November 10, 2006

NOTICE TO THE GVRD WATER COMMITTEE

You are requested to attend a Regular Meeting of the GVRD Water Committee to be held at 9:00 am on November 15, 2006 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

AMENDED AGENDA

1. ADOPTION OF THE AGENDA

   1.1 November 15, 2006 Regular Meeting Agenda
       Staff Recommendation:
       That the Water Committee adopt the agenda for the Water Committee regular meeting scheduled for November 15, 2006 as circulated.

2. ADOPTION OF THE MINUTES

   2.1 October 11, 2006 Regular Meeting Minutes
       Staff Recommendation:
       That the Water Committee adopt the minutes of the Water Committee regular meeting held October 11, 2006 as circulated.

3. DELEGATIONS
   No delegations presented.

4. REPORTS FROM COMMITTEE OR STAFF

   4.1 Boundary Road Main No. 5 (Phase 3) – Pre-purchase of Steel Pipe and Valves
       Designated Speaker: Simon So
       Recommendation:
       That the GVWD Board authorize the expenditure of up to $10.8 million of budgeted capital funds for the pre-purchase of steel pipe and valves for Boundary Road Main No. 5 (Phase 3).

   4.2 Seymour-Capilano Filtration Project – Project Status
       Designated Speaker: Tim Jervis
       Recommendation:
       That the GVWD Board receive the report titled “Seymour-Capilano Filtration Project – Project Status” dated October 23, 2006 for information.
4.3 Manager’s Report  
*Designated Speaker: Toivo Allas*

**Recommendation:**
That the Water Committee receive the Manager’s Report dated October 18, 2006 for information.

4.4 Decision of Advertising Standards Canada (ASC) Regarding Brita Commercials and Advertisements  
*Designated Speaker: Bob Jones*

**Recommendation:**
That the GVWD Board request the Chair to write to Advertising Standards Canada regarding Brita commercials and advertisements, express support for the CWWA’s position that the ASC decision in this matter is unsatisfactory and request the ASC to re-open the case and require Brita to withdraw its advertisement.

5. INFORMATION ITEMS  
No items presented.

6. OTHER BUSINESS  
No items presented.

7. RESOLUTION TO CLOSE MEETING  
No items presented.

8. ADJOURNMENT
GREATER VANCOUVER REGIONAL DISTRICT
WATER COMMITTEE

Minutes of the Regular Meeting of the Greater Vancouver Regional District (GVRD) Water Committee held at 9:04 a.m. on Wednesday, October 11, 2006 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

PRESENT:
Chair, Director Scott Young, City of Port Coquitlam
Councillor Linda Barnes, City of Richmond
Director Derek Corrigan, City of Burnaby
Councillor Calvin Donnelly, City of New Westminster (arrived at 9:06 a.m.)
Councillor Janice Harris, District of North Vancouver
Councillor Meghan Lahti, City of Port Moody
Director Barbara Steele, City of Surrey (arrived at 9:15 a.m.)
Director Tim Stevenson, City of Vancouver (arrived at 9:21 a.m.)

ABSENT:
Vice Chair, Director Pamela Goldsmith-Jones, District of West Vancouver

STAFF:
Johnny Carline, Chief Administrative Officer
Toivo Allas, Manager, Policy and Planning Department
Tom Heath, Manager, Operations and Maintenance Department
Tim Jervis, Manager, Engineering and Construction Department
Klara Kutakova, Assistant to Regional Committees, Corporate Secretary’s Department

1. ADOPTION OF THE AGENDA

1.1 October 11, 2006 Regular Meeting Agenda

It was MOVED and SECONDED
That the Water Committee:

a) amend the agenda for the Water Committee regular meeting scheduled for October 11, 2006 by withdrawing item 4.5 “Manager’s Report”; and

b) adopt the agenda as amended.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 September 13, 2006 Regular Meeting Minutes

It was MOVED and SECONDED
That the Water Committee adopt the minutes of the Water Committee regular meeting held September 13, 2006 as circulated.

CARRIED

3. DELEGATIONS

No delegations presented.
4. REPORTS FROM COMMITTEE OR STAFF

4.1 2007 Programs and Strategic Priorities of the Water Committee
Report dated September 28, 2006 from Tim Jervis, Manager, Engineering and Construction Department, considering the proposed 2007 programs and priorities under the committee’s purview, as the basis for the budget to be considered at the October 20, 2006 budget workshop.

Presentation material was provided and is retained with the October 11, 2006 Water Committee agenda package.

9:06 a.m.
Councillor Donnelly arrived at the meeting.
9:15 a.m.
Director Steele arrived at the meeting.
9:21 a.m.
Director Stevenson arrived at the meeting.

Discussion ensued relative to the key drivers of the budget increase, the impact of external projects on the GVWD planning and budget, and promotion of tap water/reduction of bottled water use. Members requested that the GVWD prepare formal communication material, which would explain the water rate increase, and which could be attached to the municipal tax notice.

Request of Staff
Staff was requested to:
• provide the committee with a map outlining the GVWD infrastructure, and projects planned, underway and completed;
• forward to municipalities formal communication material explaining the water rate increase;
• refer the educational material related to the true cost of bottled water, the high quality of tap water and environmental impact of plastic bottles in landfills to the Environment Committee and the Waste Management Committee; and
• refer the energy recovery projects/proposals to the Environment Committee for information.

It was MOVED and SECONDED
That the Water Committee endorse the proposed programs and priorities, as outlined in the report dated September 28, 2006, titled “2007 Programs and Strategic Priorities of the Water Committee”, as the basis for the budget to be considered at the budget workshop on October 20, 2006.

CARRIED
Director Corrigan absent at the vote.
4.2 Pre-purchase of Steel Pipe and Valves for Douglas Road Main No. 2 and Capilano Main No. 5

Report dated September 14, 2006 from Simon So, Civil, Mechanical Design and Construction Division Manager, seeking authorization for the expenditure of budgeted capital funds for pre-purchase of steel pipe and valves for two water system projects which are included in the 2007 GVWD Budget and Long Range Plan.

It was MOVED and SECONDED

That the GVWD Board authorize the expenditure of budgeted capital funds for pre-purchase of steel pipe and valves for:

a) Douglas Road Main No. 2 - Canada Way South Section ($3.5 million); and

b) Capilano Main No. 5 - Selkirk to Little Mountain Section ($3.0 million).

CARRIED

Director Corrigan absent at the vote.

4.3 Status of Utilities Capital Expenditures to August 31, 2006

Report dated September 25, 2006 from Tim Jervis, Manager, Engineering and Construction Department, and Phil Trotzuk, Financial Planning and Operations Manager, Finance and Administration Department, providing an update on the status of utilities capital expenditures.

It was MOVED and SECONDED

That the Water Committee receive the report titled “Status of Utilities Capital Expenditures to August 31, 2006” dated September 25, 2006 for information.

CARRIED

4.4 Proposed Conditions – 2007 GVWD Water Permit

Report dated September 5, 2006 from Bob Jones, Quality Control Division Manager, Operations and Maintenance Department, outlining conditions being considered for the GVWD’s 2007 Water Permit by the GVRD’s Drinking Water Officer acting on instruction from the Administrative Council of Medical Health Officers of the Lower Mainland and informing about the GVWD’s ability to meet the proposed conditions.

It was MOVED and SECONDED

That the Water Committee receive the report dated September 5, 2006 titled “Proposed Conditions – 2007 GVWD Water Permit” for information.

CARRIED

4.5 Manager’s Report (Oral Report)

Pursuant to item 1.1 “Adoption of the Agenda”, this item was withdrawn.
5. INFORMATION ITEMS

5.1 Delegation to the GVRD Water Committee – *What is the Cost of a Bottle of Water?*

Letter dated September 22, 2006 from Scott Young, Chair, GVRD Water Committee to Rockridge Secondary School, regarding presentation titled “What is the Cost of a Bottle of Water?” delivered at the September 13, 2006 Water Committee meeting.

*It was MOVED and SECONDED*

That the Water Committee receive the correspondence dated September 22, 2006 titled “Delegation to the GVRD Water Committee – *What is the Cost of a Bottle of Water?*” for information.

CARRIED

6. OTHER BUSINESS

No items presented.

7. RESOLUTION TO CLOSE MEETING

No items presented.

8. ADJOURNMENT

*It was MOVED and SECONDED*

That the meeting now conclude.

CARRIED

(Time: 10:30 a.m.)

Klara Kutakova,  
Assistant to Regional Committees

Scott Young, Chair
To: Water Committee

From: Simon So  
Civil, Mechanical Design and Construction Division Manager  
Engineering and Construction Department

Date: October 17, 2006

Subject: **Boundary Road Main No. 5 (Phase 3) - Pre-purchase of Steel Pipe and Valves**

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**Recommendation:**

That the GVWD Board authorize the expenditure of up to $10.8 million of budgeted capital funds for the pre-purchase of steel pipe and valves for Boundary Road Main No. 5 (Phase 3).

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1. **PURPOSE**

To obtain Board authorization for the expenditure of budgeted capital funds for pre-purchase of steel pipe and valves for Boundary Road Main No. 5 (Phase 3).

2. **CONTEXT**

As shown on Attachment No. 1, the proposed Boundary Road Main No. 5 (BRM5) comprises approximately 9,700 meters (31,825 feet) of 1800 mm (72-inch) diameter pipe from north of the GVWD’s Vancouver Heights Reservoir and Pump Station to the Central Park Reservoir and Pump Station in Burnaby. This main will replace the existing Boundary Road Mains No. 2 and 3 and enhance long-term water supply capability and operational reliability.

Boundary Road Mains No. 2 and 3, built in 1925 and 1930 respectively, are part of the major supply system conveying water from the Seymour Lake source to Central Park Reservoir and Pump Station. However, both mains have reached the end of their useful life and are in poor condition. In recent years both mains have been susceptible to leaks on a frequent basis which required excavation for repairs in the heavily traveled Boundary Road corridor raising system reliability and public safety concerns.

Considerable changes in system demand and operational requirements have also occurred since the construction of the GVWD’s existing transmission mains in the Boundary Road corridor. This includes the proposed operational changes required after commissioning of the Seymour-Capilano Filtration Plant in 2008. These factors all contribute to the need to
construct BRM5 to strengthen this critical transmission link in the GVWD system to meet the short and long term needs for water supply and operational reliability and flexibility.

The proposed phased construction plan for BRM 5 is summarized as follows:

<table>
<thead>
<tr>
<th>Section</th>
<th>Length</th>
<th>Location</th>
<th>Construction Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>3,150m</td>
<td>• Vancouver Heights Reservoir (Eton St./Ingleton Ave.) to Rupert St./1st Ave.</td>
<td>2006/07</td>
</tr>
<tr>
<td>Phase 2</td>
<td>2,950m</td>
<td>• Rupert St. from 1st Ave. to 29th Ave.</td>
<td>2007/08</td>
</tr>
</tbody>
</table>
| Phase 3 | 3,600m | • Rupert St./29th Ave. to Central Park Reservoir  
• Vancouver Heights Reservoir to Edinburgh St./Ingleton Ave. | 2007/08 |

Phase 1 construction has been underway since May 2006 and completion is expected by May 2007. Detailed design for Phase 2 is expected to be complete by late 2006. A funding request for Phase 2 construction will be brought forward to the Board in February 2007 upon completion of design. Construction of Phase 2 is scheduled to commence in April 2007 with completion in April 2008. Phase 3, which is the subject of this request, comprises approximately 3,600 metres (11,800 feet) of 1800 mm (72-inch) diameter steel pipe, as shown on Attachment No. 1. Detailed design is anticipated to be complete in June 2007 and construction is scheduled for September 2007 to May 2008.

A public consultation plan for Phases 2 and 3 is being developed to ensure that the public and business owners are informed about the purpose and associated impact of the project and consulted on ways to best mitigate those impacts.

Due to the long lead time (currently up to 8 months) required to tender, award, manufacture, line/coat and deliver the large diameter steel pipe, and the long lead time (10-12 months) required for the delivery of the valves, this funding request is being brought forward at this time in order to maintain the project schedule.

The 2007 GVWD Budget and Long Range Plan include $18.9 million for construction of the Phase 3 main. This funding request for expenditure of up to $10.8 million of budgeted capital funds is to cover the cost of pre-purchase of steel pipe and valves and includes a 15% contingency. In accordance with the approval process for capital projects, a separate funding request for construction for this section will be brought forward for approval next year upon completion of detailed design and confirmation of the construction cost estimate.

3. ALTERNATIVES

a) Authorize the funding request and proceed with pre-purchase of steel pipe and valves. This alternative maintains the overall project schedule which is based on staged completion to ensure that Boundary Road Main No. 5 becomes operational prior to commissioning of the Seymour-Capilano Filtration Plant. Based on current forecasts for steel prices, late 2006 is a relatively good time for the GVWD to be buying steel products prior to the anticipated price increase in early 2007.
b) Defer the funding approval.

Alternative a) is recommended.

4. CONCLUSION

Construction of Boundary Road Main No. 5, between the GVWD's Vancouver Heights and Central Park Reservoirs, is taking place in stages to upgrade the transmission capacity of the Seymour supply system. This main needs to be operational prior to commissioning of the Seymour-Capilano Filtration Plant. Board authorization for the expenditure of up to $10.8 million of budgeted capital funds for the pre-purchase of steel pipe and valves for the Phase 3 section is requested in order to maintain the overall project schedule.

Attachments:

1. Drawing WF-2599, Sketch 46
To: Water Committee

From: Doug Neden, Water Treatment Engineering Division Manager
Engineering and Construction Department

Date: October 23, 2006

Subject: Seymour-Capilano Filtration Project – Project Status

Recommendation:

That the GVWD Board receive the report titled “Seymour-Capilano Filtration Project – Project Status” dated October 23, 2006 for information.

1. PURPOSE

To advise the Committee and Board of the status of the Seymour-Capilano Filtration Project to September 30, 2006.

2. CONTEXT

2.1 Implementation Status

a) Design: Detailed design for the project is substantially complete.

b) Materials and Equipment Procurement: Tenders for supply and installation of the filter media are scheduled to close on October 26, 2006. The energy recovery turbine, scheduled for tendering in mid-2007, is the largest significant equipment item remaining to be procured.

c) Construction: The construction status for each major component of the project is summarized as follows:

i) Capilano Pump Station (Kingston Construction Ltd.)

- Construction is substantially complete.
- Operational testing of the eight large (2,000 hp) pumps will commence in November.
- The station will be maintained in operational readiness for the completion of the twin tunnels needed to deliver water to and from the new filtration plant.
ii) **Break Head Tank and Energy Recovery Facility (Kingston Construction Ltd.)**

- Concrete for the Break Head Tank structure is complete and construction of the energy recovery turbine room atop the tank is nearing completion.
- Design of the power feed to the Capilano Pump Station and preparation of the turbine procurement tender is proceeding.
- Overall completion is 55%. Break Head Tank and Energy Recovery Facility projected substantial completion is December 2006 and December 2008, respectively.

iii) **Twin Tunnels (Bilfinger-Berger Canada Inc.)**

- TBM’s No. 1 and 2 commenced tunneling in the raw and treated water tunnels, respectively, during this reporting period. As of the end of September, the two machines were approximately 200m from the center of the Seymour shaft. Full-scale TBM excavation in both tunnels is scheduled to commence in early November.
- The twin tunnels steel pipe liner supply contract was awarded to Northwest Pipe Company in September. Pipe installation in the tunnels and shafts is scheduled to commence in early 2008.
- Work continues 24 hours a day, 7 days per week.
- Overall project completion is 25%, projected substantial completion is December 2008.

iv) **Filtration Plant (NAC Constructors Ltd.)**

- The filtration plant contractor continues to cast concrete for the filter walls, residuals handling area and the backwash water treatment area. Structural steel work on the post-treatment and residuals handling buildings is complete. Structural steel work is underway on the Operations and Maintenance Centre (OMC) building. Roofing and wall cladding of the post-treatment and residuals handling buildings is underway.
- Overall completion is 55%, projected substantial completion is December 2007 followed by testing and commissioning in spring 2008.

v) **Clearwells (Graham Industrial Services Ltd.)**

- Clearwells construction is substantially complete.
- Landscaping is underway and scheduled to be complete in this area in November.
Financial Status

The project budget is summarized as follows:

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Budget</th>
<th>Capital Expenditure Authorization</th>
<th>Cost Committed to Date</th>
<th>Projected Final Cost (See Notes 1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Project Management</td>
<td>$4,500,000</td>
<td>$4,500,000</td>
<td>$4,496,000</td>
<td>$4,496,000</td>
</tr>
<tr>
<td>Capilano Pump Station / Break Head Tank / Energy Recovery Facility</td>
<td>$87,300,000</td>
<td>$87,385,000</td>
<td>$63,523,000</td>
<td>$71,529,700</td>
</tr>
<tr>
<td>Twin Tunnels</td>
<td>$200,300,000</td>
<td>$194,130,000</td>
<td>$145,020,500</td>
<td>$169,351,200</td>
</tr>
<tr>
<td>Filtration Plant and Clearwells</td>
<td>$307,900,000</td>
<td>$307,900,000</td>
<td>$269,120,700</td>
<td>$317,354,400</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$600,000,000</td>
<td>$593,915,000</td>
<td>$482,160,200</td>
<td>$562,731,300</td>
</tr>
</tbody>
</table>

Notes: 1. Projected final cost is net of GST rebate.
       2. Provincial ($18M) and Federal/Provincial ($100M) infrastructure grants not included.
       3. BC Hydro grants for filtration plant geo-exchange ($100,000) and Capilano energy recovery ($800,000) not included.
       4. Contingency remaining (to capital expenditure authorization) = $31.2 million
       5. Overall project completion: 51% to September 30, 2006.

3. ALTERNATIVES

No alternatives presented.

4. CONCLUSION

This is the third quarterly status report for the construction phase of the Seymour-Capilano Filtration Project in 2006. Detailed design is substantially complete and all of the major construction contracts are well underway with two of five contracts substantially complete. Overall completion of the project is 51% as of the end of September 2006. The project continues to track within budget, with overall completion scheduled for the end of 2008.
To: Water Committee

From: Toivo Allas, Manager
Policy and Planning Department

Date: October 18, 2006

Re: Manager’s Report

Recommendation:
That the Water Committee receive the Manager’s Report, dated October 18, 2006 for information.

Identification of GVRD Water Infrastructure

At its regular meeting of October 11th, 2006, the Water Committee requested that staff provide a map showing the water system and upcoming infrastructure projects. The attached map shows the water transmission system and highlights the infrastructure improvements currently identified over the next ten years. This system profile is reviewed and updated as needed on an annual basis.

Attachment No. 1: Map of Water Transmission System