2022 Annual Engineering Report

City of Weyburn
Saskatchewan, Canada

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Engineering Department

Executive Summary

The purpose of this report is to present the City of Weyburn Council a summary of the operational activities, unplanned and scheduled maintenance projects of the Engineering, Public Works and Water Treatment Plant (WTP) departments for the 2022 year.

Prepared and presented by the Engineering department with preparation and cooperation from the Public Works and WTP departments.

The Engineering Department is a very diverse department that handles a wide variety of assets, projects, and essential services. With this broad portfolio comes many challenges, but also a great range of opportunities. In 2022, the department managed the first year of the Infrastructure Revitalization Program and improved the asphalt repair program utilizing a new hot-mix asphalt repair truck. The Engineering Department focused heavily on infrastructure upgrades to roads, sidewalks, utility assets and WTP processes. Despite the ongoing supply chain issues and market conditions, the department continues to provide the City of Weyburn with a high level service. The dedicated staff worked hard to implement innovative solutions, suggest process improvements, embrace new systems and programs, and improve safety measures.

Infrastructure Revitalization Program

As of January 2022, the City of Weyburn Council approved the Infrastructure Revitalization Program (IRP) to take the place of the Local Improvements Plan. The IRP has a funding model that does not require the local property owners to pay for part of or all of the cost of the 'local improvement'.

The 2022 budget has allotted $700,000 for the Infrastructure Revitalization Program (IRP) to maintain and revitalize the City's streets and sidewalks. The Engineering Department coordinated various asphalt and concrete projects in 2022 utilizing $600,000 of the budgeted amount. One asphalt project for $100,000 is being carried over into 2023 so the underground infrastructure can be replaced prior to the paving work.

Asphalt paving and crack sealing was also done throughout the City, at the airport and on City pathways for an additional funding of $457,000. The total investment in asphalt and concrete in 2022 was $1,142,000.

Photo: New concrete sidewalk on Foster Street

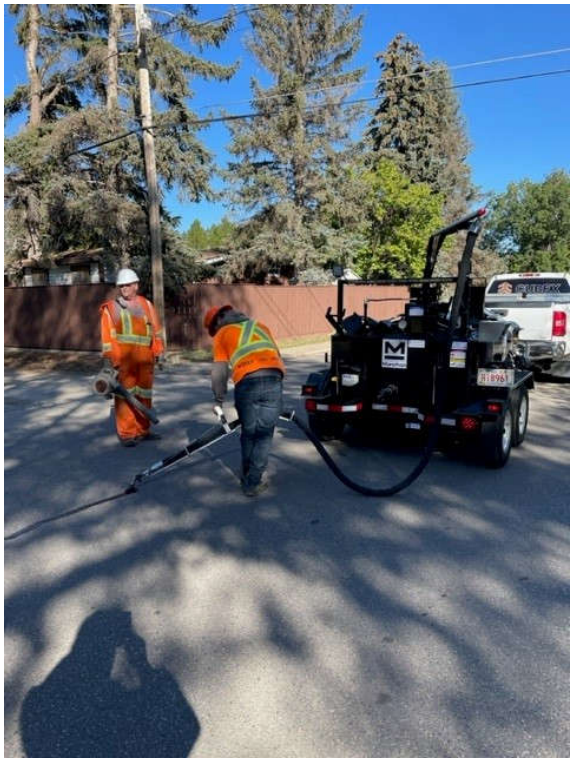
Asphalt Projects

Based on the pavement condition ratings from the 2019 Infrastructure Condition Assessments completed by Associated Engineering (Regina, SK), the City of Weyburn Engineering Department coordinated approximately 2,000 linear meters of asphalt paved roadway rehabilitation projects in 2022. The 2022 asphalt projects included the milling and paving of approximately 405 m of 4th Street (from 6th Avenue S to 10th Avenue S), 910 m of Saskatchewan Drive, 135 m of Allen Street, 680 m of downtown alleys, the Legion parking lot, 650 m of granular based trails and recapping 1,062 m of existing paved trails.

Photo: New Pavement along 4th Street S.

Crack Sealing Program

The Engineering Department coordinated an extensive crack sealing program in the fall of 2022. Typically, the crack sealing projects are either scheduled in early spring or late fall. During these times the pavement contracts in the colder temperatures leaving the cracks open. It is not recommended to crack seal in the hot summer months due to the expansion of the asphalt resulting with the cracks closing up.

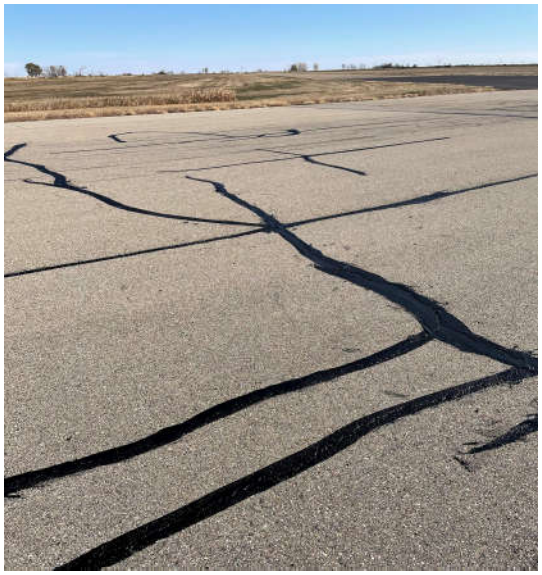


The City awarded the crack sealing program to Genco Asphalt Inc. (Estevan, SK) and had 5th Avenue N, 16th Street, Douglas Road and the primary runway at the Weyburn Airport sealed.

Additionally, the City of Weyburn transportation crew had a hands-on demonstration of a crack sealing trailer on Windsor Street. The purchase of a City owned crack sealing trailer has been requested in the 2023 budget. The addition of a crack sealing trailer to the transportation fleet will result in contractor cost savings and will help to preserve our asphalt streets.

Airport Maintenance

The City of Weyburn continues to invest in the Weyburn Airport Infrastructure. In 2022, the Engineering and Transportation Department with consultation from the Airport Board focused on repairs to the primary runway, secondary runway and the taxiway. The City received funding from the Community Airport Program (CAP) which covered 50% of the repairs to the primary runway and taxiways.



The rehabilitation plan for 2022 included milling and filling 18 cracks on the taxi ways, and 6 of the worst cracks on the secondary runway. The overlapping section where the Primary and Secondary runways meet was completely rebuilt to create a smoother transition. Crack sealing was also done the length of the primary runway.

Asphalt Patch Truck

The City of Weyburn purchased a new hot mix (asphalt) patch truck in 2021, but with supply chain issues, the truck didn't arrive until mid-summer of 2022. This truck allows the crews to cut out larger sections of damaged roads and properly fill using hot asphalt. This type of repair works better and will last longer than just filling in the potholes on top of the old existing asphalt.

The crews concentrated heavily on repairing potholes on major roadways and road repairs from utility projects. The hot mix patch truck was out working on the City's streets until late fall and used approximately 130 tonnes of hot mix asphalt during the 2022 construction season.

Concrete Projects

The City of Weyburn's concrete infrastructure is made up of sidewalks, curb and gutter and ramps. This concrete infrastructure serves the commuting needs of residents, and municipal customers throughout the City. The accessibility and reliability of those concrete assets is vital to the safety of the users, movement of goods and economic growth within the City.

On an on-going basis the Engineering Department tracks sidewalk defects and/or trip hazards and the general condition of the municipal concrete infrastructure. On an annual basis, the Engineering Department prioritizes and coordinates contractor procurement for areas of concrete requiring maintenance, repair and/or replacement. The condition of the concrete determines if the sidewalk can be resurfaced or needs a full replacement. Sections of sidewalk identified for replacement are based on the overall needs for the network and prioritized based on the parameters required, such as, the geographical location of the defects, severity/number of defects and the frequency of use by area residents and/or businesses.

Photograph: New concrete ramp on 3rd St NE

The following images are taken before, during and after the sidewalk replacement on Laing Crescent.

The Engineering Department coordinated and procured $85,000 worth of concrete projects utilizing the 2022 operating budget for concrete pedestrian accessible ramps and sidewalk trip hazard repairs. The Infrastructure Revitalization Program also funded the rehabilitation and replacement of many more sidewalks throughout the City in 2022.

In total, approximately 200 linear meters of concrete sidewalk were replaced, 50 meters of sidewalk was resurfaced and sealed, and 19 concrete pedestrian accessible ramps were installed to replace existing concrete curb and gutters.

The following images were taken before and after the sidewalk replacement on Foster Street. The first four images are displaying some of the concrete defects and trip hazards that warranted this portion of sidewalk to be replaced in 2022.

Lift Station No. 3 Rebuild

In 2013, the City of Weyburn obtained Stantec (Regina, SK) to complete a Lift Station Condition Assessment of the City's Lift Stations. Stantec identified various corrosion, safety and regulatory compliance issues with Lift Station 3 and recommended completing a more detailed structural assessment to determine rehabilitation options. In 2020, the City obtained KGS Group (Regina, SK) to complete a detailed structure condition and design options for rehabilitation of the existing structure or a complete rebuild to replace the existing asset. Due to the deteriorating condition and non-compliance with current safety standards of the existing structure and corresponding utility infrastructure components it was determined that it was more feasible for a complete rebuild to replace the existing asset.

The construction of the Lift Station was awarded to TransCanada Contracting (Regina, SK). Construction started in the summer of 2022 and is expected to be complete in June of 2023. The new Lift Station will meet current industry and safety standards and will be equipped with remote monitoring to send out alerts in the case of an equipment failure, security breach or power outage.

Lagoon Dredging

Wastewater treatment and management is a vital part of the City's infrastructure. Environmentally sustainable wastewater treatment and disposal solutions are an increasingly important part of the City's water management.

In 2021, the Engineering Department successfully enhanced the City's wastewater facility with specially formulated blends of bacteria to boost the aerobic bacteria that already exists within the lagoon. Working in conjunction with proper lagoon maintenance and operation, independent studies have shown that this method of wastewater lagoon sludge treatment can increase the natural bioaugmentation of the lagoon sludge.

Over the years, sediment and sludge has accumulated at the bottom of the Diversion lagoon causing anaerobic (without oxygen) conditions resulting with a very slow break down process that only leads to more sludge buildup over the long term. In order to maintain optimal lagoon health and wastewater treatment efficiency, every 3 to 5 years the built-up sediment and sludge has to be mechanically removed from the bottom.

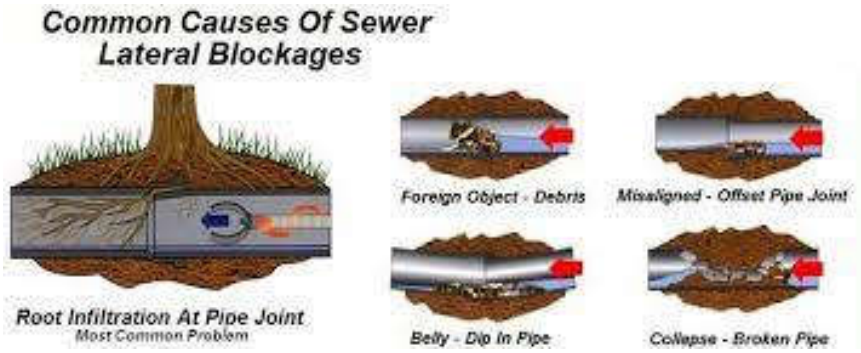
In June, Kayden Industries (Calgary, AB) removed over 6,000 m^3 of sludge and sediment from around the outlets of the diversion lagoon using an unmanned remote dredge and high capacity centrifuge process.

The clean out of these inert solids off the bottom of the diversion lagoon in conjunction with maintaining proper lagoon bacteria health will result in optimized wastewater treatment for the next few years.

Sewer Cleaning Policy

The City's Water and Sewer Service Connection Fund covers the cost of unclogging blockages in sanitary sewers. The local sewer service providers have a wide range of service rates due to the difference in levels of service, technology and equipment used to unclog sanitary sewers.

In 2022, the Engineering department proposed the implementation of a Sewer Cleaning Service Policy to set minimum service level standards and expectations for sewer cleaning services covered under the City's Water and Sewer Service Connection Fund.



The Sewer Cleaning Service Policy will allow the City to establish contractual price agreements for a consistent 24 hour on-call sanitary sewer maintenance service that provides total sewer line cleaning, camera footage and inspection reports and a warranty period. The Sewer Cleaning Service Policy sets out a minimum service standard of total wall to wall sewer line cleaning and camera footage. Total sewer line cleaning and video footage can provide the City with visual data displaying the structural condition of the sewer pipes (cracks, collapsed, corrosion or deteriorating conditions causing blockages or restriction of flow) to allow the City to be proactive with the sewer maintenance and renewal programs which aligns with the asset management policy.

With this increased level of service of wall to wall sewer pipe cleaning and video inspection the City expects to find more defects with the structural integrity of the underground infrastructure. Aligning with the asset management policy, the City will be able to address these defects with repairs and annual sewer renewals in order of priority to reduce the sewer maintenance and cleaning call out services required.

Vortex Plumbing and Heating (Weyburn, SK) submitted the lowest rates for both business and non-business hours along with the longest warranty period of 1 year and therefore was awarded with the 2022 Sanitary Sewer Cleaning Services Contract.

2022 Flood Response

From May 12 to May 13, 2022, Weyburn received 60 mm (Environment Canada) of precipitation. This excessive precipitation caused the City of Weyburn's main sewage lift station (Lift Station #1) to experience high level volumes of wastewater causing all four submersible pumps to be switched into 100% operating capacity. Even with the Lift Station operating at full capacity, the incoming storm water entered the wastewater system faster than it could be pumped out to the lagoon, causing flooding of the Lift Station's wet well and subsequently back up conditions down the trunk sewer line along 5th Street up to 5th Avenue North. Multiple residential, commercial and recreational facilities experienced extensive damages caused by flooding and sewer backups.

The wastewater receiving chamber at the Diversion Lagoon also overflowed as the outlets into the lagoon could not discharge the high volumes of wastewater fast enough resulting in an overland spill of raw sewage.

After the May 13, 2022 event, the outlets at the diversion lagoon were cleaned out, where over 6,000 m^3 of solids were removed from around the outlets. The utilities crew also installed the diesel generator trailer pump at Lift Station #1 which could be used in place of the submersible pumps with a higher pumping capacity in the event of another high flow event.

The next high flow event happened on June 20 to June 21, 2022 when Weyburn received another 95 mm (Environment Canada) of precipitation. The utilities crew switched Lift Station #1 over to the diesel pump and obtained multiple vacuum tank trucks to increase the flowrate out to the lagoon but could not gain on the rising water levels in the Lift Station's wet well. By 3 am on June 21, 2022, the water surpassed high level alarms at the Lift Station causing backwater conditions in the trunk sewer line and connecting upstream sewer systems. The City Administration (with support from the Environmental Regulators) made the difficult decision to conduct a sewage bypass with a second smaller diesel pump that discharged directly into the Souris River simultaneously as the diesel trailer pump was discharging to the lagoon. The City Administration and Weyburn Police Service asked residents to reduce water consumption & non-essential water use and to discharge sump pumps outside instead of into the sewer in an attempt to increase the sewer system capacity for the excessive storm water. Even with the use of the additional pump and tank trucks bypassing the lagoon and the temporary water conservation order, the water levels at the Lift Station remained at high alarm levels for 12.5 hours causing backflow conditions at the Diversion Lagoon and the main sewer lines, resulting in more flood damage to residential, commercial and recreational facilities throughout the City.

The original design capacity of the City's main lift station did not include residential sump pump discharge directly into the sanitary system. Since the 2011 flood there has been a substantial increase of sump pit discharges plumbed into the sanitary system, which results in a large influx of storm water into the sanitary system during high or prolonged rainfall events. In order to identify all infrastructure deficiencies and prioritize areas where infrastructure could be upgraded to improve sewage conveyance and storage capacity for high flow events, a hydraulic engineering assessment was warranted.

The Engineering Department obtained Catterall & Wright (Saskatoon, SK) to provide comprehensive, expert engineering services to provide the City with hydraulic modeling and design options and recommendations for upgrades and or expansion of the City's main Lift Station and/or connecting sewer systems. The results and recommendations of this final report are expected to be delivered in Q1 of 2023 and sewage conveyance improvements to take place in 2023.

In addition to the hydraulic assessment, the Public Works and Engineering departments provided immediate and on-going response during both flood events, working above and beyond their normal working hours to manually operate lift station pumps, open/close gate valves, unblock catch basin and storm sewers, operate pump trucks, work with emergency services to provide traffic control barricades to provide public safety and liaison with the environmental regulators regarding the bypass.

Water Treatment Plant Process Upgrades

The Water Treatment Plant (WTP) source water is obtained from Nickle Lake, which is characterized with high organics as measured by Total Organic Carbon (TOC). Due to the elevated concentrations of TOC remaining in treated water, Disinfection By-Product (DBP) formation in the distribution network exceeds regulated limits.

The City of Weyburn engaged MPE Consulting (Saskatoon, SK) to carry out a study for the improvement of the treated water quality in 2020. MPE Consulting recommended injection of Carbon Dioxide (CO2) to remove most of raw water impurities and usage of Chloramines as a disinfection to reduce the Disinfection By-Products (THMs and HAAs). The City awarded TransCanada Contracting (Regina, SK) with two upgrade projects at the WTP in 2022, to enhance coagulation by addition of CO2 and to reduce THMs by addition of Ammonia.

Enhanced Coagulation With CO2 Upgrades

Dissolved and suspended particles are present in natural surface raw waters. These suspended materials mostly arise from land erosion, the dissolution of minerals and the decay of vegetation and from several domestic and industrial waste discharges. Such material may include suspended, dissolved organic and/or inorganic matter.

MPE consulting recommended enhanced coagulation with CO2 to suppress pH at a point where suspended and organic substances destabilize efficiently, settle at the bottom of the tank and ultimately removed as a sludge.

Nickle Lake Raw Water with chemicals

Coagulant destabilizes particles

Particles settled at the bottom

Installation of CO2 tank

New CO2 tank located on west side of WTP

CO2 Control Panels

Enhanced disinfection by Ammonia to reduce THMs and HAAs

Disinfection is a required step in drinking water treatment that is enforced to protect public health. However, when selecting the appropriate disinfectant for a specific system, it is important to note that disinfectants react with organics and inorganics in source water to form disinfection byproducts, or DBPs. The challenge in the water treatment process is providing adequate protection from microbial pathogens through disinfection, while simultaneously minimizing the health risks associated with THMs (Trihalomethane) and HAAs (Halo acetic acid) as DBPs.

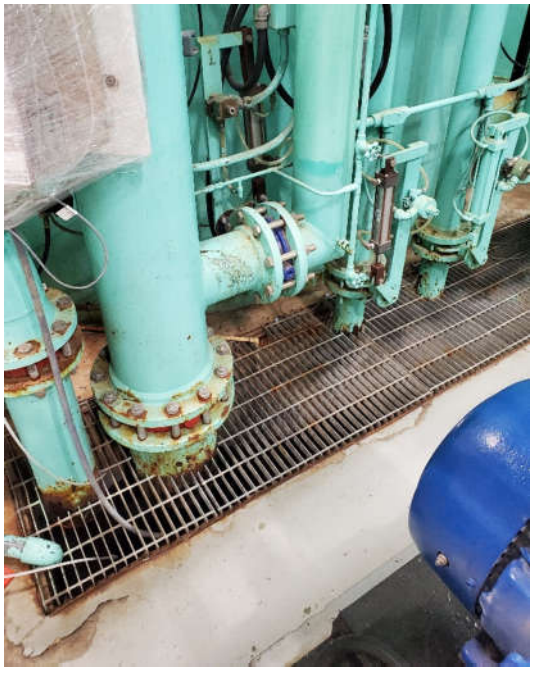
Historic record shows, free chlorine has resulted, the increased production of DBPs within our 80 km distribution system, therefore the City of Weyburn will be implementing the recommendations of MPE engineering to change from free chlorine to combine chlorine and ammonia (chloramines) as disinfectant that ultimately will reduce DBPs (THMs and HAAs).

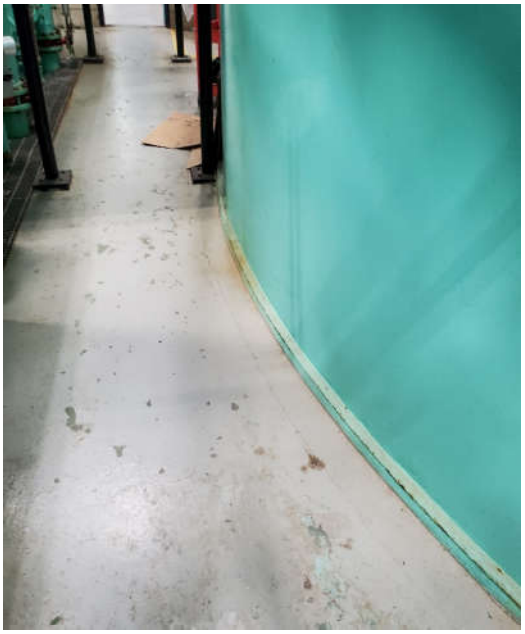
Chloramines are safe and regulated and are currently being used successfully to disinfect water throughout North America. In Saskatchewan, the City of Saskatoon, Estevan, and Meadow Lake are currently using chloramines to provide disinfection within their respective distribution system.

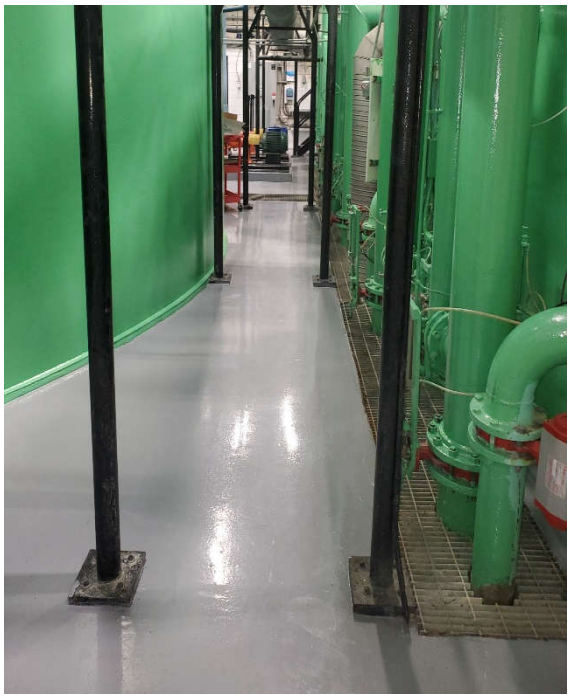
Ammonia Feed System

Water Treatment Plant Epoxy Paint Project

Due to the age of the Water Treatment Plant's *Plant 100* (built in 1959) the metal tanks and floor were showing significant wear and deterioration. The Engineering Department coordinated an epoxy paint project to provide protection from further deterioration caused by rust. The epoxy paint work was completed in December 2022. The epoxy project required copious amounts of preparation work (grinding and sanding) and washing and drying before the epoxy could be applied. The following photographs show Plant 100 before and after the epoxy coating.







Albert Douglas Dam Inspection

The Albert Douglas Dam was constructed in the early 1980s by the Prairie Farm Rehabilitation Administration (PFRA) to expand the City of Weyburn's raw water reservoir, Nickle Lake. Nickle Lake reservoir supplies water to the residents of Weyburn and surrounding rural areas who rely on it for potable water, irrigation, recreation, municipal & industrial use, as well as wildlife habitat. Conducting structural inspections is a key aspect in ensuring dam safety and securing the City's water supply system. Dam Safety Reviews should be completed every five (5) years in accordance with the industry best practices as published by the Canadian Dam Association (CDA) and the Water Security Agency's Regulatory Framework for Water Dams in Saskatchewan. The last Dam Safety Review (DSR) of Albert Douglas Dam was conducted in 2009. Since the 2009 inspection, the City of Weyburn and surrounding areas experienced a 100 year flood in 2011 resulting in some embankment and rip rap erosion issues. The design life of various structural and/or instrumentational components have also since expired. The dam structure was over-due for a proper Safety Review so the City could move forward with rehabilitation, operational and emergency response planning to ensure the safety of City employees, contractors and the general public as well as protect the City's raw water supply.

The City awarded the Dam Inspection to KGS Group where they applied their extensive knowledge in structures originally designed and constructed by the PFRA to the Albert Douglas Dam inspection.

The dam inspection included an on-site inspection, review of historical data and records, review of the consequence of dam failure, dam safety analysis, review of operation, maintenance and surveillance practices, assessment of the emergency preparedness and security measures and failure mode identification. The on-site inspections were conducted on the earth embankment structure and all of its components, spillway and abutments, emergency earth spillway, local reservoir shoreline, instrumentation and areas immediately downstream of the dam.

In addition to KGS's structural, geotechnical and hydrotechnical engineering team, a specialized dive team was obtained to perform the upstream condition assessment on the concrete structure below the water surface.

The final report concluded that there were no defects that threaten the immediate safety of the Albert Douglas Dam at this time but there were several recommendations to address the mechanical and instrumentational deficiencies as well as update safety and emergency response planning to adhere to the Canadian Dam Association Dam Safety Guidelines.

These findings and recommendations from KGS's 2022 dam inspection will allow the Engineering Department to address the safety deficiencies and non-conformances in 2023 as well as prioritize future investigations and engineering studies to address the data gaps from the lack of monitoring and maintenance data.

Water Infrastructure Program

Watermain Valve Replacements

The function of the water main valve is to isolate a section of watermain to stop the flow of water. This is used when there is a water main break and there is a need to stop the water flowing to and out of the broken watermain pipe. This allows the repair crew to do the necessary repairs to the water main.

Photograph: New valve install with sacrificial anode for corrosion protection

Another use for the valves is to direct the flow of water in a water main. By operating specific valves on the water main, the Utilities crew can direct flows in the water main as such that all the water in the main is flowing in one direction. One directional flow is used during unidirectional flushing for removing sediment from the water mains. One directional flow creates the velocity needed to scour the sediment from the water main pipes where it then exits through an opened hydrant.

The Engineering and Public Works departments coordinate the replacement of corroded and malfunctioning valves each year. Valves that are malfunctioning will not close, will not open, or leak out of the valve body itself when in the closed position.

Photograph: Corroded valve

The valves that have been replaced vary in age from late 1950 to early 1980.

The cost for replacing a valve depending on the size of the valve will be in the range of $8,000 – 12,000 including the street restoration. The City budgeted $55,000 for valve replacements in 2022.

Fire Hydrant Replacements

The Engineering Department coordinates an annual hydrant replacement program to replace malfunctioning and/or obsolete (John East) fire hydrants. The cost for replacing a fire hydrant including street/sidewalk, curbing and landscaping restoration is $10,000 – 13,000 per hydrant. The City budgeted $35,000 for hydrant replacements in 2022.

Photograph: Canada Valve Hydrant

The main purpose of fire hydrants are for fire suppression but the City also uses them for watermain flushing to flush sediments out of watermains after any water infrastructure repairs. Currently there are four manufacture brands of hydrants in service throughout the City.

When a hydrant valve becomes stiff or hard to operate due to corrosion build up and seized bearings it results in leaking and requires repair or replacement. The John East fire hydrants (from 1960's) cannot be repaired because they are obsolete and repair parts are not available anymore. The John East fire hydrants also do not have isolation valves installed on them, which prevents isolating the hydrant for maintenance work. When the John East hydrants are replaced, the watermain has to be shut off, which creates service interruptions to the residents in the area.

Photograph: Hydrant and barrel for full hydrant replacements

The hydrants that are being installed now are designed as such that if the hydrant top is knocked off, the operating valve in the hydrant will stay closed holding back the water. Isolation valves are installed on all new hydrants to allow for servicing and maintenance as well.

Catch Basin Replacements

Catch basins are used for draining surface water into a piping system that will carry this water to the river or a drainage channel leading into the river. The catch basins also have an open space below the catch basin drain pipe. This space is used to catch the sand and gravel so it doesn't enter the drainage system. These catch basins are commonly seen in intersections but are also found on some streets mid-way on a block or in back alleys.

Photograph: Catch basin grate for rolled curb

There are a variety of catch basin tops or grates that fit with the curbing style or the position of the catch basin. These grates will also vary in size depending on the surface area to drain on a street. It is the piping size that will restrict the amount of storm water that passes through the piping system.
The barrel construction under the grate will vary. Some of the barrels are constructed of cinder block, brick, and concrete or a combination of these materials. The catch basins that are constructed with cinder block/brick are failing. The mortar that holds everything together is falling out and some of the blocks are falling out as a result. When this happens the soil around the catch basin barrel begins to wash away/erode into the piping and that is how the small sink holes form near the catch basin.

Photograph: Sink hole around catch basin grate

These barrels need to be replaced with a concrete barrel design that is of solid construction with a floor in it. The top portion of the barrel will have solid concrete rings that a sealant is used between each ring. These rings will bring the catch basin frame to ground level.

Photograph: Catch basin grate located in a back alley lane

The City budgeted $50,000 for catch basin replacements in 2022.

Storm Line Refurbishment

There is a network of pipelines under the streets that is referred to as storm sewer. This piping is a gravity flow (no pressure) drainage line. This network of lines will carry the snow melt and rain/storm waters from the streets and yards to the drainage ditches or directly into the Souris River.

The network of pipeline will vary in piping type, and size. The piping can be made of VCT (clay tile), concrete, CMP (corrugated metal pipe), CIP (cast iron pipe), and PVC (polyvinyl chloride). The size will vary from 150mm up to 900mm. The trunk main increases in size as more branch lines are connected to the main trunk.

Photograph: Corroded CMP Storm Line

Each catch basin will have one or more pipes connected to it. From there these pipes are connected to a storm main or trunk main, before entering the drainage ditch or River.

These lines will fail due to corrosion or deterioration causing a sink hole to form in the street and require repair or replacement of the pipe.

The City budgeted to replace $15,000 in storm lines in 2022.

Photograph: Sink hole caused by failed storm line

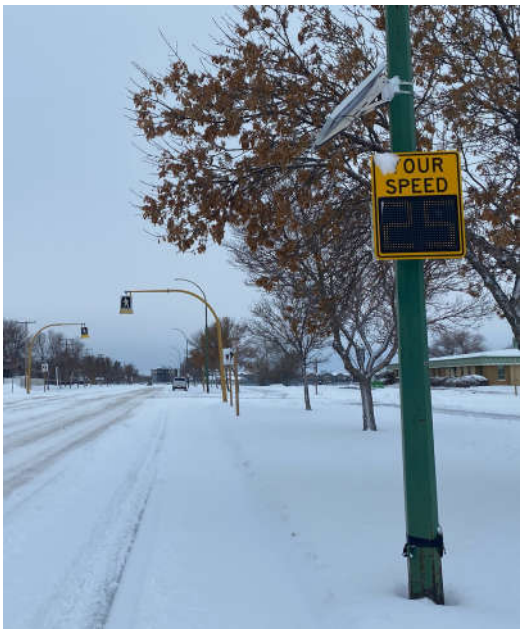
Public Works and Essential Services Open House

The City of Weyburn Public Works & Essential Service departments hosted an Open House & Barbecue for the citizens of Weyburn on June 22, 2022. The event was in held in the Public Works yard where the fleet vehicles for the Fire, Police and Public Works were on display for the public to check out and get a better understanding of how they are used to sustain our City and serve and protect the residents of Weyburn. Staff were on hand to answer any questions and give residents a hands-on look at the City's fleet equipment.

An important part of our essential services are our departmental service dogs. Oakley the Police Dog, Jessi the Fire Dog, and Beaumont the Victim Services dog were on site for residents to meet and greet.

A barbecue was held in the new Fleet Services shop for all those in attendance with approximately 350 people coming through the doors. We look forward to hosting another Open House in 2023.

Radar Speed Signs



The City of Weyburn has implemented new safety measures in another Weyburn school zone thanks to a grant from the Government of Saskatchewan. In late August, the City installed two radar speed signs along 5th Ave. N, in the Assiniboia Park Elementary School zone, which will improve public safety on a significant traffic route. The solar powered digital radar speed feedback signs cost $8,619.82 and were funded through the Provincial Traffic Safety Fund Grant Program.

The Weyburn Police Service conducted speed data analysis on 5th Ave. N, on the west side of the school zone, between Brimacombe Dr. and 13th St. N, from Feb. 18-23, 2022. Over the study period, there was a total of 789 enforceable speed violations. In addition, a high number of near-misses have been reported in the area by students, parents and school staff. Speed management and aggressive driving were the top priorities for the City of Weyburn when applying to the Traffic Safety Fund in January 2022.

“It was necessary to address issues of excessive speed in the area and important we protect vulnerable pedestrians.” said Jennifer Wilkinson, Director of Engineering for the City of Weyburn.

The school yard is a popular space for children in the community during and after school hours, as well as throughout the summer. The paved walking path adjacent to 5th Ave. N has a steady volume of pedestrians and cyclists throughout the year. Radar speed signs have been shown to slow drivers an average of 10 per cent. Radar speed signs also have an immediate and long-lasting impact on driver behavior and can reduce the speeds of oncoming drivers 80 per cent of the time.

The City thanks the Government of Saskatchewan for its traffic safety initiatives and grant programs.

“The City is always looking for funding opportunities to help keep project costs down for our taxpayers and we are grateful the provincial government recognized our community’s needs,” Wilkinson said.

Traffic Signal Light Replacement

The City of Weyburn upgraded the traffic signal light poles and fixtures at the intersection of Souris Avenue and 2nd Street this year as part of their downtown street light replacement and installation project. Industrial Electric Inc. (Weyburn, SK) was obtained to complete the project. These upgrades were necessary because the current wiring and infrastructure had degraded beyond repair. The decorative fixtures, signal faces and LED lights for this project match the infrastructure and traffic lights of the downtown core. The signal lights were programmed to work in conjunction with the signal lights on Souris Avenue and 3rd Street.

The overall look of the new traffic signal lights has added to the revitalization of the downtown core as well as increased reliability with the new wiring and LED lighting.

The photograph on the left is showing one of the original traffic signal structures and the photograph on the right is showing one of the decorative traffic signal structures that the intersection was upgraded with.

Landfill Projects

Two large projects were completed at the City of Weyburn landfill site in 2022. Both projects were required in order for the City to comply with the City's Permit to Operate a Waste Disposal Ground and the approved Operations Plan.

Groundwater Monitoring Wells

Semi-annual groundwater monitoring programs have been conducted at the Landfill since 2014, in accordanace with the City's Permit to Operate. Historical and annual findings from the groundwater monitoring and sampling programs provided evidence of chloride and nitrate-nitrogen impacts at the site. The Ministry of Environment has made a requirement for the City to complete further investigation to determine whether or not the current impacts are migrating off-site. Matrix Solutions Inc. (Weyburn, SK) was obtained to provide a professional assessment and install new monitoring wells around the site to address the Ministry's requirements. The existing groundwater monitoring well network was expanded with 19 more wells in 2022. The new wells will be monitored in the spring of 2023.

SaskPower Transmission Line Relocation

The location of an overhead 72kV three phase transmission power facility including a 25kV under-build was running through the City of Weyburn Landfill site and becoming a major safety concern during daily landfill operations and subsequently impeding the development of the landfill's filling, environmental control and operational plans.

The Ministry gave the City until March 2024 to start operating out of an engineered cell and close the current filling cell. The current operating cell could not be properly filled and covered until the transmission line was removed. In 2021, the Engineering Department submitted a formal request to SaskPower with a proposed alternate route for the transmission line to be relocated around the the landfill site. The construction of the new transmission line route started in late 2022 and was completed in December 2022.

The new route extends around the outside perimeter of the landfill so the compaction and filling equipment are not restricted in any way. The City can now obtain an Engineering Firm to design and propose a new engineered cell to meet Ministry requirements.

Recycling Contract Renewal

The City of Weyburn implemented a city wide multiple material recycling program in 2017, providing recycling of waste packaging and paper for single family and multi-family dwellings in accordance with the Multi-Material Stewardship Western (MMSW). The recycling program has deferred large amounts of recyclable material from the landfill since implementation in 2017 with curbside pickup and depots located around the city. In June 2022, GFL Environmental Inc.'s recycling contract was up for renewal. The Engineering Department posted the City wide multiple material recycling contract for tender in March 2022 for a 4.5 year contract from June 2022 – December 2026.

Although both local companies (Goliath Disposal and GFL) proposed competitive monthly all-inclusive costs to cover bi-weekly pickups, Goliath Disposal (Weyburn, SK) proposed no charge rate for their public depot location, which resulted with an overall lower monthly cost for each year of the contract term. As a fiscal responsible decision, the City awarded Goliath with the new recycling contract. With the change to Goliath, every resident received a new curbside cart and the location of the public depot changed and is now located on 1380 Coteau Avenue West. The transition of service providers was not an easy undertaking, but was successful. The City would like to thank the residents of Weyburn for their patience during the transition period.