



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 21, 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. Ouchi	Electoral Area "C" (Chair) District of Coldstream (Vice Chair) City of Vernon City of Vernon City of Vernon District of Coldstream Electoral Area "B" Alt. Agricultural Representative
Staff:	T. Hall D. McTaggart Z. Marcolin S. Edwards D. Douglas P. Juniper	Administrator General Manager Engineering Utilities Engineer Water Treatment Manager Clerk Executive Assistant (taking minutes)
Also Present:	Director P. Nicol Councillor M. Besso Alt. Director J. Cunningham Councillor P. Maclean	Board Chair District of Coldstream City of Vernon District of Coldstream
	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:

- Neil Whiteside, P.Eng., Kerr Wood Leidal
- Brett deWynter, P. Eng., AECOM
- Rod MacLean, P.Eng., Associated Engineering

APPROVAL OF AGENDA

Moved and seconded by Alt. Director Garlick and Director Sawatzky

That the Agenda of the February 21, 2013 Greater Vernon Advisory Committee - Special Meeting be approved as presented.

CARRIED

UNFINISHED BUSINESS

2012 Master Water Plan

The Committee reviewed Technical Memorandum No. 1 – Domestic & Agricultural Water Demand Forecast. The scope of TM1 was development of a long-term water supply plan for the

Greater Vernon area to understand current and forecast land use, population and agricultural service areas.

The following was presented:

- Historic monthly water demands – 2008 – 2011
- Cumulative volumes supplied
- Existing Domestic Component
 - o Domestic (noted that domestic is the residential component)
 - o Agricultural (noted that in 2012 all agricultural customers are now metered. GVW is working to meter all customers to better forecast all unaccounted for water)
- Unit Rates
 - o Includes leakage and unaccounted for water
- Domestic Growth Projection
 - o Residential / ICI Growth Forecast (2011 – 2052)
 - o Noted: ICI – Industrial, Commercial and Institutional customers
- Domestic Demand Projection (2052)
 - o Noted that current (domestic) base water demand is 292 litres per day to person / the forecast has used 250 litres per day to account for conservation efforts.
 - o Current inefficient agricultural irrigation methods
- Domestic Forecast
- Agricultural demands
 - o Existing demand / design flows (system wide). It was noted that 2564 ha is allocated (agricultural water rate) – total is 3452 ha. The remainder of properties that have allocation but are not using the land for agricultural purposes is approximately 888 ha – these properties were counted on the domestic side.
 - o Agricultural customers are now metered and any customers exceeding allocation are billed according to bylaw rate

The Committee reviewed Technical Memorandum No. 2 – Evaluation of Water Supply Sources. The Committee was advised that the scope of TM2 was to review and update the watershed hydrology in the Duteau Watershed to confirm runoff estimates and long term supply expectations as well as evaluate other water sources to determine yield based on a 50 year drought return frequency.

The following was presented:

- Review of the water sources in the Greater Vernon Water system.
 - o Aquifers provide hard water
 - o Surface water sources (eg. Duteau) are gravity fed and require full treatment
 - o Groundwater sources are typically hard water and costly to pump
 - Majority of water is supplied out of the Duteau Watershed which is comprised of the following storage lakes
 - o Aberdeen
 - o Haddo
 - o Grizzly
- Providing the following:
- o Irrigation: 21,995 ML/y
 - o Consumption: 3,380 ML/y
 - o Storage: 33,051 ML
- Water licenses in the Greater Vernon Water System:
 - o Consumption licenses – 58,115 Ml/year

- Waterworks license (domestic)
- Agricultural – strictly allocation
- Largest unused licenses are off of BX Creek
- Hydrology
 - Review of normal annual runoff in the Okanagan Basin
 - Summary of source supply for Greater Vernon Water including:
 - Duteau Creek
 - Okanagan Lake
 - Kalamalka Lake
 - B.X. Creek
 - Coldstream Creek
 - Deer Creek
 - Groundwater sources
 - Review of Water Supply estimates
 - Duteau - average demand in 2051 – 30,800 MI/y
 - Average runoff – 33,618 ML/y
 - 1:10 year low – 19,962 MI/y
 - 1:50 year low – 12,439 MI/y
 - Duteau storage (current) 18,340 ML
 - Review of Groundwater Aquifers including:
 - Coldstream Valley
 - Vernon Centre
 - B.X. Valley
 - Swan Lake
 - Okanagan Landing

The Committee reviewed Technical Memorandum No. 3 – Source Storage and Supply. The objectives of Technical Memorandum No. 3 were to:

- Examine potential future storage and supply projects
- Cost estimates
- Identify issues
- Prioritize projects

The following was presented:

- Greater Vernon Water has:
 - 3 dams on the Duteau Supply - Haddo, Grizzly and Aberdeen
- 24,000 MI/y of additional supply available
- Potential projects in next 30 years:
 - Raising Aberdeen 4 metres will add approximately 11,670 ML of storage
 - Okanagan Lake – 50,000 MI/y license application

It was noted that:

- Application for additional water license out of Kalamalka Lake was done in 2001 which was not approved
- Submit application for consideration of additional license off of Okanagan Lake
- Future decisions regarding water supply should be based on urban/domestic future demand.
- Water transfer options studied for supply in Technical Memorandum No. 9
 - License transfers
 - Unused water 8,846 ML of license Greater Vernon Water "can" consume

- Water licences are currently under the Ministry of Forests, Lands and Natural Operations, Water Protection and Sustainability Branch
 - Looked at Kal Lake in 2001 system regarding interests from Lake Country – Vernon also had requests – that was refused. There is a history,
 - It was noted the Department of Fisheries and Oceans has minimum flow criteria for Vernon Creek
- Physical water transfers within a water basin may be feasible
 - Interbasin transfers - transfers between basins (Fraser River Basin and Columbia River Basin) are now prohibited under the *Water Protection Act*.
- Summary – 24,000 ML/y of additional supply available
 - Potential projects in next 30 years
 - Raising Aberdeen 4 metres adds 11,670 ML of storage
 - Okanagan Lake – recommendation that the RDNO make application for a 50,000 ML/y water license reserve application on Okanagan Lake

The Committee reviewed Technical Memorandum No. 4 – Domestic Water System Analysis. The purpose of TM4 was to

- Document / summarize the existing domestic conveyance system'
- Identify design criteria for evaluation of the domestic system
- Analyze the water system and identify key transmission, storage and pumping deficiencies
- Identify required upgrades

It was noted that projections in TM4 were based on the agricultural separation done to date.

The following was presented:

- Review of the existing system which is designed to:
 - Provide peak hour pressure
 - Meet maximum day demand plus fire flow requirements
 - Meet storage requirements
- Recommended upgrades include:
 - School Road Watermain
 - Learmouth Watermain
 - Improved pump redundancy
 - Improved instrumentation

It was noted that there are challenges with regard to data collection due to different software within the respective jurisdictions.

Moved and seconded by Alt. Directors Lord and Spiers

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

- Technical Memorandum No. 1 – Domestic & Agricultural Water Demand Forecast
- Technical Memorandum No. 2 – Evaluation of Water Supply Sources
- Technical Memorandum No. 3 – Source Storage and Supply
- Technical Memorandum No. 4 – Domestic Water System Analysis

CARRIED

ADJOURNMENT

There being no further business, the meeting was adjourned at 11:15 a.m.

Certified Correct:



Chair



Corporate Officer
JEANNE BYRON
CORPORATE OFFICER

