



Committee Meeting Date: November 15, 2006

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.

2.2 Financial Status

The project budget is summarized as follows:

Seymour-Capilano Filtration Project Cost Summary

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

- 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.