MEMORANDUM

To: Abbotsford/Mission Water and Sewer Commission

From: Jim Gordon, General Manager Engineering, Regional Utilities

Date: August 4, 2005

Subject: Stave Lake Cedar Watermain Connection

Report No: UMC 1-2005

STAFF RECOMMENDATION:

That Report No. UMC 1-2005, dated August 4, 2005, from the General Manager Engineering, Regional Utilities, regarding the Stave Lake Cedar Watermain Connection be received;

That staff negotiate a Bulk Water Supply Connection Agreement with the FVRD and present to the Water and Sewer Commission for discussion and approval prior to presentation to each of the Abbotsford and Mission Councils for approval.

BACKGROUND:

Fraser Valley Regional District (FVRD) staff met with Stave Lake Cedar over the past few years to discuss a connection to the regional water supply line from Norrish Creek. Negotiations are now close to completion. Plans call for a 250mm distribution line to supply Stave Lake Cedar and potentially the Dewdney Elementary School and approximately 10 adjacent properties.

It's proposed that a "customer" connection be provided to the FVRD by the joint Abbotsford/Mission regional utility and that the distribution system beyond the connection be maintained by the FVRD.

DISCUSSION:

The Ownership and Governance Agreement (Governance Agreement) and the Operations and Maintenance Agreement (Operations Agreement), together with the delegation bylaws from each of Abbotsford and Mission Councils, provide both the mandate and direction for the operation and governance of the regional water and sewer utilities. These agreements stipulate that any new bulk water customers must be approved by the Water and Sewer Commission.
(WSC) and each of the Abbotsford and Mission Councils.

The proposed Stave Lake Cedar bulk water connection will require an agreement between Abbotsford and Mission (supplier) and the FVRD (customer). Previously negotiated bulk customer agreements with other local governments are problematic in terms of legal content and inadequate prior communication with elected officials. Staff plans to carefully draft this proposed agreement with legal counsel and present to the WSC and individual Councils for discussion and approval.

It is intended that this agreement provide a template for future bulk service agreements.

**ANALYSIS:**

Abbotsford and Mission staff plans to work together with legal counsel to draft the agreement, followed by negotiations with the FVRD on the final terms. Following are some of the items which will be included in the agreement. It is expected that other items, as well as routine legal clauses, will arise through the drafting/discussion process and be included in the agreement.

**Capital Contribution**

An equitable capital contribution is necessary. It is proposed that customers fund the growth burden caused by their connection as they would if they were to add similar growth in Abbotsford and Mission. A capital contribution equivalent to the flow weighted average of Abbotsford and Mission Regional Development Cost Charges (DCC) will be required for each service connection to the distribution system.

**Annual Rate**

Most bulk connections are long term; however, it is difficult to provide hard numbers for long term rates. Staff will work to develop an annual rate calculation formula that includes operating costs, contributions to replacement reserves, administration and contingency.

**Term**

Given the customer infrastructure expense necessary for connection and the growing dependency on the system post connection, a long term agreement will be necessary. Staff proposes a 10 year agreement with automatic 5 year renewals unless renewal cancellation notice is given.

**Connection Costs**

All costs related to the connection are to be born by the customer. The connection methods and construction are to be under the direction and supervision of Abbotsford operations staff.

**Meter**

An approved water meter and backflow apparatus is to be supplied in an approved Ministry of Transportation right of way. Maintenance, repair and replacement will be done by Abbotsford operations staff and billed to the customer.

**System Operators**

Distribution system operators are to be certified in accordance with the Provincial certification program.
The FVRD advise that they are very anxious to have the water connection made quickly. Staff understands and will assist in expediting the drafting, communication and approval processes. The existing staff and legal resource workload related to the September 1, 2005 system transfer and the steps necessary to develop a solid agreement for Council's approval, dictate an optimistic late fall connection date.

SUMMARY:

The FVRD would like a bulk water supply connection for Stave Lake Cedar and approximately 10 nearby properties. Staff will negotiate a bulk water supply agreement for this connection with the FVRD and present to the WSC for discussion and approval prior to presentation to each of the Abbotsford and Mission Councils for approval.

UTILITY MANAGEMENT COMMITTEE (UMC) COMMENTS:

The UMC is of the opinion that a solid template customer agreement needs to be developed – one that can be applied to all future customers. The UMC agrees that this long awaited water supply connection is important and has asked the Regional Utilities Operator (City of Abbotsford) to expedite the drafting of an agreement including undertaking the necessary negotiations and approvals.
MEMORANDUM

To: Utilities Management Committee

From: Tareq Islam, Manager of Electoral Area Utilities (ag.)
Wendy Rudder, Engineering & Environmental Services Coordinator

Cc: Gerald Kingston, Chief Administrative Officer
Suzanne Gresham, Director of Corporate Administration
Tom Machmer, Director of Finance

Date: July 29, 2005

Subject: Draft Bulk Water Services Agreement for FVRD Dewdney Community Water Supply and Distribution Service Area

File No.: 5550 95 001

UPDATE ON DISCUSSIONS SINCE LAST VERSION OF AGREEMENT

A draft agreement outlining the proposed terms and conditions of bulk water service provision to the Dewdney Community Water System Service Area was reviewed with the Central Fraser Valley Staff Advisory Committee (SAC), at their meeting on May 18, 2005. At this time, the SAC was also advised that the Regional District’s legal advisors had indicated that, under the current governance structure, the Commission did not have the legal ability to enter into such an agreement as its own entity, since final authorization on contractual obligations would still rest with the Regional District Board.

Following the May 18, 2005 meeting, FVRD staff sought additional comment on this issue from the Electoral Areas Services Committee, as well as senior management staff and the Regional District’s legal advisors. Much discussion ensued on the payment of capital cost contributions, alternative compensation structures and formats of agreements, but it was finally decided that the basic structure and intent of the draft Agreement presented on May 18, 2005 should be maintained.

With regard to the timing of execution of the Agreement and the governance structure issue, it was agreed that the revised agreement would be drafted with the intent to take effect upon transferal of control of the services to the City of Abbotsford and District of Mission. In the interim, a resolution would be formulated and adopted which would allow the construction of the
proposed water system to proceed in the interim until the transfer of the Central Fraser Valley Bulk Water Service function to the City of Abbotsford and District of Mission is completed. At such time a formal agreement among the three parties will be executed, which will follow the provisions of the resolution as adopted.

**DRAFT RESOLUTION**

In order to adequately represent all the foregoing requirements, the following draft resolution is being proposed.

**RECOMMENDATION:**

**THAT** the Central Fraser Valley Water Commission authorize access to the Norrish Creek main in the vicinity of the intersection of Lougheed Highway and Hawkins Pickle Road in Dewdney under staff supervision as required, effective from the date of adoption of this resolution, for the purposes of construction of the Dewdney Community Water Supply System;

**AND THAT** the Central Fraser Valley Water Commission authorize the sale of bulk water supply to the Fraser Valley Regional District for the purposes of supplying water to the Dewdney Community Water Supply System Service Area, according to the following conditions:

i. A supply of bulk water shall be provided at a rate of $0.40 per cubic metre for all amounts up to and including 101,380 cubic metres per year for a period of three years, effective from the date of commencement of the bulk water supply service.

ii. Any incremental amount exceeding the volume of 101,380 cubic metres shall be subject to a 5% surcharge on the rate per cubic metre.

iii. The amount of water to be supplied to the Regional District for the Service Area shall be measured by a bulk water meter of sufficient size and standard of construction to allow measurement of a wide range of flow rates, including very low flow and fire flow rates.

iv. The customers in the service area shall be required to pay a capital cost contribution charge to be determined as follows:

- Residential (per dwelling unit)
  - Low density (≤ 16 units/ha) $1,584
  - Medium density (17-45 units/ha) $1,200
  - High density (≥ 46 units/ha) $864

- Commercial (per m² of floor area) $3.60

- Industrial (per gross ha) $21,600

- Institutional (per m² of floor area) $2.40
Agricultural (per m² of floor area)
- Greenhouses (no valid on site water storage) $3.60
- Other (greenhouses with valid on site water storage) $1.20

v. The Regional District shall adopt a bylaw to regulate the terms and conditions of water use and service provision within the Service Area, which shall include water usage provisions consistent with those contained in the following bylaws and/or policies:

a. City of Abbotsford Waterworks Rates and Regulations Bylaw, 2001, as amended
b. District of Mission Water Bylaw No. 2196-1990, as amended
c. Any other water conservation policies formally adopted by the Commission.

AND FURTHER THAT the terms and conditions outlined in this resolution shall be used as the basis of a formal agreement for the provision of bulk water supply services to the Fraser Valley Regional District for the purposes of supplying the Dewdney Community Water Supply Service Area, to be executed jointly by the City of Abbotsford and District of Mission, following the transfer of the Central Fraser Valley Bulk Water Supply function to these municipalities.

JUSTIFICATION FOR RATE & VOLUME STRUCTURE

Volume to Be Supplied
The annual volume to be supplied is calculated using the peak day demand for the service area, annualized to provide a total amount of water in cubic metres, using the following formula:

\[ \text{Annual Base Volume} = (\text{Peak Day Demand} \times \text{Number of Days/Year}) + \text{Fire Volume} \]

The Feasibility Study provided by the Developer identifies average daily water demands for the various users in the Service Area, assuming 100% connection:

<table>
<thead>
<tr>
<th>Stave Lake Cedar Mill (domestic)</th>
<th>0.1 L/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading Post General Store (peak day)</td>
<td>0.1 L/s</td>
</tr>
<tr>
<td>Café (peak day)</td>
<td>0.15 L/s</td>
</tr>
<tr>
<td>School (peak day)</td>
<td>0.8 L/s</td>
</tr>
<tr>
<td>Pub (peak day)</td>
<td>0.3 L/s</td>
</tr>
<tr>
<td>22 single family units (peak day)</td>
<td>1.1 L/s</td>
</tr>
<tr>
<td>Total</td>
<td>2.55 L/s</td>
</tr>
<tr>
<td>Total for design purposes</td>
<td>3 L/s</td>
</tr>
</tbody>
</table>

Using the 3 litres/second design value for the entire Service Area:

\[
\text{Average Daily Consumption} = 3 \text{L/s} \times 86400 \text{s/day} \times 0.001 \text{ m}^3/\text{L}
\]
\[
= 260 \text{ m}^3/\text{day}
\]
In order to account for the potential of a fire-fighting episode occurring within the Service Area, an additional amount was calculated, assuming one eight-hour fire fighting episode per year, with a fire flow rate of 225 L/s.

\[
\text{Fire Fighting Volume} = \text{Fire Flow Rate} \times \text{Fire Fighting Episode Duration} = 225 \text{ L/s} \times 8 \text{ h} \times 3600 \text{ s/h} \times 0.001 \text{ m}^3/\text{L} = 6480 \text{ m}^3
\]

Therefore, the Annual Base Volume can be computed as:

\[
\text{Annual Base Volume} = (260 \text{ m}^3/\text{day} \times 365 \text{ days/year}) + 6480 \text{ m}^3 = 101,380 \text{ m}^3/\text{year}
\]

**Rate per Cubic Metre**

At present, total annual water production and total operating and capital costs are used to calculate a cost per cubic metre for the Central Fraser Valley Bulk Water Services function. Using this methodology, the cost per cubic metre for 2004 was approximately $0.29/m$.

Financial projections for the next five years suggest that, under the current Financial Plan for this service, the cost per cubic metre will be approximately $0.30/m^3$, and should not exceed $0.35/m^3$. A rate of $0.40/m^3$ is being proposed to account for administrative overheads related to provision of the service, and to allow for some flexibility in changes to the Financial Plan over the next five years. The rate review after the first three years of service will also provide an opportunity to revisit the rate structure.

**CONCLUSION**

It is hoped that the above recommendation will provide:

- The required access to the Norrish Creek main so that the developer can initiate construction of the system
- Assurance to the Commission that the construction of the connection will occur with the required level of involvement and inspection by Central Fraser Valley Bulk Water Supply Services staff
- An opportunity to expedite the construction process but still ensure that the agreement is executed at a point in time when the Commission and the Regional District have become two separate legal entities.

The support of the Utilities Management Committee on this issue is respectfully requested.