

**Town of Norman Wells
Agenda
Regular Council Meeting #20-04
Tuesday, February 4th, 2020, 7:00pm
Council Chambers, Town of Norman Wells**

1. **Call to Order**
2. **Declaration of Conflict of Interest**
3. **Review and Adoption of Agenda** Resolution
4. **Delegation**
5. **Departmental Reports** Second meeting of each month
 - a) Town Manager
 - b) Finance
 - c) Fire Department
 - d) Governance & Community Engagement
 - e) Lands
 - f) Public Works
 - g) Recreation
 - h) Utilities
6. **Committee Reports**
 - a) Recreation Committee - none
 - b) Economic Development Committee - none
 - c) Town Planning and Land Use Committee - attached
7. **Minutes**
 - a) Regular Meeting of Council #20-02 Resolution
 - b) Special Meeting of Council #20-03 Resolution
 - c) Committee of the Whole #20-02 Resolution
8. **Old Business**
9. **New Business**
 - a) Under Drain Filter Repair Resolution
 - b) Cat Train Café Resolution
 - c) Acquisition of Lot 188 – Plan 1075 Discussion
10. **Council Forum**
11. **Correspondence to Council**
 - a) Norman Wells Biathlon Team
 - b) James Ulch – Heritage Hotel
12. **Correspondence from Council**
13. **In Camera**
14. **Adjourn**

**Town of Norman Wells
Minutes
Regular Council Meeting #20-02
Tuesday, January 21st, 2020, 7:00pm
Council Chambers, Town of Norman Wells**

Present: Frank Pope Mayor
Alexis Peachey Deputy Mayor
Jean-Paul Bernard Councillor
Jim Boyle Councillor
Pascal Audet Councillor
Trevor Smith Councillor

Regrets: David Wever Councillor (Council Business)

Staff: Alex Millette Recreation Manager
Cathy Clarke Senior Administrative Officer
Hugo Pabke Utilities Manager
Jennifer Waterhouse Governance & Community Engagement Manager
Johannie Lapierre Development Officer
Misty Rayner Finance Manager
Randy Sinasac Fire Chief
Shawn Donahue Public Works Manager

Delegation: None

Guests: Denis Bibeau
Chris Chivers
Cindy Collier
Donald Fillmore NWT Housing Corporation
Dwayne Semple NWT Housing Corporation
Harold Harris
Nathan Watson
Norma Wall
Wayne Kakfwi

1. **Call to Order** 6:59PM
2. **Declaration of Conflict of Interest**
Councillor Smith declared a conflict of interest with item 8a – Marten Avenue Project due to employment with NWT Housing. Accepted by Mayor Pope.
3. **Review and Adoption of Agenda**

‘Be it resolved that the Agenda for the Regular Council Meeting, dated January 21st, 2020 is hereby adopted.’

Motion: No. 20-02-01
Moved by: Councillor Peachey
Seconded by: Councillor Smith

Motion Carried

4. Delegation

- a) RCMP – Cpl. Tim MacDonald Policing Report
Report submitted by Cpl. MacDonald.

5. Departmental Reports Second meeting of each month

- a) Town Manager – Attached
- b) Finance – Attached
- c) Fire Department - Attached
The Fire Chief informed Council that the 2222 number has been cancelled. This will address the nuisance calls that were being made to the Fire line. A new line has been set up for 911 access.
- d) Governance & Community Engagement – Attached
Beginning work on by-laws. Currently looking at Business license and Taxi license by-laws.
- e) Lands – Attached
The RFP for the Community Plan was issued on January 16th.
A lease agreement has been signed with GNWT for space to place a gazebo lakeside at the new Territorial Quarry site. ITI has agreed to pay the annual lease payments. Details for the site will be worked on once a timeline has been set up for the gazebo move in the spring.
- f) Public Works – Attached
Councillor Audet inquired if the Fire Lane between the Northern and the old MACA building could be plowed. The Public Works Manager will check to see if Town Property and address it. Inquiry as to who the bulletin board outside the old MACA building belongs to. Council believes it belongs to MACA.
- g) Recreation - Attached
The Recreation Manager recognized the hard work of the recreation staff over the holidays. Currently conducting interviews to fill the vacancy for the Recreation Coordinator position.
- h) Utilities - Attached
There were several freeze ups over the holidays which is common at this time of year. The Utilities Manager informed Council that one of the underdrain filters at the Water Treatment Facility is out of service. The manager is looking at options and has requested quotes for the repair. The manager will bring this to Council as soon as they are received. Mayor Pope directed the Manager to bring to the next CoW meeting or contact the SAO if action is required before the next Regular Council Meeting.

6. Committee Reports

- a) Recreation Committee - none
- b) Economic Development Committee - none
- c) Town Planning and Land Use Committee – Attached

7. Minutes

- a) Regular Meeting of Council #20-01

Resolution

‘Be it resolved that the Minutes for the Regular Council Meeting, dated January 7, 2020 are hereby adopted as amended.’

Motion: No. 20-02-02
Moved by: Councillor Audet
Seconded by: Councillor Boyle

Motion Carried

b) Regular Meeting of Council #20-01

Resolution

'Be it resolved that the Minutes for the Committee of the Whole Meeting, dated January 15, 2020 are hereby adopted as amended.'

Motion: No. 20-02-03
Moved by: Councillor Peachey
Seconded by: Councillor Smith

Motion Carried

8. Old Business

Councillor Smith left Council Chambers at 7:15PM

a) Marten Avenue Project

'Be it resolved that the Council of the Town of Norman Wells hereby authorizes Administration to conclude the presented agreement for sale (as attached) of the future lots (as attached) for the following price once the land is subdivided and surveyed:

Lot A: \$23,560

Lot B: \$24,240

Lot C: \$24,160.'

Motion: No. 20-02-04
Moved by: Councillor Audet
Seconded by: Councillor Peachey

Motion Carried

Councillor Smith returned to Council Chambers at 7:17PM

9. New Business

a) Denis Bibeau Project – Extension

'Be it resolved that the Council of the Town of Norman Wells hereby approves the variance of a six-month extension to start the development on the lot.'

Motion: No. 20-02-05
Moved by: Councillor Smith
Seconded by: Councillor Peachey

Motion Carried

b) Denis Bibeau Project – Variance

Council Requested that the Development Officer provide a brief summary of the variance request. The Town Planning Committee recommends approval on condition that the height complies with NAV Canada regulations. It was confirmed that it is the applicants' responsibility to obtain the approval from NAV Canada.

Discussion around the use of Seacans for the foundation. This does not violate current property standards and zoning by-laws. The Town Manager recommended consideration of this topic as part of the Community Plan.

'Be it resolved that the Council of the Town of Norman Wells hereby approves a variance of 1.6m for the height of the proposed house on the condition that it complies with NAV Canada regulations.'

Motion: No. 20-02-06
Moved by: Councillor Peachey
Seconded by: Councillor Audet

Motion Carried

c) Municipal Lease Agreement
No discussion

'Be it resolved that the Council of the Town of Norman Wells hereby authorizes Administration to apply the enforcement process permitted under the Commercial Tenancies Act in order to terminate the lease agreement and recover the rental fees.'

Motion: No. 20-02-07
Moved by: Councillor Peachey
Seconded by: Councillor Boyle

Motion Carried

d) Community Plan Project Lead
No discussion

'Be it resolved that the Council of the Town of Norman Wells appoints Councillor Wever to be the Council Liaison on the Community Plan Project.'

Motion: No. 20-02-08
Moved by: Councillor Smith
Seconded by: Councillor Peachey

Motion Carried

10. Council Forum

Councillor Bernard – Directed a question to Public Works about plowing of the Woodland Avenue trail to the school. Public Works try to plow the trail once per week. The Bobcat is out of service waiting for new tracks. Once they are replaced the trail will be plowed.

Councillor Audet – Inquired whether the road to Jackfish Lake is being maintained this winter. The Town Manager stated that it is being cleared as far as the gun range. Council directed Administration to look at the road and see if it can be cleared all the way up to Jackfish.

Councillor Boyle – Nothing

Councillor Peachey - Nothing

Councillor Smith – Inquired on behalf of the Curling Club whether there was an update on the LED light switch. The Town Manager will follow up on it.

Mayor Pope – Directed Administration to arrange a meeting with the President of Canadian North to discuss pricing and scheduling. Directed Administration to arrange a meeting with Imperial Oil to get an update on their operations and to discuss their vacant houses. The Mayor stated that there is a

housing crisis in the community and Council would like to know what their plans are related to their vacant houses. The Public Works Manager indicated that at the last meeting with IORL that they indicated they would get back to the Town about the houses but there has been no response. Last Sunday Sahtu MLA, Minister Chinna, hosted an Open House at the Legion. Minister Chinna indicated that she will be visiting Council and bringing Health Minister. Council requested that Minister Chinna be asked to bring all Cabinet.

Mayor Pope requested that Council submit their three priorities to the Town Manager by the end of the week.

11. Correspondence to Council

a) Request for Comments on SLWB Item - Prohibition Creek Access Road Geotechnical Assessment Council unanimously agreed they would like construction to move ahead immediately. They have no concerns with the project.

12. Correspondence from Council

- None

13. In Camera

'Be it resolved the Council of the Town of Norman Wells hereby go in camera the time being 7:45PM.'

Motion: No. 20-02-09
Moved by: Councillor Boyle
Seconded by: Councillor Smith **Motion Carried**

'Be it resolved the Council of the Town of Norman Wells hereby leave in camera the time being 8:15PM.'

Motion: No. 20-02-10
Moved by: Councillor Smith
Seconded by: Councillor Peachey **Motion Carried**

14. Adjourn 8:16PM

**Town of Norman Wells
Minutes
Special Council Meeting #20-03
Wednesday, January 29th, 2020, 12:00 pm
Council Chambers, Town of Norman Wells**

Present:	Frank Pope Alexis Peachey Trevor Smith David Wever Jean-Paul Bernard	Mayor Deputy Mayor Councillor Councillor Councillor
Regrets:	Pascal Audet Jim Boyle	Councillor Councillor (Work)
Staff:	Cathy Clarke Johannie Lapierre Alex Millette Misty Rayner	Senior Administrative Officer Development Officer Recreation Director Finance Manager
Guests:	Zackary Chivers	

1. **Call to Order** 12:07PM
2. **Declaration of Conflict of Interest**
None.
3. **Review and Adoption of Agenda**

'Be it resolved that the Agenda for the Special Council Meeting, dated January 29, 2020, is hereby adopted.

Motion: No. 20-03-01
Moved by: Councillor Smith
Seconded by: Councillor Peachey

Motion Carried

4. **New Business**

a) Councillor Audet Request for Leave of Absence from Council Duties

The Senior Administrative Officer informed that Councillor Audet brought to her attention that he has been notified he couldn't be a councillor as per article 26 of his contract with the Town. Councillor Audet submitted a request for Leave of Absence. The Cities, Towns and Villages Act differs, stating that there is no conflict if the contract is for public utility or essential service. The SAO required some time to verify the nomination process in the past election and the status of past votes because this situation happened before. A by-election is not required at this time because Council still has quorum. The request is for 60 days of absence. The SAO could potentially come back to Council on this matter on February 18th's meeting.

'Be it resolved that the Council of the Town of Norman Wells hereby grants Councillor Audet's request for a leave of absence from Council duties for a period of sixty days commencing January 29, 2020.

Motion: No. 20-03-02
Moved by: Councillor Wever
Seconded by: Councillor Bernard

Motion Carried

Ajourn: 12:12PM.

Frank Pope
Mayor

Cathy Clarke
Senior Administrative Officer

**Town of Norman Wells
Minutes
Committee of the Whole Meeting #20-02
Wednesday, January 29th, 2020, 12:00 pm
Council Chambers, Town of Norman Wells**

Present: Frank Pope Mayor
Alexis Peachey Deputy Mayor
Trevor Smith Councillor
David Wever Councillor
Jean-Paul Bernard Councillor

Regrets: Pascal Audet Councillor
Jim Boyle Councillor (Work)

Staff: Cathy Clarke Senior Administrative Officer
Johannie Lapierre Development Officer
Alex Millette Recreation Director
Misty Rayner Finance Manager

Guests: Zackary Chivers

1. **Call to Order** 12:12PM
2. **Declaration of Conflict of Interest**
3. **Review and Adoption of Agenda**
4. **Delegation**
5. **Topics**

- a) **Community Plan: Completed**
- b) **Gas Tax Allocation**

-What should we be spending our funds on, needs/wants and priorities

The Finance Manager advised that the information in the package comes from the electronic files as the paper files aren't easily accessible at this time. It shows where the Town has spent the Gas Tax funding over the last 10 years. 2019: banked about 4.2 million dollars. We received Gas Tax funds for 2019 and the once eligible doubling of the funds for 2018. CPIF funds haven't been received for 2019 yet. Still outstanding \$303 000 in gas tax which is usually received between January and March of the following year as MACA fiscal year ends on March 31.

The SAO reminds that the Town only starts to collect interests once the money hits our account, so the timelines are important to consider. The funds come without interest even if they are received after the contribution date. The funds and interests can only be used for the eligible projects. There are other existing grants the Town can apply for. Gas Tax can often be used as matching dollars. Council will have the opportunity to discuss about how the different funds/reserves will be dealt with. Community engagement is highly recommended.

The Deputy Mayor Peachey presents an example of the correlation between the Gas Tax funding and the existing Reserve funds by-laws. It is possible to work on current project as well as putting money to the side for the future. The money can be divided/differed to multiple years.

The SAO adds that the Town will eventually meet with the financial institution to look at an investment strategy. There will be more return on a long-term investment but the Town first needs to determine the priorities and get money into the reserves. The present objectives are consistency, the ability to get the interest from day 1 and the determination of short, mid and long terms needs.

Discussion is held about the importance to see the big picture while talking about waste management for example as the landfill remediation project and the property clean-up project impact each other. On the drainage project, the ICIP funding is still on hold even if the funds have been approved before the federal elections. The Town is currently sterilizing money for 25% of the project cost as a required contribution. The longer it takes, the less the money is worth. This issue with the federal funds being frozen impacts the North across Canada. It is not possible to correspond directly with the federal government. Communications must go through MACA as the agreement for funding is between the territorial and federal government.

The Mayor comments that the Town must do project planning, optimize the existing money and Council agrees to add the topic on the lobby list.

The Deputy Mayor Peachey requests a list of the expected funds separated from the received ones in order to identify priorities about the reserve by-laws and to work on the projects. The Finance manager will add the information to her monthly report.

Each member of Council presents their priorities:

Councillor Bernard: Landfill and recycling, facility maintenance (depending on status/condition), utilidor (life expectancy assessment required), medical transport.

Councillor Wever: Landfill (sewage, waste management, energy efficiency options), recreation center, a more attractive town.

Deputy Mayor Peachey: Landfill (along with clean-up of unsightly property), utilidor and recreation facilities (jackfish included, status report required).

Councillor Smith: Landfill (along with the research of a new site), recreation facility (neglected for last number of years), by-laws and policies.

Mayor: Landfill (rules of operation, remediation and implementation), waste management (shredding rubber), by-laws and policies, parks and playgrounds (operational and safe), facility maintenance, utilidor system (requires considerable planning and repair). The landfill project could be discussed at the open house meeting of the Sahtu Land and Water Board to be held next month.

The SAO notes that the community engagement component is common and beneficial to the landfill and recreation projects. The Town can start to get the community's input and provide information to the

residents. For example, the costs and manpower necessary for the current arena operations (in potable water for instance) vs for a new facility (possibility of ice use fees).

The Finance Manager informs that asset management is an on-going project and that 95% of the Town buildings have aged out, the pool being the youngest (1996).

The Mayor reminds the importance of planning for the landfill and the property clean-up as lots 165-166 are contaminated. GNWT applied for funding for all Sahtu communities landfills as it is on their land. Discussions will have to occur with MACA and the Department of Lands. The Executive director of the Sahtu Land and water Board informed that most of Northwest Territories landfills are at capacity or over. There will still be a partnership with GNWT in the future for the lease of a new site to implement a landfill.

The Finance Manager explains that an AECOM study reported that the landfill had 5 years life expectancy at the start of 2018. The life expectancy might have changed since then as some items have been trucked out (barrels, batteries). Although we have been moving stuff out, the Mayor adds that a large amount of material has been disposed at the landfill in the last year.

The SAO compares with Yukon which has a 40 years standard.

Councillor Wever inquires on the status of the metal selling project. The SAO replies that our contact is still interested. They are in the process to see if they could bring a compactor during the barge season and if other communities would be interested by the service too. We could check if it would be possible to do the work ourselves, but equipment and manpower might be an issue for this option.

Councillor Wever comments that the territorial should be challenged on the environmental topic. They should provide directions as the problem is all over the Northwest Territories. The SAO informs that Trevor Bremner, Resource Management Officer at the Department of Lands assured that he has started internal discussions about the immediacy of the properties clean-up. The Mayor would like to meet with IORL soon about their remediation program to see how much room the Town could utilize for its own waste.

The Mayor reminds Council about tomorrow night's dinner with the senator of GNWT.

6. Adjourn 1:00PM

Frank Pope
Mayor

Cathy Clarke
Senior Administrative Officer



January 24, 2020

Submitted To: **Town of Norman Wells**
Attn: Hugo Pabke, Utilities Manager
Phone: (867) 587-3700 ext. 1015
utilitiesmanager@normanwells.com

Covering: **AWI Proposal #3062**

Granular Media Filter Upgrade
Location: Town of Norman Wells, NT

Submitted By: **AWI (Anthratech Western Inc.)**
4450 – 46 Ave SE
Calgary, AB T2B 3N7
Main: (403) 255-7377 Fax: (403) 255-3129
www.awifilter.com

Contacts: **Craig Morris**
Project Manager
Direct: (403) 204-5237
craigm@awifilter.com

Philip Hambley
Vice President and Director of Product Design
Direct: (403) 204-5230
philiph@awifilter.com

Introduction

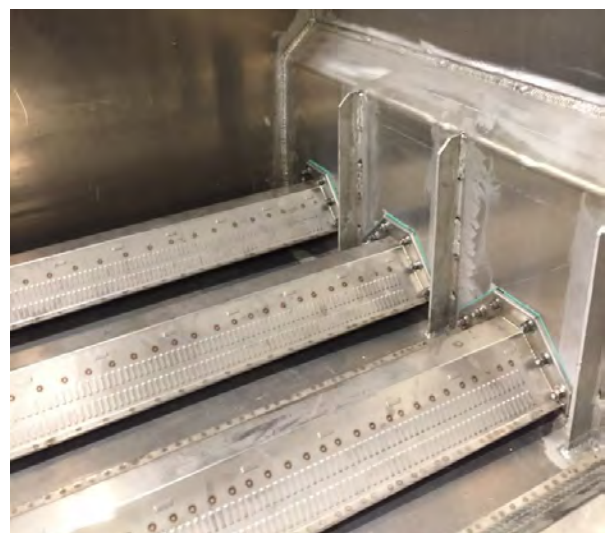
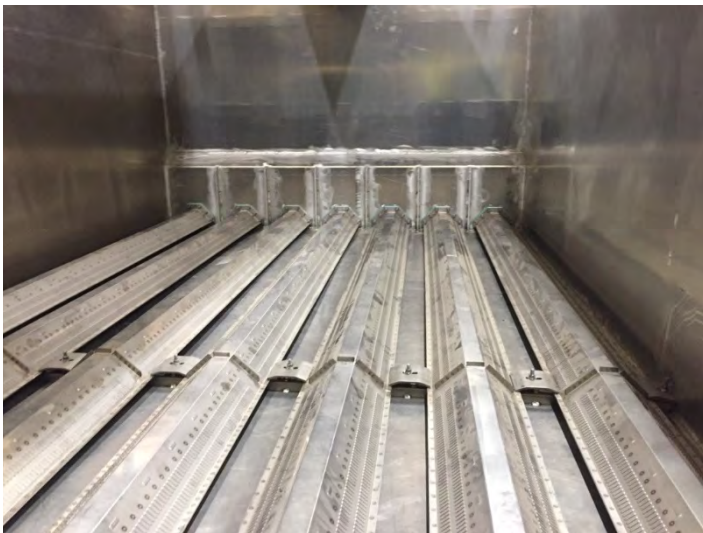
AWI is pleased to provide the following proposal for the supply and installation of the Phoenix Underdrain System and air scour blower for the Town of Norman Wells Water Treatment Plant. Generally speaking, the goal of a filter upgrade is to install a filter underdrain system that can provide a long service life and effective cleaning of the filter media bed.

Over the past 25+ years, AWI filtration technology and filter media expertise have been used in more filter upgrades, retrofits and new filter systems than any other filter optimization technology in Canada. With installations across Canada, the United States and in select international markets, AWI has a proven track record of successful projects and repeat clients.

Regardless of the size or configuration of the filter, the underdrain system is the most important component. The underdrain system collects filtered water during the filtration cycle and distributes water and air flows during the backwash cycle. In addition, the underdrain system must retain the filter media and be antimicrobial.

An underdrain system with balanced hydraulic flow of both water and air is critical to helping maintain a costly asset – the filter media bed.

The filter media bed must be properly maintained to achieve maximum filtration capacity and a long service life.



Phoenix Underdrain System installed in an aluminum filter tank

The AWI Phoenix Underdrain System

We are confident that AWI's patented Phoenix Underdrain System is the appropriate underdrain choice for this filter upgrade project.

The Phoenix Underdrain System is a robust stainless steel system that will provide long-term, sustainable performance at the Norman Wells WTP.

The Phoenix Underdrain System:

- has been used to replace every common type of filter underdrain system, including clay block type systems;
- is in operation in over 2200 filter cells worldwide;
- provides direct media retention, is self-cleaning and is very resistant to biofouling;
- offers guaranteed uniform hydraulic performance;
- includes an industry-leading comprehensive 12-month warranty.



Head Office



Phoenix Underdrain System



Filter Media Analysis



Filter Media Supply



Process Evaluation Studies



Filter Inspections

AWI PROPOSAL

Town of Norman Well Water Treatment Plant Granular Media Filter Upgrade

Filter Design Summary	
Filter Type	Open-top Gravity
Material of Construction	Marine-grade Aluminum
Number of Filter Cells	2
Filter Cell Width	1.5 m (4.9 ft)
Filter Cell Length	1.7 m (5.5 ft)
Area per Filter Cell	2.55 m ² (26.95 ft ²)
Total Filter Area	5.1 m ² (53.9 ft ²)

Filter Upgrade: Project Scope Summary

1. Supply and installation of the Phoenix Underdrain System in one filter.
2. Supply and commissioning of an air scour blower. The addition of air scour capability will increase the cleaning energy of the filter media bed during the backwash cycle.
3. Supply and installation of piping and valves from the air scour blower to one or both filters.
4. Installation of customer supplied filter media.
5. Optional upgrade of the second filter, including AWI supply of additional filter media to meet original WTP design specifications.
6. Optional operator training

OPTION TO UPGRADE BOTH FILTER CELLS:

AWI has been requested to provide scope of work and pricing to replace the failed underdrain system in one filter cell at the Town of Norman Wells Water Treatment Plant. For your consideration, we have included optional pricing to complete the upgrade on the second filter cell at the same time.

Upgrading both cells at once is a cost-effective approach, as the work can be completed by the AWI crew on an expediated schedule in one trip to site. In addition, to achieve a quality weld of new components into the tank, the tank must be room temperature and fully dry, which will be difficult to achieve with water in the adjacent filter cell.

Taking both filter cells off line may require water restrictions or supply of water from an alternate source. This approach was recently undertaken during the concurrent upgrade of both filter cells at the Fort Providence Water Treatment Plant.

If the decision is made to proceed with upgrading both filter cells, AWI will supply additional filter media for the second filter to meet original WTP design depth specifications, as there is not a sufficient volume of customer supplied filter media at site for two filters.

Proposed AWI Scope of Supply – Upgrade of One Filter Cell

1. SUPPLY OF PHOENIX UNDERDRAIN SYSTEM

1.1. All Required Phoenix Underdrain Laterals

- Fabricated from 316L stainless steel (SS) and passivated. Media retention slots are punched directly into the sides of each lateral. No gravel is required.
- The air-scour capable Phoenix Underdrain lateral is comprised of discrete and separate chambers for independent water collection/backwash distribution (lower chamber) and even distribution of air flow (upper chamber). During filter backwash, the underdrain will provide uniform air and backwash water flow individually or simultaneously through all laterals, across the entire filter area.
- Includes floor-mounted aluminum underdrain lateral support channel. The channel will be welded to the floor of the filter cell.

1.2. One Internal Feedbox Assembly

- Fabricated from marine-grade aluminum. The feedbox will be welded to the internal wall and floor of the filter cell.
- The Phoenix Underdrain System laterals will bolt-up and connect to the internal feedbox. Backwash and filtered water flows will enter and exit the filter through a primary orifice at the end of the laterals and through the water feedbox.

1.3. One Air Scour Header

- Fabricated from 316L SS and passivated. Will terminate in a 150# RFSO flanged inlet end for connection to incoming PVC air piping.
- Includes all required flexible reinforced-PVC connection hoses, air header pipe U-bolts, anchor clamps, support brackets, seal gasket material and fasteners.

1.4. All Required Installation Components

- Includes 316 SS floor anchor bolts, fasteners, shims and seal gaskets.

1.5. Phoenix Underdrain System Warranty

- Equipment designed, manufactured and sold by AWI is intended for years of trouble-free service. For the benefit of the original users, AWI warrants all new equipment manufactured by AWI to be free from defects in materials and workmanship for a period of 12 months from filter underdrain commissioning.

1.6. Project Documentation

- Design Package
 - Submitted for approval prior to underdrain equipment fabrication.
 - Will include general arrangement drawings and data sheets.
- O&M Manual
 - Submitted following completion of site work.
 - Will include operations and maintenance instructions, as-built drawings and other associated technical documentation.

1.7. SHIPMENT TO SITE

- AWI Phoenix Underdrain System Components will be packaged in secure wooden shipping crates. The blower will be packaged on a heavy-duty pallet.
- Materials will be shipped from AWI's warehouse in Calgary to site collect via customer's preferred carrier.

2. SUPPLY OF AIR SCOUR BLOWER AND ASSOCIATED ITEMS

2.1. AWI will supply a positive displacement type blower unit, as manufactured by Aerzen Canada. The blower unit will be capable of delivering an appropriate volume of air to each filter based upon air scour of one filter at a time.

- The blower unit will be supplied complete with 3-phase motor, belt drive, inlet filter, PRV and pressure gauge, all mounted on a structural steel base. A sound enclosure is included to ensure quiet operation of the blower during air scour cycles.
- To allow for testing of the blower and air scour cycle during underdrain commissioning, the blower is to be installed by the customer prior to AWI arrival at site, including electrical connections. See additional detail in the Excluded Items section of this proposal.

2.2. AWI will supply and install schedule 80 PVC piping and supports from the blower to both filters, including 2 electrically actuated Bray type butterfly valves for operation of air scour cycles on both filter tanks. Electrical connection for the valves is to be run prior to AWI arrival at site (by others).

3. AWI SITE SERVICES

- 3.1.** An experienced AWI Field Services Supervisor, Technical Services Representative and welder will complete the installation of the Phoenix Underdrain System, air scour piping, valves and filter media. It is requested that the customer provide assistance during manual loading of filter media.
- 3.2.** The AWI crew will be equipped with all required personal tools. Portable aluminum welding equipment is to be provided by the customer for AWI use during installation of the feedbox, floor channel and anchors. AWI will supply and apply touch-up epoxy as required.
- 3.3.** It is estimated that the upgrade of a single filter, including installation of air scour piping, will be completed in 3 days at site. If the second filter is upgraded in the same trip, it is estimated that all site work will be completed within 4 – 5 days at site.
- 3.4.** During underdrain and blower commissioning, AWI will collect backwash and air scour pressure, water temperature and flow rate for baseline information to be included in final project documentation.
- 3.5.** All travel, vehicle and subsistence costs are included.
- 3.6. Site Safety:**
 - AWI acknowledges the customer will retain responsibility as the site Principal Contractor as outlined in The Northwest Territories Safety Act. AWI maintains a valid COR (Certificate of Recognition) through the Alberta Construction and Safety Association (ACSA), which meets the requirements of the Canadian Federation of Construction Safety Associations (CFCSA).
 - AWI will coordinate the completion of all hazard assessments and safety orientations with the customer prior to commencement of site work. It is assumed that the filters are considered a restricted space. AWI Representatives have completed all necessary confined space and other standard safety training. They will be fully equipped with the standard required PPE and necessary installation tools.

4. Operator Training (Optional)

- 4.1.** Comprehensive training is a critical step in developing and maintaining an efficient, sustainable filtration process. Upon request, an experienced AWI Technical Services Representative will present a one-day operator training workshop following filter commissioning. Depending on operator requirements, AWI's training session can qualify for Continuing Education Units (CEUs). Additional information on CEUs can be provided upon request.

AWI PRICING SCHEDULE		
Items	Description	Price
1 - 3	Supply, installation and commissioning of the AWI Phoenix Underdrain System, air scour blower, piping, valves and filter media (one trip to site)	One Filter \$94,750.00 Two Filters \$114,700.00*
4	Optional 1day operator training session for CEUs	\$2400.00
<p><i>All prices are Ex-Works AWI Calgary warehouse as per Incoterms 2010, in Canadian funds, all applicable taxes extra. Price is firm for acceptance within 45 days from date of proposal.</i></p> <p><i>* Upgrade of the second filter includes AWI supply of additional filter media to meet original WTP filter media design depth.</i></p>		

PROPOSED TERMS OF PAYMENT

- 10%** Of contract value due upon submission of engineering design package for approval.
- 80%** Of contract value due upon readiness to ship from Calgary.
- 10%** Of contract value due upon completion of AWI site services.

ESTIMATED DELIVERY PERIOD

- Design package will be submitted 3 - 4 weeks after receipt of purchase order or written notice to proceed.
- Fabricated components will be ready for shipment 10 – 12 weeks after approval of design package.
- AWI requires 4 – 5 weeks lead time to schedule site services, subject to prior project commitments.

EXCLUSIONS (by others)

- A forklift and operator for offloading and handling of all components, equipment and filter media.
- To be completed prior to AWI arrival at site:
 - It is requested that the customer collect samples of the new filter media at site and submit samples to AWI for analysis to confirm compatibility with the new underdrain system.
 - Preparation of filter(s), including removal and disposal of existing filter media and underdrain, and cleaning of filter cell(s).
 - It is requested that the customer test removing a portion of the tank coating to ensure it can successfully be removed for welding of new internal component to the tank.
 - Supply and installation of a housekeeping pad for the new blower (optional).
 - Placement of the new blower.

- Electrical, motor starter and instrumentation connections to AWI supplied blower and valves.
- Electrical and instrumentation connections to existing PLC and other equipment, as required.
- Related to AWI site work:
 - Site facilities including lunchroom and washroom facilities for the AWI crew.
 - Filter access equipment and lighting.
 - Portable aluminum welding equipment for use by AWI welder.
 - Power supply for tools.
 - It is requested that the customer provide 1 – 2 laborers to assist the AWI crew at various times during of site work.
 - Services of a WTP operator for filter operation during various stages of site work.
 - Filter and equipment lock out procedures as required.
 - Removal and disposal of all waste material related to AWI supply.
- Disinfection of upgraded filter and testing required prior to placement of filter back into service (per AWWA C653).
- AWI recommends supply and installation of permanent pressure gauges to monitor backwash pressure on all filters. This item has not been included for in AWI scope or pricing but should be discussed further.
- Any items not identified in the above proposal are not included in AWI's supply. Should additional components or site work be required that is not included in this proposal, AWI will immediately advise the customer of any and all additional costs for time and materials to complete additional work prior to proceeding.

We appreciate the opportunity to provide the above information. Please contact one of the AWI representatives below with any questions or if further information is required.

Craig Morris
Project Manager
Direct: (403) 204-5237
craigm@awifilter.com

Philip Hambley
Vice President and Director of Product Design
Direct: (403) 204-5230
philiph@awifilter.com

Administrative Report

DATE OF MEETING: February 4, 2020

Agenda #: 20-04

SUBJECT: FILTER UNDERDRAIN REPLACEMENT

SUBMITTED BY: HUGO PABKE

RECOMMENDATION: APPROVE PURCHASE OF UNDERDRAIN SYSTEM FROM AWI

EXECUTIVE SUMMARY

The filter underdrain of one of the two filters at the Water Treatment Plant is broken. The current design of the underdrain of the filters at the water treatment plant is deficient and prone to failure.

Utilities staff recommend using AWI to replace the underdrains of both filters at the water treatment plant.

RELEVANT COUNCIL DIRECTION, POLICY OR BY-LAWS

N/A

DISCUSSION

The Norman Wells Water Treatment Plant has 2 filters (A and B) that operate independently of each other to filter water. During the fall of 2019 utilities staff identified operational issues with Filter A. Filter A was requiring more frequent cleaning and had media break through the filter underdrain and break the effluent pump after the filter.

In December of 2019 Utilities staff dug out all the media from Filter A to expose the underdrain system. The underdrain system was completely broken and could not be repaired. The existing underdrain system is made of light duty PVC.

After discovering the problem utilities staff contacted the water and sanitation department at MACA to enquire if other communities in the NWT have had similar issues. MACA suggested speaking to AWI as they have upgraded or provided new underdrain systems to multiple communities in the NWT over the last 5 years that have

had similar problems with filters as what we are experiencing in Norman Wells. Utilities staff contacted AWI and asked them to prepare a proposal for replacing the underdrain system on filter A as well as a proposal for replacing the underdrain system on both filters at the water treatment plant.

When parts of the water treatment plant break the utilities department usually tries to replace the broken item with an identical replacement. In this case the original design of the underdrain is deficient and is prone to failure.

I recommend that we get AWI to replace both filter underdrains in one visit. A significant portion of the cost of this work is flying 3 people from AWI to site as well as the cost to engineer the upgraded underdrain system. AWI has quoted the town a base price of \$94,750.00 to replace a single filter and a base price of \$114,700.00 to replace both filters.

We have only been able to get a quote from 1 company for this work. AWI are the only company that have ever done this sort of filter upgrade in the North. Upgrading the filter underdrain will extend the life of the water treatment plant.

ANALYSIS OF ALTERNATIVES

There is no alternative to replacing filter underdrain on Filter A.

FINANCIAL IMPACTS

The replacement of both filter underdrains has been quoted by AWI at \$114,700.00. There are a few costs associated with this project that the town will need to take on. These include the cost to transport all of the equipment needed for this project from Calgary to Norman Wells, rental cost of an aluminum welder and associated equipment, work needed to prepare the plant for the retrofit including electrical wiring and instrumentation, as well as the cost of having an AWI staff stay on site for an extra day to provide training to Utilities staff. We estimate that the above costs would be \$30,000.00.

The total cost of this project is estimated to be \$144,700.00. This would be taken from Gas Tax Funds.

STAKEHOLDER ENGAGEMENT

This issue has been discussed with MACA's Water and Sanitation Division.

