behind.

Time constraints appear to be the biggest obstacle to training for 31 percent of respondents. Other barriers included lack of resources/facilities, financial costs, no incentives for employers, and finding and retaining personnel.

Image of the Industry

- In general, focus group participants thought the heavy equipment operator sector was doing a poor job of promoting itself.

Education

- According to responses from the RM survey, the levels of education among current heavy equipment operators are mostly below the post-secondary level. The industry survey showed slightly higher levels of education.

- In both surveys, the number of respondents who said they employ people with less than grade twelve was quite high, and this could be partly contributing to why the industry is viewed as an "unskilled" trade.

- Focus group participants mentioned the federal government's strong focus on technology and high technology jobs in their budget and in education programs. By encouraging youth to enter the high tech field, they are pushing the "low tech" jobs further down in terms of esteem.

- As an industry, they would like to see more effort channelled into educating people, and especially youth, about the knowledge and skills needed to succeed in the industry, and a major part of that is dispelling the myths that operators don't have to be highly skilled.

- As the industry becomes more computerized, the need for employees with a solid understanding of computers will become increasingly relevant. Some people within the industry are predicting that the most important tool in the mechanic's tool chest will be a laptop computer.

Skill predictions from Industry

- In the survey results from industry, almost two-thirds expect skill levels to change in the next three years. About one-third expect to see greater specialization, a few expect to see greater generalization, and over half expect to see an increase in both specialization and generalization.

- Many of the respondents were concerned about where they would find qualified employees to fill these emerging new jobs.

Future Recruitment

- Participants in the focus groups believe that high school students are a viable target market, but there is a significant lack of information being given to youth in high school about trades in general. They would like to see more opportunities for high school students to see what the industry involves, and if it is something they would consider for future employment.

- Some of the ideas for promoting the industry include co-operative programs at the high school level, showing youth that the hand-eye skills they have

developed from video games, etc. would serve them well as operators, taking a video into the schools that shows the industry in a more positive light.

Heavy Equipment Operators & Journey Status

- According to focus group participants working within the industry, the lack of an industry standard is a problem. For employers, they have no idea what skill levels their new employees have until they see them at work.

- Employees also face some challenges as a non-certified trade because there is no standardized pay scale, and they sometimes find that contractors take advantage of them because of this.

- There was fairly widespread agreement that offering journey status would help improve the image of the industry both internally and externally.

The Need for Enhanced Training and Delivery

- The heavy equipment sector will be facing some significant labour challenges in the years ahead. The dramatic changes in Saskatchewan's demographics and a heavy emphasis on high tech employment likely mean there will be less people available to work in the heavy equipment sector.

- Traditional methods of training and delivery will need to be enhanced as companies try to compete in a world that relies on higher technology and a new set of knowledge-based skills.

- The industry is relatively advanced when it comes to communications tools, which would make for a wider variety of training options.

Conclusion

- Predictions for the Saskatchewan heavy equipment sector indicate continued growth over the next decade and into the future. The competition for jobs and for skilled personnel will become increasingly more fierce as the size of the skilled labour pool declines.

- The industry needs to find effective ways to recruit, and more importantly, to retain qualified people to be heavy equipment operators and mechanics. According to people within the industry, efforts so far have been disjointed. In general, they would like to see a greater emphasis on standardized skills (ie/ journey status), and on realistic co-op terms and partnerships with the industries that employ heavy equipment operators.

- Perhaps the most significant obstacle facing the industry is ensuring that fundamental knowledge gained through experience is not lost from today's

workforce to tomorrow's workforce. Companies must find ways to pass essential knowledge to new entrants in the industry.

- People within the industry are frustrated with the industry's inability to attract people who want to look at heavy equipment operation as a career. Training could help alleviate the negative, stereotypical image of heavy equipment operators by allowing employees to feel they have accomplished a level of competence.

- Escalating capital acquisition costs highlight a need for industry and training institutions to develop long-term mutually-productive partnerships. Training institutions and industry will have to work closely together to upgrade the skills of the existing workforce and the skills of instructors in the training institutes to prepare the workforce of the future.

4.0 RECOMMENDATIONS

Industry Image

Recommendation #1 :

That the industry find creative, inexpensive ways to improve its image in the community.

Rationale:
The industry is not well-recognized in the community. A good public relations strategy could create goodwill and a better understanding of the industry. The visibility of the projects might increase knowledge of the industry and attract future employees. It would also give workers within the industry a reason to feel proud to be involved in the heavy equipment sector.

Strategies:
1. In conjunction with other industry organizations, sponsor community improvement projects in specific areas, especially rural Saskatchewan.

2. Identify opportunities to provide information about the industry at school trade fairs and other career-related events.

3. Explore ways to promote the industry to teachers and guidance counsellors directly.

4. Identify newsletters and other vehicles for communication and provide an informational article about the heavy equipment sector.

Recommendation #2:

Address the way various media portray the heavy equipment industry.

Rationale:
The Canadian Construction Association directly contacts advertisers who have (usually inadvertently) portrayed the industry negatively. It provides an opportunity for public education and can possibly prevent stereotypes from being further advanced.

Strategies:
1. Request that organizations, individual workers and industry associations contact sponsors immediately if they see (or hear) the industry being portrayed negatively.

2. Contact in a positive way advertising agencies to promote the positive aspects of the industry.

Recruitment & Retention of Employees

Recommendation #3:

Industry, the government, First Nations, Metis and other equity groups work together to address the inequity in age/gender/cultural background by expanding awareness and opportunities for under-represented groups.

Rationale:
Most workers within the industry are male, non-Aboriginal and over 35. The First Nations/Metis population is expanding faster than the mainstream population, which means First Nations and Metis youth are a crucial target group of employees for the industry. Through initiatives that will encourage young males and females to enter the industry, the industry can prepare itself for its future workforce.

Strategies:
1) Enhance the partnership between the Industry and the First Nations and Metis communities and with other equity groups through opportunities such as the Construction Career Development Project, Construction Career Services and Women in Trades and Technology.

Recommendation #4:

A specific mentoring program should be developed to encourage young people to take ownership and develop pride in the industry through contact with long-time employees.

Rationale:
Once employees have decided to work in the industry, there must be a concerted effort to keep them there so the long-term essential knowledge does not disappear. One of the most effective methods in corporations involves mentoring relationships. Good mentoring programs provide a chance for innate and less formal industry knowledge to be passed from long-time employees to the new recruits, and provide the younger employees with a sense of security within their new positions.

Strategies:
1) Increase employers' awareness of various funding programs designed to enhance the mentoring process.

2) Encourage employers to adopt mentoring programs already available through different government agencies.

3) Promote mentoring within the industry and industry organizations through the use of informational articles and success stories in publications, and through word of mouth.

4) Target future employees with opportunities to participate in co-op programs or a summer works program.

5) Promote the pairing of new employees with senior employees.

Recommendation #5:

Work within the industry and with industry partners to educate young people about the variety of skills needed to succeed in this occupation.

Rationale:
Currently, young people are being told that high technology industries are where future job opportunities exist and that heavy equipment operation is a low-skilled job.

Strategies:
1) Work with the Canadian Association of Equipment Distributors (CADE) and other organizations to change attitudes regarding skill levels and use of technology within the industry.

2) Continue to provide information to young people at trade and career fairs.

3) Explore ways to work within community and school systems (particularly guidance counselors) to provide information about skill levels for the heavy equipment industry.

Training & Equipment Needs

Recommendation #6:

Initiate discussions with the provincial government to revitalize current training programs and explore the most effective ways to use existing training dollars and to access equipment.

Rationale:
The industry has clearly indicated that on-the-job training is the most effective, most preferred and most used form of training. Using on-site instructors and on-site equipment would provide good value for training dollars.

Strategies:
1) Explore the possibility of providing off-season classroom training with instructors from the industry who are prepared to fully integrate training at acceptable standards.

2) Initiate discussion with the government to explore the use of existing training dollars with contractors who are prepared to fully train staff on heavy equipment.

3) Initiate discussion with stakeholders to provide more opportunities to work with private contractors to access equipment on-site for training.

Employment Insurance Problems

Recommendation #7:

Industry and the provincial government should work with the federal government to recognize the unique seasonal and time demands of the industry and to address specific issues relating to hours worked and access to Employment Insurance.

Rationale:
The current restrictions of the federal employment insurance system are a hindrance to retaining employees in the industry. Companies also face financial stress through the loss of employees and the need to train new employees every year. If the federal government will recognize the seasonal nature of the work, employees will be more inclined to remain within the industry, thereby improving the quality of the industry as a whole.

Strategies:
1) Coordinate a lobby effort to convince HRDC to reclassify the qualifications for obtaining Employment Insurance for the heavy equipment sectors.

Journey Status for Heavy Equipment Operators

Recommendation #8:

Take the necessary steps towards giving Heavy Equipment Operator journey status, with a provision that recognizes skills already learned on the job (Prior Learning Assessment and Recognition.)

Rationale:
This recommendation takes into account many of the recommendations listed above. By granting journey status to heavy equipment operators, the industry would gain a higher level of respect, and would have a standardized recognition of skill levels that would help provide stability to the industry. It would provide the industry with a way to attract and retain employees and could incorporate a seasonal training program that would not interfere with the busy season. Journey status would also provide further justification to the federal government to make changes to employment insurance to incorporate industry needs.

Strategies:
1) Initiate discussions with the Apprenticeship and Trade Certification Commission to designate Heavy Equipment Operation as a trade and that the Commission be provided with sufficient funding to ensure this can happen.

2) Begin discussions within the industry and the community to develop a standardization of training.

3) Encourage the recognition of Prior Learning Assessment and Recognition (PLAR) in setting training standards.

Future Direction

Recommendation #9:

The industry, training providers, First Nations, Metis and other equity groups should continue to work closely together with key stakeholders to develop programs that will ensure the long-term survival of the heavy equipment operator sector.

Rationale:
Without an effective partnership, the industry will continue to face obstacles as outlined in the above recommendations. By creating a workable, effective strategy to address the challenges and needs of the industry, the partnership will create a blueprint for the future of the industry.

Strategy:

1) Saskatchewan Construction Association will commit to call the committee together every six months to evaluate the direction the industry has taken.

2) The committee will review goals and strategies and adjust as required.

5.0 NEXT STEPS

The following are the most immediate steps to be taken in the implementation phase of this project.

1) Circulate the report to all stakeholders.
2) Develop a process to provide communication within the industry.
3) Post this report to websites of industry associations, related training institutions and industry members.
4) Present the findings of the report to the Roadbuilder's Association at their annual general meeting in November and to the Saskatchewan Construction Association annual general meeting in January.
5) The Steering Committee, in partnership with the Saskatchewan Construction Association and industry, will continue to meet to discuss the implementation of the recommendations.