



Indigenous Communities Public Works Pilot Project Final Report

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Executive Summary

The Indigenous Communities Public Works Pilot (ICPWP) Project is an innovative demand-driven partnership-based approach to workforce development in First Nation communities. The initiative was designed with the aim of strengthening employment opportunities for unemployed or underemployed Indigenous individuals who are interested in pursuing long-term careers in Public Works. It offers a career pathway to Indigenous participants that starts with an industry recognized 22-week training program to develop skills and competencies aligned with qualifications for entry-level Public Works Technicians. ICPWP also aims to provide Indigenous communities with the local expertise needed to address their public works and community infrastructure needs.

The Okanagan Training and Development Council (OTDC) with its partners Westbank First Nation and Applied Science Technologists and Technicians of BC co-developed and implemented the project between July 18, 2017 and March 31, 2018. It is a pilot project funded by Employment and Social Development Canada. OTDC contracted with the Social Research and Demonstration Corporation to conduct the evaluation of ICPWP. A rigorous evaluation was completed to determine whether the program model was feasible and suitable for wider implementation and testing and to assess the training and employment outcomes for participants.

The partnering organizations successfully implemented the Indigenous Communities Public Works Project, including the new ASTTBC Public Works Technician Certification Program. The training results for participants were excellent. Fourteen of the 15 participants completed the program and met the requirements to be eligible for provisional membership for Registered Public Works Technicians. All 14 participants were employed in relevant employment three months after the training ended. Participants expressed high satisfaction with the training program; moreover, they are generally pleased with their short-term employment and other outcomes. Participants also stated their intention to attain the Registered Public Works Technicians full membership after completing their required hours of work experience, and continue to advance along the career journey in public works.

The successful implementation of the program model in the pilot and the observed participant training and employment outcomes suggest the model shows promise to develop Indigenous talent for in-demand occupations. The results are expected to be used to further develop and improve the curriculum and program delivery. It is a promising model that would benefit from further testing and a longer-term follow-up with participants to determine sustainable employment outcomes.

Introduction

This is the final report for the Indigenous Communities Public Works Pilot (ICPWP) Project. The ICPWP is an innovative demand-driven partnership-based approach to workforce development in First Nation communities. The initiative was designed with the aim of strengthening employment opportunities for unemployed or underemployed Indigenous individuals who are interested in pursuing long-term careers in Public Works. It offers a career pathway to Indigenous participants that starts with a recognized training program to develop skills and competencies aligned with qualifications for entry-level Public Works Technicians. ICPWP also aims to provide Indigenous communities with the local expertise needed to address their public works and community infrastructure needs.

The Okanagan Training and Development Council (OTDC) with its partners Westbank First Nation and Applied Science Technologists and Technicians of BC (ASTTBC) co-developed and implemented the project between July 18, 2017 and March 31, 2018. It is a pilot project funded by Employment and Social Development Canada (ESDC). OTDC contracted with the Social Research and Demonstration Corporation to conduct the evaluation of ICPWP.¹

As a pilot, the project is expected to provide insights about its innovative partnership model with Indigenous and non-Indigenous partners delivering targeted training and support to achieve better employment outcomes for Indigenous individuals in Canada.

Outline of the report

This report is organized in the following manner. It starts with a background to the project, followed by a brief description of the program model. This is followed by an overview of the key evaluation questions, objectives and methods. The next section briefly describes the implementation. Following, several sections present findings from the collected information including key implementation findings and participant outcomes. The report ends with a discussion of lessons learned and selected recommendations, which flow from the findings.

Public Works Technicians

Public Works Technicians are professional technical staff who provide general maintenance, operations, construction and essential services in the community. Public Works Technicians are custodians of the community at large. They look after roads, treatment and water systems, sewers, sidewalks, parks, community facilities, and other infrastructures necessary to ensure a safe, clean, and hospitable community and other services to residents in the community.

A Public Works technician is someone who likes to work outside and is fine working in different weather conditions. They perform a range of tasks such as maintaining and repairing: water and wastewater systems, roads and sidewalks, public buildings, as well as parks and recreation facilities. It is an exciting career opportunity for someone who is adaptable, likes dynamic work, and being part of a team.

¹ The OTDC evaluation budget was matched by an anonymous donor, which made the evaluation design more comprehensive.

Background

The concept for ICPWP emerged from a consultation process initiated by ASTTBC that started in 2010 with 15 First Nation public works departments and other public works stakeholders regarding their workforce development. The stakeholders identified the local needs for trained and certified Public Works Technicians to address public works and particularly community infrastructure needs in First Nation communities.

A needs assessment was then conducted, and based on the results of this and two subsequent reports,² ASTTBC, with support from Westbank First Nation and other stakeholders, proceeded to develop a DACUM (Developing a Curriculum) and process to define the knowledge, competencies and traits required for training entry level Public Works Technicians to work in BC. The DACUM was first applied in a small pilot called *Village Public Works* delivered by the College of New Caledonia in partnership with McLeod Lake Indian Band in Mackenzie (2015-16). There was no formal evaluation of the Village Public Works pilot. The next opportunity to prototype the DACUM came in 2017 when OTDC received funding to deliver the Indigenous Communities Public Works Project in the Okanagan in partnership with Westbank First Nation and ASTTBC. This time, a detailed curriculum developed by ASTTBC guided the lessons and technical content as well as the learning activities to help participants understand how they will use the knowledge to respond to public works needs.

ICPWP: A brief description

The Indigenous Communities Public Works Project is an innovative, demand-driven, partnership-based approach designed with a focus on developing foundational skills and competencies aligned with employment as qualified entry-level public works technicians who want to start a career in Public Works.

The project delivers a newly developed recognized training aimed to develop entry level knowledge and skills required in the pathway towards certification for Registered Public Works Technicians.

It consists of 22 weeks of training. The training was delivered to 15 Indigenous individuals between October 2, 2017 and March 16, 2018, in Westbank First Nation, BC. The training was designed with the following modules:

- group-based life skills training;
- employability and essential skills for public works;
- group-based public works training including practical learning tasks; and
- job search or work readiness preparation and job placement support.

² Needs Assessment and Strategy: Enhancing Training and Employment within First Nations Public Works Operations Report, March 2013; Occupational Analysis for Public Works Technicians in BC Report, October, 2013, and Certification Program for Public Works Technicians Report, 2014.

Partnership

The project builds on a new cross-sector partnership. The lead organization is OTDC, the Aboriginal Skills and Employment Training Strategy agreement holder for the Okanagan service areas that consist of six band memberships. The other two partners are Westbank First Nation, a self-governing nation in Kelowna and ASTTBC, a not-for-profit, provincial professional association/regulator established in 1958. Two partners are located in Kelowna and the other is located in Surrey.

The partnership or collaboration is an approach to building effective “bridges”, weaving the strengths of Indigenous and non-Indigenous partners together. The ultimate aim is to simultaneously enhance opportunities for Indigenous people in the labour market, and build capacity for public works infrastructure in First Nation communities in the Okanagan.

Roles and responsibilities

OTDC has responsibility for the overall Agreement with the federal government, including oversight of the finances and accountability. OTDC hired an onsite project delivery team responsible for administration and coordination of the training program including delivering the life skills, job search and job placement support modules.

Westbank First Nation is the host organization for the training, which includes arranging practical applications of the theoretical instructions with community work activities consistent with the emphasis on active or non-traditional methods of learning. ASTTBC is responsible for the development of the curriculum that details the schedule of instruction, lesson plans, learning outcomes, learning activities, instructor guide, resources and materials, and quizzes aligned with the lesson objectives and specific competency areas. As a regulatory body, ASTTBC also specifies the training standards such as tools and equipment, facilities, instructor qualifications and the evaluation of learning and essential skills in order to meet the requirements to be Registered Public Works Technicians.

The three partners agreed to jointly develop and deliver the project.

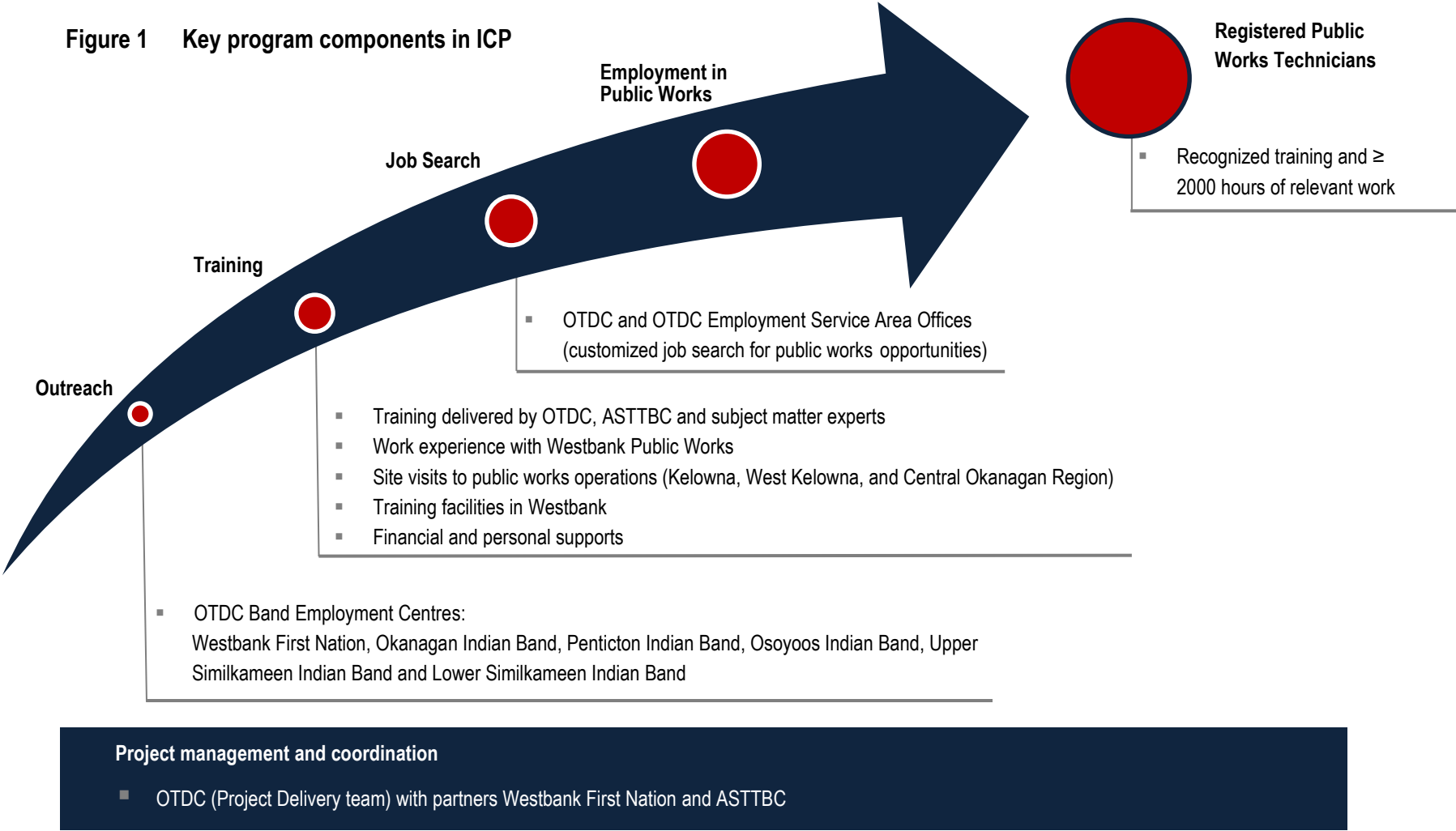
Project delivery team

OTDC established a delivery team with a full-time project coordinator and two part-time team members that were responsible for the community outreach to promote the program and recruit and select suitable candidates for the 15 training spots. The team worked with the partners to deliver the training as outlined in the curriculum, which includes arranging field visits to public works operations and guest speakers and delivering parts of the curriculum. The team also provided personal supports to participants including arranging accommodations for participants who reside outside of the Kelowna area and help with applications to Employment Insurance and other income sources as needed. The team had overall responsibility for the job search and placement component.

Key program components

The key program components in ICPWP are highlighted below and delineated in Figure 1. The implementation of these components will be discussed later.

Figure 1 Key program components in ICP



Outreach, marketing, recruitment, and selection. The project benefited from OTDC's existing network of Band Employment Centres and made use of it to market the new pilot (Figure 2). The Centres have local employment counsellors that helped with the recruitment, carried out the pre-screening and assessments and supported the Delivery team with the final selection of candidates.

Training. The public works training follows the ASTTBC newly developed curriculum, an industry approved training program with a minimum of 500 hours of student contact time (approximately 15 weeks). It includes instruction and practical skill building in the following topic areas: Tools and Equipment for Public Works; Fundamental Occupational Skills for Public Works; Environmental Best Practices in Public Works; Roads and Sidewalks; Water Systems; Sanitary and Storm Sewer Systems; Building; Parks and Recreation Facilities and Fire Protection Systems. It also includes safety certification training such as Workplace Hazardous Materials Information System and First Aid and Occupational Health and Safety. The initial vision was to have the project delivery staff coordinate the training as well as deliver selected modules. The project delivery staff would identify third party trainers who would deliver specific subject areas, The Public Works department and staff from Westbank First Nation would also help with the training.

Overall, the training was designed to offer the technical knowledge required to enter the public works field in an entry position and to be delivered with a strong use of practical and cooperative methods of learning that included practical field and hands-on experience. Box 1 briefly describes the certification process and training program.

Job search, placement and support. The training was followed by job search and placement support from the delivery team and the OTDC Employment Centres to help participants with a targeted job search for public works opportunities, placements and other employment-related supports.

Figure 2 OTDC Band Employment Centres



Box 1 Certification Process and Technical Training Program

Certification Process

The ASTT Act and Regulations, R.S.B.C. 1996, c.15, specifies that ASTTBC has the authority to register and certify Registered Public Works Technicians (RPWT) who have met the certification standards and criteria set by the respective Certification Boards and approved by the ASTTBC Council. Requirements for certification must meet the standards and guidelines for Registered Public Works Technicians, which include a minimum of 2000 hours of relevant work experience and achievement of specific occupational competencies needed by RPWTs for effective and ethical practice. Applicants can achieve these competencies by a combination of *recognized* training and work experience.

The certification process involves a two-tiered approach. The path to certification will typically include completion of a recognized training program, followed by workplace training. Graduates of training programs recognized by ASTTBC may apply for certification as a Registered Public Works Technician and become a provisional member (RPWT-Provisional). After a minimum of 2000 hours of relevant work experience, provisional members can then apply for RPWT certification. Provisional certification recognizes achievement of the required *learning outcomes*. RPWT certification recognizes achievement of the *occupational competencies* prescribed in the Public Works Certification Policy (https://asttbc.org/registration/technical_specialists/publicworks/).

ASTTBC Public Works Technician Certification Training Program

ASTTBC developed the detailed curriculum for the Public Works Technician Certification Training Program based on the consultations and needs assessment conducted with First Nation communities and other key stakeholders in the industry. It features a short-term technical and skills-building training program with a minimum of 500 hours student contact time (approximately 15 weeks).

The curriculum features common core modules to provide fundamental skills applicable for careers in the public works: work safety skills, environmental best practices, tools and equipment including technical skills such as drawing, basic trade math, surveying, interpersonal or soft skills and labour relations. It also offers the training provider the flexibility to customize the training to address identified needs in communities by assigning more detailed instructions and activities on speciality modules such as buildings, roads, sidewalks, parks and mold detection.

The curriculum also specifies the requirements for tools and equipment, facilities, instructor qualifications and the prescribed learning outcomes. The descriptions of learning outcomes are intended to support curriculum development and delivery of the training. Practical and theoretical learning tasks associated with the learning outcomes are also outlined in the curriculum, along with examples of suitable field trips, guest speakers and practical training tasks/exercises/projects (e.g., field trip to municipal water and sewer treatment plants). The training providers are expected to find community partners or local situations to execute these practical and theoretical learning tasks. Strategies to evaluate learning and criteria for successful completion are included as well. The standards in the manual are designed to provide objective and consistent criteria to allow for ASTTBC to recognize training as well as guidance to training institutions and instructors for program development and delivery.

Project objectives

The project has the following objectives:

- Deliver training designed to provide foundational skills to 15 Indigenous individuals who are interested in pursuing careers as Public Works Technicians to work primarily in Indigenous communities
- Pilot a detailed curriculum developed by ASTTBC that supports the initial certification process for Public Works Technicians
- Leave a legacy of community infrastructure projects completed as part of the training program.

Target population

Candidates for the training program must be:

- Indigenous and living in the Okanagan
- In receipt of Employment Insurance benefits, unemployed, or underemployed.

Location

The training was hosted in Westbank First Nation. The training facilities were developed to meet the standards required for the delivery of the program modules and to support program delivery. Considerations were also given to ensure ease of access for program participants who were in communities outside of Kelowna.

Evaluation

Approach

Our approach is to conduct a proof of concept, which is common in the business world to demonstrate that a company or product is financially viable. The proof of concept was used to show how the training played out in the real world and if it would be feasible and viable for wider implementation and evaluation.

The primary objective was to perform a process evaluation, assessing feasibility and the extent to which the project was delivered as intended and whether participants, project partners and others participated as expected, and whether the project met its main objectives.

The results from the evaluation will contribute evidence on the concept's viability for further development and share recommendations and lessons about the collaborative approach to achieve better employment outcomes for Indigenous individuals.

Research questions

The evaluation aims to answer the following key research questions:

- What does it take to successfully implement the project? What are the lessons for program development and practice?
- What are the outcomes and benefits, if any, for participants in the project? More specifically, did the training help participants gain technical and essential skills, certification and secure employment?

The evaluation contains two components to address the above questions:

1. Learnings from the Partnership model (collaboration) — documenting the partnership, roles, development and model including its design, implementation, challenges and opportunities, and what worked and what did not work.
2. Outcome study (benefits and value for participants) — assessing the effectiveness of the training program in producing skills development in the areas the training was provided and employment participant outcomes (within the evaluation period), as well as participants' experiences with the project.

Methodology

Methods

Multiple lines of inquiry, which align with the evaluation's aim, were used to assess the project and partnership from multiple views. The data or information required to support the process study include:

Participant interviews. Three facilitated workshop or group meetings with participants at the beginning of the training, midway and at the end (right after the final exam). Follow-up telephone interviews were conducted approximately three months after the training with participants.

Partner interviews. Two sets of interviews with key representatives from OTDC and ASTTBC at the start and at the end of the training. An interview with Westbank First Nation was conducted three months after the training.

Project delivery staff interviews. Interviews with the project delivery staff — project coordinator, facilitator and trainer — were completed half way and at the end of the training. A third interview with the project coordinator was conducted three months after training.

ASTTBC curriculum developer interview. Interview with ASTTBC curriculum developer who also delivered the training for specific subjects in the curriculum.

Participant project data. Background information form completed by participants, training results including attendance, test scores and graduation; and post-training employment progress.

Document reviews. Documents related to the project design and implementation, including marketing materials, training videos and the ASTTBC Public Works Technician Training Program Outline and Instructors Manual were reviewed.

Limitations

While curriculum evaluation is a key part of curriculum development, a formal evaluation of the curriculum implemented in ICPWP and its compliance to the training standards is not included in the scope of the evaluation. However, through the various interviews and feedback received, the evaluation is able to provide some insights on the project's ability to meet the objectives of the curriculum and student learning outcomes.

This report presents only short-term employment outcomes three months after training for the participants. A longer follow-up period is needed to determine participants' employment progress in public works and their career journey.

The outcomes reported for participants are not based on a randomized experiment. There is no comparison group to determine the difference the training had on employment and other outcomes for individuals participating in the training.

Implementation

Start-up

The training program was to begin roughly 2.5 months after the project start date in order to be completed before the Agreement end date on March 31, 2018. The partnering organizations met regularly in the initial months to plan for the start-up and launch of the training program. The concept for the project originated with ASTTBC and the funding opportunity brought the partners together with OTDC as the vehicle (funding recipient) to move the project forward. The partners had to bring the project from a concept on paper to implementation, including sharing a collective understanding of the role of the partners and the scope of the work that will be undertaken, as well as co-developing detailed practical actions in a fairly short time. Since OTDC and Westbank were not involved in the initial design, the partners needed time to develop a shared vision and to better understand the project before developing the action plan to deliver the project. The partners discussed the project delivery and implementation details in meetings mainly conducted by telephone conference calls due to the location of the partners. There were also some face-to-face meetings in Kelowna. Because this was a new partnership, the meetings were opportunities for the partners to learn more about their respective organizations, clarify their roles and expectations in the project and develop the harmony to establish a unified direction for achieving the project objectives. It also presented an opportunity for the partners to gain a better understanding and appreciation of the different strengths and cultures among their organizations.

Project delivery team

During the first month, as planned, OTDC recruited and hired a three-member on site project delivery team that would be responsible for the coordination of the training, including life and employability skills, job search, work readiness preparation, placement and support, as well as the overall operations. The positions included a full-time project coordinator, a part-time job coach and part-time life and employability skills facilitator. OTDC hired local Indigenous staff who are familiar with the community, and able to talk to the community about the program in a way that aligns with the local social, economic and cultural values.

Although the project delivery team had the main responsibility for delivering the project, it also included individuals from ASTTBC (e.g., curriculum developer) and Westbank Public Works.

Classroom

The delivery team, primarily the project coordinator, helped set up the training facility/classroom, which was located next to the Westbank Health and Wellness Centre in Westbank. It involved setting up everything needed for a classroom from “scratch” including buying furniture, buying and installing computers and office equipment and supplies, getting Internet and other IT installed, and painting, all within a couple of months.

Outreach, recruitment, and selection

The project harnessed OTDC’s existing positive community relationships and capacity to inform the bands about ICPWP and its potential value for individuals and communities. The marketing materials included posters, articles, social media posts, videos and community dialogues/conversations all designed to build excitement about the new training program. The employment counsellors in the OTDC Employment Band Centres who support job seekers in the communities helped promote the program and recruited and referred suitable candidates. The counsellors also completed the pre-assessments and screening for suitable candidates. The delivery team made the final selections; the decisions were based heavily on recommendations from the local employment counsellors. The team not only relied on these recommendations but also considered factors that individuals have, which may help them to fully engage in the training program. For example, will the candidate have the finances to attend the training program? The training is free for participants, but not all applicants would be eligible for Employment Insurance (EI) benefits. In short, the assessment and selection process looked for the usual factors such as high school completion, work history, but it also reflected on the family, personal and cultural ties that may support or hinder commitment to the training.

The project received 32 suitable applicants—two for each spot, including a small group from Westbank Public Works. Westbank Public Works was interested in “upskilling” some of their part-time or seasonal workers with a broader skillset to be eligible for all-year employment. All 15 individuals received support from local OTDC employment counsellors in the Okanagan Band Employment Centres. The outreach, recruitment and selection processes had to be, and were, completed within a month.

Training program

The project delivered the curriculum for the Public Works Technician Certification Training developed by ASTTBC. It was designed to combine theoretical or technical knowledge with local field and hands-on experience in the community. This was the inaugural testing of the curriculum with Indigenous learners.

Support

EI Benefits. The delivery team had to support participants who were eligible for EI (“authorized quits”) with their applications in order to secure money for the training period. Eight participants

Figure 3 ICPW Technician Training Program Brochure

**NEW - INDIGENOUS COMMUNITIES PUBLIC WORKS
TECHNICIAN CERTIFICATION PROGRAM**

**STARTS
SEPT 25th 2017
& ENDS
MARCH 2018**

Only 15 candidates accepted for training for a long-term career in Public Works

Learn a wide range of skills & get job placement support

For questions and to apply email:
IPWcoordinator@gmail.com OR
call 250-575-5959

Participants must be Indigenous and living in the Okanagan. Must be on EI, under-employed or not employed. Training is located in Westbank.

TRAINING YOU WILL RECEIVE:

	Weeks
Life Skills Training	1
Employability & Essential Skills for Public Works	1
Group Based Public Works Training	19
Job Search/Work Readiness Preparation	1
Job Placement Support & Follow-up	2

were eligible for EI benefits. For individuals who were not eligible for EI benefits, OTDC made other arrangements to ensure they got similar amounts of support.

Accommodations. Six individuals did not live close to the training location. The project provided accommodation for these individuals. They stayed in Westbank during the week and went home for the weekends.

Lunch. Participants were provided lunch — healthy and culturally appropriate food — during the training. The lunches served to bring the group, including the delivery team, together in dialogue, support, and eating their traditional foods. It also reduced participants' food expenses during the training period.

The participants

Selected characteristics of participants

A diverse group of participants were admitted to the training program. The participants are from five of the six member communities in the Okanagan Nation in the southern interior of British Columbia: Okanagan Indian Band, Penticton Indian Band, Upper and Lower Similkameen Indian Bands and Westbank First Nation.³ The members share the same land, *nsyilxcən* language, culture, and customs.⁴

The participants range in age from 18 to 67. The average age in the group is 40. One in two participants are married or common-law. Similarly, half of the participants have children. Two in three participants have completed high school. About half of the participants have completed a training program in the last three years in topics such as construction safety, heavy equipment and building services. Similarly, half of the participants have received job search assistance from an employment centre. Eight of the participants were employed with First Nation public works departments before the training. In fact, nine participants were employed full-time, two were employed part-time and four were not working before the training program. Most of the employed participants were seasonal workers. More significantly, many of them had a history of working in the recent years.

Figure 4 Participants in the ICPWP Training Program



Source:

<https://www.kelownacapnews.com/news/historic-grad-ceremony-for-westbank-first-nation-technicians/>

Retrieved March 28, 2018

³ The Okanagan Nation extends to Northern Washington State where the Colville Confederated Tribe is Okanagan Nation's seventh member community.

⁴ Retrieved from <https://www.svilx.org/about-us/svilx-nation/> March 19, 2018.

At the baseline focus group/workshop

Feelings on the first day of class. The participants shared how they felt on the first day of class. Almost all participants said that they were excited. They mentioned feeling nervous and anxious as other common reactions.

Motivation. Participants heard about the pilot from a variety of sources: public works department where they were working, family and friends, band newsletters, flyers in the community, social media, and ICPWP project coordinator. As indicated above, many of the participants had worked in the local public works department and were referred and encouraged by their supervisors. Many indicated that the training would upgrade their skills, advance their careers and help them make more money. Several participants mentioned the opportunity to learn and to bring the knowledge and skills back to help their communities.

Uniqueness. When asked what they thought was unique or special about the program, they indicated many features:

- Access to employment or better opportunities
- Short-term training
- Learning a variety of skill sets
- Getting safety certification training
- Indigenous participants and teachers (note: participant was referring to members of the delivery team as teachers)
- Caring teachers
- Diversity in participants making it feel like a team environment and not a classroom
- Teaching strategies suitable for experiential learners, as well as working in groups
- Financial support and accommodations
- Improving public works in communities
- Reinvesting knowledge in communities
- Safe learning environment.

Figure 5 Participants' collective strengths



The participants all indicated that this training program is different from other programs they have taken. They mentioned the content's connection with the actual work, feeling comfortable and connected with all Indigenous participants, as well as feeling proud to be learning in a supported environment.

Strengths. Participants identified many strengths they have that will help them be successful in the training. The collective strengths, listed in no particular order, are illustrated in Figure 5.

Supports. Participants also indicated some areas they may need support in order to succeed. This list was noticeably shorter than the list of strengths. The top areas are:

- Math skills
- Computer skills
- Communication skills
- Resources and study skills
- Financial support.

The participants are from a vulnerable group, and have faced many of the challenges and have strengths common among Indigenous people. They were excited about the training program and the opportunity it presented for them in their career journey.

Governance

As mentioned, the project partners met regularly in the initial months of the project and focused on getting the training program up and running. After the training program was launched, the partners did not meet regularly. In fact, after the training began, there was only one meeting – at the end of December – which was attended by two partners and the project delivery team. There were steady communications between the project delivery team and ASTTBC regarding the ongoing delivery of the training and operations.

Implementation analysis

The training program is a new initiative piloted for the first time in a dynamic environment. The partners often operated in a state of continuous development and adaptation, especially in the initial months. The following presents key implementation findings that affected the implementation and delivery of the training program.

Start-up time. The partners had to implement the project and launch the training program within a short timeframe. This was a new partnership and partners had limited time to build their relationship as well as to fully develop a detailed implementation and action plan.⁵ As mentioned, the vision, goals and objectives of the project were initiated by one partner, and the other partners, especially OTDC, had little input into the project's initial design and development.

Shared vision. The shared vision for the project among the partners may have been vague at the start, but in the process of planning and delivering the project and training for the 15 participants, the common interests merged and the partners had a clearer and more unified direction towards achieving the project goals even if the path forward was not always clear.

Communications. Two partners were located in the Okanagan where the delivery took place, and one partner was located in Metro Vancouver. There are limits to communication when face-to-face meetings are less accessible. The partners had to learn about the project and about each other very quickly. This commonly presents challenges to building understanding and trust in new partnerships.

Moreover, the partners needed to learn about each other's cultural and operational language. As mentioned, initially there were weekly and some face-to-face meetings, which helped facilitate better communication. But once the immediate needs were met — participants selected and training program started — meetings became secondary. It is important to note that given the lead representatives' other workload and the project budget, a higher level of communications could not be sustained even though they were needed to address and resolve start-up or implementation issues. In a few occasions, the difference in the partners' operational languages caused a few miscommunications.

Preparation for implementation. There were several “must-haves” that were not in place at the start of the project such as the curriculum and classroom, which needed immediate attention. Given the short implementation time frame, it severely added to the complexity of the development and implementation for the newly hired project delivery team in what was already a short timeframe for launching the training program.

Essential Skills Training. ASTTBC had stressed the importance and significance of the essential skills training as they expected a significant number of participants would need support with math skills, test taking and literacy. The plan was to prepare participants by delivering essential skills

⁵ The project details, activities and work plan were developed at a high level for the application, and needed to be further detailed collectively by the partners.

training before the public works training module. However, given the tight timelines and the need to address the curriculum development, the partners reluctantly agreed to remove the one-week employability and essential skills training for public works. This was to have been delivered and facilitated by Okanagan College. It would have included the nine essential skills associated with literacy identified by the Government of Canada as foundation for learning all other competencies and enabling people to better prepare for employment and succeed at the workplace (i.e., reading, document use, numeracy, writing, oral communication, working with others, thinking skills, computer use and continuous learning). As discussed later, the participants noted their need for help with math and the instructors also observed this need, and consequently the instructors provided additional tutorials/reviews to help participants with math and digital skills.

Curriculum. The curriculum was not ready at the start of the project; it was in development throughout the project. The state of readiness of the curriculum, and what was needed to deliver it, was an issue the partners discussed in the early months. There were two main gaps. First, practical methods of learning (e.g., cut existing pavement for repairs, carry out purging of irrigation system for maintenance, inspect alarms and extinguishers for fire protection) to connect why the theoretical knowledge “matters” in the workplace had to be developed. This involved organizing and identifying local field and hands-on experience such as completion of community projects. To be in harmony with the delivery approach, cooperative methods of learning needed to be developed (e.g., brainstorming, class presentations by participants and group work). Both the practical and cooperative methods of learning are essential to help participants embrace the knowledge in practical and applicable ways. There were expectations that a lead instructor would lead the work in the above areas. However, due to miscommunications between the partners about the curriculum and lead instructor, there was no lead instructor hired to take responsibility for expanding the practical and cooperative activities for the curriculum and teaching. Ultimately, the project delivery team and ASTTBC jointly developed these learning activities and both partners delivered the majority of the lessons. The project delivery team was not hired with qualifications as educators or instructors with knowledge and experience in the area of public works and with practical and cooperative methods of learning. However, given the time constraint and desire to successfully meet the project objectives, the project coordinator committed to keeping the program going by taking on the additional responsibility as the lead instructor. As the lead instructor, the project coordinator became responsible for instructing as well as working on the curriculum, lesson plans and objectives. The curriculum developer also delivered training in the occupational specific areas to fill in the gaps. Several instructors were brought in for their subject matter expertise.

Sequence of modules in the Public Works training. The sequence of the subject areas in the public works training module did not always go as planned; it had to be re-ordered on several occasions. It was affected by the seasonality of selected public works activities. For example, the water and irrigation systems module was moved to the start of the training before systems were shut down for the winter. The timing of the snow removal module did not align with snow on the ground. There were also difficulties finding subject matter experts to deliver parts of the public works modules. This and other situations made the implementation fluid and often challenged the project delivery team to creatively and quickly resolve issues along the way.

Westbank. Westbank, a key partner in the collaboration, was involved in the initial months planning for the launch of the training program and various implementation actions. However, the public works department, already short on staff, had to contend with the extreme floods and wildfires in the Okanagan. Consequently, due to a capacity issue, the program was not able to benefit from the involvement of Westbank public works staff in the training nor the use of Westbank's tools, shop, public works settings and land for the practical learning activities in the first half of the training program even though Westbank remained a big supporter of the project. There was, however, slightly more engagement in the second half of the project in the above activities. There were also more social interactions (e.g., Westbank public works department staff joined the participants for breakfast once a month).

Facility and Tools. The classroom was set up from scratch in a standalone structure. It had the necessities for a classroom such as tables and chairs, small white board, washrooms, computers and basic office equipment, Internet access and equipment for online meetings, and office space for project delivery. It was expected that the practical or hands-on learning would be achieved in settings with the Westbank public works department as well as with access to their tools and equipment. This did not transpire in the first half of the program. Without access to a "shop" with the tools of the trade, it was difficult to fully engage the practical learning lessons. However, in the second half of the program, there was a bit more access to Westbank tools, space to carry out activities in their yard and a couple of little jobs (e.g., provided asphalt to repair potholes).

Training before Christmas. As mentioned, some of the key start-up activities were not ready when training began. This kept the project delivery team busy; in addition to the training activities, they were also coordinating and identifying guest speakers and field trips, developing learning activities, teaching and supporting the students. The project team delivered the life skills and employability skills training. The public works components were delivered mainly by the project coordinator and the curriculum developer. There was a subject matter expert who taught the component on Horticulture. Most of the lessons took place in the classroom using the traditional "chalk and talk" approach with access to videos available on the Internet to demonstrate the knowledge. Due to the distance, the curriculum developer and subject matter expert delivered some of the lectures and reviews virtually using GotoMeeting. The use of technology to deliver from offsite was a great substitute for on-location instructors. However, the equipment used to support the online delivery needed improvements (e.g., better audio and camera). It was hard for the instructor and participants to engage well given the constraints with the equipment.

There was also an absence of field trips and practical experience before Christmas. The class did take a tour of the City of Kelowna public works. Participants thought "*it was probably one of the best days.*" At this tour, participants heard from three speakers — heavy equipment operator, safety staff, and manager. Participants got a sense of what a career in public works would look like, met people they may work with and saw first-hand different types of equipment in the yard. Although field visits were expected to be a key part of the curriculum, this was the only field visit before Christmas. Moreover, there was little emphasis on practical and cooperative methods of learning before Christmas; it was hard to plan for these activities properly, as the project delivery team received the curriculum generally only two or less days ahead of delivery.

Turning point. There was a turning point in the training after Christmas. Things fell more into place. There were several reasons for this change. First, the partners and delivery team had a better understanding of what was needed to deliver the training program and much of the start-up activities related to set up were completed. Second, there was a replacement for the Job Coach. Third, the partners and delivery team received feedback from the midway group discussion with participants, which led to improvements to the training program.

Midway group discussion with participants. The evaluation team met with participants in a midway group discussion before Christmas to learn from the participants about their experiences to date and the types of knowledge and skills they were acquiring. They mentioned developing computer skills, better work ethic, more knowledge of public works, teamwork, punctuality, math skills (wanted more) among a list of 14 skills. One of the most significant changes for many of them at this point had been gaining more respect and a better understanding of the public works field. They now saw the importance of public works for the community and the opportunity to bring skills back to their communities. They also shared what they had enjoyed most about the program, which evolved around personal relationships:

- *“Everybody gets along well; polite and friendly environment.”*
- *“Recognizing learning differences and making accommodations for each other.”*
- *“Learning and sharing in a team.”*
- Fun learning environment – *“Laughter is a form of creating love in others.”*
- Connections with other students and delivery staff (*“like family”*) and a sense of belonging (having each other’s backs).

Participants also offered insightful feedback including: wanting curriculum and materials ahead of time, EI training funds, and more hands-on experience (*“videos are good but nothing like being on site”* and *“want more field trips and opportunities to get hands dirty”*). They also noted that most municipalities or public works departments are not aware of the program, and they would improve their employment prospects by meeting with representatives from municipal public works departments. While participants were happy to provide feedback to help future participants and programming, they also wanted their input to help them. They asked the evaluation team to share their input with the project delivery team so that improvements can be made to the remainder of their program.

New staff. The original job coach left the project before Christmas. The replacement, also an Indigenous individual, was hired to take on a hybrid position of instructor and job coach. The new member has experience instructing in trades and providing classroom support to learners in vulnerable populations. The new person took on the teaching responsibilities from the project coordinator, which allowed the coordinator to begin focusing on job search, employment and employer engagement.

Training post-Christmas. With the start-up activities addressed and a new configuration in the project delivery team, the training delivered post-Christmas differed in several key ways. With an additional instructor on board, the delivery team had time to engage with employers and

community partners. It responded to some of the suggestions from the participants and incorporated more field visits and hands-on practice activities. It also invited subject matter experts to deliver key components of the curriculum. For example, Maintenance Training Systems located in Kelowna delivered the water and waste module and used their training facilities. There were site visits to Westbank, the Fire Department and other municipal public works departments. The new team member also helped participants review material before and after each week and there were regular quizzes and tutorials. There was also more class participation. For example, the instructor would pause the video and facilitate a group discussion. Usually, there was someone in the class with some direct experience in the topic area and that person would be invited to share his/her experience. Overall, the training was more coordinated with practical activities and closer to the intended delivery approach with practical and cooperative methods of learning.

Employer engagement. At the beginning of the New Year, the project coordinator started connecting with employers, including public works departments on and off reserve, and contractors, to inform them about the training program and the upcoming graduates. Three employers presented to the class and told participants about their organizations and what they were looking for in new hires. The decision was made to engage potential employers earlier and not wait until after the training was completed.



Commitment to the project. The delivery team believed in the value of the project for the participants and communities, and that motivated them to deliver the training even along a rather bumpy road. They incorporated the participants' suggestions and found ways to better support the participants in their learning and test preparations. Participants noted often their respect for the instructors and that the instructors "*cared about their success*" and "*went above and beyond for them.*" The instructors were aware of some of the learning challenges in the group and helped participants overcome these barriers and built their confidence, especially for the final exam.

Embedding culture. Being indigenous in the Okanagan nation, the delivery staff are aware of the local cultures and practices, and incorporated traditions and practices such as smudges into the training program. The participants acknowledged and appreciated these practices. For example, the delivery team wanted to create a special connection at lunches — quality traditional food at low cost — to help enhance the training experience. It is a simple concept, but participants could count on a good meal every day. Participants indicated that the traditional practices made them feel at home. They felt more comfortable asking for help when needed and they cultivated positive trusting relationships among themselves and with instructors.

Online delivery. Finding local guest speakers and subject matter experts from the community to deliver the training and bringing subject matter experts to the training centre both proved to be difficult. Consequently, the project used virtual classrooms (GoToMeeting) to deliver parts of the training. Even though it was a low tech approach (a webcam and audio through phone), it was effective. Without this format and bringing offsite subject matter experts into the classroom virtually, the project may have lost the confidence of participants in the early months. The delivery

team can learn the technical knowledge and teach but they do not have the stories and applications, which was so crucial to connect with the curriculum. Guest speakers included first aid, traffic control and others to deliver as needed.

Budget. The project targeted participants from the Okanagan nation, which aligns with OTDC's service area mandate. However, in order to have participants outside of Westbank attend the training program, the project paid for accommodations. Otherwise the participants would not have been able to attend. Consequently, the project budget had to be adjusted to include this expense.

Intermediate outcomes

Results for the partners

ASTTBC

ASTTBC achieved its main purpose. It tested and established a curriculum that supports the certification process of Registered Public Works Technicians, including the development of practical learning activities and examination questions associated with each competency area and delivering the training program to Indigenous learners. The trial allowed ASTTBC to identify what worked and what did not work in order to make improvements to the curriculum and prepare it for the next iteration.

OTDC

OTDC successfully offered and delivered a quality training program to community members in its service area in the Okanagan. OTDC added a training opportunity to its service areas in the Okanagan.

Westbank

Westbank has several graduates from the training with a broader skillset to work at the Westbank public works department. While Westbank was not able to fully participate and realize the full benefits from the project, the project nevertheless met Westbank's needs to upskill seasonal or part-time public works employees. Westbank also has access to four returning employees that graduated from the training. If Westbank staff had the capacity to be more involved, they may have experienced greater impacts. For example, involving Westbank public works staff in the training would have developed their capacity to go on to deliver the training after the pilot.

Okanagan communities

Fourteen individuals became provisional Registered Public Works Technicians and are available to public works departments in the Okanagan.

Results for the participants

Training outcomes

- 15 participants were admitted to the training program. Program attrition was extremely low. One individual withdrew shortly after the program started, but was quickly replaced by another candidate. All 15 participants stayed with the program until Christmas. Fourteen participants returned after Christmas and each one graduated from the program.
- The attendance over the 22-week period was good. Out of the 14 graduates, six participants were away one week or less, seven participants were away two weeks or less and

one individual was away less than three weeks. Participants said that wanted to come to class, which is not something they had wanted to do when enrolled in other programs.

- Participants were assessed on the competencies and skills required for Registered Public Works Technician. Participants needed to achieve a final mark of 70 per cent to pass the program and be eligible for provisional membership for Registered Public Works Technicians. The final grade is a blended mark of review exercises (20 per cent), practical rating scales (25 per cent), module quizzes (25 per cent) and a final exam (30 per cent). The scores for the three components and final marks for the 14 participants are shown in Table 1. All 14 participants wrote the final exam⁶ and they all passed. The scores for the final exam ranged from 53 to 96 per cent, with an average score of 85.2 per cent. The average final grade for the program was 84.8 per cent and ranged from 72 to 90 per cent. All participants successfully demonstrated their achievement of the prescribed learning outcomes for the training program.

Table 1 Assessment of activities and final grade

Component	% of final mark	Average (%)
Review exercises	20	83.3
Practical rating scale	25	82.2
Module quizzes	25	91.6
Final exam	30	85.2
Final Grade		84.8

Participants identified many knowledge and skills gains attributed to the training received. Almost all participants claimed to have better job clarity or understanding of what public works is — “*not just one job (but a) bunch of different areas.*” They also expressed an appreciation of the responsibility of public works for community safety. The sessions on environment, water and horticulture stood out for some of the participants. Many mentioned enjoying the shed building activity.

Employment outcomes

At graduation. Four participants from Westbank returned to employment with Westbank. The decision to carry out job search or placement activities mid-program instead of after the training paid off for the other participants. The project delivery team found placements for the other 10 participants in a variety of settings: private contractors, municipalities and with the band. The

⁶ Participants had up to three hours to complete the exam, which consisted of x multiple choice questions.

10 participants were hired with a 20-week wage subsidy. The majority of participants are earning a higher hourly wage than their previous job.

Three-months later. Three months after training ended, all 14 participants were employed. 12 of the 14 participants were still employed in their original work placements, including the four participants from Westbank. The Evaluator completed the three-month follow up interview with nine participants; highlights from these discussions are presented below.

Job search success. Participants noted the project team’s support, encouragement and willingness to “knock on (employer) doors” to facilitate work placements. Participants received support with their resumes and interview preparation. More importantly, the project team made employer connections well before the training ended and created employment opportunities for the non-Westbank employees. The project team was key in finding placements for the participants.

High job satisfaction. Participants reported high satisfaction with their work placements. They enjoyed the variety and challenging nature of the work as well as the opportunities provided to apply knowledge and skills gained in training.

Improved technical skills and knowledge in Public Works. Most participants valued the specific technical skills they learned in the training and the connection these skills have with their day-to-day work. The most frequently cited areas in which they apply their improved skills are water treatment and irrigation. Participants said they now have a greater understanding of Public Works as a whole — both in theory and practice — as well as the importance of various elements, such as maintenance and health and safety. During their placements, they have often drawn on skills and knowledge gained from the training.

Improved communications and other soft skills. Many participants noted improvements in their ability to communicate, organize and work collaboratively in a team environment. They feel more confident about their abilities and are more willing to share their ideas of how to make improvements in the communities.

Increased opportunities along participants’ career pathways in Public Works. Participants stated that the training and work placements have expanded opportunities for them in their careers in public works. They are better positioned to compete for public works roles not only on reserve but also in municipalities and for private contractors that demand more advanced skills and pay a higher wage.

Increased clarity about career and further upskilling/training. The training and work placements have provided participants with opportunities to try out a wide variety of tasks. In doing so, participants have a better sense of which areas they enjoy, and which areas they would like to pursue for further training. Most participants intend to engage in further training in the future, such as water and sewage treatment courses, earning specialized driver’s licenses or health and safety classes, as a direct result of their experience gained on the worksite.

Insight from an employer. The four program graduates from Westbank returned to their employer with improved skills and knowledge in public works. The employer noted the updated skills and knowledge of the employees, and more importantly the employer saw the benefits of the

skills development. The employees know more and are putting the new knowledge and skills into practice at the workplace.

Other outcomes

- Almost all participants expressed feeling confident and happy after completing the final exam. One person mentioned being happy that everyone made it through. There was consensus among the participants that they *“are just like family.”* When asked how that happened, several responses surfaced:

“We just clicked.”

“Humour brought people together.”

- The feeling of family and peer support was very important to helping several participants continue with the program when they thought about quitting. Other participants motivated them to come to class. They were able to lean on each other. Other factors that helped participants continue with the program include: wanting to finish what they started, caring instructors, provisional technician designation and a job at the end.
- Participants also noted other factors that enabled their success. They all said the project delivery team helped nurture the group; they cared and helped when things got hard. This was different from other programs they had attended. They also mentioned the value of the daily quizzes and math reviews that were introduced in the second half of the program. Some students said they were sad the program was ending. In other programs, they could not wait to finish. All participants said they plan to stay in touch with each other.
- After completing the training, participants continued to benefit from the supportive peer network. There is a Facebook page dedicated to the participants and almost all of them have stayed in touch with at least one other participant. This happened naturally for those participants working on the same teams during their work placements but it was not restricted to this scenario. In one example, a participant sought advice from another participant in a different band about how to approach a specific project.
- Through their work placements and as a direct result of training, participants are contributing to the public works of communities with a high level of pride, satisfaction and new found confidence in the work they deliver.

Other comments

- When asked about what they would like to keep the same about the program, a few participants noted the importance of taking the training on First Nations land, having Indigenous staff and Indigenous participants. This made some participants feel more comfortable and safe to learn and ask for help.

“I wanted to do good because of the caring instructors.”

“We all want to help each other to excel.”

“Felt supported by Westbank.”

“People were safe to share how they feel. A lot of people struggle with that.”

- When asked about their hopes for the next year, most responses include a better paying job. Other responses included: ability to continue training, learn more in public works, confidence to choose career path, career success and confidence in doing something better.
- Participants appreciated that they would be able to draw hours from their experience in the last five years towards the 2,000 hours needed for certification. Most participants will receive about 1,000 hours from their previous employment. They will also receive 200 hours for the training program. Therefore, most participants need about 800 more hours to be eligible to apply for the Registered Public Works Technician certification and will complete these hours in their work placements. Almost all participants indicated that they plan to pursue the full certification for Public Works Technician and have documented their work placement hours. Some participants noted that they did not have a vision for certification when they started the program but now have a clearer idea for their career plan. They see this training opportunity as a career and not just training; they said it felt special. They have hope for a long term career or skills that will be transferable.

“(I) was afraid to challenge myself before, but training opened up door to realize that (I) can be challenged and still succeed.”

- In the three-month follow-up, participants were asked where they thought they would be without the training and work placement. Most participants said they would not be where they are today. Many believed they would be working in remote communities away from home and family, in occupations such as wildland firefighting. One participant believed he would probably be working up north and that “this training is a life saver.”

“It was an awesome program and I really love it and the job I’m doing right now.”

“I just know this is for me.”

Unintended outcomes

- The project delivery team reached out and received help from other band and municipal public works departments when Westbank was unable to provide the practical learning activities. These partners became a network of community resources for the training program. It also provided participants with a more diverse view of public works and essential services in Okanagan communities.
- Over 50 people attended the graduation ceremony. In addition to the participants, families and friends, project delivery team members and representatives from OTDC, ASTTBC, Westbank and the funder attended the graduation ceremony. The graduation included First Nation traditions; it weaved a sense of togetherness and inclusiveness around the graduating students and Indigenous and non-Indigenous individuals. The project coordinator, as the teacher, sang and drummed for the participants (see Figure 6). Several students shared the transformation the training had on their lives in a powerful and moving way. The training affected not only the minds of the participants, but also connected with their hearts' knowledge. For some, it was their first graduation ever, and to be able to share it with family and especially with children meant a lot to the participants.

Figure 6 Honouring participants with song and drum



Recommendations from participants

Participants provided feedback and suggestions at the end of the training program on several components of the training.

Training

- Liked hands-on experience, and wanted more (suggested having a hands-on component with each module in the public works training)
- More activities to motivate learning (e.g., daily quizzes, graded worksheets, field trips, review sessions, writing exercises, and problem sets)
- Update videos or use ones that are more relevant (e.g., Canadian content)
- Make the pre-made program binder more useful (it contained only an outline of the curriculum and could have been more helpful if it contained more information and resources⁷)
- Have tools available for extended practice
- Have a shop next to the classroom so they can practice what they learned
- Have smaller groups for the hands-on sessions (e.g., split the class in half)
- Make the program longer if there is more hands-on experience
- Change the program start date from October to spring or summer in order to get field experience with public works activities that tend to shut down over the winter.

Other

- Several participants said they would have liked to have been more challenged.
- Start the program with a group retreat or activities to help build relationships among the participants.
- A majority of the participants noted the importance of holding the training on First Nation territory and with Indigenous learners, which helped in the following ways: able to learn better, “*more spirit*”, people cared about each other, embedding traditional and cultural practices and not having to explain traditions to non-Indigenous individuals, high comfort level, feels ok to make mistakes and not being judged.

⁷ Students received a pre-made binder that was designed to help them organize information, resources, quizzes and other materials received in the class as well as the content to review and prepare. The binders were not used as intended.

Building on ICPWP – Lessons learned

The findings from the evaluation detailed above relate to the program model, key program components and implementation. It describes the participants and their training outcomes, and participants', project delivery team's and partners' experiences.

There were challenges along the path to implementation, but largely due to the commitment of the partners and in particular, the problem solving skills and creativity of the project delivery team, the training program delivered abided to the requirements for certification. It resulted in positive experiences for the participants, excellent training outcomes and successful work placements. Fourteen participants completed the training program that was developed and delivered by a unique cross-sectoral partnership. The 14 participants found employment in public works and are now eligible to apply to be Registered Public Works Technicians once they meet the 2,000 relevant work hours requirement.

The evaluation provided lessons learned to inform the curriculum development, implementation and practice for future implementation.

It takes time

- Time or the lack of time to develop the new partnership and to plan and implement the ICPWP was the main challenge to the project. It was a constraint and affected all aspects of the implementation process.

Lessons to inform development and implementation

- Although there were consultations with First Nation communities to assess the need and design of the concept, the project was mainly developed by one partner with a “top down” approach. In working with partners with a focus on community development, it is important to work with and follow the local leads. Make time at the development phase to draw and build on the collective strengths and experiences, identify gaps and to build a shared vision for the project.
- Partnerships can be enabled more successfully with the development of good implementation/work plans and continuous re-assessments to reduce challenges. This requires effective communication channels. If organizations embark on partnerships, clear communications, budgets and working relationships must be outlined at the onset and reassessed throughout for the partnership to be successful.
- Prepare a detailed implementation plan to help execute the project, including descriptions for all project positions (e.g., management, delivery staff, instructors, etc.), roles of partners and their responsibilities, activities, timelines and all other important aspects for implementation. This will help clarify project priorities and ensure a more consistent understanding of what is needed to implement the project and who is doing what. It will also help to clarify roles and expectations and provide the necessary supports for implementation.

- Flexibility in implementation timelines and budget may be needed in the Agreement to support the process of implementing new innovations and activities.

Lessons for the training program

Curriculum and delivery

- Make sure the “must-haves” are ready or close to ready at the start of the program.
- Deliver “upskilling” on essential skills and digital skills at the start of the training or as a prerequisite to better prepare participants to take on the public works training, especially the needed math skills. Assess the level of these essential skills in order to identify any needed preparatory training (e.g., Test of Workplace Essential Skills).
- Deliver industry specific training in “soft skills” (interpersonal) to better prepare participants for their work placements by including sections dedicated to learning about working on teams and oral communication on the worksite in the curriculum.
- The ICPWP curriculum is for general public works training. The project provided an opportunity to look at how the training meets Indigenous learners’ needs. Include an appendix describing what needs to be done if the curriculum is being implemented in an Indigenous community or with Indigenous learners, or both, to create a more culturally appropriate curriculum. A hybrid model that blends mind knowledge with hands-on practice builds on the strength of hands-on skills many Indigenous peoples have. It is a best practice and consistent with Indigenous cultural practices.
- Recognize that the importance of knowledge acquisition for Indigenous learners is land or practice-based and driven by positive relations. Personal connections with other learners, instructors, the delivery team, and hands-on experience were important in giving participants context to situate their learnings with greater relevance.
- Connect the knowledge with Indigenous traditions such as honouring the land and the environment in the lessons, which is important for Indigenous participants.
- Learners who have learning challenges may require appropriate learning and personal support and attention to ensure success.
- Increase methods of “active learning” in the curriculum with more site visits and practical activities so that participants can immediately apply the knowledge they learn in the class by “seeing” it in work settings and practicing the skills. One partner suggested that each module should include an onsite visit to observe the theoretical lessons followed by practical experience: 1) present theory; 2) go see it in action; and 3) practice or feel the knowledge.
- If possible, avoid seasonality in public works activities by starting the training program earlier in the year and order lessons for activities available only in the spring and summer at the appropriate times. At the same time, try to align the timing of the training to make it work for participants by taking into consideration their life and employment circumstances.

- The curriculum should be treated as a “living” document that can be refined each time it is delivered to suit the specific learning and teaching circumstances in the community.
- Be clear on the staffing needs and employ suitable delivery staff who have skills and experience matching what is needed to deliver the project.
- Employ culturally appropriate staff to deliver the project who are sensitive and understand Indigenous learners and the communities and settings. Consider the opportunities and benefits with implementing the project with an Indigenous project delivery team and/or instructors. Note that it may be difficult to find Indigenous candidates that meet all of the job requirements.
- Engage with a Post-Secondary Institution (PSI) to host the training program. This will leverage the PSI’s strengths and assets such as access to qualified instructors with experience working in public works areas and subject matter experts to deliver the training, as well as access to workshops, power generators to support projects, tools and equipment and already available facilities and high speed internet, etc.

Figure 7 Project coordinator and job coach/ instructor



Facilities

- Deliver the training in a setting that combines a classroom and workshop to better link the knowledge and practice and provide easier access to equipment and tools.

Financial support

- It is important to consider the effect of a new pilot model on funding or support for participants in advance of starting training so individuals can plan and apply for financial support and budget accordingly.

Personal support

- Provide and model strong leadership at every level — partners, delivery team, instructors and participants.
- Build social capacity and supportive relationships between participants, participants and instructors, and program and community.
- Build optimism and hope — heed to the personal needs of participants, understand their struggles and provide appropriate support.
- Be mindful that this is a nation of storytelling with a preference for conversations and how it shapes communications and learnings among participants and with all project partners and stakeholders.

Work placements

- Provide short-term retention support services for participants to help ensure a successful transition from training to the worksite and maintain employment. The support provided during the transition period of ICPWP helped to address both employment related and personal issues such as relocation, transportation and personal matters.
- Build strong connections with the local public works industry as early as possible. Not only will employers be able to provide onsite learning opportunities during the training, but some of the employers will go on to hire the participants.
- Make wage subsidies available for employers if they could be a helpful tool to secure work placements and experience for participants. All but one participant with wage subsidies that were interviewed at the three-month follow-up expressed hope and optimism about upcoming career opportunities with their current employer. However, a longer follow-up period would be needed to determine whether the wage subsidy was effective in securing longer-term employment. If possible, ask employers for a commitment to hire after the work placement ends when negotiating the wage subsidy.

Partnership/Collaboration

- There is strength in cross-sector partnerships; this played a central role in the results achieved in ICPWP.
- Strong cross-sector partnerships with key stakeholders are essential to implementing demand-driven training programs; however building relationships and partnerships with key stakeholders and strategic partners takes time and effort. Sustaining relationships that meet the needs of all partners also requires time and attention.
- Building strong partnerships and collaborative relationships with new or non-traditional community partners often takes even more time, and the approved timeframes for development and implementation need to be sufficient to do this well. Relationship and trust are crucial for working in and with Indigenous communities; it takes time to get to know each partner and build trust.
- Ensure governance model is culturally appropriate and engages Indigenous individuals.
- There is a need to make it easy and relevant for partners to participate — they are busy and have competing priorities. Be upfront about what can or cannot be done and then problem solve together.
- Leverage on the partners' unique strengths and assets. For example, the reputation and credibility of OTDC as the lead agency provided easier and quicker entry into some communities. Pre-existing relationships between these agencies and communities also allowed for planning based on better local knowledge.
- Make extra time for new collaborations. Spend time to understand the commonalities and similarities between organizations and appreciate the different cultures. Understand each

other's language of operations to establish a common language for the project, which can reduce miscommunications.

- Partner with a training institution who would be prepared and capable of delivering training programs as they already have the resources in place such as classrooms, technology, shop, educators, access to subject matter experts and administrative support.
- Assess partners' preparedness to take the design or concept forward. Capacity needs to be in place at the start, especially if carrying out a project within a short timeframe.
- Be mindful of the geography/location of the partners – more face-to-face meetings may be needed.

Community engagement

- Engage with Indigenous leaders in the community who are willing to champion the program and facilitate community engagement and ownership.
- Establish an Advisory Committee to access expertise and support, provide insights for program improvements, add credibility, and enhance partnerships.
- Engage with public works departments off and on reserves to build a network of community partners that can help support the training program with site visits, guest speakers, subject matter experts and potential employment opportunities for program graduates.

Impacts beyond the project

- Establish a network or community of practice with program graduates who can remain connected using social media or other means, provide peer support along their career journey and mentor future participants.
- Proposes a collaborative model, entry-level career pathways or parts of it to be applied to other industries such as construction, heavy machinery and winery.
- Build on the knowledge of what works to improve the training curriculum for a wider implementation.

Revisiting the project objectives

1. Deliver training designed to provide foundational skills to 15 Indigenous individuals who are interested in pursuing careers as Public Works Technicians to work primarily in Indigenous communities: *The project successfully delivered a recognized training program to 15 participants. Fourteen participants completed the program and demonstrated acquisition of skills and competencies for public works. They are now provisional Registered Public Works Technicians. For their work placements, about half of the participants returned to work at their local band while the other half worked for a municipality or private contractor in or close to their community.*
2. Pilot a detailed curriculum developed by ASTTBC that supports the initial certification process for Public Works Technicians: *The curriculum developed by ASTTBC was piloted successfully in the project. Throughout the project and training program, it was further developed with the addition of practical activities.*
3. Leave a legacy of community infrastructure projects completed as part of the training program: *Due to the resource and capacity issues at Westbank, the vision to have participants working on community projects did not happen. Westbank engaged more in the second half of the program; if the project had been longer in duration, it is likely there would have been more progress towards this objective.*

Revisiting the research questions

- What does it take to successfully implement the project? What are the lessons for program development and practice? *The evaluation showed that the partnering organizations successfully implemented the Indigenous Communities Public Works Project, including the ASTTBC Public Works Technician Certification Program. The implementation was challenging given the tight timelines to firmly establish the partnership and test a new and not yet fully developed curriculum. There were several factors that contributed to the success. The lessons learned will inform improvements to the program and curriculum.*
- What are the outcomes and benefits, if any, for participants in the project? More specifically, did the training help participants gain technical and essential skills, certification and secure employment? *The training program achieved an excellent graduation rate for its participants. All participants who completed the program and wrote the final exam met the requirements to be eligible for provisional membership for Registered Public Works Technicians. The program launched participants along the career pathway in public works with relevant placements after the end of the training. The participants, instructors and other stakeholders all noted the participants' increase in knowledge and skills in public works. Participants stated their intent to acquire full RPWT certification after meeting the hours of relevant work experience, which they expect to complete later in the summer. Participants expressed high satisfaction with the training program; they are generally pleased with the short-term employment and other outcomes.*

Concluding remarks

The Indigenous Communities Public Works Pilot Project is an innovative, demand-driven, partnership-based approach to workforce development in First Nation communities. The training consisted of a 22-week recognized training program and employment support to 15 Indigenous individuals who are interested in pursuing long-term careers in Public Works. The training curriculum was designed to develop skills and competencies aligned with qualifications for entry-level Public Works Technicians. A rigorous evaluation was completed to determine whether the program model was feasible and suitable for wider implementation and testing and to assess the training and employment outcomes for participants.

The partnering organizations successfully implemented the Indigenous Communities Public Works Project, including the new ASTTBC Public Works Technician Certification Program. The training results for participants were excellent. Fourteen of the 15 participants completed the program and met the requirements to be eligible for provisional membership for Registered Public Works Technicians. All 14 participants were employed in relevant employment three months after the training ended. Participants expressed high satisfaction with the training program; moreover, they are generally pleased with their short-term employment and other outcomes. Participants also stated their intention to attain the RPWT full membership after completing their required hours of work experience, and to advance along the career journey in public works.

The successful implementation of the program model and participants' training and employment outcomes suggest the model shows promise to develop Indigenous talent for in-demand occupations. The results were well-received by the partners, and are expected to be used to further develop and improve the curriculum and program delivery. It is a promising model that would benefit from further testing and a longer-term follow-up with participants to determine sustainable employment outcomes.

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