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#### **Membership**

All members of a CPWA chapter are members of the American Public Works Association (APWA). As a member, you share common goals, challenges, and solutions with other public works professionals throughout North America. To find out more on member benefits, go to www.apwa.net or www.cpwa.net.

# A Message trom the Canadian Public Works Association

y name is Chris Hamel and I am very pleased to introduce myself as your President for the Canadian Public Works Association (CPWA) for this coming year. As you most likely know, CPWA is a key linkage between the North American entity, the American Public Works Association, and local chapters across Canada. I am thrilled to be part of an association that is focused on providing a voice for public works in our communities and connecting with our governments. Our goal is to promote professional excellence and public works awareness through education, advocacy and the exchange of knowledge.

I am located in the Greater Toronto Area. Our chapter, as well as chapters across Canada, provides excellent networking opportunities, education and training opportunities, as well as events such as AGMs and Awards Days, Women in Engineering events, IT Symposiums, Ski Days, and Golf Days, all to the benefit of our members.

My goal this year is to continue to build on the success and momentum of CPWA's focus on advocacy at the federal level. CPWA works closely with all Canadian chapters to ensure provincial priorities are raised and are consistent with federal priorities. CPWA is active with public policy statements and formal submissions that provide input to the Government of Canada on issues and policies that affect infrastructure, public works and the people who provide public works services across the country.

Part of our CPWA goals will be to further our stated public policy priorities:

- Emergency management and disaster mitigation;
- Canada's municipal asset management programs;

- Sustainable and climate resilient infra-
- Green infrastructure and natural assets;
- Direct funding to municipalities;
- Public rights-of-way management;
- Universal, affordable access to broadband and cellular services; and
- Autonomous and connected vehicle municipal infrastructure policy.

CPWA will also continue to provide our members with resources to keep you informed and support your day-to-day activities. For more information, please access:

- Our website, www.cpwa.net
- Our CPWA Fact Sheets
- Our regular CPWA Ottawa Report
- Our CPWA community on APWA Connect
- Our Twitter feed, @cpwatweets

I am looking forward to working closely with our CPWA Board of Directors and being involved in the upcoming association activities. This will involve a few key sessions on Parliament Hill in Ottawa to meet with federal ministers and other Canadian associations to help move public works forward across the Country, as well as regular meetings with the board and the American Public Works Association's leadership team. Thank you to Steve Blayney, Manitoba Chapter, for setting the stage for me this year and providing guidance as Past President.

I am always available to hear from the membership with ideas and feedback. Please don't hesitate to contact me at chris.hamel@ gmblueplan.ca. Thank you for your continued involvement in our important association.

Yours truly,

#### Chris Hamel

President

Canadian Public Works Association

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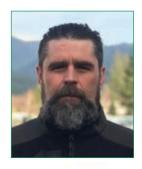


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# A Message from the Public Works Association of British Columbia

The PWABC board is working on building a stronger foundation that will continue to provide education, networking, connections and industry assistance through courses, certifications, emerging leader events, seminars and our conference.

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# Ashifa Dhanani

604-880-8585 executivedirector@ pwabc.ca

You can learn more about the Public **Works Association of British Columbia** on their website: www.pwabc.ca

he past year has been a great year for the Public Works Association of British Columbia (PWABC). The board has been concentrating their efforts on providing education to our members, including programs such as Women in Public Works, Winter Operator Training, Winter Supervisor Certification, Public Works Administration Training, Operator Spring Seminar and our Second Annual Joint Conference with the British Columbia Municipal Safety Association (BCMSA), which was held in Penticton British Columbia last Fall.

I'm excited to say that this past conference was the largest and most successful conference the PWABC has ever hosted. I would like to personally thank Penticton's team, our board, the BCMSA team and all the volunteers for their dedication and hard work to make this it a success. On behalf of our board, I would like to sincerely thank our Executive Director, Ashifa Dhanani, and BCMSA's Executive Director, Mike Roberts, for their leadership in creating and maintaining this strong partnership.

I would also like to take this time to thank our outgoing president, Matt Brown from the City of Surrey, for his hard work and dedication to the association and the industry. His leadership and professionalism

helped guide PWABC to achieve our goals. His time and effort is truly appreciated.

As I start my new role as president, my goal is to provide the association with leadership and direction to ensure the needs of our members are fulfilled. The PWABC board is working on building a stronger foundation that will continue to provide education, networking, connections and industry assistance through courses, certifications, emerging leader events, seminars and our conference. We will be working on better ways of staying connected to our members through social media and our website https://pwabc.ca. We are an energetic and engaged board and we are excited for 2020.

These items are just a small snapshot of our accomplishments from 2019. None of this would be possible without our sponsors and suppliers for their ongoing support; it's truly appreciated. As we look to 2020, our board encourages all our members to volunteer in any capacity with our association. With your selfless support, BC will continue to be a national public works leader!

I feel honoured and proud to serve as president on your behalf.

Sincerely,

#### Scott D. Lamont

President

Public Works Association of British Columbia





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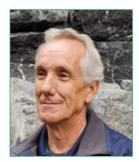




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# A Message from the Alberta Public Works Association

The conference speakers and sessions were fantastic, and, as usual, the Trade Show was the highlight of the day! The vendors provided a chance to see what's new, and everyone welcomed the chance to visit some old friends, and make some new ones.

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The Alberta Chapter was founded in 1979 to enhance the services of the APWA to the Alberta public works community and to improve the quality of public works products and services to Canadian citizens.

he summer of 2019 is in the books and it certainly came with its challenges; from way too much rain in the north to not near enough in the south. That, thankfully, is now a distant memory as we put away our turf equipment and get the snow and ice equipment ready.

I am honoured and proud to be the president of the Alberta chapter of the American Public Works Association for the next year and I would like to thank Peter McDowell for his service to the Chapter as president for the last three and a half years. Also, thank you to all the board members. You all do incredible work!

The Chapter had a very busy 2019, which began with hosting a successful Western Canadian Snow Conference in June in Edmonton. Next was another great Equipment Roadeo in Red Deer in September. The Roadeo was well-attended and once again, the committee put on a fantastic show. Big thanks to Joe and our Roadeo Committee, our sponsors and all who attended.

We followed that up with our Partners in Excellence Conference in September, which was another huge success. The preconference sessions were well-attended. The conference speakers and sessions were fantastic, and, as usual, the Trade Show was the highlight of the day! The vendors provided a chance to see what's new, and everyone welcomed the chance to visit some

old friends, and make some new ones. We were honoured to have the president of the American Public Works Association, Bill Spearman, join us in Red Deer.

I, along with most of our board, was lucky enough to attend PWX in Seattle, Washington this September. This year's PWX went off incredibly well, with over 5,000 people from all across Canada in attendance. The hospitality was first class and the event itself was extremely informative; from the sessions to the huge Trade Show – it was a huge hit. While there, Peter and I accepted a PACE award from the American Public Works Association Past President, Dave Lawry, on behalf of the Alberta Chapter.

The Idea Groups are doing well with meetings planned in all areas. If anyone gets the chance, please try to attend a meeting, as there is lots of information shared!

Please check our website or email us at admin@publicworks.ca for more information.

I would like to thank my employer, the Town of Stony Plain, for the continued support to allow me to be part of the Alberta Chapter.

Last, but not least, please be safe this winter while you are out there making the lives of the great people of Alberta better.

Remember, you all make a difference.

#### **Garry Webster**

President APWA Alberta Chapter



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# A Message from the Saskatchewan Public Works Association



Join us at our 61st Annual **Conference and PWville at the Delta** Regina, February 25-27, 2020!

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The Saskatchewan chapter strives to promote professionalism in the public works field and provide a network through which members can share and receive useful information.

other Nature kept us on our toes this fall; we had snow events as well as freezing rain. The accelerated change-over from summer to winter operations makes it a challenge for crews to keep up, however, public works professionals are always up to the challenge as every year it seems like there is a new combination of events that we need to deal with. Thank you to all staff who keep our communities functioning and make them a great place to live, the whole year through. On behalf of our Saskatchewan Public Works Association (SPWA) Board of Directors, we hope that you all had a great holiday season and all of the best to you in 2020.

Information has been posted on the SPWA website, delegate packages mailed out, and emails sent for the upcoming 2020 Annual SPWA Conference in Regina. This will be the 61st Annual Conference for our chapter, with an agenda that is full of educational sessions and a long list of suppliers with new products, services and technology. As always, we have a 0.6 CEU session for operators to help maintain your certification, and educational sessions with information on the various fields in public works, from connected and autonomous vehicles, snow storage, project management, the Regina Bypass, and numerous other sessions. We will also be hosting a social event, round table discussions, and have a keynote address by former President and CEO of the Saskatchewan Roughriders, Jim

Watch your email for more information on this and our other events. (\*Remember that the discounted rate members receive at our combined yearly events pays for the annual cost of membership with SPWA).

Our SPWA Board is pleased to have handed out the first educational packages to a Saskatchewan school division. We supplied the educational packages, developed by the American Public Works Association (APWA) for the Kindergarten, Grade 5, and Grade 6 to 8 age groups. The packages contain workbooks, story books and teacher guides that will help facilitate classroom learning about public works. We are looking forward to their feedback about the use of these materials and hope that multiple schools in the division are able to take advantage of these materials.

Visit our website as it is very user friendly, contains information on all our events, and is designed as a virtual "one-stop shop" for public works. You can also visit us on Twitter @SPWAchapter.

As you can see, the SPWA is endeavouring to bring our members and others in the public works profession greater value in educational and networking opportunities. We will also continue to promote professionalism in the public works field, advocate the essential role that public works plays in the quality of life and promote it as a career choice for the work force of the future.

Visit our chapter website at http://saskatchewan.cpwa.net, or contact our chapter administrator for more information and details about our upcoming SPWA events or how to become an SPWA member.

#### Dale Petrun

President

Saskatchewan Public Works Association

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# A Message from the Manitoba Public Works Association



# Manitoba Chapter, CPWA, Executive

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#### Mark Wiese

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**Did you know** that Manitoba is the longest serving of the Canadian chapters and has been providing a forum for practitioners since 1955! We actively support our membership, the public and policy makers to collaborate and maintain healthy communities throughout the province.

ith flood events in the spring, a long dry summer, and then finally a recordbreaking fall with rainfall, 2019 is a year for all of us in Manitoba to remember. Even with all the complications, however, projects are being completed and new infrastructure is quickly replacing the old and deteriorated roads and bridges across the province.

Even with all the chaos of the construction season, here in Manitoba we have still been able to meet together as a board and move some important incentives forward. We are currently working on bringing the Manitoba Chapter up to the 21st century by looking into and starting Twitter and Instagram pages. Keep an eye out in early 2020 for the release of these! We are hoping that the pages will bring more attention to the work that we all do on a day to day basis, and to also bring education to those wondering what we all do day to day.

Another interesting area that the board has been looking into is to start a small grouping of awards for different types of projects, products, and programs going on and being used across the province. Our team is looking into what others are doing, and what seems to work best before diving into such a large endeavor.

For our fall fundraiser we sold scratch tickets for the Grey Cup. We managed to sell quite a few tickets, and some of them did pay out for the ticket purchasers, but at the end of the game all we could think about was "finally the cup is ours again!" We are all very proud of the outstanding season that the Winnipeg Blue Bombers

had this year and evidently, it could not have ended any better. Now let's see what the Jets are going to do!

As we go into the colder season, I know there are Public Works staff all preparing for the endless amounts of snow that are on the way. With all that work ahead and the year we have had behind us, parts of the province are already looking at what the spring might hold. To help with any planning and products we are planning on hosting a one-day flood workshop in early March of 2020. We are hoping to bring together the Manitoba Emergency Measures Organization and other provincial and federal stakeholders together to discuss in a class setting how to start, work with, and finish Disaster Financial Assistance claims and ways that we can work together to protect, mitigate, and repair damages that come with flood events. Sessions like this are becoming more and more of an importance as we see climate change affect the way that we plan and work through major environmental events like floods, which are happening at a greater rate then in years past. During this event we will also be bringing in some suppliers of different products and services that can be provided in the mitigation and repairs for flood damaged areas.

I would like to wish everyone a safe and happy holiday season and we look forward to what 2020 is going to bring.

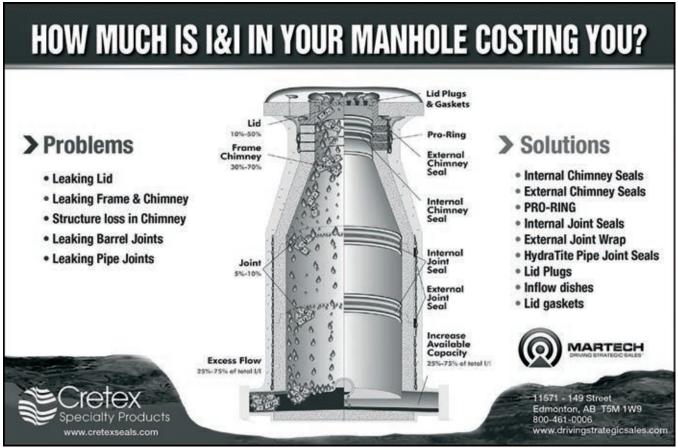
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#### **Chad Buhlin**

President

Manitoba Public Works Association









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The Alberta Municipal Supervisors
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# A Message from the Alberta Municipal Supervisors Association

This past November, AMSA's executive members completed their strategic planning and I am confident that the goals set for enhancing professional development opportunities and further growing membership will be realized with this great group of leaders.

write this message as my first communications to the Alberta Municipal Supervisors Association (AMSA) membership and all readers of *The ROADRUNNER* magazine. Thank you to AMSA's past president Joe Duplessie for his great leadership of the AMSA executive and for leaving AMSA in such a fantastic position for future.

This past November, AMSA's executive members completed their strategic planning and I am confident that the goals set for enhancing professional development opportunities and further growing membership will be realized with this great group of leaders. Convention attendance continues to be strong and I am encouraged by the many new members of the association.

The Fall Convention had a great roster of speakers scheduled, including leadership keynote speaker Nelson Scott who spoke about hiring the right people and recognizing existing staff for the right reasons. In addition, Todd Hirsch returned for an economic update and several presentations focused on legislative changes in Alberta. During conventions the always popular *bear pit* sessions allow members to share management strategies and best practices – all of which benefit the seasoned public works professional or newcomers to the field. AMSA's conventions are geared specifically to serve members, so if you have any

suggestions for topics or presenters, please send your feedback to AMSA's executive director at cheggart@amsapw.ca.

A lot has changed since the Spring Convention, with the elections of a new government at the provincial level and, of course, there was a federal election as well. With the province of Alberta's October's budget announcements, it appears that infrastructure and water/wastewater grant funding will soon be drying up. Hopefully your municipalities are able to adjust their capital plans to account for changing revenue streams and that municipal operations are sustainable in our shifting environment.

Before I sign off, I want to thank AMSA's executive members for their dedication to ensure the continued success of our association. For nearly 40 years, AMSA has provided a forum for senior public works professionals to gather and share ideas and learnings. AMSA continues to have a strong executive committee in place and it is my hope that AMSA's executive will continue the association's long legacy of helping members through advocacy, best practices and training. I look forward to what AMSA's future holds and to being a small part of that future.

Sincerely,

#### **Shaune Kovitch**

President

Alberta Municipal Supervisors Association



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# **Liens on Municipal Lands:**

# General Exemptions and Considerations

By Corbin Devlin and Richard Wong, McLennan Ross LLP

he Builders' Lien Act creates a charge on land as security for services rendered or materials furnished. Municipalities are subject to the requirements of the Act, even though interests in land held by the provincial and federal governments are exempt. Although municipal projects do not benefit from a general exemption, there are certain exemptions that are highly relevant to municipalities. There are statutory and judge-made exemptions for public highways, bridges, municipal reserve lands and, in limited circumstances, other projects based on "public policy" reasons.

#### **Public highways/roadways**

"Public highways" are exempt from liens by the express provisions of the Act. Prior case law has clarified that this exemption extends to all public roadways, not just those we might typically describe as "highways." In the recent case, E Construction Ltd. v. Sprague-Rosser Contracting Co Ltd., 2017 ABQB 99, the Court expanded on this exemption with a couple of significant rulings. First, this exemption applies even in respect of preliminary construction work in relation to an intended highway, although no highway has been commissioned and no survey plan has been registered to define the lands as a public highway. Second, the exemption extends to ancillary work (e.g. utilities) if that work is incidental or related to the construction of the public highway.

#### **Bridges and incidental structures**

Likewise, the Court in E Construction Ltd v. Sprague-Rosser Contracting Co Ltd. also confirmed that a lien could not be registered against a public street or public bridge at common-law. This is consistent with the definition of road in the Municipal Government Act which includes "a bridge forming part of a public road and any structure incidental to a public road." Citing this reasoning, the Court found that public bridges are equivalent to public highways, and as such, incidental structures to public highways (e.g., bridges) are exempt from liens.

#### **Municipal reserves**

The Alberta Court of Appeal in McFarlane Oil Co. v. Sturgeon (Municipal District No. 90), 1990 ABCA 72, held that liens registered against reserve lands are also unenforceable. The premise for this decision is that the Planning Act (which was replaced by Part 17 of the Municipal Government Act in 1994) takes away the Court's power to grant an order for sale of such lands. This was recently confirmed by the Court in Golden

Triangle Construction Management Inc. v. Nuwest Interior Systems Inc., 2019 ABQB

In Golden Triangle Construction Management Inc. v. Nuwest Interior Systems Inc., four liens were registered by subcontractors against lands designated as "Municipal and School Reserve" and "Municipal Reserve." The Court determined that the liens were invalid because, as determined by the Court of Appeal in McFarlane, municipal reserve lands cannot

The decision in Golden Triangle is subject to some controversy, and it is likely that there will be a legal challenge of this



decision in the future. In the meantime, liens against Municipal Reserve and School Reserve lands are invalid. This affects several school construction and renovation projects, among other things.

#### **Public Policy**

Some lien exemptions relevant to municipalities may yet be discovered. There are various lines of case law that provide for certain lands to be exempt based on "public policy." The reasoning in these cases is that the ultimate lien remedy is judicial sale of the lands and it would be contrary to the "public interest" for the Court to permit a judicial sale of critical infrastructure. The leading case on this issue in Alberta is the decision of Master Funduk in Prairie Roadbuilders Ltd. v. Stettler 23, 1983 CanLII 1085 (ABQB).

In that case, it was argued that a municipal sewage lagoon must be exempt from liens based on public policy. The Master reviewed the law on this issue at length and concluded that the lagoon lands were not

exempt. Notably, however, his reasoning was that the sewage lagoon stood alone from the rest of the sewage system; in effect, the lagoon was not critical to the operation of the system. The apparent implication is that a lien against a more vital part of the system would be exempt.

More recently, the "public policy" concept was considered by the Ontario Superior Court in Advanced Construction Techniques Ltd. v. OHL Construction, Canada, 2013 ONSC 7505, when it was argued that a subway station at York University should be exempt based on "public policy." The Court concluded that the subway station lands were not exempt because judicial sale of the subway station was not a realistic outcome of the lien proceedings; and further because there is a countervailing "public interest" in protecting the rights of lien claimants.

Although there is probably a very limited scope for new exemptions based on "public policy," the concept is still a live issue. There has been little judicial guidance on this issue in Alberta.

#### **Takeaway**

Considering all of this, many - but not all - municipal projects may be exempt from liens. Roadways, in particular, are clearly exempt. Municipal reserves and school reserves are currently exempt, but this is based on judge-made law and may be subject to future legal challenge.

Notwithstanding certain lands or projects that may be exempt from liens, the trust provisions of the Builders' Lien Act continue to apply. In particular, payment made after a certificate of substantial performance is issued is held in trust for the benefit of those who provided work or furnished materials for the project. Therefore, just because certain lands are exempt from lien rights, the Builders' Lien Act is not irrelevant.

Corbin Devlin is a strategic advisor, effective negotiator and skilled advocate for construction, energy and resource industry clients. Richard Wong maintains a diverse practice in the areas of civil, commercial and employment litigation.





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#### **Upcoming Events**

Public Works Supervisor Level 2 Course St. Albert, AB January 7-10, 2020

**Public Works** Administrative Professionals Workshop Canmore, Alberta

February 6-7, 2020

2020 SPWA Conference & **PWville** Public Works - It Starts Here

Regina, SK February 25-27, 2020

April 19 - 22, 2020 AMSA Spring 2020 Convention Edmonton, AB

March 17-18, 2020

American Public Works

Association - Snow

Conference

Cleveland, OH

National Public Works Week

The Rhythm of Public Works May 17-23, 2020

SPWA National Public Works Week Workshop

Warman, SK May 21, 2020

American Public Works Association – PWX New Orleans, LA August 30 - September 2, 2020

PWABC/ BCMSA 3rd Annual Joint Conference & Trade Show Richmond, BC September 20-22, 2020

**Excellence in Public** Works Conference & Tradeshow Red Deer, AB

October 2020

2021 SPWA Conference & **PWville** Saskatoon, SK February 23-25, 2021

Western Canada Snow Conference Fall 2021



#### All Bets are Off!

This photo comes courtesy of a bet made between Roadrunner editor Shannon Savory (a vocal Riders fan) and her Manitoba contact Steve Blayney (an aggravating Bomber's fan) before the teams met in November for the CFL's Conference Final. The Bombers moved forward to the finals (it's about time!) - and everyone knows how that ended. Congrats, Steve!



#### AMSA Presents Long Service Awards 25 Years

Don O'Quinn.



#### 20 Years

Marshall Morton, Barry Denison, and Dave Dextraze.



15 Years Bill Cade.



10 Years Erik Hansen.



(Left to right): Zach Mazure, Darren Gillies, Brandon Maier, Kimball Newberry, Martin Biro, and Dale Van Volkingburgh.







#### **Ready for the Snow to Blow!**

The Saskatchewan Public Works Association (SPWA) hosted the APWA Winter Maintenance Certificate Workshops on September 19, 2019, to help those whose plan, anticipate, and execute winter maintenance programs for their community.

Trainers presented both the APWA Winter Maintenance Supervisor (WMS) Certificate and APWA Winter Maintenance Operator Certificate. A full-house of participants were taught the unique skills and job requirements that both supervisors and operators require to address their roles.

#### SPWA Annual Conference & PWville February 25 - 27, 2020 Regina, Saskatcheawn

Association (SPWA) is pleased to be hosting and municipal decision-makers, municipal

The theme of this year's conference is Public Works – It Starts Here.

#### **ALBERTA PUBLIC WORKS** ASSOCIATION – AWARD WINNERS



#### 2019 Emerging Leader

Adam Smith, City of Calgary

This award recognizes emerging leaders in the public works sector for their far reaching, positive impact of public works programs and services.

Adam Smith is a natural leader and has been a top performer at Fleet Services at The City of Calgary. He began his career at the city in 2014 as a Maintenance Engineer and is currently the Acting Fleet Manager for the Calgary Fire Department. Adam is always looking for new ways to improve the way things are done, demonstrated in his award-winning redesign of the asphalt carrier on Roads' trucks. It is his innovative thinking, strategic foresight, and leadership abilities that enabled him to establish himself as a respected emerging leader at The City of Calgary.



#### 2019 Project of the Year

North Red Deer Regional Wastewater Services Commission & Stantec Consulting Ltd.

Left to right: APWA Rep, Todd's Simenson; Matthew Goudy, Commission CAO: Richard Poole, Commission Board Member, Mayor of Blackfalds; and Ken Wigmore, Commission Chair, Lacombe County Councillor.

The APWA Alberta Public Works Project of the Year Award was established to promote excellence in the management

## Saskatchewan Public Works Association



# Public Works - It Starts Here

# SPWA 2020 Annual Conference & **PWville**

February 25 - 27, 2020 Delta, Regina, SK.



and administration of public works projects by recognizing the alliance between the managing agency, the consultant/architect/engineer, and the contractor who, working together, complete public works projects.

Designed by Stantec, the North Red Deer Regional Wastewater System promises a cleaner future for communities in Central Alberta. The project consists of a 28-kilometre pipeline, one odour management facility, two major lift stations, and extensive upgrades to the City of Red Deer's Wastewater Treatment Plant. Completed on time and on budget, the project boasts innovative approaches and cutting-edge technologies to provide a modern wastewater solution for 25,000 Central Alberta residents, while protecting the sensitive watershed that supplies drinking water for 150,000 Albertans.

#### **2019 Manager of the Year**

#### Lynden Fischer, Brazeau County

The Manager of the Year Award seeks to inspire excellence and dedication by recognizing the outstanding career service achievements.

Lynden Fischer is a visionary, dedicated to the pursuit of excellence and teamwork. Lynden commenced his position as Brazeau County's Director of Public Works just over a year ago and in this time he has been credited for revitalizing this department. Lynden is known for his ability to connect with and motivate people in all walks of life. He leads by example, is innovative in his solutions, and encourages continual improvement. Lynden's ability to provide strategic and realistic objectives while maintaining focus on the bigger picture makes him an outstanding manager.

# **2019 Administrative Professional of the Year**

#### Niki Rodriguez, City of Chestermere

The Administrative Professional of the Year Award seeks to recognize outstanding achievement in the area of administration within a public works department and to inspire excellence and dedication in the public.

Niki Rodriguez, the City of Chestermere's Administrator of Community Operations, is known to be meticulousness in every aspect of her work. Her diligence, ingenuity, and conflict resolution skills have made Niki a respected and valuable colleague. Niki is always willing to be involved wherever she is needed, from training staff, or creating and implementing more efficient systems to coordinating and assisting with staff recognition and social events.

## 2019 Distinguished Service Award

#### Lynn Ness

The Distinguished Service Award seeks to recognize public works leaders for their far reaching, positive impact of public works programs and services. This award is regarded as the highest honour that APWA AB Chapter can bestow on a member.

Lynn spent his entire 42-year career with the City of St. Albert. He has been a longtime supporter of APWA Alberta Chapter, the annual Roadeo, and the Northern Area Idea Group.

#### **2019 Supplier Recognition Award**

Merv Onishenko, W. R. Meadows, Inc.

This ward recognizes a public works supplier that exemplifies support of the industry and association.

Merv has supported the public works industry faithfully with his participation in the annual tradeshow and sponsorship of APWA Alberta Chapter events. His dedication to providing the highest level of service for 35 years and his commitment to the public works field was very evident to all. Congratulations to Merv on his retirement!

# 2019 Commendation for Exemplary Service to Public Works

#### Mayor Craig Copeland, City of Cold Lake

To recognize an elected government service leader (a government or private sector leader) for far-reaching positive impact on local, provincial, or national public works programs, services or policies through exemplary public service and commitment. This award particularly recognizes leadership in furthering the mission and goals of APWA.

Mayor Craig Copeland has proudly called the City of Cold Lake home for over 30 years. After a term as councillor, he was elected mayor in October 2007, and

re-elected in 2010, 2013, and 2017. A true ambassador, he boasts about the city, its people, and its community groups wherever he finds himself. Dedicated to improving the City of Cold Lake, he has a strong vision for the future and works hard to learn what the citizens of Cold Lake expect from his leadership.

#### **2019 NATIONAL PUBLIC WORKS WEEK**

The National Public Works week award seeks to acknowledge and recognize municipalities from across Alberta who have made efforts to recognize Public Works Week within their communities. Communities use Public Works Week to educate and inform their constituents about the crucial role that public works plays in the quality of their community.

This award has two categories Large Community, and Rural/Small Community.



#### 2019 National Public Works Week Celebrations for a Large Community City of Cold Lake, award accepted by George Urlacher

The City of Cold Lake is dedicated to celebrating NPWW every year; their goal being to educate and energize the general public about the value and contribution public works professionals make to our kicked off with their annual Raise the Flag event, where, among other things, they raise their own NPWW flag. During the week the city hosted open houses at the Wastewater Treatment Facility and Public Works Facility, and held a food drive and community clean up events. Community members were invited to be involved in colouring contests and the paint the plow program. With education and awareness as high priorities, Cold Lake public works staff created interactive presentations about each aspect of public works.



#### 2019 National Public Works Week **Celebrations for a Rural/Small** Community

Town of Redwater, award accepted by Cliff Dallyn

The Town of Redwater kicked off NPWW with an opening ceremony and lunch celebrating their public works staff. Throughout the week they scheduled events for the community, staff, and management, including colouring contests, a school field trip to the Willows Storm Pond, and a skid steer challenge. This was topped off with a free community BBQ. The town effectively used these initiatives to create awareness of how public works serve the community and to celebrate the town's public works staff.



#### **CONTINUING EDUCATION**

Congratulations to Winslow Davis and Crystal Scheit who earned their Public Works Supervisor Level 3 certification.



#### **LAST. BUT NOT LEAST!**

Thank you Past President Peter McDowell (left) and a big welcome to the new man in charge, Garry Webster.



#### **What's Your Public Works Team Doing to Celebrate!**

More than 30,000 American Public Works Association members in Canada and the United States use National Public Works Week to energize and educate the public on the importance of public works to their daily lives: planning, building, managing, and operating at the heart of their local communities to improve everyday quality of life.





Photo courtesy of the Town of Canmore.

ive Canadian municipalities have been granted funding to reach carbon emission reduction targets through investment in renewable energy projects. QUEST and the Community Energy Knowledge-Action Partnership (CKEAP) received funding from the Federation of Canadian Municipalities (FCM) to support this project, titled, "Accelerating Implementation of Renewable Energy."

The cities of Moncton and Saint John in New Brunswick, the regions Waterloo and York in Ontario, and the town of Canmore in Alberta are the five communities participating in this project. The communities involved were chosen based on achieving milestones in the Partners for Climate Protection program offered by the Federation of Canadian Municipalities.

Through "Accelerating Implementation of Renewable Energy," the municipalities will offer workshops and webinars for community members and staff to learn more about adopting renewable energy practices. The events will also look at challenges to implementing these practices, such as barriers from a land-use perspective, and will identify community concerns.

Lori Rissling Wynn, Sustainability Co-ordinator for Canmore, says the workshops will help the town dive deeper into its renewable energy capacity, determining a way forward by looking at renewable energy potential and understanding how the community feels about potential

# Healthy World

projects. Right now, Canmore doesn't have a renewable energy target, but this project could inform future target setting.

"It's all valuable information for us to determine our target and how we will go forward to meet it and to determine the community's comfort with renewable energy generation," Rissling Wynn says. "If we set a target, we need to figure out how to get there."

In addition to contributing to a healthier environment, investing in renewables will also contribute to a healthier economy, she says, ultimately benefiting the public works department, since the corporation benefits.

"The bigger conversations around renewables has a lot of benefits to the communities. (Renewables) help reduce greenhouse gas emissions by changing a portion of energy to a renewable source," Rissling Wynn says. "Right now, money spent on energy leaves the community, but if you look at a community generation model, the money stays in the community."

The workshops and webinars of this project will also be an energy literacy conversation, Rissling Wynn explains. This will help bring staff up to speed about what a renewable Canmore can look like.

"Canmore is looking forward to exploring opportunities for renewable energy generation through this project," Canmore Mayor John Borrowman said in a news release. "We appreciate the collaborative work of QUEST and the project partners, along with the financial support of the Federation of Canadian Municipalities, to help communities across the country transition towards a low carbon future."

Today, Canmore has large solar arrays on the civic centre and the waste management centre. There are plans to add additional solar arrays over the next two years.

"Where our rooftops have solar potential, we will look into solar options," Rissling Wynn says.

She adds that through this project, Canmore can gain insight from the community on how people would feel about solar canopies elsewhere in the town, such as on a municipal parking lot.

Other ways the town adopts renewable energy practices will depend on the outcomes of the workshops and meetings of "Accelerating Implementation of Renewable Energy." Rissling Wynn says that QUEST will lead the conversations and do the heavy lifting for this two-year project. Besides community members, university researchers will also be involved, leading the mapping component of this project for participating municipalities.

This mapping portion will help the community assess opportunities for future projects. Rissling Wynn notes that it's a huge benefit to the community to have the opportunity to rely on academic expertise to understand more about the town, as municipalities don't always have the resources to take on work like this by themselves.

The two bodies at the forefront of this project, QUEST and the CKEAP. received \$361,000 to complete this project. QUEST is an organization that works to implement community-scale energy systems in Canada, while CKEAP is a partnership of universities, governance partners and civil society organizations working toward implementing community energy plans.

"Through this project we will support partnerships between local governments, utilities, and academia to create tools that will help identify and remove barriers to local renewable energy development,

foster broad community support, and be transferable to the rest of Canada," Tonja Leach, Executive Director of QUEST, said in a news release.

The funding for this project from FCM is through the initiative Transition 2050, which helps communities develop long-term plans to meet targets set out by the Paris Agreement. Climate change has been an increasingly important topic in Canada, with more research coming out about the effects in the country. In "Canada's Changing Climate Report" released in 2019 by the government of Canada, scientists warn that the country's climate is warming, on average, double the rate of the rest of the world. The reports explains how this can lead to more extreme weather events, from increased drought to intense rainfalls.

Limited effects from climate change will occur only if communities in Canada and across the world work to reduce carbon emissions to nearly zero early in the second half of the century plus substantially reduce other greenhouse gas emissions, the report says.

Learn more about QUEST at https:// questcanada.org.

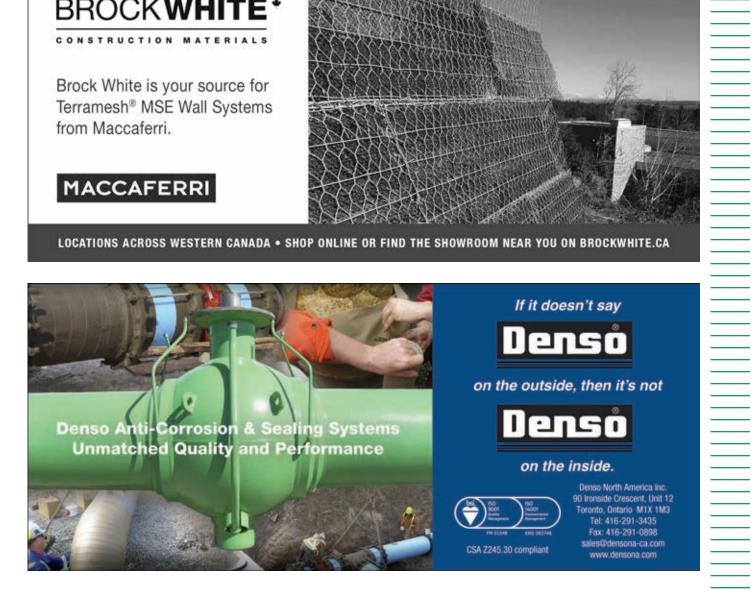


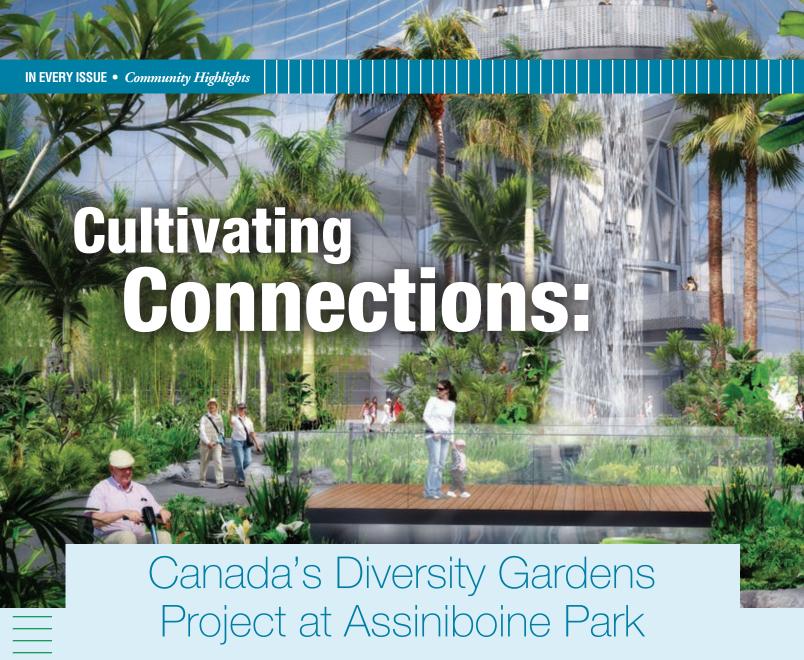
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By Laura Cabak, Assiniboine Park Conservancy

magine a place where nature, culture and community unite. Imagine a place that inspires us to live in harmony with nature and each other. This is the vision behind Canada's Diversity Gardens, an exciting new attraction currently under construction in Winnipeg's historic Assiniboine Park.

"Canada's Diversity Gardens is a project of its time and Assiniboine Park is the perfect place to bring it to life," says Margaret Redmond, President & CEO of the Assiniboine Park Conservancy. "This vast, beautiful natural space brings us closer to nature and to each other. Through shared experiences, we find common ground and cultivate connections that strengthen us as a community."

The Canada's Diversity Gardens development represents the final phase in a transformational redevelopment plan that was launched in 2009 by the Assiniboine Park Conservancy, the not-for-profit organization created by the City of Winnipeg to revitalize and ensure a financially sustainable future for the Park.

The project will span approximately 35 acres in the south-east corner of the Park, blending extraordinary indoor horticulture displays with community gathering space, iconic architecture, state-of-the-art design and breathtaking gardens.

Together, these indoor and outdoor spaces will deliver an immersive visitor experience that encourages a greater public understanding and appreciation for the importance of plants in our daily lives, and celebrates Canada's astounding natural and cultural diversity.

"These gardens are not just a stunning attraction," says Sean McCoshen, leadership donor to Canada's Diversity Gardens project. "They're a symbol of what makes Canada the envy of the world, a nation where – more than any other country – diverse people lead lives of mutual acceptance and respect. In this era of climate change, they're also a reminder of how much we depend on the natural world and that our future depends on our stewardship of the planet."

At the heart of the development stands The Leaf, an architecturally brilliant indoor horticultural attraction. The Leaf will feature four distinct zones that transport visitors through different environments, as well as Canada's tallest indoor waterfall, a canopy walkway that provides a bird's eye view of the Tropical Biome, and over 16,000 tropical and Mediterranean plants.



Here are some features of the Diversity Gardens:

- The largest of The Leaf's planted spaces, the Tropical Biome, will be a rainforest like paradise brimming with lush foliage, bold textures and vibrant colour. It will be home to leafy plant material from tropical regions of the world, with some specimens that will grow to reach over six stories high over time.
- In the Mediterranean Biome, visitors will be surrounded by plant life from climates characterized by moist, cool winters and hot, dry summers; which include Greece, South Africa and California. The result will be a memorable mosaic of colour, texture and fragrance.
- The ever-changing Babs Asper Display House will celebrate the art of horticulture, highlighted by rotating floral exhibits with global and seasonal themes.
- Elevated five stories above ground, the Shirley Richardson Butterfly Garden will be a

magical space that appears to soar above the sea of plant life flourishing below.

The 6,000 square metre facility will also house a restaurant, retail space, indoor and outdoor classrooms, and beautifully appointed banquet facilities for daytime and evening

While The Leaf will be the centerpiece of Canada's Diversity Gardens, the development will also include expansive outdoor gardens designed for year-round enjoyment.

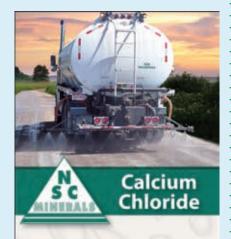
Edible plants and fruit trees will grow in the Kitchen Garden, while visitors can enjoy art and music in the Performance Garden. The Seasonal Garden will display a variety of lush perennials, showcasing the best and brightest of each growing season, while The Grove will tell Manitoba's story through a curated selection of majestic trees. The Indigenous Peoples' Garden will offer a naturalized environment where visitors will have the opportunity to learn about Indigenous perspectives and cultural practices.

These cultural connections are truly what sets Canada's Diversity Gardens apart from similar attractions. As part of the project team, Lord Cultural Resources was challenged to re-imagine the traditional botanical garden experience and develop a single unifying narrative that will tell the unique and ethnoculturally diverse stories of Canadians through the medium of plants.

In order to gather these stories, Lord contacted people and organizations representing 83 cultural groups in Winnipeg and the surrounding area. They conducted interviews with individuals representing more than 20 cultural groups and collected 115 personal plant stories that will be shared over time in interpretive displays throughout The Leaf and surrounding outdoor gardens.

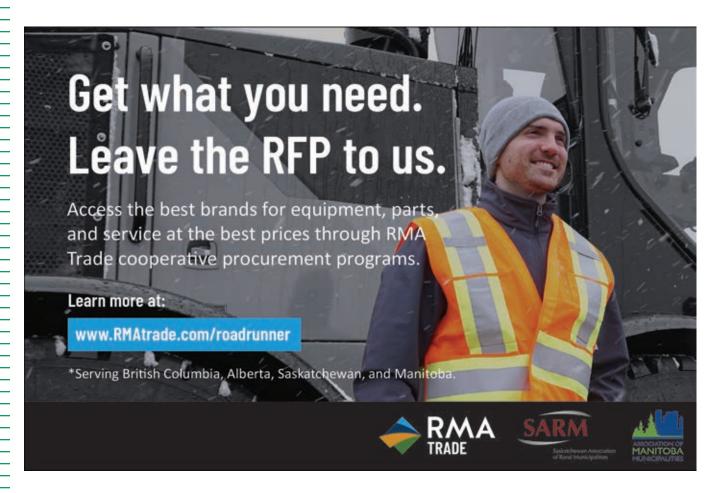
"The core theme that emerged from that process is that plants are fundamentally important to sustaining human life," said Dov Goldstein, Senior Practice Leader, Lord Cultural Resources. "For this reason, the relationship between people and plants has the power to define and shape cultures, including the diverse communities that make up the Canadian

Laura Cabak is the Communications and Public Relations Manager with Assiniboine Park Conservancy in Winnipeg, Manitoba.



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# **Shedding UV Light**

# on Greater Vernon's Water System

By Jonathan Lowe, P.Eng, CPEng(NZ), and Stephen Horsman, P.Eng, PE, WSP Canada

he Duteau Creek Water Treatment Plant's (DCWTP) existing dissolved air flotation clarification (DAF) and chlorine disinfection processes did not provide 99.9 per cent (3-log) inactivation of protozoa required by the local regulations for a surface water source. The DCWTP treats up to 162 million litres per day and is one of two sources that supply the businesses and 62,000 residents of Greater Vernon, British Columbia.

The DCWTP was designed to add filtration to meet the regulatory treatment objectives, but following an unsuccessful public referendum to borrow the \$30 million needed for filtration, the Regional District of North Okanagan (RDNO) investigated creative alternatives. The RDNO conducted performance testing of the DAF process and established that ultraviolet (UV) disinfection was a potentially viable technology for achieving the required 3-log inactivation of protozoa. Subsequently, the RDNO successfully secured grant funding from the Canadian Water & Wastewater Fund for the \$7 million innovative application of UV disinfection and selected WSP Canada as the prime consultant to engineer and deliver the project.

WSP leveraged their expertise in UV disinfection and local Okanagan experience to address the following key issues.

#### **Unconventional treatment approach**

The findings of the risk assessment and historical water quality data were used to establish the optimum siting of the UV reactors downstream of the treated water reservoir. An operational control philosophy was developed to meet the regulatory requirements and obtain early approval of the unconventional approach from the local health authority.

#### Reliability

Traditionally, UV disinfection would take place prior to a treated water reservoir,



Figure 1. The 350kW uninterruptible power supply equipment and UV controls.



Figure 2. Left: The 3D computer model developed during design of the UV facility. Right: The UV facility after construction.

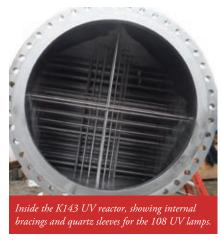


The operations platform with the UV reactor orientated to facilitate UV lamp removal and maintenance.



however siting restrictions and water quality objectives dictated it be located after the reservoir. With every drop of water passing through the UV process going directly to users, both uninterrupted operation and the ability to meet treatment targets through diverse and rapidly changing operating parameters, were critical to ensure the protection of public health. By prioritizing the risks, namely the variability in water quality, flow and power reliability conditions, the design criteria were established for handling 99.9 per cent of operating conditions. A UV reactor was selected that offered a wide turn-down ratio plus a 30 per cent operating safety factor. A third standby UV reactor was added for redundancy with the ability for all three to operate in the event of an emergency.

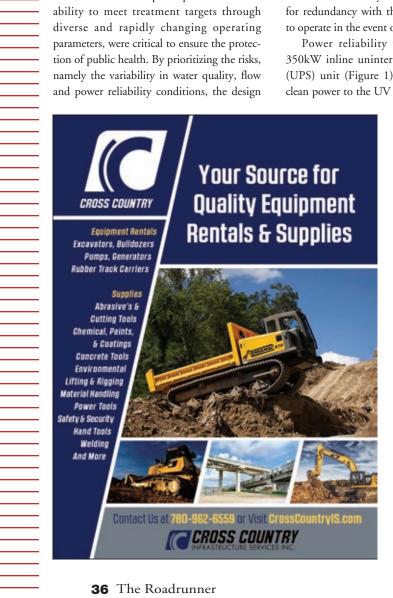
Power reliability was addressed by a 350kW inline uninterrupted power supply (UPS) unit (Figure 1) that provides stable clean power to the UV system during voltage



sags and the 20 to 30-minute transition period when loss of utility power initiates the DCWTP 1,250 kW standby diesel generator (Figure 1).

#### Site footprint and hydraulics

Early equipment selection allowed for a prompt building layout and footprint. WSP generated a 3D computer model to optimize the building layout, conduct clash investigations and assess constructability issues. The





result was a well-coordinated operator-oriented design that offered a cost effective and low footprint solution (Figure 2).

## **Aggressive schedule**

The unconventional UV approach required consent from health regulators. This demanded an advanced knowledge of UV treatment technology and proven understanding of the local drinking water treatment regulations. In addition to the technological complexities, the grant funding schedule required concept design through to tender-ready contract in just six months, a process that traditionally takes eight to 12 months. Collaboration with the RDNO and local health regulators obtained early input and buy-in, allowing for accelerated equipment selection and facility layout.

## Social and economic benefits

The addition of UV disinfection provides a minimum of 99.9 per cent inactivation of harmful waterborne disease and dual barrier protection, building resiliency in the DCWTP process and therefore reducing the overall public health risks to the community. Less potential for infections and illness creates a healthier and better functioning society in all realms of school, work and play. A second stage chlorine injection system added after the UV process improved chlorine dosing efficiency, reducing chemical consumption and the potential formation of harmful disinfection by-products.

Energy conservation was at the forefront of the design process with the implementation of capacitor bank technology that improved energy efficiency and reduced costs by 10 per cent, saving the RDNO over \$750 per month in penalty charges and energy use premiums. A Multiple Bottom Line Analysis identified that Low Pressure High Output (LPHO) UV Reactors offered 80 per cent lower energy usage than alternative UV technology. Furthermore, the rows of UV lamps in these reactors operate independently and automatically modulate power to optimize UV dosage across the broad range of instantaneous system demands and changes in water quality.

## **Environmental benefits**

All construction was completed within the compounds of the existing facility, with no offsite works required for utility upgrades and all surplus excavated soil, approximately 4,000 m<sup>3</sup>, blended into the existing topography onsite. Natural light was harnessed using 12 roof mounted solar tubes to complement the high-efficiency LED luminaires throughout both the process and electrical rooms. The proprietary hood on the solar tube was orientated to harness the limited sunlight of the north facing site. An established grove of pine and spruce trees to the west of the site were saved by using alternative slope stability

and shoring measures that allowed for steeper temporary grades keeping excavations on site during construction.

## **Project delivery**

WSP leveraged its multi-disciplinary in-house team and relationships with local specialist consultants to customize a deliverable program that prioritized all major design decisions and input requirements from the owner and the health regulator.



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This allowed key decisions to be made in a systematic manner to maintain the critical path for the design and UV equipment prepurchase schedule.

Extensive knowledge of UV disinfection and relevant Okanagan project experience provided the framework for accelerating critical decision milestones necessary to gain health authority support and get the UV Disinfection Facility out to market ahead of schedule and under budget, providing the RDNO with a \$7 million solution to their \$30 million problem.

Now in operation for almost a year, the DCWTP UV Disinfection Facility has been the recipient of numerous awards, namely the 2019 Award of Merit in Municipal and Civil Infrastructure from the Association of Consulting Engineering Companies of BC, and more recently the national 2019 Award of Excellence in Water Resources from the Association of Consulting Engineering Companies Canada.

Jonathan Lowe, P.Eng, CPEng(NZ) is a Senior Water & Wastewater Engineer with WSP Canada in Kelowna, British Columbia. He was the contract administrator and commissioning lead for the \$7 Million Duteau Creek Water Treatment Plant UV Upgrade. Over the past 14 years, Jonathan has focused on the design, implementation and assessment of water and wastewater treatment facilities and pump stations in Canada and abroad.

Stephen Horsman, P.Eng, PE, is Manager, Water & Wastewater at WSP Canada. He is a licensed professional engineer (British Columbia, Washington and Yukon) responsible for planning, design and construction management of municipal water infrastructure.





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## Sticking with Innovation That Works

Article provided by Xylem, Inc.



ue to the age of its wastewater control system, Steinbach, Manitoba, decided it was time for some new technology. With a population of about 15,000, Steinbach is the third largest city in Manitoba and one of the fastest growing areas in Canada. The Waterworks Department treats and distributes potable water, as well as wastewater for all residents.

The city has three wells that draw water from a limestone aquifer. The distribution system consists of a network of more than 80 kilometres of underground pipes, which carry treated water from the water treatment facility to homes, businesses, and fire

hydrants. Steinbach's four reservoirs' combined capacity is about two to three days of storage, depending on demand. The treatment and storage of all water, which is disinfected with chlorine gas and sodium hypochlorite, is designed for continual movement so water never gets stale.

Mike Heppner, the Waterworks Department Head and Manager, oversees all aspects of water and wastewater for the city. Heppner says, "The first part of our upgrade was to the wastewater system, which includes five remote Sewage Lift Stations, one lagoon blower building, and six controllers, with one main terminal receiving all data and compiling it on a central PC located in the office."

There was only one issue with Steinbach's current system... age. It had been operating since 1993, an eternity in the world of technology.

Because the wastewater department was already familiar with operating the existing Xylem/Flygt M&C SCADA system with Aquaview software and APP controllers, they decided to inquire what new technologies the company could offer. Steinbach contacted the manufacturer, through its Winnipeg branch, to inquire about the possibility of completely upgrading their Aquaview SCADA system, throughout the department, with the latest technology. With help from the firm's Monitoring & Control Support Department (in Charlotte, North Carolina), the existing system was assessed, and an upgrade quotation was presented to the city.

Controllers were already installed in half of the stations prior to the VTScada installation. The manufacturer began the switchover by running some in-house sessions for staff to familiarize themselves with the units. "We had one station that had an APP controller that was not working with VTScada, so this unit was changed out a while later, and this was the only issue we encountered during the entire upgrade," says Heppner. He continues, "We have had some efficiency increases with VTScada, such as each station can be checked on and confirmed it is operating properly at a glance, and it is easy to monitor multiple stations during storms or emergencies." Heppner also likes that detailed information gets tracked on the alarm page and critical information appears on the front page of every station.

In 2008, Trihedral, a SCADA software vendor, began discussions with lift station control and monitoring specialist, Xylem (then MultiTrode), makers of the MultiSmart pump station manager. MultiSmart, some elements of which still remain in Steinbach's new SCADA system, features over 400 tags per site, providing unparalleled data for water and wastewater utilities for their lift stations.

Trihedral and Xylem worked together to create a Site Import Utility that users can launch each time they add a new MultiSmart device to their SCADA system. VTScada uses DNP3 to remotely download the device's XML configuration file. Since many utilities employ radios with limited bandwidth, this file is compressed and decoded on the fly by both the MultiSmart unit and VTScada. The resulting small transmission size does not interfere with site polling. Alternatively, VTScada can also use a local configuration file in the case of Modbus protocol.

After prompting the user to make a few simple configuration choices, the utility automatically generates all the necessary tags and a selection of key application pages. Users can also easily create more specialized pages using VTScada's drag-and-drop toolset.

The SCADA system remains fully operational during this process. This is a key feature of VTScada and a prime concern of utilities, which must maintain a watchful eye on operations at all times. The newly added site can be tested on one server and then the validated configuration settings can be automatically propagated to all hot back-up servers and clients in real-time. Offline servers are also updated automatically upon restart.

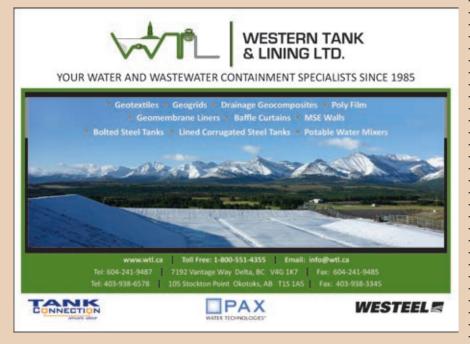
Mike Heppner says, "Once we saw what we could get with VTScada, it was a nobrainer! There are simply too many things to adequately describe what we can do now as opposed to before."

Xylem Inc. is a large American water technology provider, enabling customers worldwide to transport, treat, test and efficiently use water in public utility, residential, commercial, agricultural and industrial settings. The company does business in more than 150 countries. Learn more at www.xylem.com.

## "Once we saw what we could get with VTScada, it was a no-brainer!"

Mike Heppner, City of Steinbach







## Saying Farewell

onnie Buerger, an Operator II with the City of Fort Saskatchewan, reached a major milestone this past fall. Referred to by many locals as Sweeper Man, Ronnie hit his 45th anniversary with the Public Works department on September 5, 2019. On September 17, after Ronnie told his crew, City staff received a very surprising announcement from Ronnie's supervisor, Brian Rogers. Ronnie had decided to retire and his last day would be Friday, September 27.

It was a shock because no one ever expected him to retire. He never talked about retiring but said, "I'll just keep plugging along." Rogers had this to say in the announcement, "This change marks the end of an era and the start of a new chapter for one of our work family's longest serving members. A moment unexpected, as more and more years were put under this individual's belt without seeing even a hint of him slowing down. How do I summarize and express all the memories and moments that I want to share with everyone reading this? Stories that bring smiles to the faces of many who have had the pleasure of working with him and peaked interest in those who haven't? I cannot. But, I can tell

## to Sweeper Man

"But, I can tell you many city staff know the respect he has gained by being told, 'Don't sit there, that's Ronnie's spot."

you many city staff know the respect he has gained by being told, 'Don't sit there, that's Ronnie's spot.'"

Ronnie's commitment and dedication to his job is what his coworkers admired about him and why the community benefited all these years, whether knowingly or unknowingly. He laboured through seemingly never ending night shifts, clearing away Mother Nature's snow so that we had safer roads to drive on. He spent countless hours and logged untold kilometers operating the city's sweeper. He has, in his time, moved a mountain's worth of material with a loader.

Ronnie started with the Town of Fort Saskatchewan in 1974 when the population was under 6,000 and more than half of what we see today did not exist. Many, many times Ronnie was asked how long he was going work for. He thought he might work up to the 50-year milestone but instead decided that the time had come to retire. After all, he mused to a co-worker on his last day, "I've been making dust with the sweeper for 35 years." Not one for seeking the spotlight, Ronnie won the special Spirit Award in 2009. This annual award is given to one city employee who is nominated by their peers for their special dedication and spirit as an ambassador of Fort Saskatchewan. Ronnie may have thought he was flying under the radar but his efforts did not go unnoticed.

Although the temperature on September 27 was suitable for snow, Ronnie spent his last day on his favourite piece of equipment - the sweeper. He made sure the citizens were left with what he had dedicated his career to - a beautifully looked after community to enjoy and be proud of.

Being a very humble man, Ronnie did not want a big send off but his co-workers could not let him leave without showing how much he would be missed. Ronnie's signature

lunch box was auctioned off with all proceeds going to the United Way and staff were asked to gather at the public works yard for precisely the time that Ronnie would drive off in his truck after his final shift. Staff gathered waving signs of well wishes and even the Fire Department and Police showed up to turn on the lights and sirens in honour of Ronnie.

As some wondered what Ronnie would do on his first day off, others knew he would not be a stranger. He showed up Monday morning to personally thank everyone for their kindness and was very pleased with the extra light show provided by the Fire and Police departments. Ronnie also wanted to say thank you to all the JEG staff, the City Manager and Mayor and Council.

As the sign said, you will be missed Ronnie. All the best in retirement.

Reprinted with permission. The original was posted October 2, 2019, at www.fortsask.ca.









## Transitioning Equipment Between Seasons

By Scott Moorman, Buyers Products

cross western Canada. a change of seasons brings a change in work. Public works departments want to make sure that the transition from paving, trimming and edging to plowing, spreading and spraying runs smoothly and efficiently. Helping crews alter their day-to-day jobs is difficult enough, not to mention managing an equipment changeover that can be tricky and time consuming. Following are a few tips and tricks that can take some hassle and time out of seasonal equipment exchanges.

## Prep your plows well ahead of when you think you're going to need them

Long before the start of each winter, it's important to make sure your plows are ready for the long nights and days ahead. Poorly maintained plows can give you trouble in the middle of a storm, which can be a costly problem. When you take your plows out of storage, give them a thorough onceover to identify any potential problems:

- · Check for rust and cutting-edge wear;
- Make sure your hoses and wires aren't worn or rubbing against other parts of the plow;
- Grease all cylinders, pivot points and other moving parts. Do the same on your hitches;
- If you have self-contained plows, make sure to change the plow's hydraulic fluid; and
- Dirty oil is one of the most common causes of plow failures, but it's an easy one to prevent with a little proactive TLC. In this case, also apply dielectric grease to all electrical connections.

At the end of the snow season, make sure to grease everything one last time before putting the plow away. Compress the cylinders to protect them from rust and touch up any chipped paint or rusted areas. If you have a stainless-steel blade, apply a light coat



The best equipment purchases are those that do double duty. This truck is outfitted as a dump truck for spring, summer and fall, and a salt spreader for the winter.

of mineral oil to protect the surface. Then, store the plow indoors or on a covered pallet so it is protected from the elements above and below.

## Get your spreaders tested and ready

Before the season begins, make sure all your spreader's moving parts and electrical connectors are properly lubricated. Bearings should be greased every seven to 10 hours of operation.

When it's time to put your spreaders in storage, give them a thorough cleaning before

putting them away. You don't want material residue eating away at your components during the off-season and leaving you with a rusty surprise come winter. And again – grease, grease, grease! A well-lubricated piece of equipment is one that keeps working year after year.

Investing in spreader stands can also save a lot of headaches. Stands make storing your spreaders and getting them on and off your trucks a breeze. No more messing with forklifts or hoists; you simply back into the spreader to load it up and drive away from it to unload. This is obviously great at the start and end of each season, but it's also an amazing convenience if you have a start-and-stop winter where you need your truck freed up for other things one day and ready to deice the next.

## **Purchase versatile equipment that can** be used year-round

One of the best things you can do for the efficiency of your fleet is to invest in equipment that's equally useful no matter what the weather is. Keeping your fleet as adaptable and multipurpose as possible saves you money, time and storage space. Here are a few pieces of equipment to consider adding into your budget:

- Combo body dump spreaders: V-box spreaders only have two uses: 1) to spread salt or sand in the winter, and 2) to take up space in the garage. Look into equipping your fleet with more combo bodies. These units combine the utility of a spreader and a dump body into a single unit. Deice in the winter, and then remove the spinner to instantly have a full-function dump body for spring, summer and fall. Combo bodies are just as at home hauling mulch and gravel as they are spreading salt and sand. Combo bodies were once the sole domain of large Class 8+ trucks, but they are now available for Class 4 to Class 7 trucks as well. Some of these new releases even run off electric motors for simple maintenance. There has never been a better time to fold these versatile workhorses into your arsenal.
- **Dump inserts:** A dump insert is a costeffective way to add a dump truck to your fleet without making a massive investment. Inserts quickly pay for themselves, thanks to the extra productivity from hauling bulk materials like garbage, grass clippings and leaves. Jobs get done faster and with less manual labor - and increased workplace safety. Add a tarp system and a replacement tailgate spreader for the winter months and you have a one-truck army.
- Under tailgate spreaders: If you already have a dump body, an under-tailgate spreader is a quick way to add some extra functionality without breaking the bank. Aside from the obvious benefit of being able to fight ice in the wintertime, you can also utilize some spreaders for lighter berming jobs.

Central hydraulic system: Upfit your trucks with an all-in-one hydraulics solution to give them what they need for a hoist, plow, spreader and pre-wet system. This is a fantastic way to guarantee your fleet is ready for whatever job comes your way. Many of these systems also provide electric in-cab controls that eliminate the need to plumb hydraulics into the cab itself. This cuts down the noise and heat to provide a safer and more comfortable experience for your operators.

That's it! A little prep now can save you a mountain of headaches down the road. Follow these tips and you'll be ready for whatever weather nature throws your way.

Scott Moorman leads the Engineering Department at Buyers Products. He is passionate about using customer feedback to guide design and innovation. His team of talented engineers creates everything from truck toolboxes to SnowDogg @ snowplows.



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system can be retrofitted with a hydraulic valve kit to enable electronic control of the blade. When this capability is combined with Global Navigation Satellite System (GNSS) technology, an operator will know where they are positionally on the job site in three dimensions, as well be able to switch on the fly to automatic grade control.

The relatively high accuracies required in grading applications means the use of Real Time Kinematic (RTK) positioning. RTK systems allow a moving receiver (the machine) to communicate via radio or cell signal to a fixed base station that broadcasts corrections and increases accuracy to the



centimetre level. Without these corrections, accuracy will be limited to a few metres and make grade control impractical.

The proliferation of cell networks across the globe has enabled users to receive corrections through wireless based reference stations. Various GNSS equipment suppliers have set up multiple permanent fixed base stations across much of the country. By paying a monthly or yearly fee subscribers can gain access to these sources and avoid having to purchase or set up their own base stations.

In recent years, this has been taken a step further with telematics software. Machines can now be linked via wireless cell coverage to the office and even to each other, enabling the quick and efficient transfer of files and information. All this data can be overlaid on top of satellite imagery to give managers near real-time visual updates on job progress in an easy to use web browser format. Updated designs and linework can be almost instantaneously transmitted to the field for immediate use by field crews. Technical support can be given remotely utilizing this service, with technicians being able to diagnose and troubleshoot problems by directly interfacing with the screen.

In May of 2019, Fast Brothers Ltd., out of Blumenort, Manitoba, purchased a Leica iCON iEX3 excavator system for their CAT 336E. By running off of Lewisnet, a cellular based RTK solution, the excavator can be moved from job to job across the province while constantly being provided a stream of corrections. The ability to run entire jobsites off a common network has streamlined the workflow for operators, while also providing a permanent and more consistent fix for their GNSS equipment. Leica ConX, a telematics software, is being used to remotely update and transfer design information.

Successful integration of machine control requires close cooperation with a supplier. Purchasing a system involves training, support and access to readily available repair services. Construction machinery in Canada is exposed to some of the most extreme conditions on earth and inevitably wear and tear will affect components on even the most robust system. Timely and efficient service calls, when required, are critical to keeping a user working with as little down time as possible. While investing in this technology

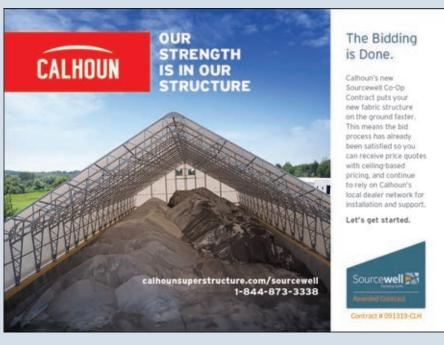
can be an enormous productivity booster, selection of a knowledgeable and capable dealer is essential.

Lewis instruments, based out of Winnipeg and Saskatoon, is entering its 70th year of business and combines a long history of supporting the construction industry with a strong focus on providing modern machine guidance solutions. Lewis, as central Canada's Leica Geosystems dealer, has the experience and know-how to install grade control systems on

any make, model or age of machine. As the construction industry evolves and continually becomes more competitive, distributors such as Lewis Instruments are prepared to bring users the solutions required to get the job done right, on time and with less rework than ever

Travis Hubble is the Machine Control & Construction Positioning Sales Representative for Lewis Instruments Ltd.





## **Constructing Maintenance** By Andrew Stevenson, ATAP Infrastructure Management Ltd.

What is essential is that the facility staff have input into the creation of the documents. No-one knows the intricacies of the equipment like the operator and, even if they are not the primary author, they

should be contributors and editors of the material.

on troubleshooting of upset conditions is helpful for the staff to be able to mitigate situations that may be outside of their

Operations and maintenance manuals should include Standard Operating Procedures (SOPs) for the facility, regular maintenance schedules (logs), and training documents. It is basically up to the experienced operations staff to determine what they want to include in the document. Smaller facilities may want to include this documentation in one manual. Larger plants may have separate manuals for opera-

tions and maintenance (O&M), standard operating procedures, and training. What is essential is that the facility staff have input into the creation of the documents. No-one knows the intricacies of the equipment like the operator and, even if they are not the primary author, they should be contributors and editors of the material.

Including pictures and diagrams is another helpful tool for the end user to understand the written word. Whenever possible, include visual aids for the operator to understand the procedure or instructions. Original equipment manuals, photographs during overhaul, and online sources can provide very useful information.

Document control is also critical when creating operations and maintenance manuals. It is important to have an electronic filing system that manages the versions of the document as it changes. Providing a version number and date on each page of the manual is also important so that staff know they have the latest version of the document.

Having these O&M documents is important, not only to reduce emergency maintenance costs, but to avoid service disruptions and potential regulatory advisories. It also assists with new employee knowledge in respect to succession and liability. Performing scheduled maintenance lowers cost of maintenance overall.

Lastly, from a risk perspective, your operation and maintenance manuals should be coupled with your contingency plans and emergency response plans to dovetail a complete O&M and safety system protecting your equipment, residents, and staff from failures.

If you have further questions regarding the creation of operations and maintenance manuals, maintenance planning or writing of SOPs, please contact us at ATAP and we would be happy to assist.

Andrew Stevenson is the Manager of ATAP Infrastructure Management Ltd. and a Past President of CPWA.

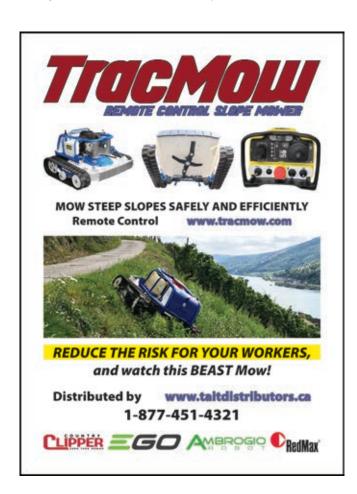




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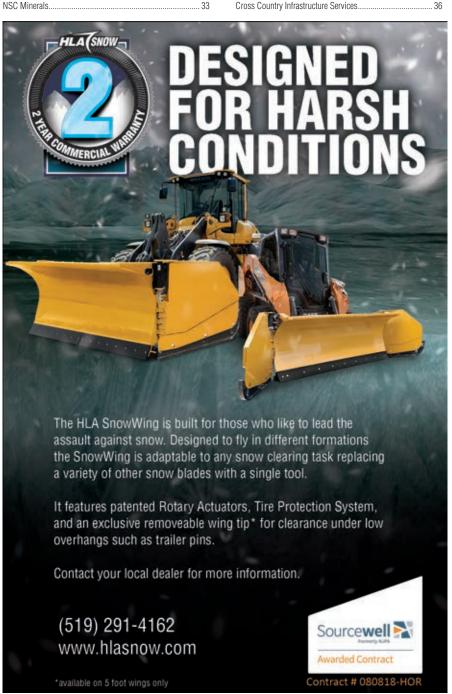
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