



REGIONAL DISTRICT OF NORTH OKANAGAN

MINUTES of a **SPECIAL** meeting of the **GREATER VERNON ADVISORY COMMITTEE** held in the Board Room at the Regional District Office on Thursday, February 28, 2013

Members:	Director M. Macnabb Councillor G. Kiss Director R. Sawatzky Alt. Director B. Spiers Alt. Director C. Lord Alt. Director J. Garlick Director B. Fleming T. Osborn	Electoral Area "C" (Chair) District of Coldstream (Vice Chair) City of Vernon City of Vernon City of Vernon District of Coldstream Electoral Area "B" Agricultural Representative
Staff:	T. Hall D. McTaggart Z. Marcolin S. Edwards P. Juniper	Administrator General Manager Engineering Utilities Engineer Water Treatment Manager Executive Assistant (taking minutes)
Also Present:	Director P. Nicol Councillor M. Besso Alt. Director J. Cunningham Councillor P. Maclean Alt. Director M. Randell M.O'Keefe M. Stamhuis R. Dickinson W. Pearce	Board Chair District of Coldstream City of Vernon District of Coldstream Electoral Area "C" City of Vernon District of Coldstream City of Vernon City of Vernon

Media and public

CALL MEETING TO ORDER

The Chair called the meeting to order at 8:06 a.m.

The General Manager Engineering introduced the consultant team to the Committee:

- Brett deWynter, P. Eng., AECOM
- David Main, P.Eng., AECOM

APPROVAL OF AGENDA

Moved and seconded by Alt. Director Garlick and Director Sawatzky

That the Agenda of the February 28, 2013 Greater Vernon Advisory Committee - Special Meeting be approved with the following amendments:

That Agenda item B.2 – Greater Vernon Water (GVW) Budget be moved to item B.1

CARRIED

UNFINISHED BUSINESS

2013 Greater Vernon Water Budget

Moved and seconded by Alt. Directors Lord and Spiers

That discussion on the 2013 Greater Vernon Water budget be deferred until the Greater Vernon Advisory Committee (GVAC) is provided with the operating budget which sets out the various expenses for different sectors of water operations, such as the costs incurred at Duteau Creek Water Treatment Plant (DCWTP), the costs to operate Mission Hill, the costs for annual flushing of the lines, as well as the revenue sources for the Greater Vernon Water function;

And further that cost and mapping details be provided where applicable on all Special and Capital Projects.

CARRIED

2012 Master Water Plan

Staff circulated pages 1 to 28 inclusive of Technical Memorandum (TM) No. 8 that had been revised for grammatical and technical amendments.

The Committee reviewed Technical Memorandum No. 5 – Independent Agricultural System. The scope of TM5 was to identify the agricultural areas within the Greater Vernon Water system and examine the following issues:

- Water sourcing
- Water storage
- Distribution requirements

and to examine costs and issues in the development of a separate non-potable agricultural water system in the Greater Vernon area. The following was presented:

- Peak flow through the system is based on allocation.
- Supply annual agricultural allocation of 17,400 ML / year.
- System separation analysis included cost/benefit analysis of completing each section taking into account sequencing projects.
- System separation – Lavington area could recover roughly 80 ML/d for an estimated \$29.3M.
- Estimated \$80.8M to have total system separation (agricultural and domestic).
- The Technical Advisory Committee (TAC) is examining options including the possibility of getting water from other locations which would require upsizing of pipes.

Current Agricultural practices

- As of 2011 the total area available to be irrigated for agricultural purposes is 3,452 ha. 2,564 are currently allocated and 888 ha is considered dormant (non agricultural).
- If the total 3,452 were irrigated a maximum allocation of 18,986 ML/y would be required.
- Separate agricultural system will need to have capacity for a demand of 17,400 ML/y by 2052 according to analysis.

Supply and Distribution Infrastructure

- Review of the current infrastructure and costs required to both replace and separate the distribution and operational components.
- Estimated value of the system to be \$619.6 million.

- Estimated replacement value of entire Greater Vernon Water assets \$619.6M
- Estimated replacement value of separated agricultural system assets \$137.2M

System Separation

- Current system separation projects where separation has been completed include Bella Vista and portions of the Von Keyserlingk and King Edward areas which has resulted in a 17 ML/d reduction in the peak capacity of the Duteau Creek Water Treatment Plant.
- The West Swan Lake system separation project is due to be completed in 2013 and will improve chronic potable supply concerns.
- Additional water sources other than Duteau Creek can be incorporated into the agricultural system. The decision on which sources to examine further will be based upon further developments within the 2012 Draft Master Water Plan. The extent of availability of these sources will be determined by the extent of separation.
- The system is capable of incorporating the reclaimed wastewater as a supply into a separated agricultural system for irrigation purposes. Operational costs to deliver water for irrigation purposes using reclaimed water are significantly higher than those in the Greater Vernon Water Agricultural System.
- The present day value of a separated agricultural water system is valued at \$137.2M. This does not include any major source work (dam or structure upgrades) in the Duteau Creek Watershed.

Recommendations:

The following tasks are recommended for inclusion in the 2012 Master Water Plan:

- The City of Vernon, Greater Vernon Water agricultural community and the provincial government continue to examine options for incorporating water from the City of Vernon wastewater reclamation program into a separated agricultural supply.
- A more detailed study be undertaken to examine more precisely the potential water savings in areas where small ranches and urban infringement are more prevalent.
- Review the implementation schedules and priorities every 5 years.

The Committee reviewed Technical Memorandum No. 6 – Water Conservation Strategies.

The Committee was advised that by reducing consumption and sustaining unit demands, a community can effectively plan, defer or eliminate the need for new capital works. Conservation efforts impact the local environmental and in addition to realizing cost benefits there is a social impact. It was noted that water availability is low in our area while consumption is high.

2012 Master Water Plan projections are based on 250 l/cap/day. The goal is to reduce domestic residential water consumption from 271 to 250 l/cap/day. Greater Vernon Water needs to develop strategies to meet this goal.

The following was presented:

- Greater Vernon Water has consumed, on average, 25,000 ML of water per year.
- Domestic use accounts for 45% of total annual demand.
- Agricultural use accounts for 55% of total annual demand.
- It was noted that the utility must be capable of providing the maximum agricultural allotment of 550 mm/yr/ha of irrigable land.

- Review of the proposed Water Conservation Plan strategies developed by Greater Vernon Water. Need to identify large water users and work with them to manage their water consumption.
- Data reporting is an important tool to ensure accurate reporting (manage meter data).
- Any additional licensing on Okanagan Lake or Kalamalka Lake is subject to application. It was noted that following conclusion and approval of the 2012 Master Water Plan the Regional District would proceed with recommendations that come forward regarding any application / transfer of water license.

The Committee reviewed Technical Memorandum No. 7 – Water Treatment. The objectives of Technical Memorandum No. 7 were to identify long term water treatment needs necessary to consistently supply sufficient quantity and quality of potable water to the distribution network in the most cost effective manner. TM7 provided an overview of the raw water quality associated with the long term raw water sources for the Greater Vernon Water area.

The following was presented:

- Duteau Creek currently supplies the largest volume of water to the distribution network. It was noted that a significant portion of the water is used for agricultural irrigation. This water source currently has a clarification and disinfection treatment and distribution and is mainly gravity fed.
- Harvey Lake and raw water pipe line limited to roughly 200ML/d.
- Stage 1 includes coagulation, flocculation, Dissolved Air Floatation (DAF) clarification and disinfection.
- There is space available for filtration improvements.
- Raw water source storage upgrades to improve the long term reliability of the supply.
- Provision for raw water bypass for irrigation at the Duteau site.
- Watershed control programs – GWW is making an application to Okanagan Basin Water Board (OBWB) for a grant for Coldstream Creek Watershed protection.
- Filtration needs to eventually be added at the Mission Hill Facility.
- Interior Health sets the Water Quality standards.
- Regional District of North Okanagan (RDNO) does not have control of the watershed (i.e. a fence surrounding / protecting the water source).
- Pilot study will be completed soon which will outline the different options for treatment.
- Mission Hill Water Treatment Plant (MHWTP) and the Kalamalka Lake Pump Station have been upgraded to maximize the water licence available. The existing facilities provide a long term supply of 58 ML/d. Additional licences or transfers would have to be considered to increase water supply from the Kalamalka Lake source.
- Recommend that the Regional District make application for additional water licenses from Okanagan Lake for future demand.

The Committee reviewed Technical Memorandum No. 8 – Greater Vernon Water Financial Issues and Principles to Support the Master Water Plan.

The Committee was advised that the goal of TM8 was to update the progress of the Greater Vernon Water Utility since the last Master Water Plan (2002). The following was presented:

- Greater Vernon Water now operates as a stand-alone water utility.
- Separation has occurred where it is viable.
- Most areas of Canada had water treatment and filtration in place for many years. BC has gone from having the lowest cost of water to be, in general, on average with other

- communities.
- Water metering and consumption billing are typically standard in most other parts of Canada but is just getting established in BC.
 - Water consumption has been steadily decreasing Canada wide.
 - There are few variable costs in the water utility – costs are fixed. Rates need to be designed to reflect this with a larger portion on the fixed amount, smaller portion on the variable amount.
 - Need to manage the asset, as pipes deteriorate they must be replaced;
 - Need to forecast when the lines must be replaced
 - Concerns with the large inventory of asbestos cement lines
 - Significant renewal demands will be required.
 - Need to prepare a network renewal plan.
 - Biggest opportunity for saving is to consider replacing utilities together and economize on doing all of the works at one time.
 - Quality of install as well as installation location can affect the length of infrastructure life.
 - Pipe size is driven by peak agricultural demand.
 - Reduced consumption can have a significant impact on costs - reduce consumption / increase supply. TM9 takes into consideration conservation impacts.
 - Technology has been a huge factor in reducing water consumption
 - Education is the key to reducing water consumption.

Moved and seconded by Alt. Director Lord and Director Sawatsky

That the following Technical Memorandums forming part of the 2012 Draft Master Water Plan be received for information:

- Technical Memorandum No. 5 – Independent Agricultural System
- Technical Memorandum No. 6 – Water Conservation Strategies
- Technical Memorandum No. 7 – Water Treatment
- Technical Memorandum No. 8 – GVW Financial Issues and Principles to Support the Master Water Plan.

CARRIED

2013 Greater Vernon Water Budget (Capital)

The General Manager Engineering provided an overview of the 2013 Greater Vernon Water Capital Budget. The following was presented:

- 2012 capital budget was \$21.7M comprised of:
 - 50% Operations and Maintenance
 - 37% Capital
 - 13% Debt payments
- In 2012 the Board of Directors resolved to fund necessary capital programs and approved rate hikes of 17% in 2012 and 2013 in order to fund the capital projects.
- The 2012 Master Water Plan is scheduled to be complete in June 2013 which will impact future budgets.

Proposed 2013 Capital Projects:

Project Description	Estimated cost
West Swan Lake - Phase 3 <ul style="list-style-type: none">- To separate domestic / non domestic water supplies	\$2,750,000

<ul style="list-style-type: none"> - Noted that there were changes from original estimate due to changes in underground infrastructure. - Better analysis is required of the cost of separation to better forecast costs. 	
<p>Mission Hill WTP - Bulk salt delivery</p> <ul style="list-style-type: none"> - Pre approval received. 	\$200,000
<p>Mission Hill WTP - Replace hypo system</p> <ul style="list-style-type: none"> - Pre approval received. 	\$400,000
<p>Springfield Separation</p> <ul style="list-style-type: none"> - Maximum capacity / maximum demand we are 272 ML/d maximum day demand – this project will realize 11.8 ML. - We can meet max day demand without bypassing Duteau by removing Springfield and Binns from the system and providing irrigation water from the Wells / Goose Lake. - If Duteau is pushed to the maximum demand we are required to open the irrigation valve into the domestic system resulting in water quality alerts. - Separation projects are bypassed, the water is untreated thereby reducing pressure on the plant . 	\$2,600,000
<p>McMechan Pump Station Improvements</p> <ul style="list-style-type: none"> - To address pressure zone issues to improve efficiency. 	\$300,000
<p>Water main replacement 30th Ave 34th St to 35th St</p> <ul style="list-style-type: none"> - Works to be done in conjunction with City of Vernon improvement project. 	\$150,000
<p>Water main replacement 29th St, 41 to 43 Ave</p> <ul style="list-style-type: none"> - Works to be done in conjunction with City of Vernon improvement project. 	\$170,000
<p>Upgrade Pressure Reducing Valve Station 24</p> <ul style="list-style-type: none"> - Works to be done in conjunction with City of Vernon improvement project. - Will improve safety concerns. 	\$350,000
<p>32nd Avenue Railway Crossing</p> <ul style="list-style-type: none"> - Works to be done in conjunction with City of Vernon improvement project. - Will improve water quality. 	\$100,000
<p>Upgrade Hypo Injection Systems at Goose Lake and King Edward</p> <ul style="list-style-type: none"> - Replace hazardous gas chlorine system with liquid chlorine systems. To be used on the irrigation systems. 	\$20,000
<p>Water main Replacement 19th Ave: 20th St - 21st St</p> <ul style="list-style-type: none"> - Works to be done in conjunction with City of Vernon improvement project. 	\$50,000
<p>Water Quality looping, 3500 block 16th Street</p> <ul style="list-style-type: none"> - Improve water quality issues. 	\$27,000
<p>PRV 1 Pump Station – Separation</p> <ul style="list-style-type: none"> - Works to be done to meet operational issues. 	\$60,000
<p>Binns Separation - Phase 1 (Tender awarded)</p>	\$925,000
<p>Binns Separation - Phase 2</p> <ul style="list-style-type: none"> - Has been tendered and will be awarded once budget approval has been given. 	\$1,500,000

Rotovariator for Duteau Creek WTP Centrifuge – To ensure we have a replacement.	\$45,000
Replacement Snow Mobile – To work in the watershed in the winter.	\$8,000
Replace Vehicle 303 - 1 tonne truck and equipment box.	\$65,000
Hydrometric Station Coldstream Creek at Kirkland – To obtain data for the Coldstream Creek watershed protection plan.	\$20,000
Total Capital	\$9,740,000

Moved and seconded by Ag. Representative Osborn Alt. Director Garlick
That the 2013 Greater Vernon Water Capital Projects Budget be received for information.

CARRIED

ADJOURNMENT

There being no further business, the meeting was adjourned at 11:45 a.m.

Certified Correct:



Chair



Corporate Officer

**JEANNE BYRON
CORPORATE OFFICER**

