

TO Cities of Regina and Moose Jaw
FROM Dale Schoffer, Chair, Buffalo Pound Water Board of Directors
DATE October 31, 2019
SUBJECT 2019 Semi-Annual Report



PURPOSE:

The purpose of this report is to submit an executive summary of the Board's activities in 2019 to the Cities of Regina and Moose Jaw in order to satisfy the conditions prescribed in Section 7.1 of the Unanimous Membership Agreement.

BACKGROUND:

Section 7.1 of the Unanimous Membership Agreement (UMA) states as follows:

7.1 *Semi-Annual Reports.* On or before October 31st of each year, the Board of Directors shall prepare a semi-annual report which shall be submitted to each of the Cities, who shall bring the matter forward to their respective elected officials as an information item for the Regina Council and Moose Jaw Council. The semi-annual reports will include, in respect of the immediately preceding semi-annual fiscal period:

- (a) the strategic plan update for the Corporation;
- (b) projected major capital expenditures in excess of \$1 million;
- (c) any matters that require the approval of the Cities pursuant to Article 5 of this Agreement;
- (d) six month financial statements for the period ending June 30 and financial projections against budget;
- (e) financial and operational performance against stated goals and objectives, including a key performance indicator report;
- (f) capital and operational plans and budgets for the upcoming year;

- (g) reporting on performance of the Board of Directors and any updates on the required skills and experience matrix for future appointments; and
- (h) information that is likely to materially affect either of the Cities.

DISCUSSION:

In accordance with Section 7.1 of the UMA, the semi-annual report is comprised of the following matters:

1.0 Strategic Plan

The Board of Directors, at its meeting held on September 27, 2017, adopted the 2018 - 2020 Strategic Plan.

The 2018-2020 Strategic Plan was presented to the Cities at the October 26, 2017 Mid-Year Meeting with both Cities supporting Plan.

The 2018 - 2020 Strategic Plan was implemented on January 1, 2018.

There have been no changes to the Strategic Plan since its adoption.

2.0 Plant Performance

The Plant's Performance for 2019 is comprised of the 2017 National Water and Wastewater Benchmarking Initiative (NWWBI) results and the current 2018 - 2020 Strategic Plan Balanced Scorecard.

NWWBI

The NWWBI has a lag of 2 years for reporting purposes based on the time to obtain the data from all the participants.

Overall Radar Chart Dashboard

Given that there are numerous individual performance measures in the system, the Radar charts are developed to graph total goal attainment against five specific set of goals.

The Overall Radar Chart Dashboard shows the Plant performance against 5 categories of Goals; Ensure Adequate Capacity, Protect the Environment, Provide Safe and Productive Workplace, Protect Public Health and Provide Reliable Service/Infrastructure. In total the dashboard is made up from 13 rolled up measures that are measured in the NWWBI system for water treatment plants. The chart also contains a Quartile Chart of O&M Cost/ML Treated.

The 2017 Plant ratings on these 5 goals were:

Sufficient Capacity	100 %
Environmental Stewardship	82.5 %
Workplace	95.1 %
Protect Public Health	100 %
System Reliability	98.3 %

The goal of the Plant is to continuously improve its environmental stewardship. The environmental stewardship goal is made up of two measures i.e. percentage of wasted water and the GHG emissions from the energy consumed. The Plant's amount of wasted water is high but not statistically different from the other utilities.

The ageing filters which require frequent backwashing is one of the contributing factors of higher wasted water. The residuals created by the Green House Gas (GHG) generated was higher due to the amount of electrical energy used to bring the water to the Plant from the lake, which has an elevation difference of approximately 83 m, and the amount of natural gas used to regenerate the granular activated carbon. Most water treatment plants do not contend with either of these issues in their treatment systems which makes the Plant an outlier. The calculation of GHG emissions also factors in the Province in which the energy originates. As SaskPower utilizes a lot of coal in power generation, the Provincial Factor is very high. Whereas BC, Ontario and Manitoba have a much lower factor as they use significantly more hydro in their electrical power generation as less coal

The System Reliability goal improved significantly from 2016 (73.4%) due to reduction in reactive maintenance hours and improvements in average capital reinvestment rate.

The Plant scored well on its O&M cost as compared to other participants, which included Cities, Private Utilities, Regional Systems and Water Commissions representing other water treatment plants across Canada, which puts it in the lower 25-50% Quartile at \$266.42/ML

The Min – Max Trend Graphs

These graphs provide an easy visual comparison of a number of plant performance measures for overall improvement and performance gaps within a comparable group. Although these graphs are very informative for trending purposes and provide a high level overview of where the BPWTP compares to the median, maximum and minimum of the other plants, the graphs do not show if the BPWTP performance measures are statistically different from the other plants. For determining the statistical significance, the NWWBI has started performing the statistical analysis on 22 performance categories, which the system measures for the participating plants. The only measures that are noteworthy, or statistically different, are the following:

1. Capital Reinvestment

Due to the ongoing capital projects, the capital reinvestment rate has been increasing steadily for the past few years. In 2017, the capital reinvestment rate was above the NWWBI group median. The investment rate of 1.6% approximately equates to system replacement on a 50-year life cycle basis.

2. Reactive Maintenance Hours

Despite the ageing assets, the Plant's reactive maintenance hours have been decreasing for the past few years demonstrating the strength of our preventative maintenance program.

3. Energy Consumed in kWH/ML Treated

The higher energy consumption compared to the NWWBI group median is a result of having the carbon regeneration facility and the elevation difference between the Lake Pump Station and the Main Plant. In 2017, the Plant consumed more energy than 2016 but increased sales in 2017 resulted in lower cost/ML.

4. Chemical Cost

The favorable trend in the chemical cost is reflective of the improvement in the lake water quality, as fewer chemicals are required to treat the water. Raw water quality is highly dependent on the amount of water released from Diefenbaker dam. Adequate release of water helps improve water quality at Buffalo Pound Lake.

5. Total Overtime O&M Hours/Total Paid O&M hours

The Plant overtime is not statistically different from the other similar plants. Much of the overtime in 2017 was incurred during the commissioning and tie in of the UV system to the existing Plant.

6. # of Sick Days taken per O&M Employee

The Plant sick time has been improving and was not statistically different from the group median in 2017. There are employees at the Plant who require periodic sick time due to their ongoing medical issues. Our ageing work force is also a contributing factor for higher sick time as they are more prone to age related degenerative diseases.

7. % of Water Wasted During Treatment Process

The bulk of the wasted water is due to the aged filters which require frequent backwashing. The revitalization of the filters is included in the Plant renewal project. However, the Plant is exploring various options to renew the filter medium to extend the filter run time and reduce the wasted water due to frequent backwash.

2019 STRATEGIC PLAN BALANCED SCORECARD

The Plant's KPIs use targets that are set by the Board through the Strategic Plan's Balanced Scorecard. These are reviewed by the Board and the targets adjusted accordingly at the Annual Retreat.

The status of the KPIs, as of October 4, 2019, are outlined in the attached Balanced Scorecard spreadsheet.

All items on the Balanced Scorecard are on track or have been completed with the exception of:

- (i) There were 2 unexpected service interruptions of 4.5 hours due to thermal gradients in July and 14 hours with loss of power in September.
- (ii) The Board developed a draft Financing Strategy and obtained input from the Cities' Finance Directors.

The decision was to delay approving the Financing Strategy (Pre-Approval) until greater cost certainty was done by advancing the Plant Renewal Project to the 30% design and obtain a Class 3-4 Estimate. This should commence in Q1 2020.

- (iii) The Customer Service Agreements between the Corporation and Cities should be completed in early 2020.

3.0 Q3 2019 Year-End Forecast

The Cities only require the Q2 2019 mid-year operating and capital budget forecast and statement for June 30. However, the Q3 2019, September 30 statement and forecast are available which provides for more accurate data and has been used in place of the June 30 data.

Operating Budget

The water sales are projected to be \$0.195 million over the 2019 forecast due to the early warm dry summer which increased the demand for water. This changed in mid-summer as precipitation increased and remained above normal in to the fall. The revenues are estimated at \$13.023 million by year end.

The operating expenditures for 2019 are forecasting an under-expenditure of approximately \$1.225 million from the 2019 budget. The largest savings are due to the reduction in chemical usage with the continued improvement in the raw water quality of the lake.

There are some maintenance expenses which are forecasted to be below budget as some activities were deferred, or cancelled, but the associated expenses will not be carried forward. Expenditures are estimated at \$11.317 million by year end.

The amount of operating funds to be transferred to the Operating Reserve at year end could be as high as \$1.706 million. The remaining surplus of funds will be utilized to provide a cushion for years where the water sales are below the forecast. Excess funds in the Operating Reserve can be transferred to the Capital Reserve to be used in the progression and development of the Plant Renewal Project.

Capital Budget

The water sales allocated to the Capital Budget are projected to be \$0.095 million over the 2019 forecast. The revenues are estimated at \$14.888 million by year end which include the transfer of some PTIC-NRP Grant funds.

The capital expenditures for 2019 are forecasted at \$16.462 million by year end. There is the risk that the expenditures will be much lower based on the amount of work the contractors can deliver for the Electrical Capital Upgrades by year end. There is also some risk that the PTIC-NRP Grant credit may be reduced based on the timing the claims are submitted. In both cases, any work or claims that miss the December 31, 2019 deadline will occur in 2020.

All of the Capital projects are either in progress, have been completed or cancelled with remaining funds placed in the Capital Reserve.

The Capital Reserve at year end is estimated at \$53.759 million but could be impacted by the risks identified above.

4.0 2019 Budget

At its September 25, 2019 meeting the Buffalo Pound Water Board of Directors adopted the 2020 Budget.

The water and electrical rates were established as follows:

Water Rate	Cities of Regina and Moose Jaw	\$355.00/ML
	Sask Water	\$355.00/ML
	Provincial Park	\$447.62/ML
Capital Water Rate	Cities of Regina and Moose Jaw	\$215.00/ML
	Sask Water	\$311.39/ML
Electrical Rate	Cities of Regina and Moose Jaw	\$0.11799/kW.h
	Sask Water	\$0.12979/kW.h

This represented a Water Rate increase of 0.0% and a Capital Water Rate increase of 14.36% or an overall blended rate increase of 4.97% to the Cities over 2019. The electrical rate increased 6.40% from 2019.

The capital rate and electrical rate for SaskWater was calculated based on the January 14, 2009 agreement. The water rate for the Buffalo Pound Provincial Park was calculated based on the January 1, 2009 agreement.

5.0 Major Capital Expenditures in Excess of \$1 Million

There are no new or unidentified major capital expenditures in excess of \$1 million commencing in 2020. All projects continuing in 2020 have been previously identified and reported in previous years. The current ongoing projects that exceed \$1 million are:

1. The remainder of the Electrical Capital Upgrades Project which consists of the Main Plant Redundant Power Supply; Lake Pump Station Transmission Line Replacement and the Lake Pump Station Pumping Upgrades and Power Supply for approximately \$40.4 million.
2. The Supervisory Control and Data Acquisition (SCADA) upgrade for approximately \$6.0 million. The budget was increased for 2020 based on a higher level of cost estimate with the completion of the predesign phase. This Project was placed on hold pending the outcome of the Plant Renewal Project RFP award.
3. The Plant Renewal Project (PRP) is to ensure the long term viability of the Buffalo Pound Water Treatment Plant and to ensure that it will be able to meet its mandate as a going concern into the future.

It has been nearly 30 years since the last rehabilitation or upgrades to the Plant have occurred and major components within the facility are at, or near, the end of life phase.

The PRP encompasses over 30 smaller projects which had been identified since 2005 and reviewed in technical studies. These have all been included under the program of work for the PRP. The project's cost range is \$127.2 to \$224.0 million at a Class 5 level of estimate.

A budget of ~\$140 million was set as a placeholder in the financial budget model until such time as the design is advanced with a higher class of estimate which is expected in Q1 2020, at which time the estimates will be revised.

The Project contemplates utilizing any grants funds that are received to offset any required financing, while borrowing an unknown amount of funds to execute the Construction Contract at the Guaranteed Maximum Price stage in early Q1 2021.

4. Ongoing principle and interest payments, for the \$45 million loan that was obtained at the end of 2017 for the Electrical Capital Upgrades Project, estimated at \$3.0 million in 2020.

6.0 Board Performance and Skills and Experience Matrix

In April, the Board reappointed both members whose terms expired in 2019; those being Dale Schoffer and Judy May; with terms of office expiring in 2022.

Buffalo Pound Water Board of Directors	Position	Term of Office Expires	Sub- Committees
Ben Boots	Member	April, 2020	Capital Projects Committee; HR Committee (Chair)
Daryl Posehn	Member	April, 2020	Capital Projects Committee
Dave Richards	Member	April, 2021	Capital Projects Committee (Chair)
Grant Ring	Member	April, 2021	Finance & Audit Committee; HR Committee; Governance & Nominations
Dale Schoffer	Chair	April, 2022	Governance & Nominations; Ex-Officio on all Committees
Judy May	Vice-Chair	April, 2022	Finance & Audit Committee (Chair)

Up to the end of Q3 2019, there were: five (5) regular Board meetings; five (5) Finance & Audit Committee meetings and four (4) Capital Projects Committee meetings. The Board also attended a one (1) day retreat in June.

The Board continues to work very well together and has accomplished a number of initiatives over the past year. The synergies with the diverse skill set continually improve the discussions at Board meetings resulting in more effective leadership and direction

In September, 2019, the Board of Directors adopted the Board Diversity/Recruitment Policy with the objective of comprising a Board that will appropriately represent the interests of the Corporation and stakeholders and will reflect diversity by recruiting members with Board governance or senior administration experience while taking into consideration, gender, ethnicity, orientation, occupation and physical disabilities.

Also in September, 2019, the Board approved a motion to permit increasing the membership of the Board by one (1) member if that increase would facilitate the appointment of a qualified diversity candidate to the Board.

For purposes of recruitment, the Corporation utilized a targeted social media recruitment platform for obtaining a pool of interested candidates for the Board. The application process opened on October 18 and closed on November 1. Forty-four (44) applications were received; 15 of which appeared to be diverse candidates.

Two Board member's terms will expire in April, 2020. Both members, Mr. Ben Boots and Mr. Daryl Posehn, have indicated they are desirous of being reappointed to the Board for a subsequent three (3) year term.

The Skills and Experience Matrix, developed and updated by the Board, will continue to be utilized in recruiting future Board members.

7.0 Matters Requiring Approval of Cities Pursuant to Article 5 of the UMA

There were no items that require approval of the Cities as per Article 5 of the UMA at this time.

8.0 Other Information that is Likely to Materially Affect Either of the Cities

Electrical Capital Upgrade Project

The Electrical Capital Upgrade Project (ECUP) is to address several of the most critical risks affecting the Corporation. The Plant's electrical system, and lack of backup power, is its Achilles heel.

The Plant does not have any secondary electrical feeds from SaskPower nor does it operate dual drive motors and is only served by a single transmission line that runs 17 kms from the PQ3 Substation south of Highway #1.

This work was accelerated to address the numerous electrical failures that occurred in 2011, 2013, 2015 and 2018 from ageing infrastructure. This work, once completed, will ensure both the long-term viability of the Buffalo Pound Water Treatment Plant and its obligation to meet its mandate as a reliable going concern.

The ECUP was comprised of 3 distinct elements which were developed into 3 RFPs as tender packages.

- RFP Package #1 – Main Plant Backup Generators
- RFP Package #2 – 3 km 138 kV Transmission Line from the Main Plant to the Lake Pump Station (LPS)
- RFP Package #3 – LPS Electrical Upgrades, Backup Generators and Pump Upgrades

The estimated ECUP cost was \$40.422 million.

In 2017, an application was made to obtain grant funding for all 3 RFP packages under the Clean Water Wastewater Fund (CWWF). However, the application was not successful.

The Board obtained a loan for \$45 million to complete the necessary works. Any remaining funds would be used towards the Plant Renewal Project.

As the work was urgent, the designs proceeded. RFP package #1 was issued in late 2017 and awarded in early 2018. The design advanced on the other 2 packages.

In early 2018, the Corporation obtained approval to make application under the Provincial Territorial Infrastructure Component – National Regional Project (PTIC-NRP) Program. As RFP package #1 had already been awarded, it was not eligible for grant funding. The Board released RFP package #2 but there were no compliant submissions, resulting in the process being cancelled and reworked. The Board held RFP packages #2 and #3 in abeyance pending a decision from the Provincial and Federal governments.

The Corporation was successful with its PTIC-NRP application for funding of ~\$20.6 million to perform the work in RFP packages #2 and #3.

RFP package #2 had been released on two occasions but was unsuccessful in obtaining a general contractor. The work was then split into 3 smaller distinct components to reduce the risk that the general contractors previously had concerns with. As of October 30, 2019, all these components have been awarded.

RFP package #3 was released in Q4 2018 and approved in January 2019.

NEXT STEPS

Construction of RFP package #2 should be completed by February 26, 2020. At this point the Plant should be able to produce 25% of its capacity with a power outage.

Construction of RFP package #3 is expected to be completed in Q3 2020. After this work is done the Plant will be able to produce 50% of its capacity with a power outage.

Lastly, when the Cities upgrade their pumps to variable frequency drive pumps, the Plant will be able to double its production with the generators and be able to run at 100% of its capacity.

The final completion will be ahead of schedule for the PTIC-NRP grant funding requirements and the project is on budget.

Once this work is complete, it will significantly reduce the Corporation's risk of not being able to meet its mandate by having less internal electrical failures and will have the ability to operate when there is a Sask Power failure.

Plant Renewal Project

The Plant Renewal Project (PRP) is to ensure the long-term viability of the Buffalo Pound Water Treatment Plant as well as being able to meet its mandate as a reliable going concern.

This PRP started with the gap analysis and Business Case in 2016 which was completed in 2017. The Board formally approved the project to proceed in 2017. CH2M Hill, now known as Jacobs, was selected from a public competition as the Owner's Advocate/Engineer in late 2017.

In 2018, the Corporation procured a legal advisor, Aird & Berlis, to provide legal advice and to develop the Design Build Agreement. The Fairness Advisor, RFP Solutions Inc., was selected to provide oversight for the Request for Proposal (RFP) evaluation and confidential meetings with the design build teams. Jacobs has held several workshops on the PRP for the RFP development and had invited the Cities to participate in the Design Build Agreement development session.

The Cities' Senior Administrators had met to discuss the PRP, the Progressive Design Build (PDB) procurement method and the next steps to advance the PRP. The Cities' Directors of Finance had met to discuss the Financing Strategy.

The Board hosted a Joint City Council Meeting on September 17, 2018 to provide information on the PRP and to have open dialogue with questions and answers with the Cities prior to releasing the Request for Qualifications (RFQ).

The RFQ was developed by Jacobs and issued to the public on October 1, 2018. The RFQ closed on November 9, 2018 with four proponents responding. On March 27, 2019, the following three were selected; those being:

Alberici Bird Management Group (ABMG) – Joint Venture

- Alberici Western Constructors Ltd.
- Bird Construction Industrial Services Ltd.

Prairie Water Partners – Joint Venture

- Maple Reinders Constructors Ltd.
- AECOM
- Westridge Construction Ltd.

Joint Venture between:

- Graham Infrastructure, Inc.
- AECON Water Infrastructure, Inc.
- Stantec Consulting Ltd.
- Associated Engineering (Sask) Ltd.

The RFP was released to the three shortlisted design teams on May 6, 2019. There have been several technical memorandums developed for many aspects of the project. The Plant will be sized for a Firm Capacity of 220 ML and a Total Capacity of 250 ML to allow for growth for the Plant to reach its next renewal anticipated in 2050.

There have been three commercial confidential meetings with the proponents; 43 Requests for Information with their design concepts progressing very well. The RFP submissions are due on December 20, 2019.

NEXT STEPS

The proposals will be evaluated in late December and early January and it is anticipated that the Board will approve the award to a design team at the end of January. The Corporation has the funds to pay for the entire design and does not require any financing from the Cities for this phase of the work.

After the award of the RFP to one design team, the scope of work will be better defined and the cost estimates will be at a higher level. The Corporation's Financing Strategy will be adjusted based on new information and discussions with the Cities' Administrations on the best approach to obtain the financing as financing will be required in order for the Corporation to execute a Guaranteed Maximum Price (GMP) which will commence the construction phase of the work. The financing will require both City Council's approval according to the Unanimous Membership Agreement.

It is anticipated that the design will advance from the 20-30% completion at the time of the RFP award to the GMP phase with a design around 60% completion which is anticipated early 2021. Should additional time be required to finalize the financing, the design can be extended up to 100% to obtain the GMP and extend the requirement to the middle of 2021.

Once this project has been completed, it ensures that the Corporation will be able to deliver on its mandate as a reliable going concern for the next 25 years.

Future Grant Applications

The Corporation submitted an Expression of Interest (EOI) for the Plant Renewal Project for the Investing in Canada Infrastructure Program (ICIP) grant for the maximum eligible amount of \$215.4 million in April.

As this was only an EOI there was no approval required by the City Councils at the time. There have been a lot of discussions with the Province and Federal Governments on the grant but at this time there have not been any decisions made public on the status of the project funding. Several smaller projects in the Province have been approved for their ICIP funding.

The Province recently indicated that they are working on a second intake for the ICIP and details will be made available in the near future.

The impact of grant funding can be simplified by this statement; for every \$50 million of grant funding the Corporation receives, it reduces the Capital Cost to make the Principle & Interest Payments for the next 25 years by \$100 per million liters sold or \$0.10 per cubic metre.

With the complexity of the Plant Renewal Project and its Progressive Design Build procurement method, there may be issues related to the eligibility for funding of the Plant Renewal Project once the RFP has been awarded. The Corporation will manage this risk to the best of its ability but will look for some flexibility from the Federal and Provincial Governments with their eligibility requirements provided that there is a political desire to support the project.

The Board will continue to monitor the eligibility requirements for any and all grant opportunities and work with all parties in advance to be as successful as possible for the Plant Renewal Project.

ATTACHMENTS:

1. 2018-2020 Strategic Plan.
2. 2017 NWWBI Buffalo Pound Water Treatment Plant Overall Radar Chart.
3. 2017 Buffalo Pound Water Treatment Plant NWWBI Statistical Analysis Summary & 2019 Balanced Scorecard spreadsheet.
4. Q3 2019, September 30 Unaudited Financial Statements and Forecast – Operating and Capital Budget.
5. Board Skills and Experience Matrix.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Dale Schoffer", is positioned above a horizontal line.

Dale Schoffer
Chair
Buffalo Pound Water Board of Directors
attachments

BUFFALO POUND WATER 2018 – 2020 STRATEGIC PLAN

MISSION (Why We Exist): To provide for the Cities of Regina and Moose Jaw, a reliable and affordable supply of safe, high-quality drinking water which meets the needs and expectations of consumers.

VALUES (How we operate): SAFETY | TEAM CULTURE | ACCOUNTABILITY | PROCESS-DRIVEN | INNOVATION | CONTINUOUS IMPROVEMENT

VISION (Where We Are Going): BPW is an expertly operated, independent, and trusted entity, that will be positioned to provide sustainable and reliable water as a critical service *for generations to come*.

**3-YEAR BUSINESS PLAN
2018 - 2020**

Deliver on the Mission, and by 2020, Renewal construction begins.

CORE SERVICES

WATER QUALITY
Regulatory Requirements and Customer
Expectations Met 100% of the Time

WATER QUANTITY
Meet Customer Demand 100% of the Time

PROJECTS

RENEWAL PROJECT
◆ 2018 Renewal Vision is Clear | 2018 Funding
Pre-approval

CRITICAL PROJECTS
◆ Electrical Project | SCADA Project | Chlorine
Project | CMMS Project

PEOPLE

**SAFETY
CULTURE**

Plant-wide
Safety
Management
System

**PEOPLE DEVELOPMENT &
PERFORMANCE**

Performance Plans, Learning
Plans, Plant-wide and
Department Goals

**COMMUNICATION &
MANAGING CHANGE**

Internal Communication to
Create One Team, Successful
Change Implementation,
Evolution of Project
Management

BOARD GOVERNANCE

Bylaws, Policies, Customer
Services Agreement, Asset
Transfer, Board Education
& On-boarding

FINANCIAL & RISK MANAGEMENT

FUNDING SOURCES

Grants, Loans,
Research New Lines
of Business

**FINANCIAL OPERATING
PERFORMANCE**

Budget Variance

RISK MANAGEMENT

Risk Registry &
QMS Framework

**ASSET LIFECYCLE
MANAGEMENT**

Asset Maintenance Plan

Select your plant →

Buffalo Pound WTP

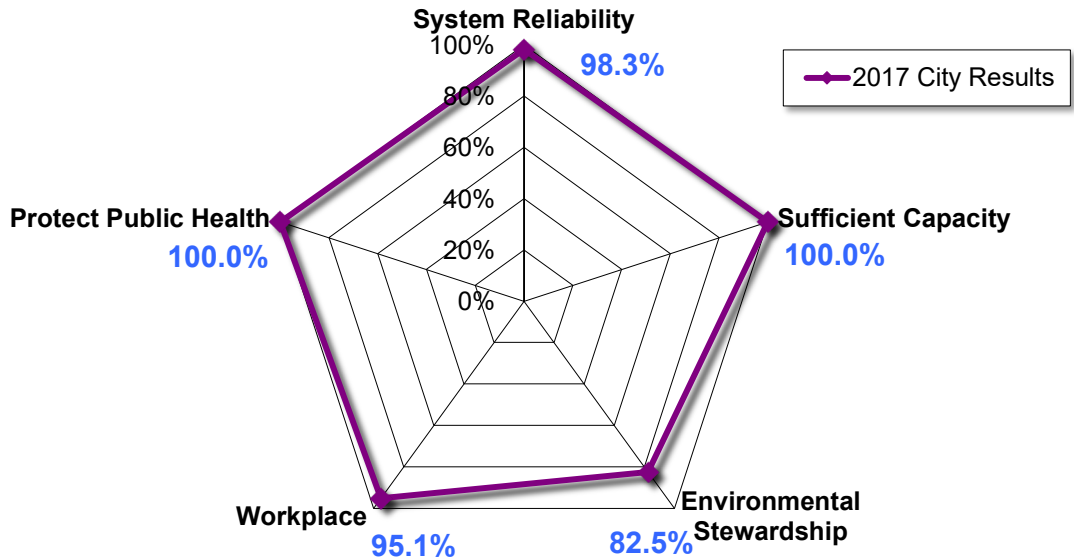
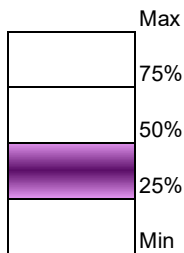
Water Treatment Plants - Conventional Filtration

Overall Radar Chart

Quartile Chart

O&M Cost / ML Treated

\$266.42



Data Labels for 2017 City Results

Quartile Charts show in which quarter your utility falls

Goals

Provide Reliable Service and Infrastructure

- ☒ 5 year Average Capital Reinvestment / Replacement Value
- ☒ Nr of Unplanned Hours that Plant Could Not Operate at Rated Capacity
- ☒ Unplanned Maintenance Hours / Total Maintenance Hours

Protect the Environment

- ☒ % of Water Wasted During Treatment Process
- ☒ GHG Emissions from Energy Consumed/ ML Treated

Protect Public Health

- ☒ # of days over Group Target for Turbidity
- ☒ # of days with Total Coliforms
- ☒ # of days over Group Target for Nitrates

Ensure Adequate Capacity

- ☒ ADD / Existing Licence Capacity
- ☒ Nr of Days Plant Operated at >90% Capacity

Provide Safe and Productive Workplace

- ☒ # of Sick Days Taken per O&M employee
- ☒ # of O&M Accidents with Lost Time / 1,000 O&M Labour Hours
- ☒ # of Lost Hours due to O&M Accidents / 1,000 O&M Labour Hours


Buffalo Pound WTP
NWWBI Statistical Analysis Summary - 2017

Plant Category	Goal	KPI	Favourable if Result is Higher or Lower	Data Distribution	Other Plants' Mean	Buffalo Pound Value	Percentile	Is the Data Significant?
All WTPs	G1	Capital Reinvestment / Replacement Value	Higher	Lognormal	0.012	0.016	65.1	FALSE
	G1	# of Unplanned Hours that plant could not operate at rated capacity)	Lower	Weibull	4.606	10.250	93.9	FALSE
	G1	Reactive Maintenance Hours / Total Maintenance Hours	Lower	Lognormal	0.069	0.033	33.4	FALSE
	G5	# O&M Accidents with Lost Time / 1000 O&M Labour Hours	Lower	Gamma	0.021	0.000	33.3	FALSE
	G5	# Sick Days taken per O&M Employee	Lower	Gamma	8.164	8.430	59.7	FALSE
	G5	Total Overtime Hours / Total Paid O&M Hours	Lower	Gamma	0.046	0.041	48.8	FALSE
Conventional Filtration	G1	Unit Filter Run Volume (m3/m2)	N/A	Weibull	304.710	245.000	33.1	FALSE
	G2	# Days Plant Operated over 90% of Capacity	Lower	NA	NA	NA	NA	NA
	G3	Total FTEs / 1000 ML Treated (Hrs)	N/A	Lognormal	1.505	0.864	34.4	FALSE
	G3	Total O&M Cost / ML Treated	Lower	Lognormal	288.482	266.423	51.6	FALSE
	G3	(O&M Cost + Capital Reinvestment Cost) / ML Treated	N/A	Lognormal	385.591	352.812	51	FALSE
	G3	Total Energy Consumed in kWh / ML Treated	Lower	Lognormal	596.889	906.232	98.5	TRUE
	G3	Chemical Cost / ML Treated	Lower	Weibull	57.622	53.604	56	FALSE
	G4	% of Water Wasted During Treatment Process (% Residuals)	Lower	Gamma	0.067	0.068	58.7	FALSE
	G4	% of Backwash Waste Treated	N/A	Lognormal	0.846	1.000	65.9	FALSE
	G6	Average Annual Treated Water Turbidity (NTU)	Lower	Lognormal	0.074	0.090	66.3	FALSE
	G6	# of Coliform Occurrences in Treated Water (CFU/1000 mL)	Lower	Exponential	0.053	0.000	48.1	FALSE
	G6	Treated Water Nitrates Average Value (mg/L)	Lower	Lognormal	0.636	0.060	23.7	FALSE
	G6	Raw Water Total Organic Carbon Average Value (mg/L)	Lower	Lognormal	4.705	10.300	90	FALSE
	G6	Treated Water Total Organic Carbon Average Value(mg/L)	Lower	Lognormal	2.409	4.900	91.3	FALSE
	G6	Raw Water Dissolved Organic Carbon Average Value (mg/L)	Lower	Weibull	5.781	10.200	85.8	FALSE
	G6	Treated Water Dissolved Organic Carbon Average Value (mg/L)	Lower	Lognormal	3.053	4.900	87.8	FALSE

Goal Legend:

G1	Provide Reliable Service and Infrastructure
G2	Ensure Adequate Capacity
G3	Meet Service Requirements with Economic Efficiency
G4	Protect the Environment
G5	Provide a Safe and Productive Workplace
G6	Protect Public Health and Safety

Legend:

	Statistically significant - not favourable
	Statistically significant - positive
Values within the 2.5 to 97.5 percentile range are considered to be statistically similar	

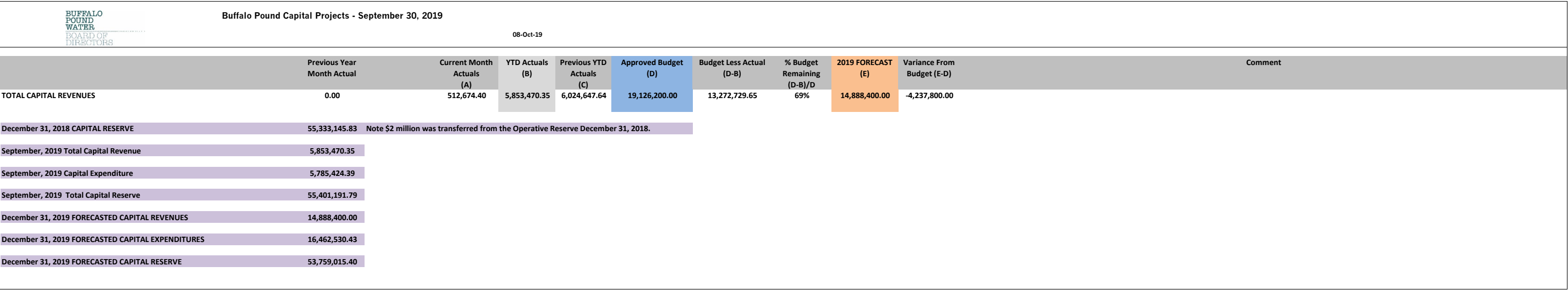
BALANCED SCORECARD (BSC): CORE SERVICES

OBJECTIVES	MEASURES (Core Outcomes of Strategy)	2018	2019	Status at October 4, 2019	2020	INITIATIVES (RACI)
Water Quality: Objective – Meets regulatory requirements and customer expectations 100% of the time	Regulatory requirements met, Taste and odor quality met	100%	100%	100%	100%	Quality & Quantity: SOPs documented & followed (Lead measure by all Operations, Maintenance, Lab) Quality: (a) ensure regulatory monitoring according to Permit to Operate; annual report appendix 1 (Lab) (b)Taste and odor of water leaving the Plant less than 8-10 TON (Threshold Odor Number) (Operations and Lab)
Water Quantity: Objective - To deliver water that meets customer demand 100% of the time	Parent: Customer demand met without compromising Quantity	100%	100%	99.79% July 8/9 Plant Shut Down for 4.5 hours due to thermal gradients September 29/30 Plant Shut Down Loss of SPC Power for 14 hours	100%	Quantity: Reliability (Operations, Maintenance) including e.g. immediate reporting of failure of critical assets (see notes page) Maintenance
Renewal Project: Objective – Successful achievement of all aspects of this massive undertaking to transform the plant's ability to deliver, meeting its mission and vision	Project deliverables: On-time On-budget Scope management	Project Charter & Plan (Including: Vision, owner's engineer resource, and funding pre-approval)	(Project reporting)	Charter completed Financing Strategy completed Funding pre-approval on hold pending direction of Cities for financing RFQ Awarded RFP released in May, 2019 Project progressing very well	(Project reporting)	(Major Capital Projects Committee, Ryan, Rudi, Harry)
Critical Projects: Objective – Critical projects are delivered (see initiatives)	Individual project deliverables: On-time On-budget Scope management	Electrical phase construction begins		Phase 1 - Main Plant Electrical completed Phase 2 - 138kV Trans Line broken into smaller packages, piles and poles awarded, remaining RFP out to market Phase 3 - LPS construction commenced in June.		1. Electrical Project: Phase 1 (Main Plant) Completed - 2019, Phase 2 (Transmission Line) Completed 2020, Phase 3 (LPS Electrical Upgrades) Completed 2020, complete (R=Rudi) 2. SCADA Project (R=Rudi) 3. Chlorine Project (R=Gene) 4. CMMS Project (R=Harry)
		SCADA Begins		SCADA RFP released for equipment pre-selection. SNC working on drawings. Project on hold pending PRP RFP Award.		
		Chlorine Project Complete		Chlorine is now just in time delivery of chlorine gas and the Scrubber in progress with AE.		
		CMMS Implementation	CMMS Completion	CMMS Phase 1 Asset Management completed, Phases 2 Work Management completed, Phase 3 Inventory Management start implementation for end of October, added SiteDocs and Criticality Assessment in November 14/15		
Safety Culture: Objective – To operationalize plant-wide a Safety Management System	a. # of Injuries	a. 0	a. 0	0 lost time/0 first aid/0 near misses 1 property damage-contractor	a. 0	R=Keith (lead) A=Operations, Maintenance, Lab
	b. Audit	b. Pass	b. Pass	2019 internal audit (passed bronze level)	b. Pass	
People Development & Performance: Objective – To design, implement, and monitor people development and performance processes plant-wide.	a. % out of scope employees with individual performance plans and learning plans	100%	100%	100% Completed	100%	Succession Plans update and communicate (Ryan) Best practices research to design a reward system based on Plant and individual performance (R=Ryan; A=Managers)
	b. Department Goals cascaded from Strategic Plan	100%	100%	100% Completed	100%	
	c. % in scope employees with individual performance plans and learning plans (managers)	100%	100%	In-Scope under development by managers and HR consultant, release January 2020	100%	
	Added 2019 Monitor HR Issues	N/A	N/A	2019 HR Issues (Ongoing 0/Complete 1)	N/A	
Communication & Managing Change: Objective – To evolve all communication and project management processes	a. Employee Engagement Survey	Design survey & set baseline	Annual 100%	2018 completed, analysis and implementation plan presented to the Board, plan is currently being implemented, next survey will be mid 2020	Annual 100%	Internal Communication: Meetings (daily toolbox, Operations hand off; monthly staff meetings recorded); Plant wide e-mails; F2F conversations (Management Team & all staff); Successful change implementations; adopt Org.

plant-wide	b. Organizational Change Management plans for projects with significant process changes	Design/adopt model	Complete	Completed 2018	Complete	Change Management model (Mgmt. Team) Project management evolution: RACI, Charters, Major Project Committee (Rudi & Harry)
Board Governance: Objective – To continue to evolve board governance effectiveness (Ryan, Laurie, Board)	Initiative completion	Policies: Annual review Customer Services Agreement	Policies: Annual review	Policy reviews completed Water Supply Agreements draft completed; require Board/City approval. Operational & Pump ownership under negotiations based on CPC and Board feedback	Policies: Annual review	Policies: Ongoing review and updates (Customer Service Agreement; Asset Transfer; Board Education & Onboarding)
		Board Education	Board Education	Training Module for New Members on WT Completed.	Board Education	
Funding Sources:	% of critical projects funded	100%	100%	100%	100%	Grants Loans
Objective – Establish funding sources into the corporation	% of O&M budget funded	100%	100%	100%	100%	Research new lines of business: business & economic development funding partners (defer to 2021)
Financial Operating Performance: Objective –To meet budget variance targets	Sum of O&M budget under management control within 5%	5%	5%	-4.9%	5%	Approximately \$12M budget (Mgmt. Team)
Risk Management: Objective – To manage risk and take	Initiative milestones Reporting	RR Annual Review	RR Annual Review	Updated quarterly - Board Annual Done	RR Annual Review	Risk Registry (Mgmt. Team, Board) based on RACI QMS (Keith and Mgmt. Team)
		QMS Framework Completed	QMS Begins Implementation	2 proposals for the GAP analysis received, award in October	QMS fully implemented	
Asset Management: Objective – To adopt a formal asset lifecycle management approach	Project milestones	Working on CMMS Project	Complete asset criticality analysis	In progress with CMMS implementation	Start developing the asset management plan	Asset Management Plan (Harry)

<div><div><div>BUFFALO POUND WATER BOARD OF DIRECTORS</div><div>Revenues and Expenditures September 30, 2019</div><div>08-Oct-19</div></div></div>										
	Current Month Actuals	YTD Actuals (B)	Previous YTD Actuals	2018 YEAR-END ACTUALS	Approved Budget (D)	2019 FORECAST (E)	Variance From Budget (E-D)	Budget Less Actual (D-B)	% Budget Remaining (D-B)/D	Notes
REVENUES										
TOTAL REVENUES	1,015,923.65	10,301,508.98	10,716,990.69	13,607,577.30	12,828,300.00	13,023,500.00	195,200.00	2,526,791.02	19.7%	Water sales slightly higher than historical 2 year lag forecast
EXPENSES										
Total Wage & Benefit Expenses	314,004.10	3,016,225.94	2,807,457.05	3,995,614.59	4,147,400.00	4,138,111.63	-9,288.37	1,131,174.06	27.3%	
Total Administration Expenses	10,501.65	329,444.96	304,091.86	514,834.36	556,000.00	553,364.00	-2,636.00	226,555.04	40.7%	
Total Maintenance Expenses	87,106.89	966,694.66	1,004,042.45	2,404,546.17	2,519,000.00	2,088,924.24	-430,075.76	1,552,305.34	61.6%	Deferral of some maintenance work and only hauling half the sludge to landfill and storing half for additional drying
Total Chemical Expenses	290,177.53	1,683,399.04	1,465,183.70	2,194,722.49	2,790,000.00	2,082,000.00	-708,000.00	1,106,600.96	39.7%	Raw Water Quality of Lake is Very Good, reduced chemcial requirements
Total Laboratory and Research Expenses	19,485.56	193,653.82	150,976.27	239,786.56	355,000.00	305,000.00	-50,000.00	161,346.18	45.4%	Developing Research Strategy to focus research
Total Utility Expenses	205,739.56	1,466,728.50	1,448,160.01	2,155,269.28	2,175,000.00	2,150,000.00	-25,000.00	708,271.50	32.6%	
TOTAL EXPENDITURES	927,015.29	7,656,146.92	7,179,911.34	11,504,773.45	12,542,400.00	11,317,399.87	-1,225,000.13	4,886,253.08	39.0%	

December 31, 2018 OPERATING RESERVE	1,905,124.62
September 30, 2019 Forecasted Operating Revenue at YE	13,023,500.00
September 30, 2019 Forecasted Operating Expenditure at YE	11,317,399.87
September 30, 2019 Forecasted Operating Reserve at YE	3,611,224.75
Target Balance for Operating Reserve	2,000,000.00



		Individual Attributes									Skills and Experience											Diversity/ Leadership			
Director's Name	Director Since	Integrity	Mature Leadership	Strategic Thinker	Good Communicator, influencer	Business Acumen	Fiduciary Duty	Independence of Mind	Active Participant	Team Player	Water Utility Operations Engineering	Capital Project Management	Risk Management	Finance and Audit	Legal	Environmental	Govt Relations/Policy/Community	Public Health & Safety/Regulatory	Executive Leadership	Governance	Human Resources	Geography	Board Chair Potential	Committee Chair Potential	Self Declared Diversity Status
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	9	10	5	5	9	8	9	10	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	8	9	6	1	5	7	7	8	8	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8	7	7	3	2	8	8	7	6	7	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
Term expiring. Up for reappt.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	8	8	6	6	6	8	7	8	7	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
Term expiring. Up for reappt.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	8	8	7	3	8	7	8	8	8	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	8	9	10	7	6	8	8	9	9	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yes/No
TARGET																									
CURRENT																									
NEEDS																									

Self Declared Diversity Status: “Yes” denotes one or more of: Gender (female); Orientation; Aboriginal; Visible Minority; Disability.

PERSONAL ATTRIBUTES: DEFINITIONS

Category	Criteria
Integrity	An innate adherence to ethical conduct and values.
Mature Leadership	Experience driven perspective and self-awareness of emotional patterns and triggers.
Strategic Thinker	Generates and applies unique business insights to challenges and opportunities, ability to challenge conventional thinking.
Good Communicator and Influencer	Expresses thoughts and ideas clearly and with respect for the views of others and listens actively. Has credibility with management and other directors.
Business Acumen	Track record of wise business judgment.
Fiduciary Duty	Strong understanding of fiduciary responsibility to the long term sustainability of the organization.
Independence of Mind	Unfettered from speaking his or her mind honestly on all issues.
Active Participant	Comes to meetings fully prepared and listens and speaks up.
Team Player	Committed to the role of the Board as a whole, works to resolve issues, treats others in a respectful and supportive manner, is flexible in arriving at solutions.

SKILLS AND EXPERIENCE: DEFINITIONS

Category	Criteria
Water Utility/Operations Engineering	Involved with the producing, treating, disinfecting and storage of water for delivery to the public.
Capital Project Management	The management of high level corporate capital projects (ie. millions of dollars).
Risk Management	The identification, assessment, and prioritization of risks and the coordinated and economical application of resources to minimize, monitor, and control the probability of those risks.
Finance and Audit	The provision of sound financial advice or information in support of the operations of the organization.
Legal	Knowledge of the Canadian legal system and its application thereof.
Environmental	Knowledge of the environment and its relationship to water treatment facilities.
Government Relations/Policy/Community	Dealing with government affairs or public administration at all levels of government and the ability to interpret legislation and policy as it relates to the organization.
Public Health & Safety/Regulatory	Knowledge of Occupational Health & Safety training and resources to reduce workplace risks and reduce workplace injuries and illnesses. Adherence to laws, regulations, guidelines and specifications relevant to the organization.
Executive Leadership	Provision of leadership to colleagues, ie. plans; sharing of visions; taking charge; inspiring others through examples.
Governance	Dealing with government, control and authority within the organization.

DIVERSITY: GOALS/NEEDS

Category	Goals/Needs
Geography	Being from different locations (ie. cities, towns) to bring a different perspective to the Board.

LEADERSHIP: POTENTIAL BOARD LEADERSHIP

Category	Goals/Needs
Board Chair	Well qualified individual with the skills, experience, time and motivation to dedicate to the job. Focus on tasks at hand as well as long term strategic issues. Accurately report on Board activities. One who holds himself/herself accountable.
Committee Chair (specify)	Same as above.