Appendix N: Curling Chiller Replacement Planning Analysis

The maintenance contractor's recommendation of October 2010 resulted in three scheduled tasks:

- 1- 2011 Complete an overhaul to correct conditions identified from compliance inspection
- 2- 2012 Replace condenser
- 3- 2013 Replace curling brine chiller

Technical Safety BC conducted an assessment to follow the replacement planning for the chiller from the time it was recommended in October of 2010 through to the date of failure on October 17, 2017.



Figure N-1: Curling Chiller Replacement Planning

In 2011, the chiller was scheduled for replacement in 2013 and shows as such on the 2011 and 2012 forward-looking five-year financial plans for capital spending.

In 2013, the year the chiller was to be replaced, it was deferred to the following year while other arena expenses were advanced.

In 2014 the chiller replacement was dropped from the 2014 and subsequent five-year financial plans for capital spending. The Facilities Master Plan was produced in 2014 and identified arena spending priorities that did not include the chiller replacement.

In 2014 and subsequent years the chiller replacement shows up as an intended activity in the 2014-2018 Corporate Strategic Plan and 2016 Business Plan.

When requested to provide detailed capital spending items for the 2017-2021 five-year financial plan, the City of Fernie provided a management spreadsheet that identified the chiller replacement in 2017.

After the chiller was confirmed to have failed, a capital request was drafted for replacement in 2018 (appendix P).



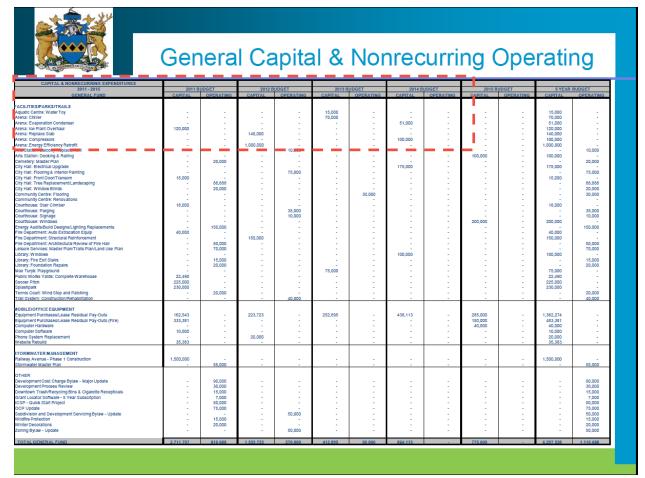


Figure N-2: Financial Plan Deliberations 2011-2015, Presentation to Council dated March 21, 2011.

| CAPITAL & NONRECURRING EXPENDITURES | | | | | | | | |
|-------------------------------------|---------|-----------|-------------|-----------|-------------|-----------|---------|--|
| 2011 - 2015 | 2011 E | UDGET | 2012 BUDGET | | 2013 BUDGET | | 2014 | |
| GENERAL FUND | CAPITAL | OPERATING | CAPITAL | OPERATING | CAPITAL | OPERATING | CAPITAL | |
| ACILITIES/PARKS/TRAILS | | | | | | | | |
| quatic Centre: Water Toy | _ | _ | - | _ | 15,000 | _ | _ | |
| rena: Chiller | - | - | - | - | 70,000 | - | - | |
| rena: Evaporation Condenser | - | - | - | - | - | - | 51,000 | |
| rena: Ice Plant Overhaul | 120,000 | - | - | - | - | - | - | |
| rena: Replace Slab | - | - | 140,000 | - | - | - | - | |
| rena: Compressors | - | - | - | - | - | - | 100,000 | |
| rena: Energy Efficiency Retrofit | - | - | 1,000,000 | - | - | - | - | |

Figure N-3: Detail from slide above. Chiller line item shown planned in 2011 to be replaced in 2013 as a future expense item. This item was confirmed to be the curling rink chiller and was budgeted for as part of the Arena expenditures.

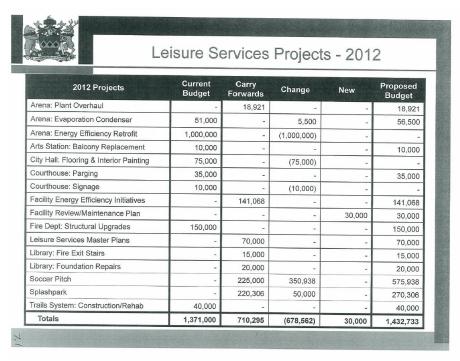


Figure N-4: Financial Plan Deliberations – 2012-2016. Presentation to Council dated February 6, 2012 showing condenser replacement expense in 2012.

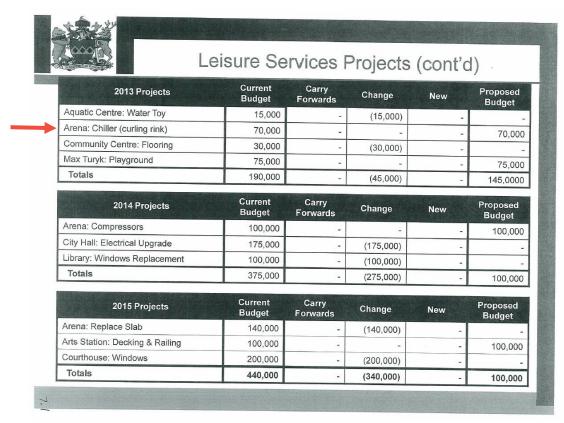


Figure N-5: Financial Plan Deliberations – 2012-2016. Presentation to Council dated February 6, 2012 showing chiller replacement as a future expense in 2013.

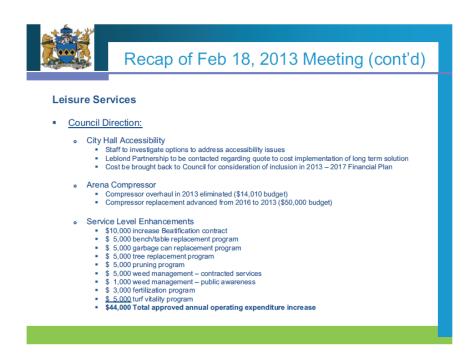


Figure N-6: Slide from council meeting on March 4, 2013 showing content of deliberation on arena capital expenditures. Minutes from council meeting of Feb 3, 2013 indicate that items approved in the 2012-2016 Financial Plan were reviewed which included the curling rink chiller as a \$70,000 planned expenditure in 2013.



Figure N-7: Slide from Public Consultation of 2013-2017 Financial Plan (April 15, 2013). Replacement of Curling Rink Chiller shown deferred to 2014.



Figure N-8: Presentation to Council – 7 April 2014 – 2014 Budget and Capital Spending Deliberations and Facilities Master Plan discussion.

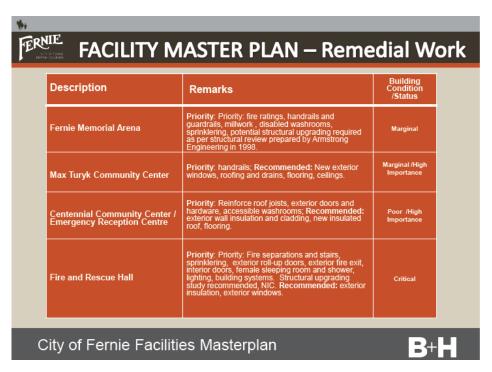


Figure N-9: Presentation to Council – 3 February 2014 – 2014 Budget and Capital Spending Deliberations. Facilities Master Plan showing recommended priorities for Arena capital spending.

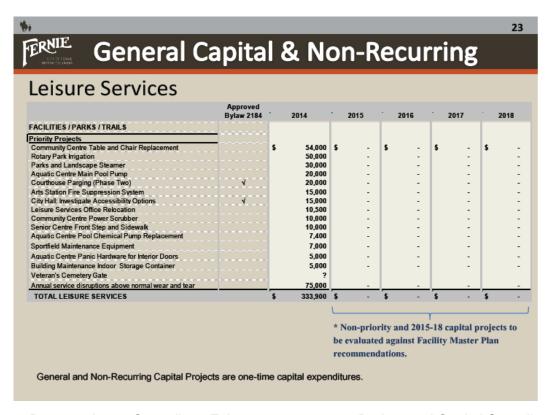


Figure N-10: Presentation to Council – 3 February 2014 – 2014 Budget and Capital Spending

4. Upgrade and maintain aging infrastructure and facilities.

| 4.1 | Upgrade and maintain aging infrastructure and | facilities. | |
|-------|---|---|--|
| 4.1.1 | Arts Station maintenance. Maintenance expenditures to sustain facility at a level sufficient to support the existing service levels by replacing the decking and railing. | Department Target Measure Status | Leisure Services 2015 (Fall) Q3 Complete construction Not Yet Initiated |
| 4.1.2 | Courthouse maintenance. Maintenance expenditures (parging the exterior walls) to protect the facility and ensure the long-term sustainability of this significant historical asset. | Department Target Measure Status | Leisure Services 2014 (Fall) Q3 Implement Facility Master Plan recommendations Not Yet Initiated |
| 4.1.3 | Fire Hall planning and maintenance. Continue to investigate construction of a new Fire Hall to address current and future community needs while concentrating on projects that will assist in satisfying the Fire Department's current operational requirements. Current projects include: Digital radio equipment Fire Station Office Renovation (new flooring, windows, steel cladding etc.) | Department Target Measure Status | Fire & Emergency Services Various (2014 to 2018) Purchase and install equipment Ongoing |
| 4.1.4 | Memorial Arena enhancements. Infrastructure improvements to sustain facility at a level sufficient to support the existing service levels through equipment upgrade and replacement. Dual water softener Brine pump Chiller replacement | Department Target Measure Status | Leisure Services Various (2014 to 2018) Install equipment Ongoing |

Figure N-11: 2014-2018 Corporate Strategic Plan portion of page 17 of the showing the chiller replacement as a goal associated item for the 5-year period.

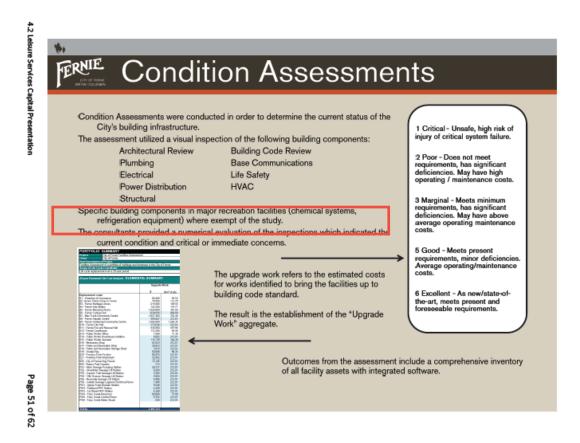


Figure N-12: Presentation to Council on 8 December 2014 – Supporting Documentation for 2015-2019 Financial Plan Deliberations. Facilities Master Plan condition assessments identified at end of 2014 to have omitted arena refrigeration equipment.

| <u>Leisure Services</u> 01-2-2718-133 01-2-2718-133 01-2-2718-133 01-2-2718-133 | Energy Audits/Build Designs/Lighting Replacements Recreation Facility Study - Plan Development Courthouse Facility Signage Arena Board Retrofit | \$ 75,000 17,000 15,000 | CWFD Accumulated Surplus |
|---|---|----------------------------------|--------------------------|
| 01-2-2718-133 | Senior Centre | 2,375 | Recreation Facility |

Figure N-13: 2015-2019 Capital Budget Request by Facility presented on January 19, 2015. Planned non-recurring expenses for the arena included the penalty board retrofit.

| 2015 Facilities Capital Projects | | | | | | | | |
|----------------------------------|--|----------|------------|----------|--|--|--|--|
| ACILITY | PROJECT | BUDGET | | | | | | |
| PACILITY | PROJECT | Proposed | Grant Fund | Deferred | | | | |
| Aquatic Centre | Steam Room Retro | | | \$45,000 | | | | |
| Aquatic Centre | Architectural Design Chemical Building/Storage Room | | | \$10,000 | | | | |
| Aquatic Centre | recinitectular besign enemical banding, storage noom | | | +/ | | | | |
| Aquatic Centre | Tile Re Grout All Areas | | | 50,000 | | | | |
| | | \$67,000 | \$50,000 | | | | | |

Figure N-14: 2015-2019 Capital Budget Request by Facility presented on January 19, 2015. Arena expenses did not identify chiller replacement.

2016 DEPARTMENTAL OBJECTIVES

| Goal #3 Increase corporate and public safety. | | | | | | | |
|---|---------------------|---|--|--|--|--|--|
| Objective Increase corporate and public safety. | Strategy Measure | Senior's Drop In Centre upgrade exit signs. Upgraded signs installed. | | | | | |
| Goal #4 Upg | rade and mai | ntain aging infrastructure and facilities. | | | | | |
| Objective Upgrade and maintain aging infrastructure and facilities. | Strategy Measure | Arts Station maintenance deck and railing. Implement Facility Master Plan recommendations. | | | | | |
| | Strategy Measure | Courthouse maintenance (exterior parging) Implement Facility Master Plan recommendations. | | | | | |
| | Strategy | Memorial Arena enhancements (equipment upgrade – dual water softner, chiller replacement). | | | | | |
| | Measure | Equipment installed. | | | | | |

Figure N-15: 2016 Business Plan and 2016-2020 Proposed Financial Plan – Excerpt from Page 46 presented to council on December 15, 2015.

2016-2020 LEISURE SERVICES DRAFT CAPITAL PLAN

| Leisure, Rec, Parks and Facilities Capital | 2016 | | 2017 | | 2018 | |
|--|--------|---------|------|---------|--------|--------|
| | BUDGET | | | BUDGET | BUDGET | |
| Aquatic Centre | \$ | 160,000 | \$ | 135,000 | \$ | 70,000 |
| Arena | | 10,800 | | 202,000 | | - |

Figure N-16: 2016 Business Plan and 2016-2020 Proposed Financial Plan – Excerpt from Page 48 presented to council on December 15, 2015.

| Leisure, Rec, Parks and Facilities | PROJECT | 2016 BUDGET |
|------------------------------------|---------------------------|----------------|
| Aquatic Centre | Roof Repair | 130,000 |
| Aquatic Centre | Pool Floatation Equipment | 15,000 |
| Arena | Rebuild Compressor | 10,800 |

Figure N-17: 2016 Business Plan and 2016-2020 Proposed Financial Plan – Excerpt from Page 49 presented to council on December 15, 2015. Chiller replacement not identified as 2016 project.

| FACULTY | | 2014 Carry | 2045 | 2016 | 2047 | 2040 |
|--------------|--|------------|------------|-----------|------------|-----------|
| FACILITY | | Forward | 2015 | 2016 | 2017 | 2018 |
| | PROJECT | BUDGET | BUDGET | BUDGET | BUDGET | BUDGET |
| | | | | | | |
| Arena | Accessibility Lift - Lloyd is this moving ahead or not | | 117,000 | | | |
| Arena | FMP | | | | | |
| Arena | Melt Pit Retrofit | | | | | |
| Arena | FMP - Chiller Replacement | | | | 60,000 | |
| Arena | E Water System | | | | | |
| Arena | Board Retrofit | \$ 15,000 | 15,000 | | | |
| Arena | Roof Repair - Waiting on Quote | | | | 142,000 | |
| Arena | Rebuild 2 Compressors and replace Motor | | 84,263 | 84,500 | | |
| Arena | De Humidifier | | | | | 50,000 |
| TOTAL | Arena | \$ 15,000 | \$ 216,263 | \$ 84,500 | \$ 202,000 | \$ 50,000 |
| Curling Club | Chiller Replacement | | | | 50,000 | |
| Curling Club | Roof Repair - Waiting on Quote | | | | 300,000 | |
| | | | | | | |
| TOTAL | Curling Club | \$ - | \$ - | \$ - | \$ 350,000 | \$ - |

Figure N-18: Excerpt from spreadsheet titled Leisure Services Capital Budget Information 2017-2021. The curling chiller replacement is identified as a 2017 expense/activity.