AGENDA
Bentley Town Council Regular Meeting
Tuesday June 14, 2022
6:45 pm

1. Call to Order
2. Indigenous Acknowledgement
"We acknowledge that we are meeting on Treaty 6 Territory and Home of Metis Nation Region 3, on land that is part of a historic agreement involving mutuality and respect. We recognize all the many First Nations, Metis, Inuit, and non-First Nations whose footsteps have marked these lands."
3. Amendments \& Acceptance of Agenda
4. Adoption of Previous Minutes:
a) Regular Meeting of Council May 24, 2022
5. Financial:
a) Prepaid Cheque Listing - Cheques No. 20220358 to 20220414
6. New Business
a) Asset Management Program
i) Presentation by Stantec - Asset Management Water Infrastructure
ii) Policy 58/2022 - Asset Management Policy
iii) Asset Management Plan - Phase 1 - Water Distribution and Treatment System
b) Advocacy to Provincial and Federal Levels of Government
i) Strategic Planning Workshop Presentation May 22, 2022
ii) Invitation to Request a Meeting with the Minister - 2022 AM Fall Convention
7. Correspondence
a) Public Engagement - Information Session June 29, 2022, Oxford Building and Municipal Park at Seniors Drop-In (Reminder)
b) Public Engagement - Information Session July 5, 2022, New Beginnings Subdivision - Next Steps at Seniors Drop-In
c) Parkland Regional Library System Board Meeting Minutes May 19, 2022
d) Bill 21 - Red Tape Reduction Statutes Amendment Act 2022 Implementation Fact Sheet
e) RCMP Quarterly Update - Q1 2022
8. Other Business
a) Tool Cat Purchase - Verbal Update CAO
b) In-Camera - New Beginnings Subdivision - Advice from Officials (In-camera pursuant to section 24(1) Freedom of Information and Privacy Act
9. Council Reports
a) Mayor Rathjen
b) Deputy Mayor Hansen
c) Councillor Grimsdale
d) Councillor Eastman
e) Councillor Valiquette

## 10. Adjournment



# Minutes of the Regular Meeting of the Council of the Town of Bentley 

May 24, 2022

| Date and Place | Minutes of the Regular Meeting of the Council of the Town of Bentley <br> held Tuesday, May 24, 2022, at 6:45 p.m., in the Bentley Municipal Office |
| :--- | :--- |
| In Attendance | Mayor Greg Rathjen <br> Deputy Mayor Hansen <br> Councillor Lenore Eastman <br> Councillor Dale Grimsdale <br> Councillor Brenda Valiquette <br> CAO, Marc Fortais |
| Call to Order | Mayor Greg Rathjen called the meeting to order at 6:45 p.m. |
| Indigenous | Mcknowledgement"We acknowledge that we are meeting on Treaty 6 Territory and <br> Home of Metis Nation Region 3, on land that is part of a historic <br> agreement involving mutuality and respect. We recognize all the many <br> First Nations, Metis, Inuit, and non-First Nations whose footsteps have <br> marked these lands" |

Read by Mayor Rathjen

## Agenda

Motion 103/2022 Moved by Councillor Grimsdale, "THAT the agenda of the May 24, 2022, Regular Meeting of Council be amended to include the following items under Other Business:
a) Campground Signage
b) Letters for parades
c) Seniors Luncheon

## Carried

Motion 104/2022 Moved by Deputy Mayor Hansen, "THAT the amended agenda, of the May 24, 2022, Regular Meeting of Council be accepted."

## Previous Minutes

Motion 105/2022 Moved by Councillor Valiquette, "THAT the minutes of the May 24, 2022, Regular Meeting of Council be accepted."

Carried

Financial

New Business
a) Prepaid Cheque Listing Cheques No. 20220320 to 20220357

Motion 106/2022 Moved by Councillor Grimsdale, "THAT Cheque No. 2022320 to 20220357 be received for information."

Carried
a) Bylaw 232/2022 - $\mathbf{2 0 2 2}$ Mil Rate Bylaw

Motion 107/2022 Moved by Councillor Grimsdale, "THAT Bylaw No. $232 / 2022$ be given the first reading this $24^{\text {th }}$ day of May 2022."

## Carried

Motion 108/2022 Moved by Deputy Mayor Hansen, "THAT Bylaw No. $232 / 2022$ be given second reading on this $24^{\text {th }}$ day of May 2022."

Carried
Motion 109/2022 Moved by Councillor Valiquette, "THAT Bylaw No. $232 / 2022$ be considered for third and final reading this $24^{\text {th }}$ day of May 2022."

## Carried Unanimously

Motion 110/2022 Moved by Councillor Eastman, "THAT Bylaw No. $232 / 2022$ be given third and final reading on this $24^{\text {th }}$ day of May 2022."

Carried
b) Bylaw 233/2022 - A Bylaw of the Town of Bentley, in the Province of Alberta, to provide for the supplementary assessment and taxation of manufactured homes for the 2022 calendar year.

Motion 111/2022 Moved by Councillor Eastman, "THAT Bylaw $233 / 2022$ be given first reading this $24^{\text {th }}$ day of May 2022."

Motion 112/2022 Moved by Councillor Valiquette, "THAT Bylaw $233 / 2022$ be given second reading this $24^{\text {th }}$ day of May 2022. "

Carried
Motion 113/2022 Moved by Councillor Grimsdale, "THAT Bylaw $233 / 2022$ be considered for third and final reading this $24^{\text {th }}$ day of May 2022."

## Carried Unanimously

Motion 114/2022 Moved by Deputy Mayor Hansen, "THAT Bylaw $233 / 2022$ be read a third and final time this $24^{\text {th }}$ day of May 2022."

Carried

## Correspondence

a) Public Engagement - Information Session June 29, 2022, Oxford Building and Municipal Park
b) Hazardous Waste Round Up
c) Lacombe County Highlights May 12, 2022
d) Parkland Regional Library System - 2021 Annual Report Infographic

Motion 115//2022 Moved by Councillor Grimsdale, "THAT correspondence items a) to d) be received for information."

## Carried

## Other Business

## a) Campground Signage

- Feedback from the community was brought up regarding the difficulty in seeing the campground signage.
- The CAO advised that administration would look at options regarding more predominant signage


## b) Letters for parades

- Now that communities are not locked down from COVID, the Town of Bentley is receiving invitations to attend parades from other communities.
- Mayor Rathjen mentioned to all of Council that he encourages members of council to represent Bentley. He also stated that this would be non-billable time to the town and that it is part of Council's job to represent their community. if there is interest in attending the parades to represent Bentley, please ensure that
- Administration and the Mayor is informed that a Council member will be attending.


## c) Seniors Lunch

- CAO Marc Fortais reminded Mayor and Council that to celebrate Senior's week a luncheon was being held June 5, 2022 @ 12:30 pm at the Bentley Community Hall. The event is a collaboration with the Seventh Day Adventist Church and Community Services (FCSS). Come out and enjoy music, great food, and great company.

Motion 116/2022 Moved by Councillor Valiquette, "THAT Other Business items a), b) and c) be accepted as information."

## Carried

d) In-Camera - Disclosure Harmful to Personal Privacy Personnel/Labour matter (in-camera pursuant to section 17(1) Freedom of Information and Protection of Privacy Act

Motion 117/2022 Moved by Deputy Mayor Hansen, "THAT the Regular Meeting of Mayor and Council, be closed to the public at 7:35pm for a discussion regarding a personnel/labour matter, pursuant to 17(1) of the Freedom of Information and Protection of Privacy Act."

Carried

Motion 118/2022 Moved by Councillor Valiquette, "THAT the Regular Meeting of Mayor and Council be resumed in public at $8: 30 \mathrm{pm}$."

Carried

Adjournment Mayor Rathjen adjourned the meeting at 8:32pm

## Mayor Greg Rathjen

CAO Marc Fortais

| Cheque | \# Date Vendor Name | Invoice \# | Invoice Description | Invoice Amount | Cheque Amount |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20220358 | 2022-05-25 RED DEER PRO LIFE | 24052022 | PAYMENT REIMBURSE PROLIFE TOURNAN | 430.50 | 430.50 |
| 20220359 | 2022-05-30 CARSON, BARBARA J |  |  |  |  |
| 20220360 | 2022-05-30 JENSEN, DARREN J |  |  |  |  |
| 20220361 | 2022-05-30 MEREDITH, SANDRAL |  |  |  |  |
| 20220362 | 2022-05-30 GIBSON, COLE C |  |  |  |  |
| 20220363 | 2022-05-30 DENNEHY, NATHAN |  |  |  |  |
| 20220364 | 2022-05-30 GREAVES, LORYANNE |  |  |  |  |
| 20220365 | 2022-05-30 FORTAIS, MARC C |  |  |  |  |
| 20220366 | 2022-05-30 KIKSTRA, ROBERT B |  |  |  |  |
| 20220367 | 2022-05-30 LOOV, CHRISTOPHER D |  |  |  |  |
| 20220368 | 2022-05-30 BUDGELL, KAYDE T |  |  |  |  |
| 20220369 | 2022-05-30 SMITH, MADISON M |  |  |  |  |
| 20220370 | 2022-05-26 CARSON, BARB | 04052022 | PAYMENT REIMBURSEMENT MEALS \& MLLI | 95.60 | 95.60 |
| 20220371 | 2022-05-26 CENTRALALBERTA ECONOMIC PARTNERSHIP | 122575 | PAYMENT CAEP MEMBERSHIP FEES | 765.87 | 765.87 |
| 20220372 | 2022-05-26 NUTIRIEN AG SOLUTIONS (CANADA) INC. | 900792625 | PAYMENT <br> FERTILIZER FOR PARKS AND RE | 52.50 | 52.50 |
| 20220373 | 2022-05-26 SHAW CABLE | 12062022 | PAYMENT OFFICE INTERNET | 131.25 | 131.25 |
| 20220374 | 2022-05-26 GOVERNMENT OF ALBERTA, PROVINCIAL TRAF | B51613870Q | PAYMENT EMPLOYEE VIOLATION TICKET 7 | 123.00 | 123.00 |
| 20220375 | 2022-06-01 A.J. REPAIRS | 1093 | PAYMENT REPAIR ON HUSKY 445 \& EARTH | 253.31 | 253.31 |
| 20220376 | 2022-06-01 BEARCOM CANADA CORP, C/O T45502 | 5373652 | PAYMENT <br> SMARTPHONE \& PLAN FOR CHR | 577.50 | 577.50 |
| 20220377 | 2022-06-01 BUNZL CLEANING \& HYGIENE | $\begin{aligned} & 131076 \\ & 131124 \end{aligned}$ | PAYMENT <br> JANITORIAL SUPPLIES FOR CAN JANITORIAL SUPPLIES FOR CAN | $\begin{aligned} & 459.16 \\ & 115.88 \end{aligned}$ | 575.04 |
| 20220378 | 2022-06-01 EASTMAN, LENORE | 20052022 | PAYMENT <br> MILEAGE TO COUNTY OFFICE (J | 29.50 | 29.50 |
| 20220379 | 2022-06-01 ECO TREE LTD | 10723 | PAYMENT GRIND 5 SPRUCE STUMPS 4738 | 630.00 | 630.00 |
| 20220380 | 2022-06-01 GREAVES, LORYANNE | 27052022 | PAYMENT WINDOW ENVELOPES 2 BOXES | 84.00 | 84.00 |
| 20220381 | 2022-06-01 GREGG DISTRIBUTORS LP | $\begin{aligned} & 059-453217 \\ & 059-455414 \end{aligned}$ | PAYMENT MOWER BATTERIES AND EAR M REPLACED 2 SMOKE ALARMS IN | $\begin{aligned} & 400.32 \\ & 106.58 \end{aligned}$ | 506.90 |
| 20220382 | 2022-06-01 HOLDEN, KARI | $\begin{aligned} & 26052022 \\ & 3105202 \\ & 31052022 \\ & \text { May31,2022 } \end{aligned}$ | PAYMENT <br> BENTLEY FIREHALL JANITORIAL OFFICE JANITORIAL FOR MAY $2 C$ BASEMENT JANITORIAL FOR MA SENIORS DROP IN JANITORIALI | $\begin{array}{r} 210.00 \\ 210.00 \\ 150.00 \\ 75.00 \end{array}$ | 645.00 |
| 20220383 | 2022-06-01 INNOV8, DIGITAL SOLUTIONS INC. | IN343046 | PAYMENT <br> OFFICE PHOTOCOPIER | 993.85 | 993.85 |
| 20220384 | 2022-06-01 JACKSON, BRIAN | 31052022 | PAYMENT MAY CAMPGROUND CARETAKEF | 663.86 | 663.86 |


| Cheque \# | Cheque \# Date Vendor Name | Invoice \# | Invoice Description | Invoice Amount | Cheque Amount |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20220385 | 2022-06-01 KEY AGVENTURES INC. | WR12736 | $\begin{aligned} & \text { PAYMENT } \\ & \text { ZERO TURN MOWER REPAIR } \end{aligned}$ | 733.54 | 733.54 |
| 20220386 | 2022-06-01 LOOV, CHRISTOPHER | 27042022 | PAYMENT <br> REIMBURSEMENT ANNUAL PPE | 150.00 | 150.00 |
| 20220387 | 2022-06-01 MCLAREN, CAROLYN | 148 | PAYMENT <br> PLAYGROUP FOR MAY 2022 | 300.00 | 300.00 |
| 20220388 | 2022-06-01 MY TECH ONSITE | INV 2041 | PAYMENT <br> HARDWARE - IT | 315.19 | 315.19 |
| 20220389 | 2022-06-01 RECEIVER GENERAL | $\begin{aligned} & 05312022 . \\ & 31052022 \end{aligned}$ | PAYMENT <br> REGULAR EMPLOYMENT INSUR <br> REDUCED EMPLOYMENT INSUR | $\begin{array}{r} 3,106.16 \\ 17,280.13 \end{array}$ | 20,386.29 |
| 20220390 | 2022-06-01 RED DEER LOCK \& SAFE LTD. | 555669 | PAYMENT CAMPGROUND WASHROOMS LC | 375.90 | 375.90 |
| 20220391 | 2022-06-01 SHAW CABLE | $\begin{aligned} & 21052022 \\ & 23052022 \end{aligned}$ | $\begin{aligned} & \text { PAYMENT } \\ & \text { FCSS INTERNET } \\ & \text { P.W. SHOP INTERNET } \end{aligned}$ | $\begin{array}{r} 124.95 \\ 73.50 \end{array}$ | 198.45 |
| 20220392 | 2022-06-01 1829336 AB LTD O/A ROYAL GLASS | 9333 | PAYMENT <br> ARENA GLASS IN DOORS GOINC | 283.50 | 283.50 |
| 20220393 | 2022-06-01 HYDRASURVEY LTD. | 2205-04 | PAYMENT WASTEWAATER SLUDGE SURVE | 7,317.98 | 7,317.98 |
| 20220394 | 2022-06-08 BENTLEY COMMUNITY HALL | 09282022 | PAYMENT <br> RENTAL FOR SEPTEMBER 28 " | $300.00$ | 300.00 |
| 20220395 | 2022-06-08 BENTLEY ESSO | 31052022 | PAYMENT <br> VEHICLE/EQUIPMENT GAS/DIES | $1,865.27$ | 1,865.27 |
| 20220396 | 2022-06-08 BENTLEY MUNICIPAL LIBRARY | 07062022 | PAYMENT <br> LACOMBE COUNTY ANNUAL GR」 | $14,409.90$ | 14,409.90 |
| 20220397 | 2022-06-08 BLACK PRESS GROUP LTD. | 34264867 | PAYMENT <br> RIMBEY REVIEWAD FOR TOURI: | 341.51 | 341.51 |
| 20220398 | 2022-06-08 CANOE PROCUREMENT GROUP OF CANADA, D | AB006801 <br> AB116351 | PAYMENT <br> WINDOW ENVELOPES <br> BUSINESS CARD HOLDER DISPI | $\begin{array}{r} 215.40 \\ 17.21 \end{array}$ | 232.61 |
| 20220399 | 2022-06-08 CHAPMAN RIEBEEK LLP | $\begin{aligned} & 2206011 \\ & 2206012 \end{aligned}$ | PAYMENT <br> GENERAL MATTERS <br> BYLAW PROSECUTIONS (GENEF | $\begin{aligned} & 447.56 \\ & 212.36 \end{aligned}$ | 659.92 |
| 20220400 | 2022-06-08 GO SERVICES INC. | 15156718 | PAYMENT PORTA POTTYS AT PARK AND B/ | 787.50 | 787.50 |
| 20220401 | 2022-06-08 GREGG DISTRIBUTORS LP | 059-456607 | PAYMENT <br> OFFICE SMOKE DETECTORS | 106.58 | 106.58 |
| 20220402 | 2022-06-08 OUTLAW ELECTRIC LTD. | $\begin{aligned} & 9273 \\ & 9274 \\ & 9275 \\ & 9321 \end{aligned}$ | PAYMENT <br> INSTALL SURGE PROTECTOR AT ARENA WINTERIZE <br> SENIORS DROP IN KITCHEN PLL <br> PARKS \& REC BUILDING UPDATE | $\begin{array}{r} 1,049.60 \\ 97.65 \\ 97.65 \\ 4,367.01 \end{array}$ | 5,611.91 |
| 20220403 | 2022-06-08 PITNEYWORKS | 03062022 | PAYMENT POSTAGE | 1,080.00 | 1,080.00 |
| 20220404 | 2022-06-08 RATHJEN, GREG | 31052022 | PAYMENT <br> MILEAGE REIMBURSEMENT | 50.74 | 50.74 |
| 20220405 | 2022-06-08 RED DEER LOCK \& SAFE LTD. | 556577 | PAYMENT CAMPGROUND WASHROOM LOI | 374.85 | 374.85 |
| 20220406 | 2022-06-08 RIMBEY EXPRESS | 2165 | PAYMENT WATER SAMPLES \& RETURNS F | $106.52$ | 106.52 |


| Cheque \# | Cheque \# Date Vendor Name | Invoice \# | Invoice Description | Invoice Amount | Cheque Amount |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20220407 | 2022-06-08 SELECT AG FOODS | $\begin{aligned} & 01062022 \\ & 05062022 \end{aligned}$ | PAYMENT <br> SENIORS LUNCHEON SUPPLIES <br> SENIORS LUNCHEON SUPPLIES | $\begin{array}{r} 27.96 \\ 11.91 \end{array}$ | 39.87 |
| 20220408 | 2022-06-08 TELUS COMMUNICATIONS INC. | 04062022 04062022. June04,2022 | PAYMENT <br> ARENA WIFI <br> TELUS BILL FOR JUNE 2022 INTERAC LINE | $\begin{array}{r} 68.25 \\ 767.51 \\ 37.55 \end{array}$ | 873.31 |
| 20220409 | 2022-06-08 UNFUSSY INC. | 1007-44 | PAYMENT <br> WEBSITE BRANDING AND DESIG | 9,450.00 | 9,450.00 |
| 20220410 | 2022-06-08 VALIQUETTE, BRENDA | 31052022 | PAYMENT REIMBURSEMENT MILEAGE TO । | 29.50 | 29.50 |
| 20220411 | 2022-06-08 WASTE CONNECTIONS OF CANADA INC. | 7425-00024285: | PAYMENT COMMERCIAL WASTE PICK UP | 907.53 | 907.53 |
| 20220412 | 2022-06-08 WASTE MANAGEMENT | 1141357-0613-2 | PAYMENT RECYCLING | 8,421.99 | 8,421.99 |
| 20220413 | 2022-06-08 WILD ROSE ASSESSMENT SERVICES | 8636 | PAYMENT <br> PROGRESS PAYMENT FOR JUNE | 1,330.88 | 1,330.88 |
| 20220414 | 2022-06-08 CCT BINS INC | 1998 | PAYMENT <br> SPRING CLEAN UP | 526.18 | 526.18 |

Agenda Date:
June 14, 2022
Agenda Item: New Business:
Federation of Canadian Municipalities - Municipal Asset Management Program (MAMP) Grant - Project Completion

## SUMMARY AND BACKGROUND

In July of 2020 Town of Bentley Administration, supported by Council, applied for funding with the Federation of Canadian Municipalities (FCM) to advance the Town's Asset Management Program. The 2020 Federal Budget committed an additional \$60M (above a previously committed \$50M) to support municipal investments in Asset Management with these funds administered by the Federation of Canadian Municipalities (FCM). The town was successful in receiving approval of a \$50,000 grant from FCM to move forward with the initial phases of Asset Management implementation. Additionally, the town had committed $\$ 15,000$ in funding to meet the $80 \%$ to $20 \%$ funding split for the grant.

Phase 1 of the asset management program focused on Water Infrastructure Assets. Administration felt that this represented the highest risk of asset class and felt that it was important to move this forward first. The funding provided by FCM allowed the town to:

- Provide training to both Mayor and Council as well as staff
- Develop an Asset Management Policy
- Review the Water Infrastructure Asset Class
- Conduct high level inventory capture
- Review existing data
- Identify risks
- Develop a long-term financial plan to replace assets
- Create a Draft Asset Management Plan

Through the development of clear and transparent asset management practices, administration and Mayor and Council will be able to make informed decisions that mitigate long term risks and ensure that adequate funding is available to sustain and maintain capital assets.

The Town's current method of managing assets was largely based on staff knowledge and expertise. This creates risk and exposure through loss of knowledge if there is staff turnover, as well as no well documented long-term strategy for asset replacement. Shifting to a more structured Asset Management Framework will allow the Town to capture and document our asset management practices, document approved levels of service, understand the risk profile and understand long term costs of sustainably managing the Town.

## CURRENT STATE:

Council and administration was engaged through workshops with Stantec Engineering in late 2021 and early 2022, to review and further understand the Town's risk profiles and refine our asset management program and strategy.

The workshops included reviewing 51 Asset and Service Level categories and 87 risk items, which were documented including:

- Components
- Customer Levels of Service
- Performance Indicators
- Current Operational and Maintenance Activities
- New Potential Activities
- Potential risk events, likelihood of risk, consequence, and overall risk

Levels of service were broken down and rated on a scale of 1-4 with 1 being the lowest level of service and 4 being the highest level of service. It should be noted that there is a balance between the provision of service/risk and cost, meaning that not all services can be provided at the highest level of service due to significant costs measured against the risk/reward profile. The idea of implementation of an asset management program, ensures that you understand your service levels clearly, the associated costs and the risk reward profile. This allows for tweaks and improvements over time.

Total Asset Inventory and Performance of the Current Water Distribution system has an Asset Replacement Value of $\$ 15.7$ million. The resulting Asset Inventory and Condition Assessment shows that the components of our systems have the following useful lives.

- Water mains (PVC)
- Water mains (AC)
- Wells
- Water Reservoir
- Water Treatment Plant
- Hydrants

100 years
75 years
50 years
80 years
50 years
75 years

Based on an averaging of costs over 100-year lifecycle of the Water System, the town should be placing approximately $\$ 172,000$ per year into reserves This takes into consideration that asset replacement has happened over various times for the existing infrastructure. Contributing to reserves over time, eases the burden of major infrastructure replacement. It should be noted that where possible the town will apply for grants to offset the costs of such infrastructure replacements.

As an example, a significant portion of water main was placed in 1973 and is comprised mainly of Asbestos Cement Pipe (AC) with a useful life of 75 years. What this means is that a good majority of water infrastructure will need to be replaced in approximately 26 years.

Administration along with Stantec are here today to present (Attachment 1) the findings of Phase 1 of the Asset Management Program and seek Mayor and Council's approval of the Asset Management Policy (Attachment 2) and Phase 1 of the Asset Management Plan (Attachment 3).

## RATIONALE FOR RECOMMENDATION

- Development of a documented Asset Management Program is critical to the long term sustainability of the Town's Assets.
- The program will allow for better transparency and ensure fiscal responsibility over the long term.
- Phase 1 of the work is completed, and we have a much better understanding of the fiscal requirements that are needed to maintain our current system.
- Mayor and Council Approval of the policy and Phase 1 Water Infrastructure Plan is required to finalize our report to FCM and submit our claim for grant funds to be disbursed.


## BUDGET AND FINANCIAL CONSIDERATIONS

- FCM Grant Applied for (max amt)
- Town of Bentley Funds

Total Estimated Project Cost
\$50,000 (77\%)
\$15,000 (23\%)
\$65,000

## RECOMMENDATION

THAT Mayor and Council approve Policy 58/2022 - Asset Management Policy; AND
THAT Mayor and Council approve Town of Bentley - Asset Management Plan - Phase 1 - Water Distribution and Treatment System; AND

THAT the CAO submit the final reporting and expense claim to the Federation of Canadian Municipalities for the Town of Bentley Grant to offset the cost of implementation of Asset Management Plan - Phase 1 - Water Distribution and Treatment System.

## ATTACHMENTS

1) Stantec PowerPoint presentation
2) Town of Bentley Asset Management Policy 58/2022
3) Asset Management Plan - Phase 1 - Water Distribution and Treatment System

Marc Fortais, CAO


## Town of Bentley Asset <br> Management Plan <br> Phase 1 - Water Distribution and Treatment System

## Today

- Refresher on the Project
- Risk \& LOS Workshops
- Asset Inventory \& Performance
- Long Term Financial Plan
- Next Steps



## Refresher - MAMP Grant Project

- Asset Management Training for
- Mayor and Council
- Administrative Staff
- Develop an Asset Management Policy
- Water Asset Class
- Conduct a High-Level Inventory Capture
- Review Existing Data
- Develop a Long-Term Financial Plan
- Draft Asset Management Plan


## Risk \& LOS Workshops

- Workshops with Staff \& Council
- 51 Asset \& Service Categories
- Documented:
- Components
- Customer Levels of Service
- Performance Indicators
- Current O\&M Activities
- New potential Activities


## Risk \& LOS Workshops

Level of Service Breakdown

- Rated on a scale of 1-4
- Lowest Level 1 - 9 Services
- Level 2 - 11 Services
- Level 3 - 20 Services
- Highest Level 4 - 11 Services


## Risk \& LOS Workshops

Level 1 Services (9)

- Fall into 3 categories
- Function of scale
- Function of Asset Age and Condition
- Improvement Opportunities


## Risk \& LOS Workshops

- Workshops with Staff \& Council
- 87 Risk Items reviewed
- Documented:
- Potential Risk events
- Likelihood
- Consequence
- Overall Risk
- 12 Risks Identified as Medium
- 4 Risks Identified as HIGH


## Risk \& LOS Workshops



## Risk \& LOS Workshops

| Risk Type | Risk Description | Cause of Potential Failure | Comment | Current Monitoring | How Risk is Currently Controlled | Risk <br> Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | Failure of pumps due to power surge at pump station. | Due to pump failure due to electrical fault caused by power surge. | If electrical supply is subject to power fluctuations surge protection should be used. | None | No surge protector in pumphouse | 64 |
| Network Risks | Contamination of water due to ingress of water as a result of inadequate structure or maintenance. | Due to lack of structural integrity of reservoir as a result of poor design or maintenance | Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents. | Divers monitor deficiencies, visual inspections of hatches. Significant drop in cl2 residual would begin investigation. | Tritoflex sealant installed on \#3 reservoir, no concerns with other reservoirs | 32 |
| Customer Risks | Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe. | Disinfectant decay due to water remaining in pipe for extended period | Service may have been installed without any consideration of residence time in service pipe | None | None | 32 |
| Customer Risks | Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures. | As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice | If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination. | None | None | 32 |

## Asset Inventory \& Performance

\$15.7M
Asset
Replacement
Value


## Asset Inventory \& Performance




- AC Water Main
- PVC Water Main
- Proposed Water Main


## Asset Inventory \& Condition




## Long Term Financial Plan

- What is the Cyclical reinvestment required given the infrastructure the Town has today?

| Asset Name | Current Replacement Value | Annualized Cost | Reinvestment \% per year |
| :---: | :---: | :---: | :---: |
| Water Pressure Main | $\$ 11,928,800$ | $\$ /$ Year | $\$ 119,000$ |
| Water Wells | $\$ 450,000$ | $\$ 9000$ | 1.0 |
| Water Reservoir | $\$ 2,485,000$ | $\$ 31,000$ | 2.0 |
| Water Treatment Plant | $\$ 310,000$ | $\$ 6,200$ | 1.3 |
| Hydrants | $\$ 440,000$ | $\$ 15.6 M$ | $\$ 6,400$ |
| Combined Total |  | $\$ 172 \mathrm{~K}$ | 2.0 |

Water System 100 Year Life Cycle Cost by Year and Asset Class


## Implementation Plan (Next Steps)



- Develop the Town's first Asset Management Plan (Water) Including Risk, LOS \& Decision Frameworks
- Create and task an Asset Managment Team
- Create an Asset Management Policy and undertake Training
- Create a

Long Term Financial Plan for

- Develop an Asset Management Plan for the Sewer Assets building on the Phase 1 developed Frameworks
- Create forward looking plans based on the asset management plans and activities
- Begin to use the Level of Service language in budget development
- Create a Long-Term Financial Plan for Sewer Assets
- Develop an

Asset Managment Plan for the Road Assets

- Create a detailed 10 year capital plan to based on the AM Plan Long Term Financial Plans
- Begin a public conversation about sustainable infrastructure
- Optimize the investment between water, sewer and road assets

Discussion \& Questions

## Policy 58/2022

## POLICY TITLE: Asset Management Policy

DATE ADOPTED:<br>SCHEDULED REVIEW DATE:<br>REPLACES: NEW


#### Abstract

AUTHORITY: The Municipal Government Act, Section 3, defines the purposes of a municipality to be: (a) to provide good government; (a.1) to foster the well-being of the environment; (b) to provide services, facilities or other things that, in the opinion of council, are necessary or desirable for all or a part of the municipality; (c) to develop and maintain safe and viable communities, and (d) to work collaboratively with neighboring municipalities to plan, deliver and fund intermunicipal services.


## POLICY PURPOSE:

The Town of Bentley recognizes that to meet the Town's Vision for the future, infrastructure, and assets both existing and new assets must be effectively managed to ensure that they are sustainable for future generations to enjoy. This means that the Town embraces an Asset Management approach that is founded on delivering Levels of Service that the community and Mayor and Council supports and managing Risk and cost within reasonable levels. The Town will apply sound technical, social, and economic principles that consider the present and future needs of users when making investment decisions. It is the balance between Citizen Expectations-Level of Service-Risk and Cost that drive service decisions.

## DEFINITIONS:

Asset: An item that has potential or actual value to the municipality. This can be an engineered structure or a natural asset delivering service. Value can be tangible or intangible, financial or non- financial, and includes consideration of risks and liabilities. Assets are defined as a class of assets with a total aggregated value of greater than \$50,000.

Asset Management: Coordinated activity of the municipality to realize value from assets. The application of sound technical, social, and economic principles that considers present and future needs of users, and the service delivered from the asset

Externally Managed Assets: The Town has ownership of assets that are managed and operated by other parties (e.g., the Curling Club).

Level of Service: The parameters, or combination of parameters, which reflect social, political, environmental, and economic outcomes that the organization delivers. Service level parameters can include, but are not necessarily limited to, safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost, and availability.

Life Cycle Costs: The total cost throughout its life including planning, design, acquisition and support costs and any other costs directly attributable to owning or using the asset

Risk: The relationship between the likelihood of an event happening and the consequences of that event
Sustainability: Meeting the needs of today without compromising the needs of future generations.

Maintaining or improving the standard of living by protecting human health, conserving the environment, using resources efficiently and advancing long-term economic competitiveness.

## POLICY STATEMENT:

Asset management is a broad strategic framework that encompasses many disciplines and involves the entire organization. To guide the organization, the following policy statements have been developed:
a) The Town of Bentley will maintain and manage infrastructure assets at defined levels to support the Town's Strategic Plan, public safety, and community well-being.
b) The Town of Bentley will set and monitor standards and service levels to ensure that they meet/support community and Council goals and objectives
c) Council will review the Town's Level of Service Register and Risk Register annually as part of the Budget Process.
d) The Town of Bentley will undertake periodic service level reviews to ensure that services, program and assets support community and Council expectations and other strategic objectives.
e) The Town of Bentley will establish infrastructure replacement strategies using full life cycle costing principles.
f) The Town of Bentley will plan financially for the appropriate level of maintenance of assets to deliver service levels and maximize and extend the useful life of assets.
g) The Town of Bentley will plan for and provide stable long-term funding to replace, renew and decommission infrastructure assets throughout its Life Cycle.
h) Where appropriate the Town of Bentley will consider and incorporate asset management in its other corporate plans as they continue to be updated into the future
i) The Town of Bentley will report to citizens annually on the status of community owned/operated infrastructure and the performance of work related to the implementation of this asset management policy. This report will provide a public facing forecast on the sustainability of the County's community infrastructure.

## POLICY PRACTICES:

## 1. Implementation Plan

a. The CAO shall develop and establish an Implementation Plan to guide the Administration's activities in developing an Asset Management System and Asset Management Plan(s).
b. The CAO shall delegate appropriate authorities and accountabilities to staff to fully activate the Implementation Plan.
c. The CAO shall communicate to Council the anticipated timelines, progress and level of resourcing required to fully implement the desired Asset Management System.

## 2. Guidelines and Practices

The Town will incorporate best practices as part of implementing the Asset Management System, including:
a) Maintaining a current register of Assets and Conditions.
b) Making informed decisions, identifying all revenues and costs (including operation, maintenance, replacement and decommission) associated with infrastructure asset decisions, including additions and deletions. Tradeoffs will be articulated and evaluated, and the basis for the decision recorded.
c) Integrating corporate, financial, business, technical and budgetary planning for infrastructure assets;
d) Defining and articulate service, maintenance and replacement levels and outcomes;
e) Using available resources effectively;
f) Managing assets to be sustainable;
g) Minimizing total life cycle costs of assets;
h) Considering environmental goals;
i) Considering social and sustainability goals;
j) Minimizing risks to users and risks associated with failure.

## 3. Organizational Capacity

The Town considers Asset Management as a Core Service delivered by the Town and will:
a) grow and maintain the capacity to ensure the reliable and effective delivery of an Asset Management Program as a Core Service delivered by the Town;
b) ensure relevant employees receive the necessary training in asset and financial management to competently manage the Town's Infrastructure Assets;
c) ensure that all members of Council receive an appropriate orientation to the Town's Asset Management Program, and ongoing training as deemed necessary to appropriately oversee the program.

## 4. Asset Management Team

The CAO will establish a Cross Departmental Asset Management Team to coordinate and oversee the implementation of the Town's Asset Management System.
a) The CAO will designate a Lead for the Asset Management Team.
b) The Asset Management Team will have responsibility for implementing the Town's Asset Management System through the leadership of the corporate Departments.

## 5. Context and Integration

The CAO will ensure that the concepts and principles contained in the Asset Management Policy and Plan(s) are reflected in other Town documents such as:

- Official Community Plan
- Business plans
- Corporate strategic plan
- Corporate financial plan
- Capital Budget plan
- Operational plans and budgets (including vehicle and fleet plans and budgets)
- Neighborhood plans
- Annual reports
- Design criteria and specifications
- Infrastructure servicing, management, and replacement plans, e.g., transportation plans
- Community social plans
- Parks and recreation plans
- Facility plans

6. Understanding the state of the Town's Externally Managed Assets are important to ensure a transparent view of the communities' overall infrastructure obligations and liabilities. The CAO will work with the external groups to develop an approach and timeline for implementing Asset Management Plans for these Externally Managed Assets.

## 7. Annual Reporting

The CAO will annually report to Council the progress of the Town's Asset Management Program, the state of the Town's infrastructure, and the long-term forecast for the Town's infrastructure sustainability.

Chief Administrative Officer

Mayor

Date

Date

## Asset Management Plan

## Town of Bentley

June 9, 2022

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## 1 Introduction

The Town of Bentley received funding through the Federation of Canadian Municipalities' Municipal Asset Management Program (FCM-MAMP) to support the development of the Town's first Asset Management Plan for the Water system. The main purpose of this effort for the Town will be to document and codify the existing Levels of Service, the Risk exposure related to the ownership of assets, to create a singular register of the community infrastructure, and to develop a Long-Term Financial Plan.

The primary deliverable from the MAMP Grant funding is to develop:

1. Training for Staff \& Council, Development of an Asset Management Policy \& Strategy;
2. Document and Codify Asset and Program Levels of Service and Risk Profiles;
3. Asset Management Team Development and Draft Asset Management Plan.

This Asset Management Plan (AMP) will serve as the foundation for the Town's continued growth and maturity in this discipline.

Across Canada, the knowledge that asset management requires proactivity and foresight is becoming more widely accepted and put into practice. Most assets follow a pattern of deterioration where maintenance can extend the useful life of the asset - and drastically reduce the overall cost - if timed appropriately. In contrast, maintenance performed on an asset that is already failing can be of questionable value. In the same manner, long term costs can be forecast by projecting forward the anticipated costs of ownership and renewal at the anticipated end of life.

A plan encompassing all relevant variables enables the community to prioritize asset maintenance, rehabilitation, and replacement measures. This way acceptable levels of service can be maintained while the costs incurred are minimized. Realistic overviews of what to expect in the future can be provided to strengthen the quality of long-term planning and decision making.

Currently, the Town's asset management system is in its infancy. The structure of the inventory and accompanying geographic information system (GIS) have been established. In further stages of development, the asset management plan will provide a basis for both short- and long-term planning and development, along with budgeting. The framework contained in this plan can be adapted and transposed to other infrastructure assets to allow the Town to have a broader perspective on the financial implications of maintaining the Town's assets. .

## 2 Asset Register

### 2.1 Water Treatment System

The Town of Bentley pumps raw water from 3 High Quality groundwater wells running simultaneously. The Wells draw from the Paskapoo formation, and the Town has a Diversion License to access 200,043 m3. The 2012 daily average draw from the raw water wells was $287 \mathrm{~m} 3 /$ day, or approximately $104,000 \mathrm{~m} 3 /$ year - just over $50 \%$ of the Town's total Diversion License.

From the wells, the raw water is pumped to the Treatment Plant where is it treated with Sodium Hypochlorite for disinfection and into the three inline reservoirs, with the capacity of $1778 \mathrm{m3}$, stored in the Treated Clear well for discharge to the Distribution System.

To pressurize the Distribution system, there are three Pumps, two in parallel and a third pump for Fire/Standby capacity. These are operated on a timed, alternating cycle.

### 2.2 Water Distribution System

The Town's water distribution system is constructed primarily of Asbestos Cement (AC) and Polyvinyl Chloride (PVC) pipe materials. AC pipe was used from 1973 to 1979 and can be found mainly in the core areas of the Town, this Asbestos Cement distribution system served as a replacement for individual wells serving residential properties. The town has not actively worked to remove or seal the original residential wells.

PVC has a significantly long life (expected to exceed 100 years) and has excellent resistance to breaks and failures. Figure 1 illustrates the installation of underground water distribution infrastructure over time. Table 1 itemizes the assets covered in this AMP, their quantity, life span and current replacement value.

Table 1: The Town of Bentley's Water System Replacement Value

| Asset Type | Asset Quantity <br> *BULK $\left.^{*}\right)$ | Typical Life | Current Replacement <br> Value |
| :--- | :---: | :---: | :---: |
| Wells | 3 | 50 | $\$ 450,000.00$ |
| Treatment Plant | 1 | 50 | $\$ 310,000$ |
| Water Reservoir | 4 | 80 | $\$ 2,485,000$ |
| Water Mains | 9176 m | $75-100$ years | $\$ 11,929,000.00$ |
| Hydrants | 44 | 75 years | $\$ 440,000.00$ |
| Total Cost |  |  | $\$ 15,614,000.00$ |

As a note on Current Replacement Value, this will be different than the Current Value noted in the Town's Tangible Capital Asset Register (TCA). The TCA will contain an opening balance, or acquisition cost of the assets, then depreciate them annually to calculate a current net book value. The Current Replacement value of the above assets is shown below in Figure 1. The Replacement Value of the Water Distribution system in the Town vastly exceeds the value of the remaining assets. $76 \%$ of the value of the Town's water utility assets are comprised of underground distribution mains as indicated in Figure 2.

Figure 1: Current Replacement Value for the water distribution system


Figure 2: Percentage by Value of the Current Water Distribution System


In addition to the large relative value of underground distribution mains, a significant proportion of these mains were constructed in 1973 as part of the Town's conversion from individual wells servicing homes to a centrally treated municipal supply. Much of the Town's watermains are constructed of Asbestos Cement (AC) pipe with the remainder being of PVC. Figure 3 outlines the progression of underground distribution construction over time and by material.

Figure 3: Water Main Types by Construction Year


While underground infrastructure in many cases has a long useful life, it is finite and will ultimately require renewal and replacement. Table 2 outlines the typically observed life cycles for underground municipal assets in Alberta. Recent academic studies have estimated that the PVC pipe can be expected to provide reliable service in excess of 100 years. ${ }^{1}$

[^0]Table 2: The Town of Bentley's Water System Material Types and Estimated Life

| Material Type | Estimated Life |
| :---: | :---: |
| Water Main (PVC) | 100 years |
| Water Main (Asbestos Cement) | 75 Years |
| Wells | 50 Years |
| Water Reservoir | 80 Years |
| Water Treatment Plant | 50 Years |
| Hydrants | 75 Years |

Of note, there are additional system components that have not been included in this analysis. Assets like water meters, service connections (from the mainlines to the curb stop) are all constituent components that the Town may determine should be included in this AMP in future iterations.

Figure 4 illustrates the current and proposed water distribution network and the existing pipe materials.
Figure 4: Town of Bentley Water Main Network


PVC Water Main

AC Water Main

## 3 Asset Performance

Assets not only have a typical useful life (based on a number of factors including operating conditions and environmental conditions), but their useful life is also influenced by the level of service that they are able to provide. For example, a component of the distribution system may be functioning adequately in terms of physical performance, but not meet the needs of the community service expectation (for example being undersized for adequate flow). In this example, decisions to invest in and replace/upgrade assets may be made for reasons other than physical condition. The following describes the current Asset performance as currently observed.

### 3.1 Asbestos Cement Watermain Performance

The water distribution infrastructure in the Town of Bentley is relatively new and is demonstrating very good performance. The Town tracks and records the instances of water main breaks, although has not recorded any water main breaks (caused by pipe material failure), and where there have been issues, they have been related to valve failures.

Asbestos Cement (AC) water mains are a well understood material in the water utility industry, and various studies have been conducted on their performance. The National Research Council Canada (NRC) has conducted research on AC water mains in other municipal environments to better understand the performance and failure modes. Factors contributing to the deterioration of AC water mains have been identified as pipe age, size, internal/external chemical attack, soil conditions and climate. Given the variety of factors at play leading to AC water main failure, the ongoing performance of the AC water mains should continue to be monitored, and as failure trends warrant, further examination and analysis should be conducted.

### 3.2 Hydrants

The Town owns and operates 44 hydrants largely of the same vintage as the watermains they are connected to. Hydrants have a similarly long life to that of AC pipes, however, are subject to occasional mechanical failures and may require early replacement. Figure 5 illustrates the forecast number of hydrants to be replaced annually based on estimated maximum life.

Figure 5: Replacement of Hydrants 100 Year Life Cycle by Year


## 4 Levels of Service

The goal in managing the Towns' infrastructure assets is to meet a series of defined levels of service in the most cost-effective manner for the citizens and stakeholders.

A Level of Service (LOS) is driven by the expectations of the Town's citizens while at the same time meeting legislative and technical requirements. There is a direct relationship between the level of service and the cost of the service as financial constraints, and the availability of resources provides a degree of limitation. Determining the level of service requires finding a balance between three different factors.

The service provider factor is represented by an elected Council. Staff and elected officials within local government organizations have a variety of responsibilities and motivations when providing a service: the health and wellbeing of residents; regulatory requirements, policies, and laws; short and long-term budget constraints; and local interests and concerns. They must balance these considerations with the technical requirements and costs of service delivery.


1. What are the Town's strategic goals and what are they willing and financially able to provide?
2. What are the Town's citizens expectations?
3. What are the technical and safety requirements of delivering these levels of service?

In order to determine long term service goals and direction, the following are reviewed and assessed:

1. What is currently provided?
2. Where are the gaps between current service levels and expected service levels?
3. How can we balance expected LOS against cost in a long-term financial plan with service and consequence risks?


A Level of Service (LOS) analysis is a component of asset management planning that is significant and has a great deal of impact. One of the Town's core purposes is to provide safe drinking water to citizens and customers with a quality, quantity, and reliability they expect. Assets are used to provide those services and most of the resources devoted to asset management planning are spent on infrastructure. In this respect, physical assets are simply a
portion of what is required to deliver the various levels of service as determined by the Town. The Town needs to ensure the infrastructure performs to meet the level of service goals at an affordable and sustainable cost. An objective of a LOS analysis is to find a balance between the expected level of service and the cost of providing that level of service.

Additionally, as the Level of Service changes, there may be a corresponding change in the risk that is facing the organization. This will be explored later in the Plan.

A Level of Service analysis typically includes:

- Service identification with the identification of assets involved in providing the services and the stakeholders impacted.
- Determination of expectations with respect to services, and the attributes that matter to citizens.
- Determination of customer levels of service and their current and desired performance.
- Determination of technical levels of service for each strategic level of service
- Comparison of existing levels of service to expected strategic/technical levels of service
- An assessment of the lifecycle cost implications of moving from existing levels of service to expected (desired) levels of service over a forecast period.

Typically, an Asset Management Plan will be further defined in advancing levels of detail as more information becomes available and stakeholder expectations are further refined. The LOS analysis has been completed with the input of the Town staff. Workshops were held with staff to identify the range of services and activities performed by the Town.

Once services were identified, qualitative descriptions of the service levels were created on a 1-4 scale. On that scale, the Town's relative placement was identified, and confirmed with staff. This initial placement will allow the Town to objectively describe the services that it strives to provide and can begin to identify the costs to do so. Once that is well understood, a conversation about changes to levels of service, along with the corresponding change in cost, can be had.

As this is the first time the Town has documented its LOS in an Asset Management Plan, revisions are expected as more information becomes available and stakeholder expectations are further refined.

### 4.1 Customer / Citizen Levels of Service

Customer (or Citizen) Levels of Service (CLOS) are defined to align with the organization and stakeholder's vision and will help guide the infrastructure investment required to meet these goals. The CLOS is the highest level of service statement, and typically describes what the Customer sees or experiences.

Working with the Town staff, the following Strategic Levels of Service for the Water Utility has been defined based on the working knowledge of the Town's priorities:

The Town's water utility will operate in a way that:

- Ensures the system meets requirements and industry standards;
- Ensures that potable water is available for customers reliably (less 8 hours for any service interruption) and with appropriate pressure (45-60 psi) and volume; and
- Ensures that rates are affordable for residents (between 85\% and 114\% of comparable benchmarks).

While this describes the staff's interpretation of the Town's priorities, it is the highest-level statement from the Town about its service intentions. As such, Service Level Standards should be confirmed by the Town Council through annual budget process.

### 4.2 Technical Levels of Service

Technical Levels of Service (TLOS) are similar to the CLOS, except they typically describe the programs and activities that are required to ultimately create the CLOS that the customer experiences.

Each service can be delivered at varying degrees of acceptable performance - for example, where a municipality has a significant volume of unaccounted for water, proactively inspecting for mainline leaks can be an important part of leakage/integrity management. The frequency that the inspections are conducted defines the Technical Level of Service. In this example, not having a leakage detection program may be considered a 'Low' Level of Service, while the same inspection program conducted on an annual basis may be considered a 'High' Level of Service. Each example (Low vs. High) has its own cost to operate, as well as residual risks that may be present. Residual risks are discussed later in this report.

This Plan organizes the Town's Technical Services into the following categories:

- Affordability
- Capacity / Availability
- Condition
- Function


### 4.3 Current Level of Service Register

Levels of Service were described in terms of Customer and Technical along with current services, activities, and objectives and were defined on a 1 to 4 scale ( 1 being lowest service level and 4 being highest service level).

Using several sources of reference (including the Town staff experience, the Alberta Environment and Parks Regulatory Requirements, AWWA Standards and professional judgement based on the experience of Alberta water systems), Level 3 was identified as a best or recommended practice, with the Town's current activities placed in relation to those practices.

If the Town provided a level of service or conducted activities that exceeded the Level 3 practice, the level of service was identified as Level 4. If the Town provided a level of service below the Level 3 description, the level of service was identified as Level 1 or Level 2.

While there is no absolute answer for what is the 'right' level of service, each program decision carries with it a unique cost and risk residual. By understanding what the current level of service provided is, and what the related costs and risks are, the Town can make informed decisions about what resources are required. Following the methodology outlined above, an assessment was conducted with staff and identified 56 unique Levels of Service and evaluated them on a scale of "Low" to "High".

### 4.4 Observations on Level of Service

Following the Level of Service workshop, the following observations have been made. There are 20 Services that are currently identified at a below the identified best or recommended practices (i.e., Level of Service $=1$ or 2). The Town should review these services and develop an approach to assess the gaps between current and recommended practices and take any sets determined necessary to close those gaps. The full Table of Town services and service levels is shown in Table 3 and are grouped into their corresponding Service Characteristic (Affordability, Capacity/Availability, Condition and Function).

Table 3: Level of Service

| LOS ID | LOS TYPE | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Customer | Affordability | Water Rates are Affordable | Water Rates are comparable to other similar sized municipalities | Rates are more than 130\% above comparable benchmarks | Rates are within 115$129 \%$ of comparable benchmarks | Rates are between 85$114 \%$ of comparable benchmarks | Rates are less than 84\% of comparable benchmarks |  |
| 2 | Technical | Affordability | Accuracy of billing | Meter Accuracy | Inspected Meters are recording <93\% of measured water | Inspected Meters are recording 93-97\% of measured water | Inspected Meters are recording 98\% of measured water | Inspected Meters are recording $>98 \%$ of measured water |  |
| 3 | Technical | Affordability | The Water Utility is sustainable | The Water Utility has a plan to meet its' Customer Level of Service <br> Statement/Targets and has adequate revenues and reserve balances to sustain itself into the future | MGA requires 3 year operating and 5 -year capital budgets | MGA requires 3 year operating and 5 -year capital budgets. <br> Developed in-house, projected using simple methods | MGA requires 3 year operating and 5 -year capital budgets. <br> Budgets are supported by plans or long-term studies (ex IMP, growth, etc.) | The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows an positive reserve balance |  |
| 4 | Technical | Affordability | The Water Utility is sustainable | The ToB has a longterm capital investment plan that forecasts expenditures and revenues | MGA requires 3 year operating and 5 -year capital budgets | MGA requires 3 year operating and 5 -year capital budgets. <br> Developed in-house, projected using simple methods | MGA requires 3 year operating and 5 -year capital budgets. <br> Budgets are supported by plans or long-term studies (ex IMP, growth, etc.) | The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows a positive reserve balance |  |
| 5 | Technical | Affordability | Minimize leakage | Water volume loss | >25\% | 15\%-25\% | 5\%-15\% unaccounted water | <5\% |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | Technical | Affordability | water meter servicing/bench testing | \# of water meters | none | Water Meters tested at the time of installation | 20-34 | >34 (1\%) |  |
| 7 | Technical | Affordability | offsite levies are recalculated to ensure that the full costs of new development are reflected | Frequency that levy calculations are updated | Off Site levies are updated every 10 years | Off Site levies are updated every 7 years | Off Site levies are updated every 4 years | Off Site levies are updated every 2 years |  |
| 8 | Technical | Affordability | Water Asset Management Program | An internal set of business processes is in place that allows the Toc to adequately manage the Water System in an optimal manner | No Asset Management Program in place | The Town has a basic inventory of assets and generally understands the condition of them. <br> No forward-looking planning is competed regarding asset or service management | An Asset Management Program is in place, the Town understand the assets it owns, has a view of the long-term costs, and understands the LOS \& Risks facing it. | An Asset Management Program is in place that the Town follows. <br> Regularly reviewed and updated |  |
| 9 | Technical | Affordability | Water main renewal program is in place | Degree that the main replacement program is financially optimized | No Main renewal Program in Place | Main Renewal Program is in place with modest funding and a forecast of replacing all the network mainlines within $150 \%$ of their anticipated life cycle | Main Renewal Program is in place with a target objective of replacing all the network mainlines within $120 \%$ of their anticipated life cycle. | Main Renewal Program in place with sufficient funding to reinvest in the water network at an optimized level to minimize overall cost |  |
| 10 | Customer | Capacity/ <br> Availability | Maximum length of Unplanned Outage | Time that any water customer is without water service due to an unplanned outage | > 12 Hours | 8-12 Hours | $<8$ Hours | $<6$ Hours |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | Customer | Capacity/ <br> Availability | Water Outages | The Number of times per annum that a customer experiences a planned or unplanned outage. Calculated on a system wide basis (e.g., $x=\#$ <br> breaks/year/customers) | > one day every 5 years | One day every 5 years | One day every 10 years | < 1 day every 10 years |  |
| 12 | Technical | Capacity/ Availability | The ToB has an adequate allocation of water to meet its future needs. | The Town regularly compares the forecast OCP/Growth Plan projections to current Town population and water consumption needs | The ToB has > 10\% deficit of Water Allocation when compared to the projected growth over the next 20-year period | The ToB has a $10 \%$ deficit of Water Allocation when compared to the projected growth over the next 20-year period | The ToB has adequate Water Allocation to support projected growth over the next 20-year period | The ToB has a $30 \%$ excess of Water Allocation to support projected growth over the next 20-year period |  |
| 13 | Technical | Capacity/ <br> Availability | The Town has adequate Storage to meet Peak Demand and Fire Flow needs under normal operations | Number of hours of uninterrupted fire flow | Unable to maintain under normal operations | Peak demand, midAugust, 8 hours uninterrupted fire flow and service while maintaining pressure | Peak demand, midAugust, 12 hours uninterrupted fire flow and service while maintaining pressure | Peak demand, midAugust, 16 hours uninterrupted fire flow and service while maintaining pressure |  |
| 14 | Technical | Capacity/ Availability | The Town has adequate Storage to meet Peak Demand and Fire Flow needs under loss of source | Number of hours of uninterrupted fire flow | Unable to maintain under normal operations | Peak demand, midAugust, 4 hours uninterrupted fire flow and service while maintaining pressure | Peak demand, midAugust, 8 hours uninterrupted fire flow and service while maintaining pressure | Peak demand, midAugust, 12 hours uninterrupted fire flow and service while maintaining pressure |  |


| LOS ID | LOS TYPE | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | Technical | Capacity/ <br> Availability | Minimize breaks | The Break Rate Projection is an indicator of the overall system health. Calculated as the number of breaks per km per year. As tracking gets better, indicators can be quantitative | Break Rate is in significant incline | Break Rate is in incline | Break Rate is steady at 0\% | Break Rate is in decline |  |
| 16 | Technical | Capacity/ Availability | backup generator testing protocols | Frequency of generator testing | quarterly | monthly | weekly | daily |  |
| 17 | Technical | Capacity/ Availability | utility locates for third party requests | time from request to locate | > 5 days | 3-5 days | 1-3 days | Same day |  |
| 19 | Technical | Capacity/ Availability | a water demand management program is in place | robustness of the program | No Demand Management in place | A Demand Program is in place and is below typical industry and municipal standards. | ToB has a Demand Management Program in place, and it is comparable to similar municipalities | Demand Management Program is considered Class Leading, is auditable, and provides guidance to other municipalities |  |
| 20 | Customer | Function | Aesthetically pleasing (taste, color, appearance) water | Number of water quality Complaints Annually | More than 20 | 10-20 complaints | Less than 10 complaints | Less than 5 complaints |  |


| LOS ID | LOS TYPE | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 | Customer | Function | Water pressure is maintained at the recommended levels | Measure of Static Water Pressure in Mainlines | <45 psi at times in certain areas of the network | No less than 45-60 psi at all times across the entire network | $60-80$ psi at all times across the entire network | 70-80 psi at all times across the entire network | Due to topography of the Town higher pressure cannot be obtained without causing issues at lower elevations of the system. |
| 22 | Technical | Function | SCADA <br> (Supervisory Control and Data Acquisition Systems) | Measure of operator control over system | Do not have any. All manual control | System Functionality is limited. | Contemporary SCADA system that has remote access and control. responds to system events automatically. required limited direct supervisory control. | Starship Enterprise level control systems. State of the Art \& Bleeding Edge. Al Augmented. |  |
| 24 | Technical | Function | Fire Flows | Measure of the amount of water the Town that has sufficient water capacity under fire flow conditions | <75\% compliance | >75\% compliance | Sufficient capacity to meet ULC rating | Significantly Exceed ULC rating |  |
| 25 | Technical | Function | Valve replacement program | 4/yr. (360) | 60\% lifecycle program | 80\% lifecycle program | valve replacement program meets lifecycle | valve replacement cycle exceeds program requirements |  |
| 26 | Technical | Function | hydrant replacement program | 4/yr. (280) | 60\% lifecycle program | 80\% lifecycle program | hydrant replacement program meets lifecycle | hydrant replacement cycle exceeds program requirements |  |
| 27 | Technical | Function | ToB operates a Valve exercise Program to ensure that Control Valves continue to operate effectively when required. The target is $100 \%$ of Valves operate when required | frequency of Valve exercises | <5 years | every 2-5 years | every 2 years | yearly |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 28 | Technical | Function | hydrant maintenance program | pump down, visual inspection annually | <50\% of hydrants are visually inspected and pumped down prior to winter | 50\% of hydrants are visually inspected and pumped down prior to winter | $80 \%$ of hydrants are visually inspected and pumped down prior to winter | Every Hydrant is visually inspected and self draining prior to winter |  |
| 29 | Technical | Function | Inspect and Maintain Distribution System Pumps in working order | Conduct a vibration test to monitor pump condition and predict potential failures | every 2-5 years | every 2 years | Annually | Every 6 months |  |
| 30 | Technical | Function | Inspect and Maintain Distribution System Pumps in working order | Conduct Pump tests annually to monitor pump condition and ability to maintain pressure and flow | every 2-5 years | every 2 years | Annually | Every 6 months |  |
| 32 | Technical | Function | flushing programreg maintenance | annually | every 2-5 years | every 2 years | Annually | Every 6 months |  |
| 33 | Technical | Function | flushing programunidirectional | frequency | Never | Every 10 yrs. | Every 5yrs | Annually | Town to commit to unidirectional program every 5 years. |
| 34 | Technical | Function | storage reservoir cleaning program (incl structural inspection) | frequency | Never | 10yr | 5 yr | $3 y r$ |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 | Technical | Function | Infrastructure record drawings are accurate and held by the Town of Bentley | timeliness that records drawings are updated | Record Drawings are not updated | Record Drawings are updated > 12 months after construction | Updated Record Drawings within 6-12 months of construction/revisions | 0-6 months |  |
| 36 | Technical | Function | Water Network Modelling | The Town maintains and updates a Model of the Water Network | No Network Model in place | The Town updates the Water Network model between 5-10 years. | The Town updates the Water Network model every 5 years | The Town updates the water Network model every 2 years or less |  |
| 37 | Technical | Function | The Town of Bentley supports development with the review of plans and applications | time to process applications from receipt to issue | 20 days to review <br> 40 days is the maximum to approve per MGA | 15 days to review <br> 30 days to approve | 10 days to review <br> 20 days to approve | 5 days to review <br> 10 days to approve |  |
| 38 | Technical | Function | The Town of Bentley has design standards that specify infrastructure requirements | Time between reviews and updates of development standards. Reliance on Red Deer standards for some. We are currently developing the first version of standards for others | Design standards are updated every 10 years | Design standards are updated every 7 years | Design standards are updated every 4 years | Design standards are updated every 2 years |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 | Technical | Function | The Town of Bentley has master plans for infrastructure to guide development and investments | frequency that master plans are updated. Specifically refers to IMP | Reviewed annually internally <br> Major review and update every 8 years | Reviewed annually internally <br> Major review and update every 6 years | Reviewed annually internally <br> Major review and update every 4 years as per policy | Reviewed annually internally <br> Major review and update every 2 years over and above policy | Town in the process of completing infrastructure masterplan. |
| 40 | Technical | Function | The Town of Bentley has a GIS system to aid in decision making | robustness of the Town's GIS platform | GIS system has the ability to display static infrastructure maps | GIS system displays maps that are updated quarterly by PCPS | GIS system displays maps that are updated internally on a monthly basis | GIS system contains real-time data and is used for complex decision making |  |
| 41 | Technical | Function | new construction is inspected for compliance with bylaws and standards | percentage of post construction inspections for water connections | Water service connections are not inspected | $0-33 \%$ of water service connections are inspected during construction and at the time of meter install | 66-99\% of water service connections are inspected during construction and at the time of meter install | $100 \%$ of water service connections are inspected during construction and at the time of meter install |  |
| 42 | Technical | Function | The Town enters into developer agreements to enable land and commercial development | timeliness of execution from development approval | Developer agreements prepared and executed within 8 weeks of subdivision or development approval | Developer agreements prepared and executed within 6 weeks of subdivision or development approval | Developer agreements prepared and executed within 4 weeks of subdivision or development approval | Developer agreements prepared and executed within 2 weeks of subdivision or development approval |  |
| 43 | Technical | Function | The Town of Bentley has "full service" municipal engineering capability | volume of engineering design work contracted to the private sector (greater in-house capacity can lead to more flexibility and independence) | The Town outsources $100 \%$ of engineering design | The Town outsources > 50\% of engineering design | The Town outsources > 20\% of engineering design | The Town outsources 5\% of engineering design | Due to amount of engineering design required, it is not feasible to have in -house engineering capacity. |


| LOS ID | LOS TYPE | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44 | Technical | Function | cross connection control | Robustness of the Cross Connection Program | No Cross Connection Program | A Cross Connection Program is in place and is below typical industry and municipal standards. | A Cross Connection Program is in place and is comparable to industry and other municipal standards | Cross Connection Program is considered Class Leading, is auditable, and provides guidance to other municipalities |  |
| 45 | Customer | Regulatory | Clean, Safe Potable Water | Drinking water quality complies with statutory requirements | Not Compliant | Water Quality Testing is Completed, but records are not kept or up to date | All water quality testing, reports and records are kept up-to-date and pass AEP inspection | All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires |  |
| 46 | Technical | Regulatory | operator certification | certified operators that meet regulatory requirements | No certified operators | One operator | Level 1 WD and Level 1 WT \& 2 Operators | More than two certified operators, with at least one operator with Level 2 WD certification |  |
| 47 | Technical | Regulatory | Operator Training and Certification Maintenance | operator training programs to meet regulatory requirements | ToB does not have a Staff Training program in place. | ToB Staff to complete their own training for Certification maintenance. | ToB Manages its own Operator and Staff Training Program that meets the requirements of the Regulations | ToB manages its own Operator and Staff training Program that exceeds the requirements of the Regulations |  |


| LOS ID | $\begin{aligned} & \text { LOS } \\ & \text { TYPE } \end{aligned}$ | Service Characteristic | Service Description | Indicator | 1 | 2 | 3 | 4 | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 | Technical | Regulatory | testing | daily, as legislated | Not Compliant | Water Quality Testing is Completed, but records are not kept or up to date | All water quality testing, reports and records are kept up-to-date and pass AEP inspection | All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires |  |
| 49 | Technical | Regulatory | No Regulatory Compliance Breaches | Record of contraventions reported to AEP | Not reporting to AEP | Reporting some contraventions, but documentation is incomplete | Reporting all contraventions with documentation and no recommendations | No contraventions and passing AEP audit with no recommendations |  |
| 50 | Technical | Condition | hydrant painting | every third year | Never | 10 yr | 5 yr | 3 yr |  |
| 51 | Technical | Condition | Distribution pumps | replace $1 / y$ r. deferred main until complete | >35 | 25-35 years | Replace 25 years | Replace 20-25 years | Distribution Pumps are very expensive. They are inspected yearly and will be replaced when necessary. |
| 52 | Technical | Condition | Shock and Airlift Wells | Process completed | never | 6-10 years | 3-6 years | 2-3 years |  |
| 53 | Technical | Function | A Connection Inspection Program | When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination | No Action is taken to inspect private connections to the Town's main distribution system | Plans are approved in advance | Plans are approved in advance, and the private constructor is required to have a <br> Town representative inspect/observe the site | Full onsite inspection is provided during construction and plans are approved in advance. |  |


| LOS ID | LOS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE | Service <br> Characteristic | Service <br> Description | Indicator | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | Comments |  |
| 54 | Technical | Function | Regula Inspection <br> of Treatment <br> Facilities | Periodic Inspections to <br> prevent ingress of <br> contaminants | No regular inspections <br> of Treatment Facilities | Access is lifted and <br> ingress points are <br> secured. | Access is limited and <br> ingress points are <br> secured along with <br> occasional inspections. | Daily comprehensive <br> inspection of treatment <br> facilities to monitor for <br> contaminant ingress |

In reviewing the Services described with a 'Low' level of Service (I.e., at Level 1 or Level 2), there are Services that may need to be reviewed to ensure that they continue to support the Town's overall objectives. Some of these are:

- A Meter Replacement Program to ensure that the Town's water meters are operating at optimum efficiency, and are recording accurate flows;
- A Long-Term Budgeting approach and a 20-year Utility Model would help support effective decision making given the multi-generation life of utility assets;
- Regular updating of the Town's Off Site Levy calculations would ensure that the existing utility customers are not unduly subsidizing new construction;
- The Town has a limited cross connection control program in place.

Other Services that have been identified at a Level 1 or Level 2 that may warrant consideration, but may not be impactful to the overall service delivery or customer experience are:

- The Town has no Demand Management or Water Conservation program in place.
- The Town has limited SCADA or remote Operator Control functionality in the water treatment systems.


## 5 Risk

With the continuing emphasis on meeting levels of service, it's important that any risk to achieving this is identified, measured, and mitigated. The typical risk management approach is described as identifying, analyzing, and mitigating potential risks, and illustrated in the figure below.
$\left.\begin{array}{ll}\hline \text { Analyze } & \begin{array}{l}\text { What? } \\ \text { When? } \\ \text { How? }\end{array} \\ \hline \begin{array}{l}\text { Probability } \\ \text { Level of Risk } \\ \text { Consequense }\end{array} \\ \hline\end{array} \begin{array}{l}\text { Identify Options } \\ \text { Assess Options } \\ \text { Reduce Risk }\end{array}\right\}$

To evaluate the potential risks facing the Town's water utility, the Alberta Environment and Parks Drinking Water Safety Plan (DWSP) Risk Assessment was consulted as a basis from which to work. The DWSP is a proactive method of assessing risk to drinking water quality, which better protects public health. Plans are based on an assessment of risk factors that could potentially adversely affect drinking water quality. The Town has a DWSP completed and in place.

The DWSP risk rating uses a 5-point scale for Likelihood (Most Unlikely, Unlikely, Medium, Probable, Almost Certain), and identified a 5-point scale for Consequence ranging from Insignificant, Minor, Moderate, Severe and Catastrophic. Each step on the 5-point scale has an escalating value between 1 and 16.

In addition to the risks identified in the DWSP, the events were assessed against the following consequence categories to ensure that a full assessment of the potential impact of a risk materializing:

- People \& Staff: Impacts on Town staff.
- Reputation: Reputational impacts on the Town resulting from a materialized risk.
- Business Processes \& Systems: Internal processes and systems that enable the smooth functioning of the Town.
- Financial: A Risk of financial loss for the Town.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk. Table 4 outlines the risk scores and the level of risk associated with them.

Table 4: Risk Consequence Table

|  |  | Consequences |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | People ${ }^{\text {a }}$ Statt | injuries or alments not requiling medical tratmert. | Minor injury or First Aid Treatment Case. | Senous infury Clusing hospitalisation or multiple metical treatment cases. | Lfe theatening injury or multiple serious injuries causing hospitalisation. | Death or multiple iffe treotening muries. |
|  |  |  | Reputation | Internal Review | Scrutiny required by internal commithees or internal audit to prevent escalation. | Sorutiny required by clients or third parties etc. | Intense public, political and media scrutiny. Eg. front page headines, TV, etc. | Legal action or Commission of incuiry or ackerse national media. |
|  |  |  | Business Processes 8 Systems | Minor errons in systems or processes requiring corrective action or minor deliny without impact on overat schedrie. | Pollcy procedural mile occasionaly not met or senvices do not flity meet needs. | One or more key accourtability mequiremerts not met inconvenient but not clent wellare threatening. | Strategies not consistent with business objectives. Trends show service is degraded. | Crtical system falure, bad policy advice or ongoing non-compliance. Business severely affected. |
|  |  |  | Water Utility Function | Wholesale water intemption < 8 hes | Short teem or localised noncomplance, non health related e.g. aesthetic or internption 8-12 hes | Widespread anthetic issues or long term non complance, not neath related or interruption 12-24 hrs | Potential Iliness or interruption $>24$ 48 hrs | Actual Iliness or potential long serm health effects or interruption $>48 \mathrm{hr}$ |
|  |  |  | Financial | \$SK | Ssok | \$100\% | \$250k | \$500k |
|  |  |  |  | Insignificant | Minor | Moderate | Severe | Catastrophic |
|  |  |  |  | 1 | 2 | 4 | 8 | 16 |
| $\begin{aligned} & \text { 믕 } \\ & \text { 을 } \\ & \frac{1}{\bar{o}} \\ & \text { ㄹ } \end{aligned}$ | Conceivable but extremely small chance of happening in next $4-5$ years | 1 | Most Unlikely | 1 | 2 | 4 | 8 | 16 |
|  | Is possible and cannot be ruled out in next 4-5 yourn. | 2 | Unlikely | 2 | 4 | 8 | 16 | 32 |
|  | As likely as not to happen in next 4-5 years. | 4 | Medium | 4 | 8 | 16 | 32 | 64 |
|  | Would be expected to happen in next 4-5 years but there is a small chance it may not. | 8 | Probable | 8 | 16 | 32 | 64 | 128 |
|  | Would be confident this will happen at least once in next $4-5$ years | 16 | Almost Certain | 16 | 32 | 64 | 128 | 256 |

Risk Management Approach

| Low | Manage by routine procedures |
| :--- | :--- |
| Medium | Board delegates responsibility to Commission Manager with written contingencies required to document and <br> manage the consequence should it materialize. |
| High | Detailed action plan approved by NRDRWSC Board to reduce the Risk to Medium or Low. |

## Risk Calculation Example

One of the events discussed in the Workshops was related to the failure of pumps at the water treatment plant as a result of a power surge. There was no surge protection in the water treatment plant, and this event would have an impact on the supply of potable water for Residents and was assessed to have a Likelihood score of '4' - Medium.

Assessing this event against the 5 Consequence categories the following consequence ratings were determined:

Operational Impacts: Moderate (4)
People \& Staff: Insignificant (1)
Business Processes \& Systems: Moderate (4)
Reputation: Moderate (4)
Financial: Moderate (4)
The Maximum value of the Consequences is ' 8 ', multiplied by the Likelihood score of ' 4 ' produces a total Risk Score of 32 , which falls into the High category as defined by the DWSP.

After the initial workshop with Town staff installed surge protection and the risk has now been mitigated. The Likelihood score is now reduced to 1 with the total risk score being reduced to 4.

Following the identification and analysis of potential risks, the mitigation approach is a key step for the Town. An appropriate and documented approach to managing risk will support effective decision making and ensure that the risk management approach is well understood across the organization and approved by the Board. It is suggested here that risks assessed as High (Likelihood x Consequence $>32$ ) have a detailed action plan approved by the Town Council, and that those plans identify a path to reduce the risk to Medium or Low. Other risk ratings can be managed through routine procedures (Low Risk) and with written contingencies approved by the Town CAO or appropriate delegated authority (Medium Risk).

### 5.1 Current Risk Register

Working with the Town Staff, 87 risk items were reviewed (including those from the AEP DWSP). For each of these risk potentials, the likelihood of the event happening was assessed, as well as the consequence resulting from the occurrence. These consequences ranged from the functional operations of the Town water system (as outlined in the DWSP risk register) along with the additional consequence categories to ensure that a full picture of the risk profile was created.

Through the evaluation process, 12 risk items were assessed to be at a Medium level of Risk (with the product of Likelihood $x$ Consequence $>=8$ ) and 3 risks were assessed as a High Risk (with the product of Likelihood $x$ Consequence >=32). Table 5 below contains the risks identified in the Medium and High categories.

The complete Risk Register is contained in Appendix 3.
The Town has 3 Risks that were identified as High. One risk related to the Treatment Plants (contamination of potable water from ingress to a Reservoir) and two risks related to the customer responsibilities (connection pipe installation and sizing that may cause contamination issues for the user).

Table 5: Assessed Risks Rated HIGH

| $\begin{aligned} & \text { Risk } \\ & \text { Type } \end{aligned}$ | Risk <br> Description | Cause of Potential Failure | Comment | Current Monitoring | How Risk is Currently Controlled | Risk <br> Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | Contamination of water due to ingress of water as a result of inadequate structure or maintenance. | Due to lack of structural integrity of reservoir as a result of poor design or maintenance | Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents. | Divers monitor deficiencies, visual inspections of hatches. Significant drop in cl2 residual would begin investigation. | Tritoflex sealant installed on \#3 reservoir, no concerns with other reservoirs | 32 |
| Customer Risks | Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe. | Disinfectant decay due to water remaining in pipe for extended period | Service may have been installed without any consideration of residence time in service pipe | None | None | 32 |
| Customer Risks | Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures. | As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice | If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination. | None | None | 32 |

### 5.2 Management Approach

As part of a concerted approach to understand Levels of Service and Risk, and more importantly, to view them as interconnected, it is important to view the linkages between Risk and Level of Service. This is not an absolute exercise, but by viewing the two together, decision makers can often identify key areas for change.

In this exercise, the Levels of Service with a Low rating (1 or 2 ) with corresponding Risks have been identified. Low Levels of Service that are aligned with higher risks may warrant management attention to determine if the Risks are within acceptable tolerances. If the Risks are beyond acceptable tolerances, then additional actions or changes to the Levels of Service may be in order.

Table 6: LOS \& Risk Management Approach

| Service Description Indicator | LOS Description | Risk Description | Risk Description |
| :---: | :---: | :---: | :---: |
| Maximum time that any water customer is without water service due to an unplanned outage | 8-12 Hours | Failure to meet demand due to inability to operate valves as required. |  |
| SCADA systems in Place Measure of operator control over system | Do not have any. All manual control | Loss of supply resulting from failure of telemetry. |  |
| Frequency of Uni-Directional Flushing Program | Never | Failure to meet demand due to inability to operate valves as required. |  |
| Robustness of the Cross Connection Program | A Cross Connection Program is in place and is below typical industry and municipal standards. | Contamination of water as a result of cross-connection | Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations |
| SCADA (Supervisory Control and Data Acquisition Systems) |  | Loss of supply resulting from failure of telemetry. |  |


| Service Description Indicator | LOS Description | Risk Description | Risk Description |
| :---: | :---: | :---: | :---: |
| When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination | Plans are approved in advance, and the private constructor is required to have a Town representative inspect/observe the site | Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures. | Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/ supervision. |
| Periodic Inspections of Treatment Facilities to prevent ingress of contaminants | Access is limited, and ingress points are secured. Regular observations by staff | Contamination of water due to ingress of water as a result of inadequate structure or maintenance. |  |

## 6 Life Cycle Management Plan

The lifecycle management plan outlines how the community intends and plans to manage and operate its assets at the agreed levels of service while optimizing life cycle costs. To be successful, it needs to balance incoming revenues against operation costs while meeting maintenance, renewals, and upgrades priorities of the asset portfolio.

For the purposes of this report, a 100-year timeframe was adopted in order to give the Town a long-term view of the long-life infrastructure it manages.

A whole-of-life approach is used in Life Cycle Management. This approach is used to forecast the time of 'failure' of assets and project when they will require funding for renewal or replacement while considering day to day operations and maintenance. It is understood that each asset has a finite life and in the case of significant scale assets, they are made up of components that also have a finite life.

It should be noted that while this approach provides a transparent view of the long-term costs of owning and maintaining an asset, it is a long-term forecast and an estimate of future costs. As an asset is actively managed through its life, decisions need to be made based on the performance and functionality of the asset.

Functional requirements change over decades of operations (e.g., growth and water demand, environmental regulations), and what may have been suitable and desirable when constructed may not remain constant over the life of the asset.

These types of decisions are an important factor in planning for a significant renewal, replacement or upgrade of an asset as well as determining the ideal operations and maintenance budget to achieve optimum asset longevity.

By using information for each of the assets that includes:

- the total expected life,
- the current remaining life, and
- the estimated asset replacement value,
the total estimated and forecasted life and cost can be calculated.

This approach provides a visual and tangible method of assessing the recurring costs of an asset to anticipate the funding required to operate it over the long term. Note that significant components of an asset all require a regular and major reinvestment at the end of their useful lives to ensure the asset continues functioning at an appropriate level.

## 7 Long Term Financial Plan

The cost estimating method used in this report is based on an estimation of current Alberta construction unit costs multiplied by the volume of assets needing replacement. The anticipated life cycle for assets is shown in the Tables in previous sections.

As the life cycle of each infrastructure component comes to an end of life, the anticipated renewal cost is forecast into the future.

Given that each system component has its own anticipated useful life before requiring refurbishment, a regular and recurring cycle of reinvestment was modelled through the anticipated life of the asset. This recurring reinvestment represents the capital renewals of major systems required to maintain the maximum useful life of the assets. In the preliminary stages of an asset management plan, a number of assets identified as already having outlived their useful life may appear as requiring renewal in the first year. While these asset components should be reviewed for required replacement, it is not generally feasible or required to replace all assets in the next capital year and prioritization will be required. As the asset management plan progresses and is further refined, in time, this renewal spike will appear reduced.

The total asset replacement value provided is a high-level estimate for the purposes of asset management using generalized construction types. Since there was no on-site review or a comprehensive review of detailed information for each asset, certain items are assumed, and the costing may not account for specialty items or challenging site conditions etc. Across the portfolio the total asset replacement value is believed to be a legitimate tool for forecasting long term costs.

Based on our costing breakdown outlined above, the following Table 7 provides a summary of the current replacement value of the Town's assets, and the annualized replacement cost for the asset category (based on the forecast replacement schedule), and a calculation of the forecast Reinvestment rate per year as a percentage of total value.

Table 7: Annualized Reinvestment Rate (\$/year Replacement)

| Asset Name | Current <br> Replacement Value | Annualized Cost <br> $\$ /$ Year | Reinvestment \% per <br> year |
| :---: | :---: | :---: | :---: |
| Water Pressure Main | $\$ 11,928,800$ | $\$ 119,000$ | 1.0 |
| Water Wells | $\$ 450,000$ | $\$ 9000$ | 2.0 |
| Water Reservoir | $\$ 2,485,000$ | $\$ 31,000$ | 1.3 |
| Water Treatment Plant | $\$ 310,000$ | $\$ 6,200$ | 2.0 |
| Hydrants | $\$ 440,000$ | $\$ 6,400$ | 1.3 |
| Combined Total | $\$ 15.6 \mathbf{M}$ | $\$ 172 \mathrm{~K}$ | $1.1 \%$ |

As indicated in Table 7, the Town's total annual cost of infrastructure renewal based on the forecast lifecycles is $\$ 172,000$ per year, or $1.1 \%$ of the total infrastructure value. This low reinvestment rate is due to the significant value assets (Water Pressure Mains and Reservoirs) having reasonably long-life cycles. While their useful lives are long, their replacement values will represent a significant cost to the town. Planning for these asset replacements well in advance will ensure that the Town has the fiscal capacity to maintain and replace these assets when they reach the end of their useful or reliable life.

The following Figures outline the reinvestment forecast for all asset classes over the next 100 years.

Figure 6: Water System 100-year Life Cycle Cost by Year and Asset Class


Figure 7: Water Pressure Main 100-year Life Cycle Cost by Year


Figure 8: Water Treatment Facility and Wells 100-year Life Cycle Cost by Year


Figure 9: Hydrants 100-year Life Cycle Cost by Year


### 7.1 Observations

Generally, the mid-term forecast for the Water Utility expenses appears modest. Over the duration of the 100-year analysis, an average of $\$ 172,000 /$ year has been identified as the annual average rehabilitation spend. The next significant investment exceeding that average will be related to the end-of-life failure of the AC water main network, which is forecast to approach a total of $\$ 7.5 \mathrm{M}$ in investments (anticipated to be in 2048). As noted earlier, the expected life of AC water main is approximately 75 years, and subject to a variety of factors that may influence its functional life. The Town should be anticipating that as the AC water mains age, their performance will deteriorate and accelerate.

Figure 10 below illustrates the observed failure rate over time based on empirical data gathered by the National Research Council of Canada using City of Regina data.

Other, lesser cost investments in the near term may also be related to the Raw Water Wells and Reservoirs all may require updating of the electrical and controls systems and other regular maintenance based on the age of the assets. There is no performance data to suggest that they are in need of renewal, however as all assets age, their reliabilty and performance degrade. The Town should consider a more detailed assessment of these systems and plan for any updates required.

Figure 10: Observed AC Main Pipe Failure Data - National Research Council of Canada


## 8 Future Demand

In order to establish the existing and future demands for the Town the following items should be considered:

- Population change
- Change in demographics
- Seasonal Factors
- Community Expectations
- Technological Changes
- Economic Factors
- Environmental Awareness and Resiliency requirements

The demand drivers above will influence future service delivery and requirements. These new services will be delivered by managing the Community's existing assets, upgrading, and providing new infrastructure to meet demand. This demand will be managed by additional non-asset solutions that include insuring against critical risks and managing network failures.

As part of an annual planning process, the Town Council and Staff should undertake an examination of the trends the Town is experiencing and how they will impact the future service and infrastructure requirements.

Stantec is in the process of preparing a servicing study for the Southeast Area Structure Plan, which also takes into account buildout of all future development area within the Town's existing limits. The modeling and recommendations are still underway at the time of this report, but the preliminary findings are summarized below.

## Groundwater Wells

The Town's current (2021) average daily water demand is $290 \mathrm{~m}^{3} /$ day, which is supplied by three wells that have been pump tested and licensed/approved to pump up to their sustainable long-term yields. The wells have a combined capacity to supply $548 \mathrm{~m}^{3} /$ day, which is $189 \%$ of the average daily demand. The wells also have capacity to refill the reservoirs in the event that high demand for fire water or other temporary demand well in excess of the average daily demand is encountered. Without adding a fourth production well the Town has residual capacity to accommodate approximately $3 \%$ annual growth for more than 20 years.

Even with the conservative growth rate applied for planning and design, the Town's current wells are capable of service into the future with the likely need to add a fourth well to meet the projected demand for the full Town and southeast area buildout with a high level of confidence. Note that the individual wells also have higher allowable maximum diversion rates than the average daily maximums as presented above which can be leveraged to calculate limitations of the wells to meet potential short-term, high-demand situations/scenarios such as reservoir filling/fire water demand. However, if maximum daily withdrawals are made, the overall annual volumetric approvals still apply.

## Reservoir Capacity

The Town's reservoirs have a total combined capacity of $1,778 \mathrm{~m}^{3}$. Currently $1,269 \mathrm{~m}^{3}$ of that capacity is utilized for the maximum daily demand, emergency storage, and fire flow storage (assuming $150 \mathrm{l} / \mathrm{s}$ fire flow for two hours). The future commercial/industrial areas are being planned for an average demand of $0.05 \mathrm{l} / \mathrm{s} / \mathrm{ha}$ with a 2-hour fire flow of $150 \mathrm{l} / \mathrm{s}$. Combined with the Town's future residential buildout within Town limits, it is estimated that the ultimate reservoir volume will need to be approximately $2,180 \mathrm{~m} 3$. Depending on timing of future buildout and the life expectancy of the water treatment plant and reservoirs, this additional volume could be accommodated either by adding more capacity to the reservoirs at the water treatment plant, which would be challenging to expand with the current site constraints, or by replacing the water treatment plant with a new facility and additional storage.

## Water Treatment and Pumping

The water treatment plant currently utilizes chlorination treatment without any filtration. If the existing wells and future wells continue to be classified as non-GUDI wells (Groundwater Under Direct Influence of surface water), and these
wells continue to produce high quality ground water as what is being produced, the chlorination process for disinfection will be adequate to claim 4 -log reduction credit on virus inactivation.

The existing pump station is not known to have mechanical issues that need immediate attention, but the addition of surge protection is necessary and recommended to protect the electrical system and pump motors. To meet the longterm future demands, the pump station will need be upgraded to increase the pumping capacity and storage volume. Like the reservoir capacity, this can potentially be accommodated by upgrades at the existing water treatment plant but depending on timing for increases in demands and the estimated lifespan of the facility, the Town may want to consider replacing the water treatment plant and reservoirs in the relatively long-term future (approximately 20 years for an assumed $3 \%$ annual growth).

The Town is currently working on planning for the Town's growth over the next 20 years. With respect to Asset Management, it will be incumbent on the Town to add the new assets as they are brought online. This will allow the Town to further mange the replacement costs well into the future for their Water Assets. Planned upgrades will include assets like an additional Water Treatment plant, new water pipes, hydrants, water wells, etc.

## 9 Improvement Plan

An asset management plan is meant to be a living document that evolves every year to inform service decisions and long-term financial planning. In this initial stage of the plan, only a very high level of information was incorporated. Future iterations of the AM plan could evolve into more detail, which will lead to greater accuracy should the Town find benefit in more detailed information. It is recognized that it may take a number of planning cycles to evolve the plan to a sufficient level of detail for good asset management.

Based on the engagements with staff, the assessment of the data on hand, and the analysis of life cycle forecasts, the overall recommendation for the Town is to continue being a conscientious operator of the water system, and to be mindful of the forecast 2048 spike in AC Pipe failures. Knowing that this date represents the assumed 'end of life' for the AC mains, the Town can make plans to ensure that when the performance does deteriorate, that adequate financial resources are in place to effectively replace the network in an efficient manner.

The following are more detailed recommendations for improvements based on the structure of this Plan.

### 9.1 Asset Register

- Create a Record/Register of water asset performance and failures to ensure that the current performance is monitored in a systemic manner. Ensuring that the Town's infrastructure performance is accurately captured and recorded can serve as a valuable rearward looking dataset to forecast future performance.
- Ensure that the Town's physical assets are captured in not only the Asset Register but are accurately recorded in the Town's Tangible Capital Asset List as well as the Town's GIS Platform.


### 9.2 Level of Service

- Review the noted services that have been identified as Low (at a LOS 1 or 2) and review any changes required.


### 9.3 Risk

- Review the four noted Risks that have been identified as High (Risk Score $>32$ ) and determine if mitigating action is required. Review these risks (and the current services mitigating them) with Council and determine if they are within the Town's Risk Tolerance.
- Plan to conduct an inspection of the well casings to determine their integrity.
- Investigate the addition of electrical Surge Protection at the water treatment plant to ensure that the plant telemetry continues operating in the event of an electrical problem.


### 9.4 Lifecycle Management Plan

- Actively monitor the performance of the underground assets as they approach the end of their forecast lifecycle to ensure that the Town has the fiscal capacity to replace them when required.


### 9.5 Long Term Financial Plan

- Develop a 20-year Financial Model for the Town's water utility to forecast long-term revenues, expenses, reserve balances and rates.
- Table the Asset Management Plan (along with the Long-Term financial plan) with Council


Appendix 1
Asset Register

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline Assectio \& Asset Nome \& Asset Code \& Material \& \(\underset{\substack{\text { Diameter } \\(m m)}}{\text { a }}\) \& Construction
rear \&  \&  \& \({ }_{\substack{\text { Repolcacement } \\ \text { rear }}}^{\text {cent }}\) \& lengh ( \(m\) ) \& Unit cost \& Histoical Cost \& Assef Replacement \& curent total \(\cos\) \\
\hline GIs \# \& Woter Pressure Moin \& \& \& \& \& \& \& \& \& \& \& \& \\
\hline 0142 \& 50 St(North Wat Plug 53.55 Ave \& \({ }^{\text {B18 }}\) \& \({ }^{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 12.00 \& \(1,300 \mathrm{~s}\) \& \& 15.500 \& \$ 15.600 \\
\hline \({ }^{144,140}\) \& 505 ( (55 Ave - 54 Ave) \& \({ }^{818}\) \& \({ }^{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 100.00 \& 1,300 s \& s \& 137800 \& 1378800 \\
\hline 137.123
13.135136 \&  \& \({ }_{\substack{818 \\ 818}}\) \& \({ }^{\text {AC }}\) \& 150
\(\left.\begin{array}{l}150 \\ 1\end{array}\right)\) \& \({ }_{1973}^{1973}\) \& 75 \& \({ }^{26}\) \& \begin{tabular}{l}
2048 \\
2048 \\
\hline
\end{tabular} \& \begin{tabular}{|l|l|}
114.00 \\
13100 \\
\hline 1
\end{tabular} \& 1, 1.300 s \& s \& 148200
172300 \& \(\begin{array}{r}1482000 \\ 172300 \\ \hline\end{array}\) \\
\hline \({ }^{154} 0112\) \& \({ }_{50 \text { st ( } 52 \text { Ave. } 515 \mathrm{Ave} \text { ) }}\) \& \({ }_{818}\) \& \({ }_{\text {Ac }}\) \& 200 \& 1973 \& 75 \& \({ }_{26}^{26}\) \& \({ }_{2048}\) \& 10200 \& 1.300 \& s \& 1182500 \& 180300
132600 \\
\hline 0113 \& 50.5 (51 Ave 50 Ave\()\) \& \({ }^{818}\) \& \({ }_{\text {ac }}\) \& 200 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 101.00 \& 1,300 \& s \& 1313,300 \& \({ }_{1}^{132,300}\) \\
\hline N/A \& 48 sts (5s ave - Culdes.ssc) \& \({ }^{\text {в18 }}\) \& pvc \& 200 \& 2014 \& 100 \& 92 \& 2114 \& 15200 \& 1,300 s \& s \& 197,60 \& \$ 197,600 \\
\hline 0144 \& 49 St (55 Ave. 54 Ave) \& \({ }^{818}\) \& \({ }^{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 124.00 \& 1,300 \& s . \& 1161.200 \& 161220 \\
\hline 146, 147, 148 \& 49 st (54 Ave. 53 Ave) \& \({ }^{\text {818 }}\) \& \({ }_{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 98.00 \& \(1,300 \mathrm{~s}\) \& s \& 127,00 \& \$ 127,400 \\
\hline 126, 125, 124 \& 49 St (53 Ave. 52 Ave ) \& \({ }^{\text {B18 }}\) \& \({ }_{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 124.00 \& 1,300 s \& 5 \& 161,200 \& \$ 161,200 \\
\hline \({ }^{171,155,154}\) \& 47ast( 55 Ave - 54 Ave) \& \({ }^{818}\) \& pvc \& \({ }^{150}\) \& 201 \& \({ }^{100}\) \& 79 \& 2101 \& 93.00 \& \({ }^{1,300}\) s \& s \& 120990 \& \$ 120.900 \\
\hline 153,152 \& 47 Ast (54 Ave - Culdes.scc) \& \({ }^{818}\) \& pvc \& \({ }^{150}\) \& 2001 \& \({ }^{100}\) \& 79 \& 2101 \& 27.00 \& 1,300 \& s . \& 35.100 \& \$ 35.100 \\
\hline 156, 15, 158, 159 \& 54 Ave lone (77A st 46A sit) \& \({ }^{818}\) \& pvc \& \({ }^{150}\) \& 1993 \& 100 \& 7 \& 2093 \& 364.00 \& 1,300 \& s . \& 473.200 \& 473200 \\
\hline 165.204 \& 46 st lone (52 Ave. 51 Ave) \& \({ }_{818}\) \& pvc \& 200 \& 1973 \& 100 \& 51 \& 2073 \& 159.00 \& 1,300 \& s \& 2067700 \& 206,700 \\
\hline 0116 \& 46551 (51 Ave. 50 Ave ) \& \({ }^{\text {в18 }}\) \& \({ }_{\text {ac }}\) \& 200 \& 1973 \& 75 \& 26 \& 2048 \& 121.00 \& 1,300 \& s \& 1573300 \& 157,300 \\
\hline 0201 \& 46.5 ( 465 St - East side) \& \({ }^{818}\) \& \({ }^{\text {ac }}\) \& 150 \& 1973 \& 75 \& \({ }^{26}\) \& 2048 \& 21.00 \& 1,300 s \& s \& 27,300 \& 27,300 \\
\hline 0100
0100 \& 46st 50 Ave -49 Ave) \& \({ }_{\substack{818 \\ 818}}^{\text {B18 }}\) \& \({ }_{\text {AC }}{ }_{\text {AC }}\) \& (150 \({ }_{1}^{150}\) \& 1977
1973 \& \({ }_{75}^{75}\) \& \({ }_{26}^{26}\) \& 2048
2048

20, \& 10200
113.00

1 \& ${ }_{\text {l }}^{1,3000}$ ¢ \& s \& \begin{tabular}{l}
132600 <br>
146900 <br>
\hline

 \& \$ 

122600 <br>
\hline 14690
\end{tabular} <br>

\hline 0189 \& 465 ( 48 Ave - South Eno) \& ${ }_{818}$ \& ${ }_{\text {ac }}$ \& ${ }_{150}$ \& 1973 \& 75 \& 26 \& 2048 \& 16.00 \& ${ }_{1}^{1,3,300}$ \& s \& ${ }^{1426,800}$ \& \$ 20.800 <br>
\hline 0203 \& 455 t (50 Ave 49 Ave ) \& ${ }^{818}$ \& pvc \& ${ }_{150}$ \& 1973 \& 100 \& 51 \& 2073 \& 10200 \& 1,300 \& s \& 132600 \& \$ 132600 <br>
\hline N/A \& 56 ve (48A St. -ast End) \& ${ }^{818}$ \& pvc \& 200 \& 2014 \& 100 \& 92 \& 2114 \& 58.00 \& 1.300 \& s \& 75.40 \& \$ 75.400 <br>
\hline 144, 14, 144 \& ${ }_{55}$ Ave (505s. 49 Sti) \& ${ }^{818}$ \& ${ }^{\text {ac }}$ \& 150 \& 1973 \& 75 \& ${ }^{26}$ \& 2048 \& 177.00 \& $1,300 \mathrm{~s}$ \& s \& 230.100 \& \$ 230,100 <br>
\hline 0145 \& 55 ave (49 St-East End) \& ${ }^{\text {B18 }}$ \& ${ }^{\text {ac }}$ \& ${ }^{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& 2048 \& 18.00 \& 1.300 s \& s \& 23.400 \& \$ 23.400 <br>
\hline N/A \& 55 Ave (49 St Exsiting E East Limit) \& ${ }^{\text {818 }}$ \& pvc \& 200 \& 2014 \& 100 \& 92 \& 2114 \& 93.00 \& 1,300 s \& s \& 120990 \& \$ 120,900 <br>
\hline 138,139 \&  \& ${ }^{818}$ \& ${ }_{\text {ac }}$ \& 150
150 \& ${ }^{1973}$ \& 75 \& ${ }^{26}$ \& ${ }^{2048}$ \& ${ }_{52}^{5200}$ \& ${ }^{1,300}$ s \& s \& ${ }^{677,000}$ \& ${ }^{67,600}$ <br>
\hline  \& 54 Ave (49 5s- 47 A St) \& ${ }^{\text {B18 }}$ \& puc \& ${ }^{150}$ \& 2001 \& ${ }^{100}$ \& 79 \& ${ }^{2101}$ \& ${ }^{287.00}$ \& ${ }^{1,300}$ s \& s \& ${ }^{373,100}$ \& \$ 373,100 <br>

\hline \% \&  \& ${ }_{818}^{818}$ \& ${ }^{\text {ac }}$ \& $\begin{array}{r}150 \\ \hline 150 \\ \hline 1\end{array}$ \& ${ }_{1977}^{1973}$ \& 75 \& ${ }^{26}$ \& ${ }^{2048}$ \& 1 | 19400 |
| :--- |
|  |
| 22200 | \& ${ }^{1,300}{ }^{\text {s }}$ \& s \&  \& 252200

228500 <br>
\hline (0163 \&  \& ${ }^{818}$ \& Pre
puc
pr \& 150
150
1 \& 1993
1993 \& 100 \& 71 \& ${ }_{203}^{2093}$ \& 22200 \& 1,300 ${ }^{\text {s }}$ \& s \& 288,00 \& \$ $\begin{array}{r}288,00 \\ 78000\end{array}$ <br>
\hline 0162
0161 \&  \& ${ }_{818}^{8818}$ \& PvC
Pve \& (150 \& 1993
1993 \& 100
100 \& ${ }_{71}^{71}$ \& 2093

2093 \& \begin{tabular}{l}
60.00 <br>
10500 <br>
<br>
\hline

 \& 

1,300 <br>
1,300 <br>
\hline
\end{tabular} \& s \& 78.000

138500 \& \$ $\begin{gathered}78.000 \\ 138500\end{gathered}$ <br>
\hline 0160 \& 53 Ave Lone (464 St. -46 5t tone) \& ${ }_{818}$ \& pvC \& ${ }_{150}$ \& 1993 \& 100 \& 71 \& 2093 \& 56.00 \& 1,300 \& s \& ${ }_{72} 2800$ \& 72800 <br>
\hline 0170 \& 53 vee lane (46st tone. 46 sti) \& ${ }_{818}$ \& pvc \& ${ }_{150}$ \& 1993 \& 100 \& 71 \& 2093 \& 43.00 \& 1,300 \& 5 \& 55900 \& 55,900 <br>
\hline 0170 \& 46 st ( 53 Ave lone. 52 Ave ) \& ${ }^{\text {в18 }}$ \& pvc \& ${ }^{150}$ \& 1993 \& 100 \& 71 \& 2093 \& 33.00 \& 1,300 \& s \& 42900 \& 42900 <br>
\hline 0169 \& 4655 (53 Ave lone. 52 Ave) \& ${ }^{\text {818 }}$ \& pvc \& 200 \& 1993 \& ${ }^{100}$ \& 7 \& ${ }^{2093}$ \& 22.00 \& 1,300 \& \& 28.600 \& \$ 28.600 <br>
\hline 0172 \& 52 Ave (West End. 50.54 St \& ${ }^{818}$ \& ${ }^{\text {AC }}$ \& ${ }^{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& ${ }_{2048}^{2048}$ \& 7.00
1.2000 \& ${ }^{1,300}{ }^{1,300}$ \& s \& 9,100 \& \$ 9,100 <br>
\hline -0.111.123 \&  \& ${ }_{\substack{818 \\ 818}}$ \& ${ }^{\text {AC }}$ \& 200
200 \& 1973
1973 \& 75

75 \& ${ }_{26}^{26}$ \& \begin{tabular}{l}
2048 <br>
2048 <br>
\hline

 \& 

18200 <br>
188.00 <br>
\hline
\end{tabular} \& 1,300

1,300
1 \& s \& 2360,600
24, 1800 \& \$ $\begin{aligned} & \text { 2360,60 } \\ & \text { 241800 }\end{aligned}$ <br>
\hline -1068 \& ${ }_{52}^{52 \text { vee (885 } 5 \text { - } 47 \text { sti) }}$ \& ${ }_{818}^{8818}$ \& ${ }_{\text {AC }}^{\text {AC }}$ \& 200
200 \& ${ }_{1979}$ \& ${ }_{75}$ \& ${ }_{32}^{26}$ \& ${ }_{2054}^{2048}$ \& 188200
1820 \& ${ }^{1,3000}$ \& s \& ${ }_{2}^{248,6000}$ \& \$ $\quad 23866000$ <br>
\hline 0166
0193 \&  \& ${ }_{818}^{818}$ \& ${ }_{\text {AC }}{ }_{\text {a }}$ \& 200
150
1 \& 1975

1973 \& ${ }_{75}^{75}$ \& ${ }^{28}$ \& | 2050 |
| :--- |
|  |
| 2048 | \& 146000

700 \& 1,300
1,5
1,00
1 \& s \& 1898000 \& \$ 1898800 <br>
\hline 0193
0122
0 \&  \& ${ }_{\substack{818 \\ 818}}^{818}$ \& ${ }_{\text {AC }}{ }_{\text {AC }}$ \& 150
150
1 \& 1977
1973 \& 75
75 \& 26
26 \& 2048

2048 \& | 7.00 |
| :--- |
| 20100 | \& ${ }^{1,300}{ }^{1,300}$ s \& s \& 261,300 \& \$ $\begin{aligned} & \text { 9,1,00 } \\ & \text { 261,30 }\end{aligned}$ <br>

\hline 121,120 \& 51 Ave (495t-48 sti) \& ${ }_{818}$ \& ${ }_{\text {a }}$ \& ${ }_{150}$ \& 1973 \& 75 \& ${ }_{26}^{26}$ \& ${ }_{2048}$ \& 173.00 \& ${ }_{1,300}$ \& s \& 224,900 \& \$ 224,900 <br>
\hline 119, 118 \& 51 Ave (4855. 47 sti) \& ${ }^{818}$ \& ${ }_{\text {ac }}$ \& ${ }^{150}$ \& 1977 \& 75 \& 30 \& 2052 \& 153.00 \& ${ }^{1,300}$ s \& \& 198.90 \& \$ 198.900 <br>
\hline 115.114 \& 51 Ave (47 St. 4 S Sti) \& ${ }^{\text {B18 }}$ \& ${ }_{\text {a }}$ \& ${ }^{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& 2048 \& 175.00 \& 1,300 \& s \& 227,50 \& + 227,500 <br>
\hline 0202 \& Noth. West (H) 135.50 Ave ) \& ${ }^{818}$ \& pvc \& ${ }^{150}$ \& 1994 \& ${ }^{100}$ \& ${ }^{72}$ \& 2094 \& 293.00 \& ${ }^{1,3000}$ \& s \& ${ }^{380.900}$ \& \$ 380,900 <br>
\hline ${ }_{\substack{0178 \\ 177.175 .}}^{10 .}$ \&  \& ${ }_{818}^{818}$ \& ${ }^{\text {ac }}$ \& 200

200 \& ${ }_{1973}^{1973}$ \& 75 \& ${ }^{26}$ \& | 2048 |
| :--- |
| 2048 | \& 19200

11200
1200 \& 1,300
1,300
1 \& s \& 24.9500
145.500 \& \$ $\begin{aligned} & \text { 249,600 } \\ & 145500\end{aligned}$ <br>
\hline  \&  \& ${ }_{\substack{818 \\ 818}}$ \& ${ }_{\text {AC }}^{\text {AC }}$ \& 200
200 \& 1973
1973 \& 75
75 \& ${ }_{26}^{26}$ \& 2048
2048

20, \& | 112.00 |
| :--- |
| 2500 | \& 1,300

1,300

1,0 \& s \& | 14.5600 |
| :--- |
| 32500 | \& \$ $\quad \begin{aligned} & 145.500 \\ & 32500\end{aligned}$ <br>

\hline 0176 \& 50 Ave sout (50 St lone. 50 St) \& ${ }_{818}$ \& ${ }_{\text {Ac }}$ \& ${ }_{1}^{20}$ \& 1973 \& 75 \& ${ }_{26}^{26}$ \& ${ }_{2048}$ \& 121.00 \& 1,300 \& s \& ${ }_{1} 527300$ \& \$ 157,300 <br>
\hline 179, 180 \& 50 Ave Sout (50st- Raliwoy ave) \& ${ }^{818}$ \& ${ }_{\text {AC }}$ \& ${ }^{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& 2048 \& 161.00 \& ${ }^{1,300}$ s \& s \& 2093300 \& \$ 209300 <br>
\hline ${ }^{1173}$ \& 50 Ave (5ost one -4985) \& ${ }_{818}^{818}$ \& ${ }^{\text {ac }}$ \& ${ }^{200}$ \& 1973

1973 \& 75 \& ${ }^{26}$ \& ${ }_{2048}^{2048}$ \& 98.00 \& 1,300 \& \& | 1277400 |
| :--- |
| 218400 |
| 1 | \& \$ $\begin{aligned} & 127,400 \\ & 21800\end{aligned}$ <br>

\hline 0195 \&  \& ${ }_{818}$ \& ${ }_{\text {AC }}$ \& ${ }_{200}^{200}$ \& 1973 \& ${ }_{75}$ \& ${ }_{26}^{26}$ \& 2048 \& 173.00 \& 1.300 \& 5 \& ${ }_{2224,900}^{21000}$ \& 224,400
210 <br>
\hline 0103 \& 50 Ave (47 5t. 46 s 5i) \& ${ }_{818}$ \& ${ }_{\text {ac }}$ \& 200 \& 1973 \& 75 \& 26 \& 2048 \& 158.00 \& 1,300 \& \& 205,400 \& 205400 <br>
\hline 0191 \& 50 ve (465t-45 sti) \& ${ }^{818}$ \& pvc \& 200 \& 1973 \& 100 \& 51 \& 2073 \& 108.00 \& 1,300 \& 5 \& 1404000 \& 140,400 <br>
\hline 019 \& 50 Ave (45st. East End) \& ${ }^{818}$ \& pvc \& ${ }^{200}$ \& ${ }^{1973}$ \& ${ }^{100}$ \& ${ }^{51}$ \& ${ }^{2073}$ \& 295.00 \& ${ }^{1,300}$ s \& \& ${ }^{383.500}$ \& \$ 38.500 <br>
\hline 0192 \& ${ }^{50} 0$ Ave North( 485 st -47 57) \& ${ }^{818}$ \& ${ }^{\text {ac }}$ \& 150 \& 1977 \& 75 \& ${ }^{30}$ \& 2052 \& 16400 \& 1,300 s \& \& ${ }^{2132200}$ \& \& 213,200 <br>
\hline ${ }^{0190}$ \&  \& ${ }_{818}^{818}$ \& ${ }^{\text {ac }}$ \& $\begin{array}{r}150 \\ \hline 150 \\ \hline 150\end{array}$ \& 1973

1923 \& 75 \& ${ }_{26}^{26}$ \& | 2048 |
| :--- |
| 2048 | \& 155000

1000

1000 \& - 1,300 \& s \& | 202800 |
| :--- |
| 2800 |
| 2480 | \& <br>

\hline $\underset{\substack{187,186 \\ 0.185}}{ }$ \&  \& ${ }_{\substack{818 \\ 818}}$ \& ${ }_{\text {AC }}^{\text {AC }}$ \& 150
150
150 \& 1973
1973 \& 75
75 \& ${ }_{26}^{26}$ \& 2048

2048 \& | 19.00 |
| :--- |
| 9900 |
|  | \& ${ }_{1,300}^{1,300}$ \& s \& 247700

128,00 \& \$ ${ }_{\text {\% }} \begin{aligned} & \text { 24,700 } \\ & 128700\end{aligned}$ <br>
\hline ${ }_{0}^{11884}$ \& 49 A Ave (50 St-49 st) \& ${ }_{818}^{818}$ \& ${ }_{\text {AC }}$ \& ${ }_{150}^{150}$ \& 1973 \& ${ }_{75}$ \& ${ }_{26}^{26}$ \& ${ }_{2048}^{2048}$ \& 1888.00 \& ${ }_{1}^{1,300}$ \& s \& ${ }^{244,400}$ \& \$ ${ }^{244,400}$ <br>
\hline 198,199 \& 49 Ave (495t-4855) \& ${ }^{818}$ \& ${ }_{\text {ac }}$ \& ${ }_{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& 2048 \& 172.00 \& ${ }_{1,300}$ \& s \& 223.00 \& 223.500 <br>
\hline 102,200 \& 49 Ave (485 -47 575) \& ${ }_{818}$ \& ${ }_{\text {ac }}$ \& ${ }_{150}$ \& 1973 \& 75 \& ${ }^{26}$ \& ${ }^{2048}$ \& 173.00 \& ${ }_{1,300}$ \& s . \& 224,900 \& 224,900 <br>
\hline ${ }^{101,197}$ \& ${ }^{49}$ Ave (475 -4.45s) \& ${ }^{818}$ \& ${ }^{\text {ac }}$ \& ${ }^{150}$ \& ${ }^{1973}$ \& ${ }^{75}$ \& ${ }^{26}$ \& ${ }^{2048}$ \& 153.00 \& ${ }^{1,300}$ \& s . \& 198.90 \& 198950 <br>
\hline 188,203
18.196 \&  \& ${ }_{\substack{818 \\ 818}}$ \& ${ }_{\text {PVC }}^{\text {AC }}$ \& 150
200 \& 1973

1973 \& ${ }_{75}^{100}$ \& ${ }_{26}^{51}$ \& | 2073 |
| :--- |
| 2048 | \& 115.00

15400

1 \& ${ }_{1}^{1,3000}$ \& s \& | 1495000 |
| :--- |
| 200200 |
|  |
|  | \& 149500

200200 <br>
\hline 0182 \& Raliway Ave (49 Ave - 48 Ave) \& ${ }_{818}$ \& ${ }_{\text {ac }}$ \& 200 \& 1973 \& 75 \& ${ }_{26}$ \& 2048 \& 159.00 \& ${ }_{1,300}$ \& s . \& 2067700 \& <br>
\hline 183, 105, 104, 109 \& ${ }^{88}$ Ave (505s. 49 951) \& ${ }^{818}$ \& ${ }_{\text {Ac }}$ \& ${ }^{150}$ \& ${ }^{1977}$ \& ${ }^{75}$ \& ${ }_{26}$ \& 2048 \& 193.00 \& ${ }^{1,300}$ \& s \& 250,900 \& 250,900 <br>
\hline O109 \&  \& ${ }_{818}^{818}$ \& ${ }_{\text {AC }}^{\text {AC }}$ \& ciso
150
150 \& 1973
1973 \& ${ }_{75}^{75}$ \& 26
26 \& 2048
2048
2048 \& 188.00
17200
1 \& ${ }_{1}^{1,300}$ \& s \& ${ }_{2}^{244,400}$ \& 244,400
22300 <br>
\hline 107, 106 \& 48 Ave (475 5-46 551) \& ${ }_{818}$ \& ${ }_{\text {a }}$ \& ${ }_{150}$ \& 1973 \& 75 \& 26 \& 2048 \& 153.00 \& ${ }_{1,300}$ \& \& 198.90 \& 198,900 <br>
\hline \&  \& $\underbrace{}_{\substack{\text { Proposed } \\ \text { Proosed }}}$ \& ${ }_{\text {Pre }}^{\text {PVC }}$ \& 150

200 \& Proposed \& ${ }^{100}$ \& N/A \& \& \& 1,300 \& \& | 57200 |
| :--- |
| 64300 | \& <br>

\hline ${ }^{12} 8020810^{2114}$ \& 49 ave (one (45st- East trn) \& Proposed \& pve \& ${ }_{200}^{200}$ \& Proposed \& 100 \& N/A \& N/A \& 43.00 \& ${ }_{1}^{1,300}$ \& \& 645000
59590 \& <br>
\hline 209, 21, 215 \& S0 Ave (45 St- -ast End) \& Proposed \& pvc \& 200 \& Proposed \& 100 \& N/A \& N/A \& 371.00 \& ${ }_{1}^{1,300}$ \& s \& 482330 \& \$ <br>
\hline \& Suvtoctl Weter Pressue moin \& \& \& \& \& \& \& \& 9176 \& \& \& 11.228 .800 \& 11,28,800 <br>
\hline
\end{tabular}



| Asset 10 | $\underset{\substack{\text { Asset Nome } \\ \text { (seveen) }}}{\text { ater }}$ | Assel Code | Material | ${ }^{2033}$ |  | 2034 |  | 2035 |  | 2036 |  | 2037 |  | 2038 |  | 2039 |  | 2040 |  | 2041 |  | 2042 |  | 2043 |  | 2044 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G15 \# | Woter Pressue Main |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0142 | 50 St(North Wat flug f3-55 Ave) | ${ }^{818}$ | AC | \$ | - |  | S |  | \$ |  | s |  | \$ |  | - |  | \$ |  | s |  | - |  | \$ |  | \$ |  |
| ${ }^{141,140}$ |  | ${ }_{818}^{818}$ | ${ }^{\text {a }}$ | \$ | - 8 |  | s |  | \$ |  | \$ |  | s |  | - |  | \$ |  | s |  | s |  | s |  | s |  |
|  |  | 818 | ${ }_{\text {ac }}{ }^{\text {ac }}$ | 5 | -s |  | s |  | \% |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  |
| 0112 | 50 st (52 Ave. 51 Ave ) | ${ }_{818}$ | ac | s | - |  | s |  | \$ |  | s |  | s |  | - |  | s |  | s |  | - |  | - |  | s |  |
| 013 | 5 SSt (51 Ave. 50 Ave | ${ }^{818}$ | ${ }_{\text {ac }}$ | \$ | - |  | - |  | s |  | s |  | s |  | - |  | \$ |  | s |  | s |  | - 8 |  | s |  |
| N/A |  | ${ }^{818}$ | PvC | \$ | -s |  | s |  | \$ |  | s |  | \$ |  | - |  | \$ |  | \$ |  | \% |  | \$ |  | s |  |
| 0144 | 49 st (55 Ave. 54 Ave ) | ${ }^{818}$ | AC | \$ | - |  | -s |  | s |  | s |  | s |  | - |  | s |  | s |  | - |  | - 8 |  | \$ |  |
| 146, 147, 148 | 495 t (54 Ave. 53 Ave) | ${ }^{818}$ | AC | \$ | - |  | - |  | s |  | s |  | \$ |  | - |  | \$ |  | s |  | \% |  | - 8 |  | \$ |  |
| 126, 125,124 | $4{ }^{\text {st ( } 53} 3 \mathrm{Ave} .52 \mathrm{Ave}$ ) | ${ }^{818}$ | AC | \$ | - |  | s |  | s |  | s |  | s |  | - |  | s |  | \$ |  | s |  | - |  | s |  |
| 171, 15, 154 | 47 Ast (55 Ave- 54 Ave ) | ${ }^{\text {818 }}$ | PvC | s | - |  | s |  | s |  | s |  | s |  | - |  | \$ |  | s |  | s |  | - |  | \$ |  |
| (153, 158.152 |  | ${ }_{818}^{818}$ | ${ }_{\text {PVC }}^{\text {PvC }}$ | \$ | - ${ }_{-}^{8}$ |  | - $\$$ |  | \$ |  | \$ |  | s |  | - ${ }_{5}$ |  | \$ |  | - 8 |  | \% |  | - ${ }_{5}$ |  | \$ |  |
| ${ }_{1656.204}$ | 46 stlone ( 52 Ave . 51 Ave ) | ${ }_{818}$ | prc | \$ | - |  | s |  | \$ |  | s |  | \$ |  | - |  | \$ |  | \$ |  | \% |  | - |  | \$ |  |
| 0116 | 4655 (51 Ave. 50 Ave ) | ${ }_{818}$ | AC | \$ | -s |  | -s |  | s |  | s |  | s |  | - |  | \$ |  | - |  | - |  | - |  | s |  |
| ${ }^{2021}$ | 465 st (46 St. East Side) | ${ }^{818}$ | AC | \$ | - ${ }^{\text {s }}$ |  | - |  | \$ |  | \$ |  | \% |  | - |  | \$ |  | - |  | \$ |  | - 9 |  | \$ |  |
| 0100 | ${ }^{465 s t}$ ( $50 \mathrm{Ave} \cdot 4.4 \mathrm{Ave}$ ) | ${ }_{818}^{818}$ | ${ }_{\text {AC }}{ }^{\text {a }}$ | \$ | - |  | - 8 |  | \$ |  | \$ |  | \$ |  | - 8 |  | s |  | s |  | s |  | - |  | \$ |  |
| 0189 | 465 ( 48 Ave South End) | ${ }_{818}$ | AC | \$ | \$ |  | - |  | s |  | \$ |  | s |  | \$ |  | \$ |  | s |  | \$ |  | - |  | \$ |  |
| 0203 | 45 st (50 Ave-49 Ave) | ${ }^{\text {в18 }}$ | pvc | \$ | - ${ }^{\text {s }}$ |  | - |  | \$ |  | s |  | - |  | \$ |  | s |  | s |  | - |  | - ${ }^{\text {s }}$ |  | s |  |
| N/A | 56 Ave (48A St. Esst End) | ${ }^{818}$ | pvC | \$ | - |  | - |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  |  |  | - |  | - |  | \$ |  |
| 144, 14, 144 | 55 ve (505t-49 5st) | ${ }^{818}$ | AC | \$ | - |  | - |  | s |  | s |  | s |  | - |  | \$ |  | S |  | - |  | - |  | s |  |
| ${ }^{1045}$ |  | ${ }^{818}$ | ${ }^{\text {ac }}$ | \$ | - |  | - |  | \$ |  | s |  | s |  | - 8 |  | \$ |  | - 8 |  | s |  | - |  | \$ |  |
| 138,139 |  | ${ }_{818}$ | Ac | \$ | - |  | - |  | \$ |  | \$ |  | s |  | - |  | \$ |  | s |  | \$ |  | - |  | \$ |  |
| 149, 150.151 | 54 Ave (49 95-47 -4 St) | ${ }_{818}$ | prc | \$ | - |  | - |  | \$ |  | s |  | S |  | - |  | \$ |  | s |  | \$ |  | - |  | \$ |  |
| cole |  | ${ }_{818}^{818}$ | AC | \$ | - ${ }_{-8}$ |  | - 8 |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | - ${ }^{\text {s }}$ |  | - ${ }^{-8}$ |  | \$ |  |
| 0162 | $46 \mathrm{Ast}(53 \mathrm{Ave}$ close -53 ave lone) | ${ }_{818}$ | pve | s | - |  | - |  | \$ |  | s |  | s |  | - |  | \$ |  | \$ |  | - |  | - |  | \$ |  |
| ${ }_{0}^{0161}$ |  | ${ }_{818}^{8818}$ | ${ }_{\text {PVC }}^{\text {Pve }}$ | \$ | -8 -8 |  | - $\%$ |  | \$ |  | \$ |  | \$ |  | - ${ }_{8}$ |  | \$ |  | s |  | - ${ }^{\text {s }}$ |  | - ${ }^{8}$ |  | \$ |  |
| 0170 |  | ${ }_{818}$ | pve | \$ | - |  | -s |  | \$ |  | s |  | s |  | - |  | s |  | - |  | \% |  | - |  | \$ |  |
| 0170 |  | ${ }^{818}$ | PVC | s | - |  | - |  | \$ |  | \$ |  | s |  | s |  | s |  | - 8 |  | S |  | - 8 |  | \$ |  |
| 0169 0172 018 |  | ${ }_{818}^{818}$ | ${ }_{\text {PVC }}^{\text {PC }}$ | s | - ${ }_{5}$ |  | - 8 |  | \$ |  | s |  | s |  | - 8 |  | s |  | s |  | s |  | - 8 |  | \$ |  |
| 10, 111, 223 | 52 Ave (50st -49 sti) | ${ }_{8,18}^{8818}$ | AC | \$ | - |  | -s |  |  |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  |
| ${ }^{0168}$ |  | ${ }^{818}$ | AC | , | - |  | - |  | \$ |  | \$ |  | \$ |  | - |  | s |  | - 8 |  | - |  | - |  | s |  |
| ${ }^{0167}$ | 52 Ave (4855.47 5is | ${ }^{818}$ | ${ }^{\text {a }}$ | \$ | - |  | - |  | \$ |  | s |  | - |  | - |  | s |  | - |  | - |  | - |  | \$ |  |
| 0166 0193 |  | ${ }_{818}^{818}$ | ${ }_{\text {AC }}{ }_{\text {AC }}$ | \$ | - ${ }_{-8}$ |  | - ${ }_{5}$ |  | \$ |  | \$ |  | \$ |  | - ${ }_{5}$ |  | \$ |  | \$ |  | - |  | - ${ }_{5}$ |  | \$ |  |
| 0122 | $51 . \mathrm{vee}$ (50st-49 5st) | ${ }_{818}$ | ${ }_{\text {AC }}$ | \$ | - |  | - |  | \$ |  | \$ |  | \$ |  | - |  | \$ |  | s |  | \$ |  | - |  | \$ |  |
| ${ }^{121,120}$ | ${ }^{51}$ Ave (4955-4855) | ${ }^{818}$ | ${ }^{\text {a }}$ | \$ | - |  | - |  | \$ |  | s |  | s |  | - |  | s |  | s |  | s |  | - 5 |  | s |  |
| 119.118 115.114 |  | ${ }_{818}^{818}$ | ac | \$ | - |  | - |  | \$ |  | s |  | s |  | - 8 |  | s |  | \$ |  | s |  | - |  | \$ |  |
| ${ }_{0}$ |  | ${ }_{818}^{818}$ | ${ }_{\text {PrC }}$ | \$ | - |  | - 8 |  | \$ |  | ¢ |  | \$ |  | \$ |  | \$ |  | s |  | - $\%$ |  | - ${ }^{8}$ |  | \$ |  |
| ${ }^{20178}$ | 50 Ave Notrt side (West End .505 st ) | ${ }_{818}$ | AC | \$ | - |  | -s |  | \$ |  | s |  | s |  | - |  | s |  | s |  | - |  | - |  | \$ |  |
| $\underbrace{}_{\substack{177,175, 0174}}$ |  | ${ }_{818}^{818}$ | AC $A C$ $A C$ | \$ | - ${ }_{\text {- }}$ |  | - ${ }_{5}$ |  | \$ |  | \$ |  | \$ |  | - ${ }_{5}$ |  | \$ |  | \$ |  | - |  | - ${ }_{5}$ |  | \$ |  |
| ${ }^{0176}$ | $50 \mathrm{Ave} \mathrm{south} \mathrm{(505} 5$ tone. 50 s st) | ${ }_{818}$ | ${ }_{\text {AC }}$ | s | - |  | -s |  | s |  | s |  | s |  | s |  | s |  | s |  | -s |  | - |  | \$ |  |
| 179,180 |  | ${ }^{818}$ | AC | 5 | - |  | - |  | \$ |  | \$ |  | s |  | s |  | s |  | s |  | - |  | - |  | \$ |  |
| 0173 0194 0 |  | ${ }_{818}^{818}$ | ${ }_{\text {ac }}^{\text {AC }}$ | \$ | - |  | -s |  | \$ |  | s |  | s |  | \$ |  | s |  | \$ |  | - 8 |  | - |  | \$ |  |
| 0195 | $50 \mathrm{ve} \mathrm{(485t-47} \mathrm{5it)}$ | ${ }_{818}$ | AC | s | - |  | - |  | s |  | s |  | s |  | \$ |  | s |  | s |  | - |  | - |  | s |  |
| 0103 |  | ${ }^{818}$ | ${ }_{\text {ac }}$ | \$ | - |  | - |  | \$ |  | s |  | s |  | - |  | s |  | s |  | - |  | - |  | \$ |  |
| 0191 019 | 50 ve (445st-4.45st) | ${ }_{818}^{818}$ | ${ }_{\text {PVC }}{ }_{\text {puc }}$ | 5 | - $\%$ |  | - 8 |  | \$ |  | \$ |  | \$ |  | - ${ }_{8}$ |  | \$ |  | \$ |  | - ${ }^{\text {s }}$ |  | - $\%$ |  | \$ |  |
| 0192 | 50 Ave Nott (485s. 47 7 St) | ${ }_{818}$ | AC | \$ | - ${ }^{\text {s }}$ |  | - |  | \$ |  | s |  | \$ |  | \$ |  | s |  | \$ |  | \% |  | - |  | s |  |
| ${ }^{0190}$ |  | ${ }^{818}$ | ${ }_{\text {ac }}$ | s | - |  | - 5 |  | s |  | s |  | s |  | - |  | s |  | s |  | -s |  | - |  | S |  |
| $\xrightarrow[\substack{187,186 \\ 0.185}]{ }$ |  | ${ }_{818}^{818}$ | ${ }_{\text {AC }}{ }_{\text {AC }}$ | \$ | - |  | - ${ }_{-}$ |  | \$ |  | \$ |  | \$ |  | - ${ }^{\text {s }}$ |  | \$ |  | - ${ }_{5}$ |  | - |  | - ${ }_{-}$ |  | s |  |
| 0184 | 49 Ave (50 5t-49 5si) | ${ }_{818}$ | ${ }_{\text {ac }}$ | \$ | - |  | - |  | s |  | s |  | s |  | s |  | s |  | \$ |  | - |  | - |  | s |  |
| 198,199 10200 | ${ }^{49}$ Ave (495s. 48 85i) | ${ }^{818}$ | AC | \$ | - |  | - ${ }^{5}$ |  | s |  | s |  | \$ |  | - |  | \$ |  | s |  | - |  | - |  | \$ |  |
| 102,200 101,197 |  | ${ }_{818}^{818}$ | ${ }_{\text {AC }}^{\text {AC }}$ | \$ | $\bigcirc$ |  | -8 -8 |  | s |  | \$ |  | \$ |  | - ${ }_{\text {\% }}$ |  | \$ |  | \$ |  | - ${ }^{\text {s }}$ |  | - 8 |  | \$ |  |
| ${ }^{188,203}$ | 49 Ave (465t-45 5si) | ${ }^{\text {в18 }}$ | pvc | s | - ${ }^{\text {s }}$ |  | - |  | s |  | s |  | s |  | - |  | s |  | - |  | - |  | - |  |  |  |
| cisi, 186 |  | ${ }_{818}^{818}$ | ${ }^{\text {ac }}$ | \$ | - |  | - ${ }_{\text {- }}$ |  | \$ |  | s |  | s |  | - |  | \$ |  | - 8 |  | - |  | - |  | s |  |
| 183, 105, 104, 109 |  | ${ }_{818}$ | ${ }_{\text {AC }}{ }^{\text {a }}$ | \$ | - |  | - |  | \$ |  | \$ |  | s |  | \% |  | \$ |  | \$ |  | - $\$$ |  | - $\%$ |  | \$ |  |
| 0109 | ${ }^{48} \mathrm{Ave}$ (4955-485 4 St) | ${ }^{818}$ | AC | \$ | - |  | - |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  | - |  | \$ |  |
| 0108 107 108 |  | ${ }_{818}^{818}$ | AC | \$ | - |  | - ${ }^{5}$ |  | s |  | \$ |  | s |  | \$ |  | \$ |  | \$ |  | S |  | - 8 |  | \$ |  |
| 107, 106 |  | ${ }_{\text {Proposed }}^{\text {Bib }}$ |  | \$ | $\because$ |  | - ${ }^{\text {\% }}$ |  | \$ |  | \$ |  | \$ |  | - ${ }^{\text {\% }}$ |  | \$ |  | \$ |  | - $\$$ |  | - ${ }^{\text {- }}$ |  | \$ |  |
|  | 49 Ave (45st. East | ${ }_{\substack{\text { Proposed } \\ \text { Proosed }}}^{\text {Prosed }}$ | ${ }_{\text {Pre }}^{\text {PVC }}$ | \$ | - |  | - ${ }^{\text {s }}$ |  | s |  | s |  | \$ |  | - |  | \$ |  | \$ |  | - |  | - 5 |  | s |  |
|  |  | $\underset{\substack{\text { Proposed } \\ \text { Proosed }}}{\text { ded }}$ | ${ }_{\text {PVC }}^{\text {PVC }}$ | \$ | s |  | \$ |  | \$ |  | \$ |  | s |  | \$ |  | \$ |  | \$ |  | s |  | - ${ }^{-8}$ |  | \$ |  |
|  | Sobilocl - Woler Pressue Main |  |  | s | s |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  | s |  | - |  |



| Asset It | ${ }_{\substack{\text { asset } \\ \text { Aseme } \\ \text { (Seween) }}}$ | Asset Code | Material | 2057 |  | 2058 |  | 2059 |  | 2060 |  | 2061 |  | 2062 |  | 2063 |  | 2064 |  | 2065 |  | 2066 |  | 2067 |  | 2068 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| cis \# | Water Peessue Main |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0142 | 50 St(Noth Wot flug 5 F3.55 Ave) | ${ }^{818}$ | ${ }^{\text {ac }}$ | 5 | , |  | -s |  | s |  | \$ |  | s |  | s |  | - ${ }^{\text {s }}$ |  | - |  | \$ |  | \$ |  | \$ |  |
| 141, 140 | 50 st (55 Ave. 54 Ave ) | ${ }^{818}$ | AC | s | \$ |  | -s |  | - |  | - |  | \$ |  | - |  | - |  | -s |  | \$ |  |  |  | \$ |  |
| ${ }_{137}^{137} 113$ |  | ${ }^{\text {B1B }}$ | ${ }^{\text {ac }}$ | s | s |  | -s |  | -s |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | s |  |
| - 134.135 .136 | $5051(53 \mathrm{Ave}-52 \mathrm{Ave})$ 50 St (52 Ave 51 Ave$)$ | ${ }_{818}^{818}$ | ${ }_{\text {AC }}^{\text {AC }}$ | s | \$ |  | -s |  | - ${ }_{\text {- }}$ |  | - ${ }^{\text {s }}$ |  | -s |  | - |  | - 8 |  | - |  | - 8 |  | - |  | - |  |
| 0112 011 |  | ${ }_{818}^{818}$ | AC ${ }_{\text {AC }}{ }_{\text {AC }}$ | \$ | \$ |  | - 8 |  | - 8 |  | - ${ }_{8}$ |  | - 8 |  | - 8 |  | - 8 |  | - 8 |  | \$ |  | s |  | s |  |
| ${ }_{\text {N/A }}$ |  | ${ }_{818}$ | prc | ? |  |  | - |  | - $\$$ |  | \$ |  | \% |  |  |  | \$ |  | s |  | \$ |  | \$ |  | \$ |  |
| 0144 | 49 st (55 Ave. 54 Ave ) | ${ }^{818}$ | ${ }_{\text {AC }}$ | \$ | \$ |  | - |  | - |  | \$ |  | \$ |  | - |  | - |  | s |  | \$ |  | \$ |  | \$ |  |
| 146, 147, 148 | 49 st (54 Ave. 53 Ave ) | ${ }^{\text {в1в }}$ | AC | \$ | \$ |  | - |  | - |  | - |  | \$ |  | - |  | - |  | - |  | - |  | \$ |  | \$ |  |
| ${ }^{126,125,124}$ | ${ }^{49515(53 ~ A ~ A v e . ~} 52 \mathrm{Ave}$ ) | ${ }^{818}$ | ${ }_{\text {AC }}^{\text {AVC }}$ | \$ | \$ |  | - |  | - 5 |  | \$ |  | \$ |  | - 8 |  | - |  | - |  | \$ |  | \$ |  | \$ |  |
| $1771.155,154$ 153,152 162 |  | ${ }_{818}^{818}$ | ${ }_{\text {Pre }}^{\text {PvC }}$ | \$ | \$ |  | - ${ }_{\text {S }}$ |  | - ${ }_{5}$ |  | \$ |  | \$ |  | - 8 |  | - ${ }_{8}$ |  | - ${ }_{5}$ |  | s |  | \$ |  | \$ |  |
| 156, 157, 158, 159 | 54 Ave Loloe (47A st- 46A St) | ${ }_{818}$ | pve | \$ | \$ |  | - |  | - |  | \$ |  | \$ |  | \% |  | - |  | - |  | - ${ }^{\text {s }}$ |  | - $\%$ |  | \$ |  |
|  | 465 tlane ( 52 Ave . 51 Ave ) | ${ }^{818}$ | pvc | \$ | \$ |  | - |  | - |  | \$ |  | \$ |  | - |  | - |  | - |  |  |  | - |  | s |  |
| 0116 | ${ }^{46551}$ (51 Ave. 50 Ave ) |  | AC | s | \$ |  | - |  | s |  | \$ |  | s |  | - |  | - |  | - |  | \$ |  | - 9 |  | \$ |  |
| 0201 | 465 t (46st. East side) | ${ }^{818}$ | AC | \$ | s |  | -s |  | - |  | - ${ }^{\text {S }}$ |  | \$ |  | - |  | -s |  | -s |  | \$ |  | - |  | s |  |
| 0100 |  | ${ }_{\substack{818 \\ 818}}$ | ${ }^{\text {AC }}$ | \$ | \$ |  | - |  | - |  | - |  | \$ |  | - |  | - |  | - |  | \$ |  | - |  | \$ |  |
| 0100 | 4655 (49 Ave -48 Ave) | ${ }^{\text {B18 }}$ | AC | \$ | \$ |  | -s |  | - 5 |  | - ${ }^{\text {s }}$ |  | \$ |  | - |  | - |  | - |  | \$ |  | - |  | \$ |  |
| 0189 0203 |  | ${ }^{818}$ | ${ }_{\text {AC }}^{\text {PVC }}$ | \$ | \$ |  | -s |  | -s |  | - ${ }^{\text {s }}$ |  | \$ |  | - |  | -s |  | - |  | \$ |  | - |  | \$ |  |
| ${ }_{\text {N/A }} 0203$ |  | ${ }_{818}^{818}$ | PrC Pve Pr | \$ | \$ |  | - $\%$ |  | - $\$$ |  | - ${ }_{-8}^{8}$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - |  | - 8 |  | - 8 |  | \% |  |
| 14, 143, 144 | 55 ve ( 505 st -49 5s) | ${ }^{\text {в1в }}$ | AC | \$ | \$ |  | - |  | -s |  | \$ |  | - |  | - |  | -s |  | - |  | s |  | - |  | \$ |  |
| 0145 | 55 Ave (49 st- -ast End) | ${ }_{818}$ | AC | \$ |  |  | - |  | -s |  | - |  | s |  | - |  | - |  | -s |  | \$ |  | - |  | \$ |  |
| N/A | 55 Ave (49s St Exsising East L Lint) | ${ }^{\text {в1B }}$ | puc | s | s |  | -s |  | s |  | s |  | s |  | - |  | s |  | - |  | \$ |  | s |  | \$ |  |
| -138, 139 | $\underbrace{54}$ | ${ }_{818}^{818}$ | ${ }_{\text {PVC }}^{\text {PC }}$ | s | \$ |  | - 8 |  | - ${ }_{\text {- }}$ |  | - 8 |  | \$ |  | - $\%$ |  | - ${ }^{\text {S }}$ |  | - ${ }^{\text {s }}$ |  | \$ |  | - $\%$ |  | s |  |
|  |  | ${ }_{8,818}^{8818}$ | ${ }_{\text {PAC }}^{\text {PAC }}$ | \$ | \$ |  | - ${ }^{\text {s }}$ |  | - $\%$ |  | - ${ }^{\text {\% }}$ |  | \$ |  | - $\%$ |  | - ${ }^{\text {S }}$ |  | - |  | \$ |  | - $\%$ |  | \$ |  |
| ${ }^{0163}$ | ${ }^{53}$ Ave Close ( Culide.sac -49 sti) | ${ }^{818}$ | Pre | \$ | \$ |  | -s |  | - |  | - ${ }^{\text {P }}$ |  | - 5 |  | - |  | - |  | -s |  | - 8 |  | - 9 |  | \$ |  |
| ${ }^{0162}$ |  | ${ }_{818}^{818}$ | PVC | s | s |  | -s |  | - 5 |  | \$ |  | - |  | -s |  | - ${ }_{5}$ |  | - 8 |  | - 8 |  | - |  | s |  |
| 0160 | 53 ave lone (46a st -46s st tone) | ${ }_{818}$ | pvc | \$ | \$ |  | - |  | - |  | f |  | - |  | \% |  | \$ |  | \$ |  | \$ |  | \$ |  | \$ |  |
| 0170 | 53 Ave tane (46 st lane.46 5s) | ${ }^{818}$ | pvC | s | s |  | - |  | s |  | \$ |  | \$ |  | - |  | s |  | - |  | \$ |  | s |  | s |  |
| 0170 |  | ${ }^{818}$ | Pre | \$ | \$ |  | -s |  | - |  | \$ |  | - |  | - |  | -s |  | -s |  | \$ |  | - |  | \$ |  |
| 0169 |  | ${ }^{\text {B18 }}$ | puc | \$ | \$ |  | -s |  | - 5 |  | - ${ }^{\text {d }}$ |  | - |  | - |  | - 5 |  | - |  | \$ |  | - |  | \$ |  |
| ${ }^{0172}$ |  | ${ }^{\text {B1B }}$ | AC | \$ |  |  | - |  | - |  | - ${ }^{\text {d }}$ |  | - |  | - |  | - |  | -s |  | \$ |  | \$ |  | \$ |  |
| 110.111, 123 |  | ${ }^{818}$ | ${ }^{\text {ac }}$ | \$ | \$ |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | \$ |  | s |  | \$ |  |
| ${ }_{\substack{0168 \\ 0167}}^{12}$ |  | ${ }_{818}^{8818}$ | ${ }_{\text {AC }}^{\text {AC }}$ | \$ | \$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - $\%$ |  | - $\$$ |  | - $\$$ |  | \$ |  |
| 0166 | 52 Ave (475 -4.4. st) | ${ }_{818}$ | $A C$ | \$ | \$ |  | - |  | - |  | - |  | - |  | - |  | - |  | -s |  | \$ |  | - |  | \$ |  |
| 0193 0122 | 51 ave (West End. 50 Sti) | ${ }^{818}$ | AC | s | \$ |  | - |  | - |  | - |  | - |  | - |  | -s |  | - |  | \$ |  | -s |  | \$ |  |
|  |  | ${ }_{818}^{888}$ | ${ }_{\text {AC }}{ }_{\text {AC }}$ | \$ | \$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - ${ }^{\text {s }}$ |  | \$ |  | - $\%$ |  | \$ |  |
| -119,118 | ${ }_{51}^{51 \text { ave (485s } 5 \text {-4 } 7 \text { St) }}$ | ${ }_{818}^{818}$ | ${ }^{\text {AC }}$ | s | \$ |  | -s |  | -s |  | - |  | - $\$$ |  | - |  | - |  | - |  | \$ |  | - $\$$ |  | s |  |
| ${ }_{\substack{115,114 \\ 0202}}$ |  | ${ }_{818}^{818}$ | AC ${ }_{\text {PvC }}^{\text {pyc }}$ | \$ | \$ |  | - ${ }_{\text {\% }}$ |  | - ${ }_{5}$ |  | - ${ }_{-}^{8}$ |  | - $\%$ |  | - $\%$ |  | - ${ }^{5}$ |  | - 8 |  | - ${ }^{8}$ |  | $\therefore$ - |  | 8 |  |
| -178 | 50 Ave Notrts Side (West End. 50 5s St | ${ }_{818}$ | ${ }_{\text {ac }}$ | \$ | \$ |  | - |  | - |  | \$ |  | \% |  | - |  | - $\$$ |  | \$ |  | \% |  |  |  | \$ |  |
| 177, 175 | $50 \mathrm{Ave} \mathrm{Notht} \mathrm{side} \mathrm{(50} \mathrm{St}. \mathrm{-50} 5$ st cone) | ${ }_{818}$ | ${ }_{\text {a }}$ | s | \$ |  | - |  | \$ |  | \$ |  | \$ |  | - |  | \$ |  | - |  | \$ |  | \$ |  | \$ |  |
| 0174 | ${ }^{50}$ Ave ( 50 St tane South side) | ${ }^{\text {B1B }}$ | AC | \$ | \$ |  | -s |  | - |  | \$ |  | \$ |  | - |  | - |  | -s |  | \$ |  | s |  | \$ |  |
| 0176 | 50 Ave Sout (50 St one. 50 sts ) | ${ }^{818}$ | AC | s | \$ |  | -s |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | \$ |  |
| 179180 |  | ${ }_{8}^{818}$ | ${ }_{\text {AC }}^{\text {AC }}$ | \$ | \$ |  | - ${ }^{\text {s }}$ |  | - ${ }^{\text {s }}$ |  | - ${ }_{\text {- }}$ |  | - $\%$ |  | - $\$$ |  | - ${ }^{\text {s }}$ |  | - |  | \$ |  | - ${ }_{\text {S }}$ |  | \$ |  |
| 0194 | $50 \mathrm{Nve}(495 \mathrm{st}-48 \mathrm{sti})$ | ${ }_{818}$ | AC | \$ | \$ |  | -s |  | - $\%$ |  | - $\%$ |  | - |  | - $\%$ |  | - ${ }^{\text {s }}$ |  | -s |  | \$ |  | $\bigcirc$ |  | \% |  |
| 0195 | 50 Ave (485st. 47 Sti) | ${ }^{818}$ | AC | s | \$ |  | -s |  | -s |  | - 9 |  | - |  | - |  | -s |  | - |  | s |  | - |  | s |  |
| 0103 019 |  | ${ }_{818}^{818}$ | ${ }_{\text {PVC }}^{\text {PC }}$ | \$ | \$ |  | - ${ }^{\text {s }}$ |  | - ${ }^{\text {S }}$ |  | - ${ }_{-}$ |  | - 8 |  | - 8 |  | - ${ }^{\text {S }}$ |  | - ${ }^{\text {s }}$ |  | \$ |  | $\therefore$ - |  | s |  |
| 0191 | ${ }_{50} 50$ Ave (45st -astetnd) | ${ }_{818}^{818}$ | Pve | \$ | \$ |  | - $\%$ |  | - ${ }^{\text {S }}$ |  | - $\$$ |  | \$ |  | - $\$$ |  | - $\%$ |  | s |  | \$ |  | \$ |  | \$ |  |
| 0192 |  | ${ }_{818}^{818}$ | Ac | s | \$ |  | - |  | - 5 |  | 9 |  | \$ |  | - |  | s |  | - 5 |  | \$ |  | \$ |  | \$ |  |
| 0190 187,186 |  | ${ }_{818}^{818}$ | ${ }_{\text {AC }}^{\text {AC }}$ | \$ | \$ |  | - ${ }^{\text {s }}$ |  | - ${ }^{\text {s }}$ |  | - ${ }^{\text {\% }}$ |  | \$ |  | - $\$$ |  | - ${ }^{\text {s }}$ |  | - 8 |  | \$ |  | - $\%$ |  | \$ |  |
| ${ }^{10185}$ | 49 Ave (Railway yve. -5 Sisi) | ${ }_{818}^{818}$ | ${ }^{\text {AC }}$ | s | \$ |  | -s |  | -s |  | - |  | \$ |  | - |  | - |  | - |  | \$ |  | - $\$$ |  | \$ |  |
| ${ }^{0184}$ |  | ${ }^{818}$ | ${ }^{\text {AC }}$ | \$ | \$ |  | - |  | - |  | - ${ }^{\text {s }}$ |  | - |  | - |  | - |  | - |  | \$ |  | - |  | \$ |  |
| 198,199 10200 |  | ${ }_{818}^{818}$ | ${ }_{\text {AC }}{ }_{\text {AC }}$ | s | \$ |  | -s |  | -s |  | - ${ }_{8}^{8}$ |  | - 8 |  | - 8 |  | - 8 |  | s |  | \$ |  | - $\%$ |  | \$ |  |
| 101, 197 | ${ }_{49} \mathrm{Ave}$ (47 5t-46 5ti) | ${ }_{818}$ | ${ }_{\text {AC }}$ | s | \$ |  | - |  | - |  | ; |  | - |  | \% |  | - |  | - |  | \$ |  | - |  |  |  |
| ${ }^{188,203}$ | 49 Ave (465t-45551) | ${ }^{\text {B18 }}$ | pvc | 5 | \$ |  | -s |  | - |  | - |  | - |  | - |  | - |  | - |  | \$ |  | - |  | \$ |  |
|  |  | ${ }_{\substack{818 \\ 818}}$ | ${ }_{\text {AC }}^{\text {AC }}$ | 5 | \$ |  | -s |  | - |  | - ${ }_{\text {- }}$ |  | - $\%$ |  | - |  | - ${ }_{5}$ |  | - ${ }_{5}$ |  | \$ |  | - |  | \$ |  |
| 183, 105, 104, 109 | ${ }_{48} 8$ vve (50st-49 5ti) | ${ }_{818}$ | ${ }_{\text {AC }}$ | , | \$ |  | - |  | - |  | - |  | \$ |  |  |  | - |  | - |  | \$ |  | - $\%$ |  | \$ |  |
| 0109 | 48 Ave (995t-48 5si) | ${ }^{818}$ | ${ }_{\text {AC }}$ |  | s |  | - |  | - |  | - |  | \$ |  | - |  | - |  | - |  | \$ |  | - |  | \$ |  |
| 0108 107,106 |  | ${ }_{818}^{818}$ | ${ }^{\text {AC }}$ | \$ | \$ |  | -s |  | - |  | - ${ }^{\text {P }}$ |  | - |  | - |  | -s |  | - |  | \$ |  | - |  | \$ |  |
|  |  | ${ }_{\text {Proposed }}^{\text {Bib }}$ | ${ }_{\text {PvC }}^{\text {PV }}$ | \% | \$ |  | - $\%$ |  | - $\$$ |  | - $\%$ |  | - $\%$ |  | - $\%$ |  | - $\%$ |  | - $\%$ |  | \$ |  | $\bigcirc$ |  | \$ |  |
|  | 49 Ave (45 5st Estist | Proposed | Pre | s | \$ |  | - |  | - |  | - |  | \$ |  | - |  | - 5 |  | s |  | \$ |  | \$ |  | + |  |
| 209,211, 215 |  | $\underset{\substack{\text { Proposed } \\ \text { Proposed }}}{\text { den }}$ | ${ }_{\text {PVC }}^{\text {PVC }}$ | \$ | \$ |  | - |  | - ${ }^{\text {a }}$ |  | \$ |  | \$ |  | S |  | \$ |  | -s |  | \$ |  | \$ |  | \$ |  |
|  | Subloctl - Woter Pressue Mein |  |  | s | s |  | - |  | s |  | s |  | - |  | s |  | s |  | s |  | s |  | , |  | s |  |







\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline A \& в \& c \& D \& E \& F \& \(\bigcirc\) \& н \& । \& \& \(\llcorner\) \& M \& N \& \(\bigcirc\) \\
\hline Asselio \&  \& Asset Code \& Materical \begin{tabular}{c} 
Diameter \\
\((\mathrm{mm})\) \\
\hline
\end{tabular} \& \[
\begin{gathered}
\text { Construction } \\
\text { Year }
\end{gathered}
\] \& General Life
Expectancy \& Estimated
Remaining Life \& \[
\begin{gathered}
\hline \hline \text { Replacement } \\
\text { Year }
\end{gathered}
\] \& length ( \(m\) ) \& \& Unit cost \& Historical cost \& Asset Replocement \& Curent Iot \\
\hline Asset ID \& Wellal \& Asset Code \& com \& Construction \& Ceneral liey \& Remimuled \& Replocement \& \%otiterv \& \& Unit cost \& Mininenance
cost \& \begin{tabular}{l} 
Asses Replocement \\
Cost \\
\hline
\end{tabular} \& Uurent Toata cost \\
\hline N/A \& WELH1 \& \({ }^{\text {BlF }}\) \& Deactivate Well \& 1975 \& 50 \& \({ }^{3}\) \& 2025 \& 16\% \& s \& 24,000.00 \& \$ - \& 24.000 \& \$ 24,000 \\
\hline N/A \& \& \({ }^{\text {BlF }}\) \& Casting and Suticas Seal \& 1975 \& 25 \& 0 \& 2022 \& 20\% \& \& 30,000.00 \& s \& 30.000 \& \$ 30.000 \\
\hline N/A \& \& \({ }^{\text {BlF }}\) \& Ditl Well \& 1975 \& \({ }_{50}^{50}\) \& \({ }^{3}\) \& \({ }^{2025}\) \& \({ }^{16 \%}\) \& 5 \& 24,000000 \& \$ \& \({ }^{24,4000}\) \& \({ }^{240000}\) \\
\hline N/A \& \& \& Electical \& \({ }^{1977}\) \& \({ }^{25}\) \& \(\bigcirc\) \& \({ }^{2022}\) \& \({ }^{16 \%}\) \& \& 24,000.00 \& \$ \& 24,000 \& \({ }^{240000}\) \\
\hline N/A \& \& \({ }_{\substack{\text { BlF } \\ \text { BlF }}}^{\text {der }}\) \&  \& 1975
1975 \& 25
10 \& \(\bigcirc\) \& \({ }_{2022}^{2022}\) \& \(\underset{\substack{15 \% \\ 17 \%}}{120}\) \& s \& \(22,500.00\)
2550000 \& \$ \& 22500 \& \% \begin{tabular}{l}
22500 \\
\hline 2500
\end{tabular} \\
\hline \& Sublotal Wellal \& 8 F \& \& 1975 \& 50 \& 3 \& 2025 \& \(100 \%\) \& s \& 150000 \& \& 150.00 \& 150.00 \\
\hline Asset ID \& well 42 \& Asset Cod \& Components \& \[
\begin{gathered}
\text { Construction } \\
\text { Year }
\end{gathered}
\] \& General Life
Expectancy \& Estimated
Remaining Life \& \[
\begin{aligned}
\& \text { Replacement } \\
\& \text { Year }
\end{aligned}
\] \& \%otitev \& \& Unit cost \& Mainienance
Cost \& Asser Replocement \& curent Toat cost \\
\hline N/A \& \multirow[t]{5}{*}{well 42} \& \({ }^{\text {BlF }}\) \& \multirow[t]{5}{*}{\begin{tabular}{l}
Deactivate Well \\
Casting and Surface Seal \\
Drill Well \\
Electrica \\
Yield Test \& Quality Testing
\end{tabular}} \& \({ }^{1987}\) \& \({ }^{50}\) \& 15 \& \({ }^{2037}\) \& \(16 \%\) \& s \& 24,000.00 \& \$ - \& \multirow[t]{5}{*}{} \& \multirow[t]{5}{*}{\begin{tabular}{cc}
\(\$\) \& 24,000 \\
\(\$\) \& 30,000 \\
\(\$\) \& 24,000 \\
\(\$\) \& 24,000 \\
\(\$\) \& 22,500 \\
\(\$\) \& 25,500
\end{tabular}} \\
\hline N/A \& \& \({ }_{\substack{\text { Bl| } \\ \text { Bl| }}}^{\text {en }}\) \& \& \(\underset{1987}{1987}\) \& 25
50 \& \({ }_{15}\) \& \({ }_{2023}^{2023}\) \& 20\% \& s \& 30,000.00 \& \$ \& \& \\
\hline N/A \& \& \({ }_{815}\) \& \& 1987 \& \({ }_{25}\) \& \% \& \({ }_{202}^{203}\) \& \(16 \%\) \& \& \({ }_{24,00000}^{2400000}\) \& \$ \& \& \\
\hline \& \& \({ }_{81}\) \& \& 1987 \& \& 0 \& 2022 \& 15\% \& \& 22,500.00 \& s \& \& \\
\hline \multirow[t]{2}{*}{N/A} \& \& \({ }_{\text {Bl }}\) \& \& 1987 \& 10 \& 0 \& 2022 \& 17\% \& \& \({ }_{25,50000}\) \& \& \& \\
\hline \& Subotol - Well 2 2 \& B1F \& \& 1987 \& 50 \& 15 \& 2037 \& \(100 \%\) \& s \& 150000 \& \& 150000 \& 155000 \\
\hline AssetiD \& welt *3 \& Asset Code \& Component \& \[
\begin{gathered}
\text { Construction } \\
\text { Year }
\end{gathered}
\] \& \begin{tabular}{l}
General Life \\
Expectanc
\end{tabular} \& Estimated
Remaining Life \&  \& \%oot iev \& \& Unit cost \& Maintenance
Cost \& Asset Replacement
Cost \& Curent Total cost \\
\hline N/A \& \multirow[t]{5}{*}{Well \({ }^{\text {3 }}\)} \& \({ }^{\text {BlF }}\) \& \multirow[t]{5}{*}{\begin{tabular}{l}
Deactivate Well \\
Casting and Surface Sea \\
Drill Well \\
Electrica
Pump \\
Yield Test \& Quality Testing
\end{tabular}} \& 2011 \& \({ }^{50}\) \& \({ }^{39}\) \& \({ }^{2061}\) \& \(16 \%\) \& \& 24,000.00 \& \$ - \& 24.000 \& \\
\hline N/A \& \& \({ }^{\text {BIF }}\) \& \& 2011 \& \({ }^{25}\) \& 14 \& \({ }^{2036}\) \& 20\% \& \& \& \$ \& \& \multirow[t]{4}{*}{} \\
\hline N/A \& \& Blf \& \& \({ }^{2011}\) \& \({ }_{50}^{50}\) \& \({ }^{39}\) \& \({ }^{2066}\) \& \({ }^{16 \%}\) \& \& 24,000.00 \& \$ \& 24,000 \& \\
\hline N/A \& \& BlF \& \& 2011 \& \({ }^{25}\) \& 14 \& \({ }^{2036}\) \& 16\% \& \& \begin{tabular}{l}
\(24,000.00\) \\
\hline 225000
\end{tabular} \& \$ \& 24000 \& \\
\hline N/A \& \& \({ }_{\substack{\text { BlF } \\ \text { BiF }}}^{\text {b }}\) \& \& \({ }_{2011}^{2011}\) \& 25
10 \& 14 \& \({ }_{2020}^{2036}\) \& \({ }_{\substack{158 \% \\ 17 \%}}^{17 \%}\) \& S \& 22,50.00 \& \$ \& 22500
2505 \& \\
\hline \& sublotol - Well 3 \& 815 \& \& 2011 \& 50 \& 39 \& \& \(100 \%\) \& s \& 150.000 \& \& 155000 \& 155000 \\
\hline \multicolumn{4}{|c|}{Woter Wells} \& \& \& \& \& \& \& \& \& 450.00 \& 450,000 \\
\hline Asset ID \& woter Reservoir \& Asset Code \& Total Volume ( m ) \& Construction
rear \&  \& Sestimated \& Replocement \& \%otiterv \& \multicolumn{2}{|r|}{Unit cost} \& Mainienance \& Asset Replacemen \& Curent Toata Cost \\
\hline N/A \& Concrete Reseevoit t1 \(^{\text {a }}\) \& \({ }^{\text {BIE }}\) \& 712 \& 2003 \& \({ }^{80}\) \& \({ }^{6}\) \& \({ }^{2033}\) \& 29\% \& \& 1,000.00 \& \$ \& \& \\
\hline N/A \&  \& BIE \& \& ¢ \(\begin{gathered}1976 \\ 1981 \\ 1\end{gathered}\) \& \({ }_{80}^{80}\) \& \({ }_{34}^{34}\) \& \({ }_{2065}^{2056}\) \& \({ }_{218}^{218}\) \& \& 1.000000 \& \$ \& 533,000 \& \multirow[t]{7}{*}{} \\
\hline N/A \& Concrete clear Well \& \({ }_{\text {BIE }}\) \& \({ }_{107}\) \& 2003 \& \({ }_{80}\) \&  \& \({ }_{2083}\) \& \({ }_{48}\) \& \& 1,00000000
1 \& \% \& 533,000
107,000 \& \\
\hline N/A \& Electical \& \({ }_{\text {B1E }}\) \& \& 2003 \& 25 \& 。 \& 2028 \& \(6 \%\) \& \& 150,000.00 \& \$ \& 150.000 \& \\
\hline N/A \& Contros 8 Instumentation \& \({ }_{\text {BIE }}\) \& 1 \& 2003 \& 15 \& \(\bigcirc\) \& 2022 \& \({ }_{3}^{3}\) \& \& \({ }_{75,50000}\) \& \$ \& \[
\begin{aligned}
\& 150,000 \\
\& \hline 75,000
\end{aligned}
\] \& \\
\hline N/A \& Pipe works \& \(\substack{\text { Ble } \\ \text { B1E }}_{\text {Ble }}\) \& i \& 2003

2003 \& 40
80
80 \& ${ }_{61}^{21}$ \& 2043

2083 \& ${ }_{28}^{28}$ \& \& 50,000.00
5000000 \& \$ \& 50,000 \& <br>
\hline N/A \& $\underbrace{}_{\substack{\text { Decommisisiont } \\ \text { Buiding }}}$ \& $\substack{\text { cle } \\ \text { BIE }}_{\text {Bl| }}$ \& , \& 2003
2003 \& 80 \& ${ }_{31}^{61}$ \& 2083 \& ${ }_{8 \%}^{2 \%}$ \& s \& 50,000.00 \& \% \& 50,000
200,000 \& <br>
\hline \multirow[t]{2}{*}{N/A} \& Pump 1, , , 3 \& ${ }_{\text {BIE }}$ \& 3 \& 2003 \& ${ }_{2}$ \& 。 \& 2028 \& ${ }^{3 \%}$ \& s \& 25,000.00 \& \$ . \& ${ }_{75 \text { 2000 }}^{20000}$ \& <br>
\hline \& Subtoctil Woter fesevor \& ${ }^{\text {Ble }}$ \& \& \& 80 \& \multicolumn{6}{|c|}{1008} \& 2.485000 \& S 2485000 <br>
\hline Assetio \& Woter Treatment loant \& Asset code \& me (m3) \& Contriction \& Ceneral liey \&  \& Replocement \& \%otiterv \& \& Unit cost \& Mintenence
cost \& Asset Replocement \& curent Total cost <br>
\hline N/A \& ${ }^{\text {Chlorination iniection }}$ Sstem \& ${ }^{\text {BID }}$ \& , \& ${ }^{2003}$ \& ${ }^{15}$ \& $\bigcirc$ \& ${ }^{2022}$ \& ${ }^{10 \%}$ \& 5 \& 30,000.00 \& \$ \& 30.000 \& \$ 30,000 <br>
\hline N/A \& Decommisisioning \& 810 \& \& ${ }_{2003}$ \& \& ${ }_{31}$ \& ${ }_{2053}$ \& $16 \%$ \& s \& 55,00000 \& \$ - \& 50,000 \& 50,000 <br>
\hline N/A \& Builiding \& ${ }^{810}$ \& \& 2003 \& 50 \& 31 \& 2053 \& 65\% \& s \& 200,000.00 \& \& 200000 \& 200000 <br>
\hline \& Subtoral - Weter Tretment Plont \& 810 \& \& \& 50 \& \& \& 100\% \& \& 310,00 \& \& 310000 \& 310,0 <br>
\hline
\end{tabular}

| A | в | c | D |  | AA | AB |  | Ac |  | AD |  |  | AE |  | AF |  | AG |  |  | AH |  | Al |  | A) |  | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assetio |  | Assel Code | Moterial |  | 2022 | 2023 |  | 2024 |  | 2025 |  |  | 2026 |  | 2027 |  | 2028 |  |  | 2029 |  | 2030 |  | ${ }^{2031}$ |  | 2032 |
| Asset ID | well ${ }^{\text {a }}$ | Assel Code | comp |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N/A | WEL *1 | ${ }^{\text {BIF }}$ | Deactivate W | \$ | - | \$ | \$ |  | \$ |  | 24,000 |  |  | s |  | \$ |  |  | \$ |  | \$ |  | s |  | s |  |
| N/A |  | ${ }^{\text {BlF }}$ | Casing ond | s | 30.000 |  | \% |  | f |  | 30000 |  |  | s |  | s |  |  | S |  | s |  | s |  | \$ |  |
| N/A |  | ${ }_{8}^{817}$ | Dinil Wel <br> Electical | \$ | 24.000 | \$ | \% |  | \$ |  | 24,000 <br> 24.000 <br> 1005 | \$ |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A |  |  | ${ }^{\text {Pump }}$ | \$ | 22500 <br> 25500 <br>  |  | s |  | \$ |  | 22050 2550 200 |  |  | s |  | s |  |  | s |  | s |  | s |  | \$ |  |
|  | Subloct - Wellal | 815 |  | s | 102000 | s | s |  | s |  | 150,000 | s |  | s |  | s |  |  | s |  | s |  | s |  | s |  |
| Assetid | wel +2 | Assel Code | comp |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N/A | WEL 42 | ${ }^{\text {B1F }}$ | Deactivate M |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  | s |  | \$ |  | \$ |  | \$ |  |
| N/A |  | ${ }_{\substack{\text { BlF } \\ 81 F}}$ | ${ }_{\text {Costing ond }}^{\text {Coll }}$ | 5 | ${ }^{30000}$ |  | - ${ }^{5}$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A |  | ${ }_{81 F}$ | Electical | \$ | 24.000 |  | - |  | \$ |  |  | s |  | s |  |  |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A |  | ${ }_{\substack{\text { BlF } \\ \text { BlF }}}^{\text {R }}$ | ${ }_{\text {Pump }}^{\substack{\text { Pump } \\ \text { Yied test }}}$ | \$ | 22.500 25.500 |  | \$ |  | \$ |  |  | s |  | s |  | s |  |  | s |  |  |  | s |  | \$ |  |
|  | subloct - Well 2 | Bf |  | s | 102.000 | s | s |  | s |  |  | s |  | s |  | s |  |  | s |  | s |  | s |  | s |  |
| Asselid | well ${ }^{\text {3 }}$ | Assel Code | Come |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N/A | well ${ }^{\text {3 }}$ | BIF | Deactivate W | \$ |  |  |  |  |  |  |  |  |  | s |  | \$ |  |  | s |  | s |  | s |  | \$ |  |
| N/A |  | ${ }^{\text {BlF }}$ | Casting ond | 5 |  | \$ | \$ |  | \$ |  |  | s |  | s |  | s |  |  | \$ |  | s |  | \$ |  | \$ |  |
| N/A |  | ${ }_{\substack{\text { bli } \\ 81 \mathrm{~F}}}$ | Dinil Wel <br> fiectical | \$ |  | \$ | - 8 |  | s |  |  | s |  | s |  | \$ |  |  | \$ |  | \$ |  | s |  | \$ |  |
| N/A |  | ${ }^{81 F}$ | Pump | s |  | s | s |  | s |  |  | s |  | s |  | s |  |  | \$ |  | \$ |  | s |  | \$ |  |
| N/A |  | B1F | Yeild Test 8 | 5 | 25.500 |  | s |  | s |  |  | s |  |  |  | s |  |  |  |  |  |  |  |  |  |  |
|  | Sublotol - Well 3 | ${ }^{\text {BF }}$ |  | s | 25.500 | s | s |  | s |  |  | s |  | s |  | s |  |  | s |  | s |  | s |  | s |  |
|  | Woter Wells |  |  | s | 229,500 | s | s |  | s |  | 150.000 | s |  | s |  | s |  | . | s |  | s |  | s |  | s |  |
| Assetic | woter Resenoir | Assel Code | Total $\mathrm{vog}^{\text {f }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N/A | Concrete Reservoit \#1 | ${ }^{\text {BIIE }}$ |  |  |  | \$ | s |  |  |  |  | \$ |  |  |  | s |  |  | s |  | \$ |  | s |  | \$ |  |
| N/A |  | ${ }_{\substack{\text { BlE } \\ \text { BIE }}}^{\text {Be }}$ |  | \$ |  | s | \$ |  | 8 |  |  | \$ |  | s |  | \$ |  |  | \$ |  | s |  | s |  | \$ |  |
| N/A | Concrete clear well | ${ }_{B 1 E}$ |  | s |  | s | s |  | s |  |  | s |  | s |  | s |  |  | s |  | s |  | \$ |  | \$ |  |
| N/A | leectical | ${ }^{\text {BIE }}$ |  | \$ |  | \$ | \$ |  | \$ |  |  | \$ |  | s |  | \$ |  | 150,000 | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A | Contros 8 Instumentation | ${ }^{\text {BIE }}$ |  | \$ | 75,00 |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A | Pipe works | ${ }^{\text {BIE }}$ |  | \$ |  | \$ | - |  | \$ |  |  | \$ |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A | $\underbrace{}_{\substack{\text { Decommisisioning } \\ \text { Buiding }}}$ | $\underset{\substack{\text { Bl\| } \\ \text { Bl\| }}}{\text { el }}$ |  | \$ |  | \$ | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  |  | \$ |  | \$ |  | \$ |  | s |  |
| N/A | Pump 1, , , 3 | ${ }_{\text {BIE }}$ |  | s |  | \$ | s |  |  |  |  | \$ |  | s |  | s |  | 75.000 |  |  | \$ |  | s |  | s |  |
|  | sublotol Weler fesevor | 815 |  | s | 75.000 | s | s |  | s |  |  | s |  | s |  | s |  | 255000 | s |  | s |  | s |  | s |  |
| asselid | Woter Treatment Plant | Assel Code | Totat Voll |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N/A | Chloindiotion iniection system | ${ }^{810}$ |  |  | ${ }^{30,000}$ |  | \$ |  | S |  |  | s |  |  |  |  |  |  | , |  | s |  |  |  | \$ |  |
| N/A | Conitos Decommisisisioning | ${ }_{810}^{810}$ |  | \$ |  |  | \$ |  | \$ |  |  | \$ |  | s |  | \$ |  |  | \$ |  | \$ |  | \$ |  | \$ |  |
| N/A | Builing | ${ }_{810}$ |  | s |  | s | s |  | s |  |  | s |  | s |  | s |  |  | s |  | s |  | s |  | s |  |
|  |  | 10 |  | s | 80.000 | s | s |  | s |  |  | s |  | s |  | s |  |  | s |  | s |  | s |  | s |  |





















Appendix 2
Risk Register

| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Source Risks | 4 | General Risks | Contamination of raw water with sewage | Microbiological contamination | Resulting from sewage input to the source from private septic tanks or sewer outfalls. | No sanitary sewer line within 50 '+ of a well. | 1 |
| Source Risks | 5 | General Risks | Chemical contamination of raw water as a result of proximity to transport corridor. | Chemical contamination Hydrocarbons | Due to chemical contamination in the source due to spillage from transport corridor (e.g., road or rail tanker) adjacent to source and no containment. | May result from accidental spillage or a crash. | 1 |
| Source Risks | 10 | General Risks | Contamination of water with nutrients, due to agricultural activity. | Algal bloom Reduced oxygen level in water. | Due to contamination in run-off from areas of agricultural activity. | There are a number of different sources: silage pits, sludge lagoons, concentrations of stock. | 2 |
| Source Risks | 11 | General Risks | Contamination of water with pathogens due to agricultural activity. | Microbiological contamination | Due to contamination in run-off from areas of agricultural activity. | Wells are all within Town limits. | 4 |
| Source Risks | 12 | General Risks | Contamination of raw water with pesticides | Pesticides | Resulting from pesticides spraying in the watershed due to poor practice. | Toxicity testing for Town water every 5 years. | 8 |
| Source Risks | 13 | General Risks | Deterioration of raw water as a result of flooding or heavy rain | Turbidity | Due to inability to close intake when raw water has deteriorated. | Lack of storage may also influence ability to close intake; high sediment loading resulting from high level of rainfall or spring melt. | 1 |
| Source Risks | 22 | General Risks | Insufficient raw water quantity | Loss of supply | Resulting from restriction in diversion license due to changing legislation or growth in demand. | Changes in environmental legislation may lead to tighter diversion limits. | 1 |
| Source Risks | 24 | General Risks | Insufficient water available for abstraction | Low pressure Loss of supply | As a result of drought. | The Town`s recent draw down recovery for the wells shows that in $20+$ years the wells have shown no change in abstraction ability. | 1 |

| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Source Risks | 25 | Well Risks | Contamination of well during construction | Microbiological contamination Metals Drilling fluids | Cross-contamination by drilling equipment or residual substances used in drilling e.g., Barium released from drilling mud. | Drillers should operate according to the Water (Ministerial) Regulations | 8 |
| Source Risks | 30 | Well Risks | Deterioration of water quality | Iron manganese | Due to over-production from aquifer, mixing with other zones or biofouling | Well should not be pumped higher than recommended rate, downhole camera inspection, shock chlorination, rehabilitation | 1 |
| Source Risks | 31 | Well Risks | Deterioration of water quality | Fluoride <br> Arsenic <br> Uranium <br> Other heavy metals | Due to naturally occurring minerals | Yearly water analysis done by contracted lab. | 1 |
| Source Risks | 32 | Well Risks | Contamination of aquifer | Hydrocarbons Pesticides Nutrients | Activities within recharge zone or vulnerable aquifer | More likely with shallow wells, unconfined aquifers or where rock is badly faulted or fractured. | 1 |
| Source Risks | 36 | Pumps \& Mains Risks | Reduced resource availability due to break/leak on raw water mains | Loss of supply | Resulting from raw water main breaks/leaks as a result of poor mains condition. | Lack of maintenance may lead to more frequent interruptions to supply. | 1 |
| Source Risks | 38 | Pumps \& Mains Risks | Failure of pumps at Pump Station | Loss of supply | Resulting from pumps failure due to insufficient/no standby generation if electricity supply fails. | Wells/pumps serviced every 5 years. | 1 |
| Source Risks | 39 | Pumps \& Mains Risks | Loss of power to pumps as a result of electrical fault. | Loss of capacity | Loss of power to pumps due to control panel fault resulting from insufficient maintenance. | Essential components need to be maintained regularly. | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Treatment Risks | 57 | General Risks | Contamination caused by unauthorized human access | Unknown contamination | Unauthorized human access may lead to contamination. | WTWs should be kept secure at all times when not attended. | 4 |
| Treatment Risks | 58 | General Risks | Contamination of treated water as a result of dosing with incorrect or inferior quality chemicals | Chemical contamination | Contamination due to use of incorrect or inferior quality or contaminated chemicals due to lack of control check on deliveries. | Might be due to change in supplier or inadequate specification for chemicals used. | 1 |
| Treatment Risks | 62 | General Risks | Inability to meet demand caused by power failure | Loss of Supply | Resulting from power failure and to failure of stand by generator change over or no standby generator. | Many small WTW will have no standby power generation | 4 |
| Treatment Risks | 66 | General Risks | Inadequate treatment caused by incorrect dosing of chemicals | Chemical contamination | Due to incorrect dosing due to faulty equipment. | Manual dosing by hand can also be done. | 4 |
| Treatment Risks | 67 | General Risks | Loss of supply as a result of flooding | Loss of Supply | Due to plant shut down as a result of flooded areas of plant. | Flooding is not a great concern as in other Towns as we are on the side of the Blindman Valley, and our pumphouse is at the top of the hill. | 1 |
| Treatment Risks | 68 | General Risks | Contamination due to incorrectly plumbed drains | Chemical contamination Microbiological contamination | Due to inappropriate cross-connection of drainage into treated water areas. |  | 1 |
| Treatment Risks | 69 | General Risks | Contamination or loss of supply due to lack of knowledge of infrastructure location | Chemical contamination Microbiological contamination | Due to lack of adequate 'as-built' drawings | Bentley spent 3 years and contracted Stantec to map/GPS water system. | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Treatment Risks | 70 | Process Control Risks | Loss of supply resulting from failure of telemetry. | Loss of supply | Due to plant shut down not being notified due to failure of telemetry | The only system on a SCADA set-up is well number 3 . | 8 |
| Treatment Risks | 113 | Disinfection Risks | Contamination of treated water as a result of accumulation of deposits in contact tank | Turbidity | As a result of carryover of sediment from contact tank. | n/a | 1 |
| Treatment Risks | 114 | Disinfection Risks | Contamination of treated water as a result high bromate content of sodium hypochlorite | Chemical contamination | As a result of sodium hypochlorite not meeting supply specification | n/a | 0 |
| Treatment Risks | 115 | Disinfection Risks | Contamination of treated water as a result of excessive formation of disinfection by-products | Chemical contamination | As a result of excessive disinfectant dose and high levels of trace organics | Due to formation of disinfection byproducts | 4 |
| Treatment Risks | 119 | Disinfection Risks | Failure of disinfection as a result of failure of sodium hypochlorite delivery system. | Microbiological contamination | Due to failure of disinfection due to failure of delivery system. | Back-up chlorinator in stock. | 2 |
| Treatment Risks | 122 | Disinfection Risks | Inadequate treatment as a result of inability to meet disinfection requirements due to high chlorine demand | Microbiological contamination | Due to inability to add sufficient chlorine due to high flow or high chlorine demand | Colorimeter sample taken 7 days a week. | 2 |
| Treatment Risks | 123 | Disinfection Risks | Inadequate treatment as a result of insufficient contact time | Microbiological contamination | Due to insufficient contact time to kill bacteria as a result of poor contact tank design or operating beyond design flow | In 2002 the Town added a new pumphouse \& reservoir to the existing. At that time, the two older reservoirs were retrofitted with diffusion piping on both the inlets and the outlets of reservoir 1 \& 2. | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Treatment Risks | 124 | Disinfection Risks | Inadequate treatment as a result of incorrect chlorine dose | Microbiological contamination | Due to lack of residual controller and rapid change in chlorine demand, due to insufficient manual intervention. | The system is not a PLC setup, dosage does not control the CL2 injector. The injector is controlled by the start/stop process of the wells, dosage is manually adjusted. | 2 |
| Treatment Risks | 130 | Treated Storage Risks | Contamination of treated water as a result of vandalism | Microbiological contamination Chemical contamination | As a results of actions by intruders | As a minimum lids and air vents must be secure. Security fence is in place. | 2 |
| Treatment Risks | 131 | Treated Storage Risks | Contamination of treated water caused by rainwater ingress | Microbiological contamination Chemical contamination | As a result of lack of structural integrity of reservoir due to lack of inspection or maintenance | Reservoirs should be cleaned and inspected on a regular basis. | 1 |
| Treatment Risks | 132 | Treated Storage Risks | Deterioration in water quality due to disturbance of sediment in reservoir | Microbiological contamination Turbidity Aluminum Iron | Due to disturbance of sediment on floor of reservoir due to low level and lack of maintenance. | Reservoirs should be cleaned and inspected on a regular basis. | 1 |
| Treatment Risks | 133 | Treated Storage Risks | Loss of supply due to inadequate storage | Loss of supply | Due to insufficient storage to cope with fluctuations in demand. | Reservoirs may be undersized due to financial considerations. | 4 |
| Treatment Risks | 134 | Facility Specific Risks | VFD pressure switch waterline freezing |  | Emergency back-up pump running, ceiling exhaust fan removing excess heat and fumes from building causing a drop in temperature. | Only an issue during extended running of the back-up pump when the temperature outside the building is negative zero Celsius. | 2 |
| Network Risks | 145 | General Risks | Buildup of deposits in network as a result of inadequate flushing frequency and/or velocity | Discoloration Taste \& Odor | Resulting from inadequate flushing of problem areas. | Areas where sediment is known to build up benefit from a regular flushing programmed. | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | 146 | General Risks | Broken main as a result of PRV failure | Loss of supply Chemical contamination Microbiological contamination | As a result of a broken main due to high pressure due to failure of PRV. | PRVs should be serviced as required. | 2 |
| Network Risks | 147 | General Risks | Loss of supply and/or deterioration of water quality as a result of broken main | Loss of supply Chemical contamination Microbiological contamination | As a result of a broken main due to failure of pipe integrity. | May be as a result of many different circumstances | 8 |
| Network Risks | 148 | General Risks | Contamination of water as a result of cross-connection | Chemical contamination Microbiological contamination | As a result of connection with private supply due to customer having dual connection, no air gap | If customer has dual supply the pipework must be safely set up. | 8 |
| Network Risks | 150 | General Risks | Contamination of water in supply as a result of the use of non-approved or inappropriate materials in the network | Chemical contamination | As a result of contact with inappropriate materials. | Any materials used in the network should comply with the appropriate standard. | 1 |
| Network Risks | 151 | General Risks | Contamination of water due to failure to follow proper hygiene practice when carrying out repairs. | Chemical contamination Microbiological contamination | Due to ingress of material from excavation and/or poor disinfection procedures. | Operators should be fully trained in proper hygiene practice | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | 152 | General Risks | Contamination of water in supply as a result of connection to mothballed or abandoned assets. | Chemical contamination microbiological contamination | As a result of connection to a main containing stagnant water. | All abandoned assets should be cut and capped rather than just valved off. | 1 |
| Network Risks | 153 | General Risks | Deterioration of water quality as a result of incorrect sequence of valve operations | Chemical contamination Microbiological contamination | As a result of flow reversal due to the need for rezoning due to the incorrect sequence of valve operations | Valves should be maintained, and good records kept of their location and mode of operation, i.e., RH or LH thread. | 1 |
| Network Risks | 155 | General Risks | Deterioration of water quality due to change in normal flow pattern. | Chemical contamination | Due to mains sediment being disturbed by increased flow. | Iron, manganese, aluminum sediment | 1 |
| Network Risks | 156 | General Risks | Failure to meet demand as a result of failure to mend break in a reasonable time | Loss of supply | As a result of poor access. | or as a result of contractor timing. | 16 |
| Network Risks | 157 | General Risks | Failure to meet demand due to inability to operate valves as required. | Loss of supply | Inability to operate valves when needed due to the lack of maintenance | If valves are not operated and checked, they may become difficult to operate. | 8 |
| Network Risks | 158 | General Risks | Failure to meet demand as a result of insufficient valves to isolate area affected by break | Loss of supply | Due to high loss of water due lack of isolation of mains | All valves exercised yearly with documentation; problem valves are replaced immediately. | 8 |
| Network Risks | 159 | General Risks | Failure to meet demand as a results of operating system above design pressure | Loss of supply | Due to broken mains as a result of operating mains above design pressure. | Pressure is maintained at 43 psi by VFD motors controlled by the main VFD computer. | 2 |
| Network Risks | 161 | General Risks | Failure to meet demand as a result of breaks caused by age-related deterioration. | Loss of supply | Resulting from break due to deterioration of pipe condition due to age. | Planned maintenance/renewal should prevent this problem occurring. | 4 |
| Network Risks | 163 | General Risks | Loss of pressure as a result of leakage | Loss of supply Loss of pressure | Due to leakage due to inadequate leakage control/poor maintenance. | If system leakage rates are high, a leakage control programme is recommended. | 4 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | 164 | General Risks | Loss of supply or pressure or contamination of water in supply as a result of fire service tackling a fire | Loss of supply Loss of pressure Microbiological contamination Chemical contamination | Due to high flow rate or changes in flow patterns, or loss of disinfectant contact time or disturbance of sediment |  | 2 |
| Network Risks | 165 | General Risks | Loss of supply or contamination of water in supply as a result of excessive demand in a short period of time | Loss of supply Chemical contamination | Lack of communication from external stakeholders, e.g., builders, fire service | Fire service should be aware that if they are testing hydrants, they should notify water operators. | 2 |
| Network Risks | 166 | General Risks | Loss of supply as a result of failure of critical main due to lack of alternative supply | Loss of supply | Due to break on a critical main such that no alternative means of supply is available |  | 0 |
| Network Risks | 167 | General Risks | Microbiological growth in distribution system as a result of oversized mains | Microbiological contamination | Buildup of biofilms in the network due to excessive dwell time as a result of incorrectly sized mains. | Biofilms are more likely to develop in areas of low flow where disinfectant residual may be very low. | 1 |
| Network Risks | 168 | General Risks | Microbiological growth in distribution system as a result of low disinfectant residual | Microbiological contamination | Buildup of biofilms in the network due to inadequate residual disinfectant. |  | 1 |
| Network Risks | 169 | General Risks | Migration of hydrocarbons and other contaminants through pipework as a result of inappropriate materials used in areas of contaminated land | Chemical contamination | Resulting from use of inappropriate materials in areas of contaminated land | All polyethylene pipes are susceptible to migration of hydrocarbons through the pipe wall. | 1 |
| Network Risks | 170 | General Risks | Health risk to vulnerable customer due to inability to operate dialysis machine or similar | Loss of supply | Due to loss of supply | Long term care facility. | 2 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | 171 | General Risks | Pressure problems caused by PRV failure | Loss of pressure High pressure | Pressure fluctuation due to the failure of PRV. | PRVs should be serviced as required. | 2 |
| Network Risks | 172 | Pumping Station Risks | Failure of pump control panel resulting in power loss | Loss of supply | As a results of inability to operate pumps due to lack of power | 2 vfd's installed now | 1 |
| Network Risks | 174 | Pumping Station Risks | Oil contaminating water due to use of unacceptable pump lubricants. | Hydrocarbon contamination | Due to non-food grade leaking into wet well. | All pumps should use food grade lubricants. | 1 |
| Network Risks | 175 | Pumping Station Risks | Failure of pumps due to power surge at pump station. | Loss of supply | Due to pump failure due to electrical fault caused by power surge. | If electrical supply is subject to power fluctuations surge protection should be used. | 4 |
| Network Risks | 176 | Pumping Station Risks | Failure of pumps due to flooding | Loss of supply | Due to inadequate drainage or poor siting of pump house |  | 1 |
| Network Risks | 178 | Pumping Station Risks | Failure to meet demand due to insufficient pumping capacity | Loss of supply Low pressure | Due to pumps operating below rating or inadequately sized. | Pump capacity should be matched to expected demand. |  |
| Network Risks | 179 | Reservoir Risks | Contamination of water as a result of sediment deposition in reservoir | Chemical contamination Microbiological contamination. | Due to buildup of sediment in bottom of reservoir as a result of inadequate maintenance. | Reservoirs should be emptied, inspected, and cleaned on a regular basis. | 1 |
| Network Risks | 180 | Reservoir Risks | Contamination of water due to ingress of water as a result of inadequate structure or maintenance. | Chemical contamination Microbiological contamination. | Due to lack of structural integrity of reservoir as a result of poor design or maintenance | Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents. | 32 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network Risks | 181 | Reservoir Risks | Contamination of water due to ingress of organic debris as a result of inadequate structure or maintenance. | Chemical contamination Microbiological contamination. | Due to lack of structural integrity of reservoir as a result of poor design or maintenance | More of a problem on earth covered reservoirs where plant roots may penetrate structure. | 1 |
| Network Risks | 182 | Reservoir Risks | Contamination of water due to poor hygiene practice when doing planned inspection or maintenance. | Chemical contamination Microbiological contamination. | Due to poor hygiene practice or use of non-approved chemicals. | Operators should be fully trained in proper hygiene practice | 1 |
| Network Risks | 183 | Reservoir Risks | Contamination of water due to reservoir running empty due to faulty or no telemetry. | Chemical contamination | Due to disturbance of sediment on floor of reservoir due to low level as a result of lack of alarm. | Regular cleaning will help keep sediment build up to a minimum. | 1 |
| Network Risks | 184 | Reservoir Risks | Contamination of water as a result of vandalism | Chemical contamination Microbiological contamination. | Due to vandalism, due to lack of secure fencing and structure. | Degree of security required will depend on location. | 1 |
| Network Risks | 185 | Reservoir Risks | Contamination of water due to access to reservoir by stock or wildlife | Microbiological contamination | Due to lack of secure fencing round reservoir. | Degree of security required will depend on location. | 1 |
| Network Risks | 186 | Reservoir Risks | Contamination of water due vermin accessing reservoir | Microbiological contamination | Due to lack of mesh or flap valve on overflow from reservoir. |  | 2 |
| Network Risks | 187 | Reservoir Risks | Deterioration of water quality due to thermal stratification | Chemical contamination Microbiological contamination. | Due to hot weather and reservoir being above ground and inadequately insulated and poor circulation |  | 1 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Risks | 202 | General Risks | Lead in water in supply picked up from the service pipes and other fittings | Chemical contamination | Resulting from dissolved lead from internal pipework or lead solder. |  | 4 |
| Customer Risks | 203 | General Risks | Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe. | Chemical contamination Microbiological contamination | Disinfectant decay due to water remaining in pipe for extended period | Service may have been installed without any consideration of residence time in service pipe | 32 |
| Customer Risks | 205 | General Risks | Contamination of water in supply or pressure problems as a result of leaking service pipe | Microbiological contamination Loss of pressure | Due to ingress due to leaking service pipe | If a leaking service pipe is sitting in water and there is a sudden drop in pressure, water may drawn in. | 1 |
| Customer Risks | 206 | General Risks | Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures. | Chemical contamination Microbiological contamination | As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice | If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination. | 32 |
| Customer Risks | 207 | General Risks | Hydrocarbon contamination as a result of laying service in contaminated land. | Chemical contamination. | As a result of fuel/oil leak in soil through which polyethylene pipe is laid. | Hydrocarbons can migrate through polyethylene pipe. | 2 |
| Customer Risks | 208 | General Risks | Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/supervision. | Chemical contamination Microbiological contamination | Due to incorrect connection to unwholesome water due to lack of knowledge/supervision | Use of non-certified tradesmen may lead to unsatisfactory conditions | 8 |
| Customer Risks | 209 | General Risks | Contamination of water in supply as a result of use of inappropriate material in the presence of contaminated land | Chemical contamination. | Due to the use of inappropriate material due to the presence of contaminated land. | If laying pipes in contaminated land, contractors must install appropriate pipe materials. | 2 |
| Customer Risks | 210 | General Risks | Contamination of water in supply as a result of back siphonage caused by the lack of appropriate backflow protection | Chemical contamination Microbiological contamination | Resulting from back siphonage due to the lack of appropriate backflow protection, i.e. non-return valve. | Industrial/Commercial Premises are generally High Risk; Household Customers are generally Low Risk, although preparing pesticides for garden use potentially high. | 8 |


| Risk Type | Risk \# | Risk Category | Risk Description | Hazard | Cause of Potential Failure | Comment | Risk Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Risks | 211 | General Risks | Pressure problems as a result of leakage caused by corrosion | Loss of pressure | Resulting from leakage due to corrosion of copper pipework due to lack of protection or maintenance | Pitting corrosion or electrolytic or galvanic corrosion may cause leakage or failure. | 4 |
| Customer Risks | 212 | General Risks | Increased water temperature as a result of inadequate design of storage facility or internal pipework | Chemical contamination Microbiological contamination | Warm water due to on site storage above required temp due to inappropriate storage facility/lack of insulation | Elevated temperature may encourage microbial growth. | 1 |
| Customer Risks | 213 | General Risks | Contamination of water in supply as a result of loss of chlorine residual caused by increased temperature | Microbiological contamination | Resulting from loss of chlorine residual due to increase in temperature. | May give rise to microbial growth. | 2 |
| Customer Risks | 214 | General Risks | Contamination of water in supply as a result of inappropriate plumbing | Chemical contamination Microbiological contamination | Resulting from use of inappropriate plumbing materials | Plumbers should only use materials approved for potable water. | 2 |
| Customer Risks | 217 | General Risks | Contamination of water in supply as a result of installation of inappropriate appliances | Microbiological contamination | Resulting from installation of inappropriate water filters and cartridges. | Any point of use device should be approved for potable water use. | 2 |
| Customer Risks | 218 | General Risks | Contamination of water in supply caused by bacterial growth in appliances as a result of inadequate maintenance | Microbiological contamination | Due to growth of bacteria in water filters or cartridges resulting from inadequate maintenance. | If cartridges or filters are not changed regularly internal bacterial growth may occur. | 8 |
| Customer Risks | 221 | General Risks | Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations | Chemical contamination Microbiological contamination | As a result of ingress of contamination due to failure to operate proper hygiene practice. | If hoses are not properly managed and kept from coming into contact with the ground or other undesirable material contamination can easily occur. | 16 |

Agenda Date:
June 14, 2022
Agenda Item: New Business:
Advocacy to Provincial and Federal levels of government

## SUMMARY AND BACKGROUND

Advocacy works to ensure that provincial and federal decision makers, industry, and other relevant stakeholders understand and incorporate the best interests of the Town of Bentley in their decisions

Council sits on a variety of boards and committees and connects with the general community at large.
Based on the feedback obtained through Mayor and Council's involvement with community, boards, and committees and through briefings obtained from administration and the CAO, Mayor and Council must determine how they will focus advocacy efforts with the various levels of government.

This report is intended to be a catalyst for that discussion amongst Mayor and Council and to finalize your positions regarding advocacy efforts that will be made soon when you meet with your MLA or MP

## CURRENT STATE:

The Town of Bentley has many competing priorities, and it is important for Mayor and Council to order and refine those priorities from an advocacy perspective. This creates the opportunity for consistent messaging when meeting with politicians from the various levels of government.

Mayor and Council have also had the opportunity to review the Strategic Plan Goals and continue to refine objectives and tasks that align with direction that they would like to take the municipality.

## Key objectives and priorities have been identified including:

- Continued enhancement of marketing and communications to answer the question, why Bentley? and promotes a welcoming community that showcases and acknowledges the rich history of the community
- Family Oriented Project
- More Commercial and Industrial attraction to alleviate tax burden
- Bentley Southeast Area Structure Plan
- No tax and utility increases
- Asset Management Implementation for long term efficiency
- Oxford School
- Arena Slab Replacement
- Public Works Shop
- Reconfiguration of the New Beginnings Subdivision to SFD
- Phase 1 implementation of the Formal Asset Management Plan - Water Treatment and Distribution System
- Attract a Doctor to Town
- Leverage organizations like CAEP, Business Link, Community Futures to support business community and attract new businesses and promote shop local
- Leverage community partnerships and volunteers where possible to improve the delivery or programs, events and services and showcase the unity of our community
- Celebrate local community groups
- Engage neighboring communities like Sandy Point to look for joint opportunity
- Review, update and pursue a strong advocacy plan to lobby Provincial and Federal levels of government to invest, support and improve local services
- Continue to share information, plans, financials to encourage transparency and open communication with the public.
- Removal of old electronic signage

Next steps are to find ways to advocate to find funding support and ways to implement and deliver on the objectives and priorities for the community. Administration with Mayor and Council's guidance will continue to deliver what we can at the current budget levels, and this will be reviewed annually through the budget process. Mayor and Council need to focus their conversations with the various levels of government to advocate for the big asks.

## Some items that should be considered are:

1.) Continue to seek financial support for major infrastructure projects such as the $\$ 1.4$ million dollars required for the arena slab and additional funds required for eventual upgrades to the ice plant.
2.) Lobby the provincial government to ensure that Alberta Health Services will meet with Mayor and Council to discuss the need for a local doctor out of the care center.
3.) Protect the long-term interests of the Medicine Lodge Ski Hill and the 160 acres owned by the Town of Bentley, to ensure that it supports recreation opportunities and partnerships for many years to come.

## BUDGET AND FINANCIAL CONSIDERATIONS

None

## RECOMMENDATION

Mayor and Council consider options for advocating to the various levels of government and provide direction to the Chief Administrative Officer regarding their specific priorities for advocacy. This will allow administration to prepare any required supporting documentation to Mayor and Council.

## ATTACHMENTS

1) Strategic Planning Workshop PowerPoint

## Town of Bentley

Strategic Plan Actions for 2022 and Beyond

## Strategic Planning Workshop Outline

- Background from CAO
- Budget - Where do your dollars go?
- Statistics on Town facilities and assets
- Budget 2021 summary
- Bentley Community Strategic Plan (2019-2024)


## 2020 \& 2021 - Years in Review

- 2021 Goals and Actions - Work in Progress or Scheduled
- Goals and Actions for 2022 and Beyond (Group Exercise and Discussion)
- Priority Setting and Fine-tuning (Group Discussion)
- Next Steps and Closing


## Where do your budget dollars go?

| Administration <br> - General Administration <br> - Legislative Services <br> - Finance <br> -Economic Development <br> - Computer and Information Systems <br> - Donations and Grant Management | Facilities Management and Maintenance <br> - Arena <br> - Curling Rink <br> - Library <br> - Oxford School <br> - Bentley Museum (Grant) |
| :---: | :---: |
| Public Works <br> - Roads \& Streets <br> - Water Supply \& Distribution <br> - Sewage Collection \& Treatment <br> - Garbage Collection \& Disposal <br> - Project Management \& Oversight <br> - Parks, Playground and Campground | Protective Services <br> - Fire Fighting <br> - Bylaw Enforcement <br> - Emergency Management |
| Community Services \& FCSS | Planning and Development |

## Statistics

- 1 water treatment plant
- 1 bulk fill water station
- 1 clear well reservoir
- 3 portable water reservoirs
- 8.17 km of water main
- 3.2 km of storm sewer
- 8.26 km of sanitary sewer
- 75 water main valves
- 10 waste water valves
- 109 wastewater manholes
- 20 catch basin manholes
- 63 catch basins
- 2 retention ponds
- 44 hydrants and 1 flush point
- 1 septic receiving station (campground)
- 8 lagoons for waste water treatment
- 4 anaerobic cells
- 2 facultative cells
- 2 storage cells
- 1.67 km of chain link fence
- .34 km of chain and post
- 2.28 km of barbed wire
- 12 hanging baskets
- 26 planters
- 1025 sq. ft. of flower beds
- 445 water meters billed
- 13 sewer and garbage only
- 8 commercial garbage bins
- 648 property tax rolls
- 1078 residents per census
- 664 bookings arena per yr.
- 437 hr . Lacombe enfcmt
- Maintenance and support of vertical assets
- Old Firehall for Parks and Rec
- Oxford School
- Bentley Arena
- Curling Rink
- Bentley Library
- Community Hall
- Public Works Buildings (2)
- Pump houses (2)
- Ski Hill
- Bentley Fire Hall
- Town Hall
- 11 light duty vehicles/equip
- 5 heavy duty vehicles
- 4 bins/seacan for recycling
- 4 playgrounds
- 31 outdoor garbage receptacles
- 4 parking lots
- 3 km of bike path


# Background <br> Bentley Community Strategic Plan 

## Date of Plan Approval: April 2019

## Time Frame of Plan: 2019-2024

Key Concepts of the Plan:

- Community Focused Plan is not just a corporate strategic plan
- Open to members of the community to complete or accomplish actions


## Background Bentley Community Strategic Plan

## Vision:

"As we look to the future we see the Town of Bentley as a community that offers residents a high quality of life that grows in a sustainable manner that is safe, clean, attractive, friendly and family oriented. The community benefits from its strategic location building on its strengths of being proactive in planning for economic growth in an environmentally responsible manner. Bentley celebrates community spirit where citizens are actively involved in shaping and guiding the future of the community."

## Mission:

"The Town of Bentley is committed to delivering excellence every day through the provision of cost effective services that enhance the quality of life for all citizens within the community. We are committed to open communication and dialogue with all residents that we serve to ensure that we understand and deliver optimal services."

# Background Bentley Community Strategic Plan 

## Goals of the Strategic Plan

- Effective Communication and Engagement
- Financial Stability
- Economic Growth
- Enriched and United Community
- Organizational Success


# Bentley Community Strategic Plan <br> 2020 \& 2021Review 

## 1. Effective Communication and Engagement

- A well connected, knowledgeable and engaged citizenry.
- Bentley is a well-known regional centre and destination that people seek out.
- All citizens, regardless of age and ability, are engaged in a wide variety of year-round events and activities.
- 2020 \& 2021 Impacted by COVID-19
- Efforts undertaken to share information more frequently and clearly on website
- Communications with the local business community through business needs survey/random visits and coaching program
- Arena Entrance App and COVID-19 safety protocol and continued information posts regarding COVID-19
- Public Posting of Agendas and Agenda Packages
- Highway Roundabout
- Information session held in 2021 by AT to share concept plan with the public
- Roundabout to be built in 2022, working with Wallah signs on sign design for center of Roundabout to direct traffic to Bentley
- Formal Marketing Plan (Moved to 2022)
- formal marketing plan yet to be developed, however digital media campaign undertaken in 2020 through Black Press, Sunny 94
- On the Spot App 2020
- Winter Shop Local Advertising End of November - Beginning of December 2020
- will schedule a meeting with the local business community in 2022 to garner input regarding collaborative marketing to not duplicate efforts by local business and target gaps


## Bentley Community Strategic Plan 2020 \& 2021 Review

## 2. Financial Stability

- A wide variety of partnerships have been created across Bentley to deliver a host of programs and services.
- The tax base is broadened and well diversified to support new developments and endeavors.
- Financial Reporting:
- Revamped financial reporting in MuniWare to update system generated reports and ensure accuracy of reporting
- Added projections and variance analysis to quarterly reporting (this will be every quarter from now on)
- Alignment of Budgeting with the Strategic Plan and Annual Check-Ins
- Server and Computer systems upgrades (risk mitigation regarding data retention and security)
- Grant Applications:
- Successfully submitted and received grant funding for Capital Projects
- Additional Funding over and above MSI and Gas Tax
- Municipal Stimulus Grant
- MOST Funding - Operating Grant related to COVID-19
- FCM Asset Management Program Funding
- ACP Grant
- Asset Management:

Asset Management Program with Stantec - Workshop with staff and council December 16, 2021
Focus on long term expandability of community, business and residential attraction

- Need to look at major assets - Arena Slab Improvements, Concrete Program, Water and Sewer Infrastructure North Bentley, $50^{\text {th }}$ Street South Roadway Improvements, Fleet and Equip needs to improve operational efficiency
- Conversations with the County regarding exploration of regional sewage treatment facilities
- Transition of GIS system to Parkland Community Planning Association allows for more control of updates and closer support than Calgary MRF
- Donations and Sponsorship:

Concrete Bench Donation (Wes \& Norma Lowery)
Concrete Bench Donation (Wes \& Norma Lo
ATCO \& FORTIS Grants Gateway Signage
Tree Grant potentially from Blindman Valley Lions Club

# Bentley Community Strategic Plan 2020 \& 2021 Review 

## 3. Economic Growth

- Bentley has a wide variety of seasonal and permanent businesses.
- Year-round tourism supports Bentley businesses and provides a range of employment opportunities.
- Regional collaboration supports the success of Bentley businesses and growth.
- Collaboration with Regional Neighbors to actively Promote Bentley
- CAEP
- New Business Representative from the Town successfully recruited to CAEP
- updated 2020 \& 2021 Community indicators report and working with CAEP on 2022
- Exploring the opportunity with CAEP to conduct gap analysis in partnership with another Central Alberta Community or CAEP Directly
- Alberta Community Partnership Application (Successful in 2021-\$200,000)
- Intermunicipal Collaboration Committee established with Lacombe County in 2021, including terms of reference
- Storm Water Management Plan in draft stages with Stantec
- Scope for completion of Water and Sewer Servicing Study underway and negotiating with Stantec on Price
- Lacombe Tourism
- Partnership with Lacombe Tourism for On-the-Spot App
- Business Community
- Implemented and delivered Business Coaching Program to support long term community resiliency and support local businesses impacted by COVID-19 (\$15,000 invested to support one on one coaching to support 6 local businesses)


## Bentley Community Strategic Plan <br> 2020 \& 2021 Review

## 3. Economic Growth (Cont'd)

- Bentley has a wide variety of seasonal and permanent businesses.
- Year-round tourism supports Bentley businesses and provides a range of employment opportunities.
- Regional collaboration supports the success of Bentley businesses and growth.
- Collaboration with Regional Neighbors to actively Promote Bentley
- General Economic Development
- Cold Calls - continue to converse with interested parties regarding business development, residential development in the capacity as the development officer seems to be picking up slightly
- New commercial building on $50^{\text {th }}$ Ave - Bentley Bike Shop (permit approved - construction underway)
- Capital Projects (completed on schedule)
- $50^{\text {th }}$ Street South
- Concrete Replacement and Arena Ramp Improvements
- Gateway signage - lighting, xmas lights, flag poles installed in 2021
- Regular Meetings with Neighboring CAO's to explore collaborative opportunities and potential cost sharing - such as training (ie: joint council orientation workshop with the County


## Bentley Community Strategic Plan 2020 \& 2021 Review

## 4. Enriched and United Community

- A safe, sustainable and holistic community where people can live, work and recreate.
- All housing needs are met to support people of every age, ability and family size.
- An active, engaged and sustainable community.
- Bentley Care Centre Doctor
- Council approved funding to cover computer upgrades to support no more manual charting and ensure the Doctor continues to provide services to the Community
- Doctor has not returned to the community - ongoing meetings and discussions have taken place
- Communication with RCMP and Lacombe County Peace Officer
- Commitment from both RCMP and the County to present to Council twice annually
- Regular statistical updates from both
- Open and good communication regularly
- Enhanced contacts with the community from both including non-enforcement contacts weekly
- Successfully held hazardous waste roundup in 2020 and will hold in 2022
- Housing Options/ Lot Sales
- Letter to Lacombe Foundation regarding exploring affordable housing options in partnership.
- Continue to promote subdivision lands
- redevelopment of the subdivision (new beginnings underway 2021 - 2022)
- Events Strategy (Moved to 2022)
- Although regular town events were mostly put on hold - we have worked internally on modified events to meet COVID-19 requirements like Car Bingo, Drive Thru Santa, Will decorate Town Hall and possibly a Christmas Tree in the Park 2020 \& 2021
- Community Services has worked on information gathering in 2021 to put together calendar of local events, will be brought to council for review / engagement and feedback


## Bentley Community Strategic Plan 2020 \& 2021 Review

## 5. Organizational Successes

- An efficient, knowledgeable, healthy and caring community.
- A transparent and accessible municipal Council and Administration.
- Organized and engaged network of community partnerships and organizations.
- Community Room in Town Hall Building
- Successful partnership with Lacombe Family Resource Network (McMann)
- Community Programing (no cost to the town - other than provision of free space)
- New agreement for the provision of YOGA program - when allowed to operate
- TOPS moved into this room to free up operational space in old fire hall for Parks Operations and Public Works
- Community Interaction
- Open door informal commitment and policy at Town Hall - encouraging residents to meet with the CAO or Mayor and Council as needed
- Visits to Bentley businesses in the community by the CAO to support local shopping and having informal conversations
- Invitation to the community to participate in event planning such as the xmas event - business representative on the working group


# Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled 

## 1. Effective Communication and Engagement

- A well connected, knowledgeable and engaged citizenry.
- Bentley is a well-known regional centre and destination that people seek out.
- All citizens, regardless of age and ability, are engaged in a wide variety of year-round events and activities.
- Action Ensure residents are well informed and visitors can access information through an improved website was anticipated to be completed in 2021 - however with election will look to implement by Q2 2022
- Action Develop a formal marketing plan to be shared with the community by Q3 2022
- Action Continue to find ways to host safe community events in a Pandemic Environment - car show, drive thru santa, try to find a way to deliver arena slab improvement if successful for the grant between end of season minor hockey and rodeo
- Action Outdoor Rink to be built in December 2021 or January 2022 when weather permits
- Action Citizen / Volunteer Recognition Policy to be brought to Council by Q3 2022
- Action Design of Roundabout Signage for review with Council - to direct people to Bentley at Junction of Hwy 20 \& Hwy 12 (Q1 2022)
- Action Continue to enhance partnerships with local organizations and groups including the newly formed Blindman Valley Lions Club. (Engage Lions Club in Q1 2022 - regarding activity for 2022)


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 2. Financial Stability

- A wide variety of partnerships have been created across Bentley to deliver a host of programs and services.
- The tax base is broadened and well diversified to support new developments and endeavors.
- Action Responsible governance through open and transparent financial reporting, capital project implementation and budgetary information sharing. This has included quarterly financial projection and variance reports that will be posted publically as part of the council agenda package. Also, capital projects will be implemented in a fiscally responsible manner on time and on budget with the utilization of grant funding where possible. (Ongoing)
- Action Long term financial planning through the beginnings of an Asset Management Program to continue in 2022 and partially funded by grant funding from the Federation of Canadian Municipalities and implemented. This is in process but was delayed by the election. (Phase 1 Complete Q1 2022)
- Action Grant applied for through Canada Community Revitalization Fund $(\$ 720,000)$ and Support from Lacombe County in the amount of $(\$ 360,000)$ to fund $\$ 1,440,000$ Arena Slab Replacement in 2022. (Know if approved by Q1 2022)


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 3. Economic Growth

- Bentley has a wide variety of seasonal and permanent businesses.
- Year-round tourism supports Bentley businesses and provides a range of employment opportunities.
- Regional collaboration supports the success of Bentley businesses and growth.
- Collaboration with Regional Neighbors to actively Promote Bentley
- Action Established a committee of council to further explore the development potential of commercial and industrial lands as identified in the Intermuncipal Collaboration Framework and Intermunicipal Development Plan. The end goal will be to create an area structure plan, economic development plan and servicing study. The program is funded by Alberta Community Partnership Grant and work will continue through Q1, Q2, Q3 2022.
- Action Continue to enhance the gateways to our community to support tourism, business and residential development attraction - Signage for roundabout included in Alberta Transportation project. (Q2 design for sign)
- Action 2022 implementation of digital service squad partnership with Blackfalds and Sylvan Lake (grant funded program through Business Link to hire $4^{\text {th }}$ year grad student to provide small businesses with resources, training and support for the adoption of digital technologies.
- Action Land use Bylaw Consolidation/Review/Update (Q3 2022)


# Bentley Community Strategic Plan <br> 2022 Goals and Actions - Work in Progress or Scheduled <br> <br> 4. Enriched and United Community 

 <br> <br> 4. Enriched and United Community}

- A safe, sustainable and holistic community where people can live, work and recreate.
- All housing needs are met to support people of every age, ability and family size.
- An active, engaged and sustainable community.
- Action Explore opportunities for housing partnerships for the development of diversified housing options. This includes meeting with Lacombe Foundation, Bethany Group or Habitat for Humanity to further future development of residential lands. Requests have been made to Lacombe Foundation and Bethany group, but no meeting has taken place at this time with Mayor and Council - Meeting should be scheduled by Q2-2022
- Action New Beginnings Subdivision reconfiguration (in progress) - Engineering analysis underway and report will be brought back to Council in Public in Q1-2022
- Action Continue to nurture the Town's relationship with the RCMP and Lacombe Enforcement and ensure an enhanced presence in the community - Potentially look to host a community engagement with the RCMP locally in 2021 through in person or survey (Depending on COVID-19) by Q3 - 2022
- Action Waste and Recycling Options - request a presentation from LRWSC Manager regarding the Transfer Station and additional options for consideration such as a composting.(Q1 2022)


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 5. Organizational Successes

- An efficient, knowledgeable, healthy and caring community.
- A transparent and accessible municipal Council and Administration.
- Organized and engaged network of community partnerships and organizations.
- Action Ensure a coordinated response and recovery from COVID-19 impacts to the community, to promote a safe and healthy community. Including information sharing with the public in a timely manner as well as providing links to resources to support the long-term recovery of our community. Managing recreation activities at major facilities like the arena to allow recreation to continue safely. (Ongoing)
- Action Engage residents through a variety of means including hosting a volunteer recognition event/open house in 2022 which includes connecting organizations to share what they do to the community. It was originally anticipated we could do so by $3^{\text {rd }}$ or $4^{\text {th }}$ quarter 2021, however with COVID this has not been possible. (Q3 - 2022)
- Action Explore online options for Council Meeting Technology (Q2 - 2022)
- Action Community Events Strategy (Q4-2022)
- Action Drive Happiness Transportation Program (Q1 - 2022)

Goals and Actions for 2022 and Beyond

Key questions for group discussion:

- What do you as Council wish to achieve?
- How do the items related to the Strategic Plan?
- Which items are higher priority than others?
- What resources are you prepared to commit?


## (s $\rightarrow M \rightarrow A \rightarrow R \rightarrow T$

| Specific | Measurable | Attainable | Relevant | Time-Bound |
| :--- | :--- | :--- | :--- | :--- |
| Make sure your goals <br> are focused and identify <br> a tangible outcome. <br> Without the specifics, <br> your goal runs the risk <br> of being too vague to <br> achieve. Being more <br> specific helps you <br> identify what you want <br> to achieve. You should <br> also identify what <br> resources you are going <br> to leverage to achieve <br> success. | You should have some <br> success. This will <br> help you to evaluate <br> achievement and <br> also progress. This <br> component often <br> answers how much <br> or how many and <br> highlights how you'll <br> know you achieved <br> your goal. | Your goal should be <br> challenging, but still <br> reasonable to achieve. <br> Reflecting on this <br> component can reveal <br> any potential barriers <br> that you may need to <br> overcome to realize <br> success. Outline the <br> steps you're planning <br> to take to achieve your <br> goal. | This is about getting <br> real with yourself and <br> ensuring what you're <br> trying to achieve is <br> worthwhile to you. <br> Determining if this is <br> aligned to your values <br> and if it is a priority <br> focus for you. This helps <br> you answer the why. | Every goal needs a <br> target date, something <br> that motivates you to <br> really apply the focus <br> and discipline necessary <br> to achieve it. This <br> answers when. It's <br> important to set a <br> realistic time frame <br> to achieve your goal <br> to ensure you don't <br> get discouraged. |

Background<br>Bentley Community Strategic Plan

## Strat Planning Session

November 2021 and May 2022

## Bentley Community Strategic Plan 2020 \& 2021Review

## 1. Effective Communication and Engagement

- A well connected, knowledgeable and engaged citizenry.
- Bentley is a well-known regional centre and destination that people seek out.
- All citizens, regardless of age and ability, are engaged in a wide variety of year-round events and activities.


## Council Feedback

- Roundabout Signage 1.)
- Electronic Signage 1.)
- Family Oriented Project 2.)
- More Skiing for Ski Hill 2.)
- New Park with Gazebo or Stage with Power 2.)
- Better Website 3.)
- Website Branding 3.)
- Marketing enhancement - ways of communication 3.)
- Better Social Media 3.)
- Positive Attitude and Talk from all Council 4.)
- Why we want to be in Bentley
4.)


## Bentley Community Strategic Plan 2020 \& 2021Review

## 1. Effective Communication and Engagement

- A well connected, knowledgeable and engaged citizenry.
- Bentley is a well-known regional centre and destination that people seek out.
- All citizens, regardless of age and ability, are engaged in a wide variety of year-round events and activities.


## Common Themes (Tasks)

- Undertake stakeholder engagements for major projects as undertaken. For 2022 this will include:
- Website and Branding
- New Beginnings Subdivision Redesign
- Bentley South East Area Structure Plan
- Hwy 12 \& 20 Roundabout Signage
- Implement signage at the Roundabout on Highway 12 \& 20 that moves Bentley to the Highway and makes people want to drive 1.5 km up the road to explore the community.
- Engage the Community regarding a Family Oriented Project for the community such as a revitalized downtown park with gazebo or stage with power that supports a multitude of year round events and activites.
- Collaborate with the Medicine Lodge Ski Club to encourage better utilization of the Hill, while preserving the natural beauty of the area.


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 2. Financial Stability

- A wide variety of partnerships have been created across Bentley to deliver a host of programs and services.
- The tax base is broadened and well diversified to support new developments and endeavors.


## Council Feedback

- See ahead by faith and hope 1.)
- Sell those lots 2.)
- Oxford School Analysis 3.)
- Public Works Shop \& Yard 3.)
- No Tax Utility Increases 4.)
- Maintaining Existing Projects and any new initiatives with no or minimal tax raises in 2022 4.)
- Lean on Community for project 5.)
- Ask Groups for Sponsorship 5.)
- Encourage Workable Dreams 6.)
- Access Grants (More Grants) 6.)


## Bentley Community Strategic Plan

## 2022 Goals and Actions - Work in Progress or Scheduled

## 2. Financial Stability

- A wide variety of partnerships have been created across Bentley to deliver a host of programs and services.
- The tax base is broadened and well diversified to support new developments and endeavors.


## Common Themes (Tasks)

- Implement a robust asset management program that provides clarity to long term costs and capital planning and ensures that Town Assets are effectively maintained.
- $\quad$ Continue to hold property taxes and utility fees at established rates for as long as possible, while ensuring that long term asset management goals can be met.
- $\quad$ Seek out community support, sponsorships and grants for the nice to haves that support dreams, while maintaining fiscal responsibility to pay for necessities.
- $\quad$ Undertake the redesign of New Beginnings Subdivision to create Single Family Dwelling Lots that meet the current demand in Bentley.


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 3. Economic Growth

- Bentley has a wide variety of seasonal and permanent businesses.
- Year-round tourism supports Bentley businesses and provides a range of employment opportunities.
- Regional collaboration supports the success of Bentley businesses and growth.
- Collaboration with Regional Neighbors to actively Promote Bentley


## Council Feedback

- Partner \& Relationships with Neighbors 1.)
- Present Possibilities 1.)
- Marketing our Community 1.)
- Sandy Point Re-engagement 1.)
- Attracting New Business through Resources like CAEP and marketing initiatives 1.)
- New Beginnings Development Growth 2.)
- Promote Outside the box 3.)
- Doctor in Town 3.)
- Improved grocery options 3.)
- Dream the Impossible 3.)


## Bentley Community Strategic Plan 2022 Goals and Actions - Work in Progress or Scheduled

## 3. Economic Growth

- Bentley has a wide variety of seasonal and permanent businesses.
- Year-round tourism supports Bentley businesses and provides a range of employment opportunities.
- Regional collaboration supports the success of Bentley businesses and growth.
- Collaboration with Regional Neighbors to actively Promote Bentley


## Common Themes

- Enhance marketing and communications through an improved website and a brand that is reflective of the heart and soul of the community and that answers the questions Why Bentley?
- Collaborate and partner with organizations like CAEP, Community Futures and Business Link to provide Additional Supports for Business
- Create new partnerships and nurture existing partnerships with neighboring communities including Sandy Point to find collaborative ways to support one another.
- $\quad$ Seek out to improve essential services for Bentley including recruiting a Doctor
- Develop an Area Structure Plan to support commercial and industrial business attraction and support economic growth
- Complete the redesign of residential lots from multi-family to SFD for the New Beginnings Subdivision to match the supply of lots with the current demand.


## Bentley Community Strategic Plan <br> 2022 Goals and Actions - Work in Progress or Scheduled <br> 4. Enriched and United Community

- A safe, sustainable and holistic community where people can live, work and recreate.
- All housing needs are met to support people of every age, ability and family size.
- An active, engaged and sustainable community.


## Council Feedback

- Welcome is Key
1.)
- Respect Learn and Acknowledge Local History
2.)
- Promote Going Green 3.)
- Dog Park
3.)
- Community Drop in Centre or Skate Park
- Waste \& Recycling Options Partnerships 3.)
- New Home For Seniors
4.)
- Opportunities for Senior Housing Projects 4.)
- Food \& Clothing Drives for the Needy 5.)
- Day Care for Bentley - reasonably priced
5.)


# Bentley Community Strategic Plan <br> 2022 Goals and Actions - Work in Progress or Scheduled <br> <br> 4. Enriched and United Community 

 <br> <br> 4. Enriched and United Community}

- A safe, sustainable and holistic community where people can live, work and recreate.
- All housing needs are met to support people of every age, ability and family size.
- An active, engaged and sustainable community.


## Common Themes

- Promote a welcoming community that showcases and acknowledges the rich history of Bentley through a marketing and communication strategy to encourage people to live, work and recreate here.
- Explore opportunities for new seniors housing projects and expansion of homes for seniors.
- $\quad$ Seek out and attract new businesses that fill services gaps within the community, such as Day Cares
- Find ways to improve waste reduction and recycling options through partnerships for the town, while ensuring a cost effective approach for the provision of those services. (This includes public education)
- Explore options for a community focused project that the community wants and ensure that this is part of the Capital Program for the near future.


# Bentley Community Strategic Plan November Planning Session 

## 5. Organizational Successes

- An efficient, knowledgeable, healthy and caring community.
- A transparent and accessible municipal Council and Administration.
- Organized and engaged network of community partnerships and organizations.


## Council Feedback

- Review Policy and Bylaws
1.)
- FTE's Finance Officer \& Parks \& Rec Supervisor
- Help Keep Businesses in Town
- Advocacy Plan
- More Group Volunteer Projects -i.e. beatification projects
4.)
- Strategic Sharing of Plans
5.)
- You Are Now Us
6.)
6.)
- What Can You Share
6.)
- Invite groups to open house


# Bentley Community Strategic Plan November Planning Session 

## 5. Organizational Successes

- An efficient, knowledgeable, healthy and caring community.
- A transparent and accessible municipal Council and Administration.
- Organized and engaged network of community partnerships and organizations.


## Common Themes

- Ensure legislative compliance through effective policies and bylaws, with the intent to review and amend as required to stay current, relevant
- Recruit and hire a new Parks and Recreation Supervisor / Safety Officer to provide an enhanced level of service for parks and parks facilities as well as review, amend and/or implement an effective safety program.
- Leverage community partnerships and volunteers where possible to improve the delivery of programs, events and services and showcase the unity of our community.
- Review, update and pursue a strong advocacy plan to lobby Provincial and Federal levels of government to invest, support and improve local services.
- $\quad$ Share information, plans, financials etc to encourage transparency and open communication with the public. This includes quarterly financial reporting, updated website with better information sharing tools, all policies, bylaws etc posted online and available

From:
Sent:
Subject:

MA Engagement Team [ma.engagement@gov.ab.ca](mailto:ma.engagement@gov.ab.ca)
May 27, 2022 10:34 AM
INVITATION TO REQUEST A MEETING WITH THE MINISTER- 2022 AM FALL CONVENTION

Dear Chief Administrative Officers:
We are writing to inform you of a potential opportunity for municipal councils to meet with the Honourable Ric Mclver, Minister of Municipal Affairs, at the 2022 AM Fall Convention, scheduled to take place at the Calgary Convention Centre from September 21 -23, 2022. These meetings will be in person at the convention centre.

Should your council wish to meet with Minister Mclver during the convention, please submit a request by email to ma.engagement@gov.ab.ca no later than July 8, 2022.

In your meeting request, please be sure to include one specific policy item or issue your municipality would like to discuss with the Minister.

We generally receive more requests to meet with the Minister than can be reasonably accommodated over the course of the convention. To ensure suitable consideration of requests, municipalities should be mindful of the following criteria:

- Policy items or issues directly relevant to the Minister of Municipal Affairs and the department will be given priority.
- Municipalities located within the Capital Region can be more easily accommodated throughout the year, so priority will be given to requests from municipalities at a distance from Edmonton and to municipalities with whom Minister Mclver has not yet had an opportunity to meet.
- Meeting requests received after the deadline will not be considered for the convention, but may be considered for future meeting opportunities.
Meeting times with the Minister are scheduled for approximately 15 minutes per municipality. This will allow the Minister the opportunity to engage with as many municipal councils as possible. All municipalities submitting meeting requests will be notified at least two weeks prior to the convention as to the status of their request.

Municipal Affairs will make every effort to find alternative opportunities throughout the remainder of the year for those municipalities the Minister is unable to accommodate during the convention.

## Sincerely,

Stakeholder Relations<br>Municipal Affairs

Town of Bentley

Box 179, 4918-50 Avenue
Bentley, AB TOC 0J0
403-748-4044 Fax: 403-748-3213
www.townofbentley.ca


# Information Session - OXFORD SCHOOL <br> Open House June 29, 2022, 5:00pm to 8:00pm At the Seniors Drop In 

On April 12, 2022, Town of Bentley Administration along with representation from Associated Engineering, presented the findings of a Building Condition Assessment Report regarding Oxford School.

Major concerns regarding the structural integrity of the building were identified and include the deterioration of the roof, load-bearing brick walls and foundations. There are also many building code deficiencies that are required for public occupancy that are currently not being met.

The estimated cost for repairs to the building are more than $\$ 1.2$ million dollars. Due to this significant cost to repair as well as an analysis or current utilization of other community buildings, administration made a recommendation to consider demolishing the building. The following motion was approved by Mayor and Council:
"THAT the Oxford School Building be closed to all public access, due to the significant safety concerns AND

THAT all utilities be shut off and the building is to be checked weekly and logged; AND
THAT a decision regarding demolishing the building will be made by the Fall once a public information session has been held.

Town Administration along with members of Council will be present at the Senior's Drop In located at $491850^{\text {th }}$ Ave, to answer your questions and seek the community's input regarding ideas for the Municipal Park. This is a drop-in format between the hours of 5:00pm and 9:00pm.

Please come out to discuss the Oxford Building and its current condition and share your thoughts and ideas regarding the future of the Municipal Park.

Once input has been gathered, a plan will be developed for the park to share with Mayor and Council and the public for consideration.

Sincerely,
Marc Fortais
Chief Administrative Officer


## Town of Bentley

Box 179, 4918-50 Avenue Bentley, AB TOC 0J0
403-748-4044 Fax: 403-748-3213 www.townofbentley.ca


## Information Session - New Beginnings Subdivision Open House July 5, 5:00pm to 8:00pm At the Seniors Drop In

The New Beginnings Subdivision began in 2014 through the creation of the Summersault Area Structure Plan (passed through Bylaw 178/2014 and approved August 19/2014). In 2017 Northland Mortgage Corporation made an application to the Court of Queen's Bench to foreclose on the property and in August of 2018 the foreclosure Order was granted.

In 2018 the Town of Bentley approved two bylaws for the purchase of the land and for the completion of servicing for the subdivision. Throughout 2019 and 2020 the Town completed the servicing and since then the lots have been for sale.

To date there has been little interest in the properties with their current configuration. Most inquiries to the town office relate to looking for land to potentially build single family dwellings. The current configuration of multi-family housing is not attracting investment in the community and therefore Administration is recommending that the subdivision be reconfigured to Single Family Dwelling Lots. This reconfiguration can be done economically, with minimal impact to the existing road infrastructure and still result in a slightly positive cashflow or break-even cash flow even without consideration of the tax revenue to be generated.

Please drop by the open house scheduled for July 5 at 5:00pm to 8:00pm at the Senior's Drop in to learn more and provide your feedback.

Sincerely,
Marc Fortais
Chief Administrative Officer

Parkland Regional Library System

## PRLS Board Meeting Minutes May 19, 2022

The regular meeting of the Parkland Regional Library System Board was called to order at 10:04 a.m. on Thursday May 19, 2022 in the Small Board Room, Lacombe.

Present: Debra Smith (Board Chair), Gord Lawlor, Barb Gilliat, Norma Penney
Present via Zoom: Jackie Almberg, , Doug Booker, Jaime Coston, Teresa Cunningham, Cal David, Amanda Derksen, Jeff Eckstrand, Jul Bissell (alternate for Lisa Ferguson), Marie Flowers, Elaine Fossen, Dwayne Fulton, Barbara Gibson, Pam Hansen, Dana Kreil, Stephen Levy, Julie Maplethorpe, Philip Massier, Ricci Matthews, Marc Mousseau, Joy-Anne Murphy, Jackie Northey, Shawn Peach, Leonard Phillips, Lori Reid, Teresa Rilling, Bill Rock, Heather Ryan, Les Stulberg, Delaney Thoreson, Patricia Toone, Carlene Wetthuhn, Shannon Wilcox, Bill Windsor, Janice Wing
With Regrets: Doug Weir, Alison Barker-Jevne, and Gail Knudson
Absent: Edna Coulter, Bruce Gartside, Guy Lapointe, Daryl Lougheed, Bryce Olson, Ray Reckseidler, Diane Roth, Sandy Shipton, and Sharon Williamson

Guests: Margaret Law - in person, Lindsey Schmidt and Rebecca Slater (MNP) - Zoom
Staff: Ron Sheppard, Tim Spark, Donna Williams, Kara Hamilton, Haley Amendt, Hailey Halberg

## Call to Order

Meeting called to order at 10:04 a.m. by Smith.
As part of PRLS' legislative compliance procedures, board members who send regrets are excused at the beginning of each meeting.

Motion by Len Phillips to excuse Doug Weir, Alison Barker-Jevne, and Gail Knudson from attendance at the board meeting on May 19, 2022 and remain members of the Parkland Board in good standing.

CARRIED
PRLS 15/2022

### 1.1 Agenda

### 1.1.2 Adoption of the Agenda

Motion by Teresa Cunningham to accept the agenda as presented.
CARRIED
PRLS 16/2022

### 1.2. Approval of Minutes

Smith asked if there were any amendments to the February 24, 2022 minutes. There were none.

Motion by Jackie Almberg to approve the minutes of the February 24, 2022 meeting as presented.

CARRIED
PRLS 17/2022

### 1.3. Business arising from the minutes of the February 24, 2022 meeting

Smith asked if there was any business arising from the minutes. There were none.

## 2. Business Arising from the Consent Agenda

Smith asked if there was any business arising from the consent agenda. There was none.
Motion by Gord Lawlor to approve the consent agenda as presented.
CARRIED
PRLS 18/2022

### 3.1. Approval of the 2021 Audit

Shawn Peach left the meeting from 10:12 to 10:17 a.m.
Lindsey Schmidt and Rebecca Slater from Parkland's audit company, MNP, presented the audit.
The Parkland Regional Library System 2021 Audit Findings Report to the Board of Directors/Executive Committee for December 31, 2021, two additional letters to the Board and the Financial Statements December 31, 2021 were provided by PRLS's auditors MNP. In their report, the auditors state:

We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated November 12, 2021, for the preparation and fair presentation of the Library's financial statements in accordance with Canadian public sector accounting standards. We believe these financial statements are complete and present fairly, in all material respects, the financial position of the Library as at December 31, 2021, and the results of its operations and its cash flows, in accordance with Canadian public sector accounting standards.

Parkland received a clean audit. However, the auditor had three recommendations in their management letter, first, that the Finance Department develop a succession plan, in anticipation of staff retirements. They also noted that the building reserve is below the recommended minimum, stating that the Executive Committee is aware of this and are planning on slowly bringing the reserve up to minimum levels over the next few years. The last recommendation is to change amortization for Parkland's computers from $30 \%$ to $50 \%$ in order to better reflect the actual value of Parkland's computers.

Motion by Jackie Northey to approve the Parkland Regional Library System 2021 Audit Findings Report to the Board of Directors/Executive Committee for December 31, 2021 and the Financial Statements for December 31, 2021 as presented.

Lindsey Schmidt and Rebecca Slater left the meeting at 10:31 a.m.

### 3.2. 2023 Requisition Increase

At their March $24^{\text {th }}$ meeting, Parkland's Executive Committee passed the following motion:
Motion by Phillip Massier to direct staff to create a 2023 budget with a 20 cent increase in the requisition level on the most current population figures, and if the population numbers for the region drop, to increase the requisition sufficiently to equal the extra income originally projected.

## CARRIED

Parkland has kept the municipal requisition/levy at $\$ 8.55$ per capita for three consecutive years. The Government of Alberta has not increased the grant rate or adjusted for population when issuing grants since 2017.

At the time of posting the meeting package, the rate of inflation for Alberta as determined by the Federal Government was at $6.5 \%$ over this time last year.

There was considerable debate over using Treasury Board population estimates for invoicing municipalities Despite this, the board upheld the original motion made by the Executive Committee.

Motion by Phillip Massier to direct staff to create a 2023 budget with a . 20 cent increase in the requisition level on the most current population figures, and if the population numbers for the region drop, to increase the requisition sufficiently to equal the extra income originally projected.

## CARRIED

PRLS 20/2022

### 3.3 2023 Budget and Population Numbers

At the last Executive Committee meeting there was a long discussion regarding which population figures Parkland should use for invoicing municipalities. The committee was asked to revisit a decision that was made in 2021.

According to clause 8.3 of Parkland's master agreement when invoicing members for the requisition:
"The population of a municipality that is a Party to this Agreement shall be deemed to be the most recent population figure for the municipality as published by Alberta Municipal Affairs." However, according to the Government of Alberta's website "The Municipal Affairs Population List has been discontinued and will be replaced by population estimates from Treasury Board and Finance in the future."

The potential problem for Parkland was that the last updated official population list from Municipal Affairs uses 2019 population figures and, as stated, will no longer be updated. Instead, the only official population figures appear to be those from the Treasury Board.

At the March 2021 Executive Committee meeting, the committee decided to use the population numbers from Treasury Board and Finance to invoice municipalities because, as the GOA's own
website stated; " The municipal Affairs Population list has been discontinued and will be replaced by population estimates from Treasury Board and Finance in the Future." The interpretation at the time was that the population estimates from Treasury Board are replacing the Municipal Affairs population lists.

Member municipalities were informed of this change, as was the Parkland board at their meeting in May 2021. The board and Municipalities were again informed when the budget was distributed last autumn.

After much discussion on this subject by the Executive Committee, staff were instructed to seek a legal opinion on a number of issues. Based on the legal opinion obtained:

- There is no need to change our membership agreement to use the population figures from Treasury Board to invoice member municipalities.
- It would appear that PRLS should be using the population figures from the Treasury Board for the purpose of invoicing municipalities.
- If Parkland were to switch to using the federal census numbers for invoicing municipalities, then the municipalities would have to change the membership agreement.
- Switching to the federal census numbers is redundant because according to GOA's website, the federal census will be used to update the Treasury Board population estimates.
- The funding level or funding model used by Municipal Affairs has no bearing on the invoicing models outlined in Parkland's master agreement. How the GOA chooses to distribute funding is an entirely separate issue from how Parkland invoices its member municipalities.

Following on the previous agenda item, some board members indicated that Parkland's master agreement be amended to utilize the recent federal census population figures for the purpose of calculating the amount of the levy when invoicing municipalities.

Motion by Barb Gilliat to receive the legal opinion from Susan Alexander-Smith, QC for information, and to follow her recommendation for building the 2023 Budget using the Treasury Board Estimates.

CARRIED
PRLS 21/2022

### 3.4. Parkland's Strategic Plan 2023-2025 Update

In February, there were three focus groups facilitated by Shari Hansen, a Community
Development officer with Alberta Culture and Status of Women. At these focus group sessions, Hansen spoke with groups of key Parkland stakeholder groups to get input for PRLS' 2023-2025 strategic plan. While much of the data collected needs further analysis before it is truly useful, a number of key themes have emerged. The emerging priorities for Parkland's member libraries include:

- Marketing assistance including communications
- Advocacy
- Sustainable funding (which is tied to both effective marketing and advocacy)
- Assistance with HR issues
- An increased emphasis on eContent in several different categories
- Creating an environment that fosters an overall increase in the professionalism of member library service through better collection development, collaboration and partnerships developing critical thinking and analysis while at the same time sharing and celebrating the uniqueness of each library and their individual accomplishments. In such an environment, libraries can share ideas and support one another.

Due to the irregular services demanded of member libraries caused by COVID-19, and because it is only now and with some uncertainty that "normal" services are being resumed, another focus group session was held on May $4^{\text {th }}$ to go over the data collected at the February focus group sessions to see if the emerging priorities accurately reflect the services member libraries would like to see Parkland develop. Formal work on Goals and Objectives will begin shortly.

Motion by Joy-Anne Murphy to receive for information.

PRLS 22/2022

## Comfort Break 11:31-11:40 a.m.

### 3.5. Indigenous Library Services

On April $1^{\text {st }} 2022$, two years after the Maskwacis library service point closed due to the COVID-19 pandemic, the library service point had a soft opening. The Howard Buffalo Memorial Centre doors remain locked but patrons are welcome by appointment.

Before opening, Parkland staff preformed IT updates, a collection inventory, and ensured the space was ready for public access. Since opening, Parkland staff have maintained open hours on Tuesdays and Thursdays from 11:00 a.m. - 2:00 p.m.

Parkland has hired an individual to run the library service at Maskwacis for 21 hours a week. Reporting to Parkland, this person will be responsible for library programming, circulating library materials, and promoting the use of the library and its resources.

Parkland staff have so far ordered 390 new items for the collection at Maskwacis and will begin the process of weeding outdated materials. They have also purchased additional shelving units to allow for expansion of the collection and a slat wall will be installed to create a designated display area to promote the collection.

In addition, Parkland staff are in early stages of establishing library service for the O'Chiese and Sunchild reserves, as they are also a part of Parkland's indigenous grant.

Motion by Stephen Levy to receive for information.
CARRIED
PRLS 23/2022

### 3.6. Advocacy and Marketing Report

Gord Lawlor gave the Advocacy Report. The Advocacy Committee has reviewed the format for Parkland's 2021 Return on Investment (ROIs) They are posted on Parkland's website. He strongly encouraged board members to download and print the ROI for their municipality and present it to council. Also available on the Parkland website is a short infographic highlighting some of Parkland's many accomplishments in 2021 despite the challenges of the past year. Board members were encouraged to present the annual report synopsis to council in conjunction with their municipal ROI.

Gord Lawlor and Haley Amendt participated in Marigold's conference in Calgary and presented "Advocacy, Whose Role is it Anyway?" which was well received. At the conference, they discussed each region creating their own Advocacy Committee, and the committees sharing with each other. Also discussed was the notion of creating a provincial advocacy committee, with each regional system contributing members.

Hailey Halberg talked about Parkland's marketing activity. Parkland has selected 5 libraries to use as a pilot project for professional photography to support library marketing. The photography and video will be shot at the end of May and staff expect the edited photos and video in June. The libraries will be Rocky Mountain House, Caroline, Forestburg, Alix, and Amisk.

Staff will measure success by looking at how the photos are used, surveying libraries on the impact of the photos, and the success of the photos in Parkland's marketing content.

Last summer, Parkland had a public BBQ, magician, and open house to celebrate their new building. The event was such a success, staff have decided to hold it again this summer. This year, Parkland joined forces with Lacombe Days and will hold the event in July.

Parkland has created a new update email template for libraries and board members. You may have seen our sleek new design pop up in your inbox in the April. We are now able to track the open rates and which links are clicked so we can continually improve the information we send out.

Staff have spent a lot of time researching effective library signage and inviting spaces. A signage audit document has been created to help libraries evaluate their signage. Parkland has already completed signage audits for five libraries at their request.

The library display contest hosted by Parkland for the month of April is complete. There were 10 participating libraries that got over 4,000 views and 1,300 votes in the contest. The winners were Carstairs library, Camrose library, and Hughenden library. They have received credit towards Vistaprint Pro Shop to order marketing materials.

A video was then shown, "A Day in the Life of Parkland".
Motion by Carlene Wetthuhn to receive for information.

### 3.7. Parkland Community Update

Clive Public Library is resuming 'Free Movie Fridays'. The first one was last month, with 70 people in attendance.

Stettler Public Library has redone their Plan of Service. The library also now attends farmers markets throughout the summer in Stettler.

Cremona Municipal Library started a seed sharing program which has brought in a whole new demographic of patrons.

Ponoka Jubilee Library held a red dress event at the park on May $5^{\text {th }}$ in order to communicate the effects of Missing and Murdered Indigenous Women.

Sylvan Lake Municipal Library is installing new flooring and is redesigning the library children's area. The library will be closed June 13 to $27^{\text {th }}$.

Castor Municipal Library has formed a Friends of the Library group who recently held a poetry reading for 21 people.

Sedgewick \& District Municipal Library bought a new building and is moving to Main Street, hopefully in 2023.

Rimbey Municipal Library has a new addition on their library and they have re-opened.
Amisk Public Library is celebrating their $100^{\text {th }}$ birthday in summer 2023 and are planning a party to celebrate.

Donalda Public Library has newly painted furniture and are working hard on their summer programs.

Penhold \& District Public Library is holding a spice club, macrame night, and spy club. They are also partnering with FCSS to hold mom and dad children's programs. Lastly, they are holding a Battle of Alberta contest to win pizza for the game. They have hired 2 new summer programmers.

Caroline Municipal Library is continuing their programs: Soup to Seniors, crafting and sewing classes, plant exchanges, and much more.

Bentley Municipal Library has weekly crafts in a bag for parents to pick up, nature school for parents with children aged 2-5 years, and movie nights.

Eckville Municipal Library has a new manager.
Motion by Norma Penney to receive for information.

### 3.8.1. Director \& Library Services Report

3.8.2. I.T. Report
3.8.3. Finance \& Operations Report

### 3.8.4. ALTA Report

Smith asked if there were any questions regarding the Director \& Library Services Report, IT, Finance and Operations, or ALTA Reports. There were none.

Motion by Stephen Levy to receive the Director \& Library Services Report, IT, Finance and Operations, and ALTA Reports for information.

CARRIED
PRLS 26/2022

## 4. Adjournment

Motion by Barb Gilliat to adjourn the meeting at 12:15 p.m.
CARRIED
PRLS 27/2022

Meeting adjourned at 12:15 p.m.

## Chair

Legislation: Municipal Government Act Local Authorities Election Act<br>Regulation: Subdivision and Development Regulation<br>Subdivision and Development Appeal Board Regulation<br>Subdivision and Development Appeal Regulation

## Overview

Both the Municipal Government Act (MGA) and the Local Authorities Election Act (LAEA) were amended through Bill 21, Red Tape Reduction Statutes Amendment Act, 2022. Bill 21 received royal assent on May 31, 2022 and will come into force on various dates.

The Subdivision and Development Regulation, the Subdivision and Development Appeal Board Regulation, and the Subdivision and Development Appeal Regulation were combined into a single regulation.

## Clarifying Amendments in the MGA

## Intermunicipal Business Licenses

Previously, the MGA was silent on the development of intermunicipal business licensing programs. While a small number of municipalities in Alberta already do this, by making this an explicit authority, we hope to encourage more uptake to reduce costs and administrative burden on businesses.

## What's changed?

Explicitly enabling two or more municipalities to enter into an intermunicipal business licence agreement. This amendment supports economic development by making it easier for mobile businesses to operate across the province and reduces the costs and administration involved in applying for licences in each municipality (MGA s.8(2), (3)).

## Compliance Tools after Viability Reviews

Expanding ministerial authorities to provide greater flexibly and tools to enforce municipal compliance (inspections, inquiries, and audits) resulting from a viability review (MGA s.130.3).

## What's changed?

Previously, the only action available to the Minister, in cases where a municipality failed to comply with the Minister's viability directives, was to dismiss members of council or the Chief Administrative Officer. Bill 21 amends the MGA to include more nuanced actions that will provide motivation to comply with directives, such as withholding provincial grants, repealing policies or procedures, or suspending bylawmaking authority.

## Community Revitalization Bylaws and Amendments

The Minister is authorized to approve Community Revitalization bylaws and amendments, to expedite the approval time and ensure economic development in revitalization areas can begin sooner (MGA s.381.2).

## What's changed?

Previously, Community Revitalization bylaws and amendments had to be approved by Cabinet. This change will improve procedural efficiency and timelines.

Red Tape Reduction Statutes Amendment Act, 2022

## General Streamlining Amendments (For Information Only)

A variety of general streamlining amendments were made to improve readability, reduce duplication and better align with other legislation and requirements. These changes will generally not require additional action by Alberta municipalities. These changes include:

| S.1(1)(x)). | Clarifying that population for the purposes of the $M G A$ will be determined by <br> ministerial order rather than by regulation |
| :--- | :--- |
| S.3 | Adding "to foster the economic development of the municipality" to the list of <br> municipal purposes |
| S.22 | Clarifying the process regarding road closure bylaws and approval from Alberta <br> Transportation; in particular, clarifying the requirements for public notice and a public <br> hearing prior to second reading of the bylaw. |
| S.76, 85, 87, 94, | Streamlining and providing additional clarity regarding the procedures for the <br> formation, change of status or dissolution of a municipality, amalgamation of municipal <br> aq.1,108, 120, <br> $120.1,121,125$ |
| authorities, or annexation of land |  |

## LAEA Amendment

## Redaction of Personal Information

The LAEA was amended to require municipalities and school boards to redact personal information (such as addresses and contact information) of candidates and donors from candidate disclosure statements before they are made public (MGA s.147.4). This will apply to forms that are already public from the recent election - municipalities will need to redact those forms before making them publically accessible again.

## What's changed?

Previously, the authority to redact this type of personal information was unclear and interpreted differently by each municipality.

Red Tape Reduction Statutes Amendment Act, 2022

## Matters Related to Subdivision and Development Regulation (Subdivision Development Regulation Consolidation)

The Subdivision and Development Regulation, the Subdivision and Development Appeal Board Regulation, and the Subdivision and Development Appeal Regulation were combined into a single regulation.

What's changed?

- There were no substantive changes to the content of these regulations.
- Combining them into one regulation will make it easier for industry stakeholders, municipalities, and Albertans to find the information they need.
- The Subdivision and Development Regulation established municipal responsibilities for receiving and deciding on subdivision applications, including the administration of subdivisions, subdivision and development conditions, registration and endorsement, development setbacks for waste and wastewater sites and setbacks for provincial appeals to the Land and Property Rights Tribunal.
- The Subdivision and Development Appeal Board Regulation established training requirements for Subdivision and Development Appeal Board members and clerks as well as municipal reporting requirements.
- The Subdivision and Development Appeal Regulation clarified the processes and ensures subdivision and development permit appeals with limited provincial interest remain with local subdivision and development appeal boards rather than the provincial Land and Property Rights Tribunal.
- Definitions have been updated and added, including the definition of sour gas, food establishments, and roads.
- For example, the definition of food establishments is removed, as the requirements under the Food Regulation and the Food Retail and Food Services Code already sufficiently address this issue.
- The new regulation does not include redundant provisions that are already addressed within the MGA or other legislation:
- The requirement to designate different types of land with specific suffixes is already within the MGA.
- The requirements for certain forms, such as the deferred reserve form, already exist in other legislation or regulations.
- Section 577 of the MGA already provides the Minister with the authority to request information from municipalities, and does not need to be replicated for subdivision and appeal board training information requirements.


## For More Information:

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May 24, 2022
Staff Sergeant Jay Peden
Detachment Commander
Sylvan Lake, Alberta
Dear Mayor Rathjen,

Please find attached the quarterly Community Policing Report for the Sylvan Lake Detachment. This report serves to provide an overview of the human resources, financial data, and crime statistics for the January $1^{\text {st }}$ to March $31^{\text {st }}, 2022$ reporting period. Community engagement remains a top priority for the Alberta RCMP, and the consistent delivery of these quarterly reports is but one of a number of projects we have underway. Our Body Worn Camera program and our new mobile app for iOS and Android devices are two other initiatives that ensure we remain transparent and accountable to you for the work we do.

Body Worn Cameras increase the transparency of police interactions with citizens. Included in this Community Policing Report package is an updated overview on Body Worn Cameras, which will enter into a field test phase later this year. As mentioned in previous correspondence, the Federal Government recognizes that this was not in the multi-year financial plans for Contract Partners, and thus has agreed to fund the first 3 years of the roll-out. This has allowed some time for Contract Partners to factor this into their future planning processes (i.e. MYFP). As we are currently awaiting the vendor procurement process to finalize, we are unable to provide community-specific cost estimates. Once costing is confirmed, we will provide financial forecasting to our communities with Municipal Policing Service Agreements.

Alberta RCMP has launched a new mobile app for iOS and Android devices, that allows for Albertans to access information without delay. The app is available as a free download through Apple or Google Play, and will provide your community members with online access to news, crime reporting, detachment locations, crime mapping and statistics. The app also contains links to partner law enforcement services, mental health supports, Crime Stoppers and connects to Alberta RCMP social media accounts. Even though the app provides convenient links to Alberta RCMP social media accounts, it will not replace other methods of crime reporting, engagement, or emergency assistance. I solicit your support to remind all of your community members that social media posts or use of other third-party crime apps are not

appropriate ways to report a crime. The Alberta RCMP app complies with Canadian privacy laws for mobile apps set out by the Office of the Privacy Commissioner of Canada and the Office of the Information and Privacy Commissioner of Alberta and will not track or monitor users in any way.

The attached reporting and attachments, along with your valued feedback and guidance, will reinforce your policing priorities and help ensure we are meeting the growing and shifting demands of your community. As the Chief of Police in your community, I sincerely appreciate and encourage you to reach out with any questions or concerns.

Sincerely,


Staff Sergeant Jay Peden
Detachment Commander
RCMP Sylvan Lake

## 

Sylvan Lake Provincial Detachment
Crime Statistics (Actual)
January to March: 2018-2022

| CATEGORY | Trend | 2018 | 2019 | 2020 | 2021 | 2022 | \% Change <br> 2018-2022 | $\begin{gathered} \text { \% Change } \\ \text { 2021-2022 } \end{gathered}$ | Avg File +/per Year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Offences Related to Death |  | 0 | 0 | 0 | 0 | 0 | N/A | N/A | 0.0 |
| Robbery | 人 | 3 | 0 | 0 | 0 | 0 | -100\% | N/A | -0.6 |
| Sexual Assaults |  | 1 | 6 | 4 | 0 | 2 | 100\% | N/A | -0.4 |
| Other Sexual Offences | $\pi$ | 1 | 3 | 0 | 0 | 1 | 0\% | N/A | -0.3 |
| Assault |  | 7 | 8 | 8 | 7 | 3 | -57\% | -57\% | -0.9 |
| Kidnapping/Hostage/Abduction |  | 0 | 0 | 0 | 0 | 0 | N/A | N/A | 0.0 |
| Extortion |  | 0 | 0 | 0 | 0 | 0 | N/A | N/A | 0.0 |
| Criminal Harassment |  | 1 | 1 | 0 | 5 | 1 | 0\% | -80\% | 0.4 |
| Uttering Threats |  | 8 | 0 | 2 | 5 | 3 | -63\% | -40\% | -0.5 |
| TOTAL PERSONS |  | 21 | 18 | 14 | 17 | 10 | -52\% | -41\% | -2.3 |
| Break \& Enter |  | 22 | 40 | 35 | 18 | 14 | -36\% | -22\% | -3.8 |
| Theft of Motor Vehicle | $7$ | 11 | 18 | 23 | 1 | 7 | -36\% | 600\% | -2.5 |
| Theft Over \$5,000 |  | 0 | 3 | 1 | 4 | 8 | N/A | 100\% | 1.7 |
| Theft Under \$5,000 | $\checkmark$ | 36 | 16 | 22 | 16 | 26 | -28\% | 63\% | -2.0 |
| Possn Stn Goods |  | 17 | 21 | 15 | 8 | 12 | -29\% | 50\% | -2.3 |
| Fraud | $\checkmark$ | 8 | 5 | 5 | 10 | 6 | -25\% | -40\% | 0.1 |
| Arson | $1$ | 1 | 0 | 0 | 0 | 1 | 0\% | N/A | 0.0 |
| Mischief - Damage To Property |  | 0 | 0 | 15 | 6 | 15 | N/A | 150\% | 3.6 |
| Mischief - Other | $0$ | 19 | 23 | 1 | 3 | 0 | -100\% | -100\% | -5.8 |
| TOTAL PROPERTY |  | 114 | 126 | 117 | 66 | 89 | -22\% | 35\% | -11.0 |
| Offensive Weapons |  | 1 | 1 | 1 | 0 | 0 | -100\% | N/A | -0.3 |
| Disturbing the peace |  | 2 | 1 | 0 | 0 | 0 | -100\% | N/A | -0.5 |
| Fail to Comply \& Breaches |  | 9 | 5 | 16 | 6 | 10 | 11\% | 67\% | 0.3 |
| OTHER CRIMINAL CODE |  | 2 | 1 | 3 | 3 | 1 | -50\% | -67\% | 0.0 |
| TOTAL OTHER CRIMINAL CODE | $\checkmark$ | 14 | 8 | 20 | 9 | 11 | -21\% | 22\% | -0.5 |
| TOTAL CRIMINAL CODE |  | 149 | 152 | 151 | 92 | 110 | -26\% | 20\% | -13.8 |

## Sylvan Lake Provincial Detachment <br> Crime Statistics (Actual) <br> January to March: 2018-2022



## RCMP is

## Body-worn cameras for RGMP officers

The Royal Ganadian Mounted Police [RCMP] is committed to ensuring that Canadians feel protected by, and have trust in their national police force. Body-worn cameras can help to increase the trust between police and the communities they serve.
$\rightarrow$ front-line RCMP officers will soon be wearing body-worn cameras.
$\rightarrow$ between 10,000-15,000 body-worn cameras will be deployed to contract and federal police officers who interact with communities, across Canada's rural, urban and remote locations.
$\rightarrow$ the video evidence collected will provide an independent, unbiased, and objective way to capture interactions between the community and police officers.
$\rightarrow$ work is ongoing to acquire body-worn cameras and a Digital Evidence Management System (DEMS) to support a nation-wide rollout of camera as as quickly as possible.
$\rightarrow$ a field test, with up to 300 cameras will take place in three different Divisions of the RCMP - Alberta (K Division), Nova Scotia (H Division), Nunavut (V Division). The testing will take place in northern/remote, rural, and urban settings.

## Your input is important

We have been meeting with various organizations, groups and community members across Canada to introduce body-worn cameras, and to better understand their concerns.

If you are interested in being part of the conversation, contact us at:

Bwc_consultations_cvc@rcmp-grc.gc.ca

## How body-worn cameras support police and communities:

$\checkmark$ more timely resolutions of complaints
$\checkmark$ improved evidence gathering
$\checkmark$ enhanced transparency and accountability for police
$\checkmark$ improved police and public behaviour

- 

Officers will activate their body worn cameras during calls for service, including:
$\checkmark$ mental health calls
$\checkmark$ interactions with people in crisis
$\checkmark$ crimes in progress
$\checkmark$ for investigations
$\checkmark$ public disorder and protests
$\checkmark$ to record information to support the performance of their duties

When possible, officers will let you know when the camera is recording.

The decision to turn on a body-worn camera will happen before the officer arrives at a call for service.

Policy and training will provide the guidance required for officers using body-worn cameras.

Body-worn cameras are not intended to be used for the purpose of:
$\checkmark 24$ hour recording
$\checkmark$ surveillance
$\checkmark$ when intimate searches are conducted
$\checkmark$ areas with a high expectation of privacy


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## Greg Rathjen

## REPORT FOR May 2022

- May 10 Regular Town Council Meeting
- May 11 Strategic Planning Review
- Connect with LLREMP Vote Approval on Directors Position
- May 14 Open Farmers Market Welcoming each Vendor to our Community
- May 17 Met with Dr. Smit to get update on possibility of a clinic opening back up in Bentley
- May 19 Mayors meeting with
- Minister Mclver Minister of Municipal Affairs, Future direction for funding Questions from Mayors Big discussion on the money being invested inn our regional Hospital .... Questions about the possibility of relocating rather than rebuilding in site
- Discussion with Mayors on best practises for council connections with community. Positive recommendation of hosting a meet and greet B B Q .. Using public open house meetings with a purpose for connection and communication.
- May 20 Meeting of JUPA at County Office
- May 21 Set up and attend Farmers market at a town table welcoming people to our community Talked to over one hundred people
- May 24 Regular Town Council Meeting
- May 28 Greeting people and welcoming them to our community and sharing highlights at Farmers Market Town of Bentley Table talking to over one hundred people
- May 31 attend Alberta Indigenous Tourism - Cultural Awareness Seminar
- Most of the Regional communities were represented very strongly. Learning the Past Present and Future Plans for our area.


## Pam Hansen <br> REPORT FOR May 2022

- May 10 : regular council as per minutes
- May 20: JUPA : meeting explaining what Joint using partnership agreements are

Mandated by the MGA

- Talked about who was involved ; school divisions and communities
- Discussed facility use and access as well as legal requirements
- School division will be working on these agreements and meeting with towns
- May 19 Parkland library: as per attached minutes May 24 town council as per minutes



## Dale Grimsdale

## REPORT FOR May 2022

- May 2 School Board Council teacher meeting: Learned about First Nation incentives as well as Red Dress Day. Documentation released by the Alberta government regarding private school funding. Jr/ Sr boys won silver in handball, Jr girls placed 4th. Great showing by Bentley school. Also update on the Superhero play being put on at the school we contributed too.
- May 10th - council meeting
- May 11 - strategic workshop on mid year goals and plan
- May 24-council meeting.


## Lenore Eastman

## REPORT FOR May 2022

- May 8 - Regular Council Meeting
- May 11 - Strategic Plan Review
- May 16 - Lacombe Foundation meeting
-looked at financial information -discussed housing.
- Bentley needs to submit a formal plan
- Eckville is getting a Nurse Practitioner at their expense. (\$67000./3yrs)
- May 17 - AHS Connect Care zoom meeting
- information on connecting with drs. through the internet.
- May 20 - JUPA meeting
- information on working with the school systems on using their facilities.
- May 24 - Regular Council Meeting.



## Brenda Valiquette

## REPORT FOR May 2022

- 10/05/22. Council meeting/ planning update
- 11/05/22. Strategic planning continued.
- 20/05/22. JUPA Meeting Lacombe County
- 24/05/22 council meeting


[^0]:    ${ }^{1}$ Folkman, Steven, "PVC Pipe Longevity Report: Affordability and the 100+ Year Benchmark Standard" (2014). Mechanical and Aerospace Engineering Faculty Publications. Paper 170.
    https://digitalcommons. usu. edu/mae_facpub/170

