



**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE  
MEETING OF WEDNESDAY 07 JANUARY 2009**

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**SUBJECT**      **CORE AREA AND WEST SHORE WASTEWATER TREATMENT – APPROVAL OF PEER REVIEW QUESTIONS**

**PURPOSE**

To approve the questions for the peer review panel for the core area and west shore wastewater treatment project.

**BACKGROUND**

The consultant team is in the final stages of developing the wastewater management strategy options for the Core Area Liquid Waste Management committee (CALWMC) to consider during their workshops scheduled for the first quarter of 2009. These workshops will provide the committee an opportunity to review system strategy options.

With projects as large as the core area and west shore wastewater treatment project, a peer review process is frequently used to provide opportunity for an independent panel of experts to respond to questions elected officials may have as they make decisions regarding various system development options and strategies.

The peer review team (PRT) will assist the CALWMC in reviewing the strategy options developed by the consultant team and will provide an independent opinion when the committee is selecting the wastewater treatment strategy to be submitted in the revised Liquid Waste Management Plan (LWMP).

The PRT will be assembled by the team chair after CALWMC approves a list of key questions they wish the team to assess, such as project phasing, integrated resource management and system configuration, among others. A draft list of questions is attached (Appendix A).

**ALTERNATIVES**

1. Approve the draft list of questions prepared by Capital Regional District (CRD) staff.
2. Approve the draft list of questions prepared by CRD staff with amendments made by the CALWMC.
3. Defer approval of questions until the meeting of 28 January 2009.

**FINANCIAL IMPLICATIONS**

The cost of the peer review process is estimated at \$300,000 for Alternatives 1 and 2 with completion scheduled for May 2009. The cost would be charged to Bylaw No. 3461.

**SUMMARY/CONCLUSIONS**

The peer review process will provide the CALWMC with the opportunity to have their issues addressed by an independent panel of experts. It will offer the CALWMC a second opinion on the wastewater management strategies developed by the CRD's consultant team and it will assist them in making decisions on the wastewater management strategy to be submitted in the revised LWMP.

The peer review chair will begin to assemble the peer review panel in the latter part of January and the CALWMC will be able to add questions to the list, if required.

The PRT will be independent of the current consulting team and made up of world class experts from Canada and the United States in the implementation of major wastewater treatment projects, including resource recovery and distributed wastewater treatment.

**RECOMMENDATION**

That the Core Area Liquid Waste Management Committee approve the attached list of questions prepared by Capital Regional District staff for the Peer Review Team.

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Tony Brcic, PEng  
Project Manager, Wastewater Treatment Project

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Dwayne Kalynchuk, PEng  
General Manager, Environmental Services  
Concurrence

**COMMENTS**

TB:jt:jta  
Attachment: 1

**CORE AREA AND WEST SHORE SEWAGE TREATMENT  
QUESTIONS FOR PEER REVIEW TEAM**

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**1. Population, Capacity Projections and System Configuration**

- (a) Are the population projections reasonable?
- (b) Is the Stage 1 design horizon adequate?
- (c) Are the strategies flexible and adaptable for future population growth?
- (d) Are the assumptions and strategies appropriate for the management of wet weather flow? Are there other strategies that should be considered?
- (e) Are the assumptions and strategies appropriate for management of biosolids? Are there other strategies that should be considered?
- (f) Which strategy is preferable from an operational perspective?

**2. Economic and Financial Analysis**

- (a) Are the approach and assumptions for I&I reduction reasonable?
- (b) Are the assumptions for the program and costs reasonable for the following:
  - linear infrastructure
  - liquid treatment
  - biosolids
  - resource recovery (e.g., water reuse, biogas and future heat recovery)
- (c) Are the methods that were used to compare costs among the strategies appropriate? Are there other analytical approaches that should be considered in addition to the triple bottom line approach?
- (d) Which option offers the best value to stage the level of treatment?

**3. Technologies**

- (a) Was there adequate review of established and applied technologies? Are there other technologies available to suit the site constraints at the various sites?

**4. Resource Recovery**

- (a) Has adequate assessment been done on energy recovery from biosolids and heat extraction?
- (b) Does each strategy offer revenue generation from resource recovery? Which strategy maximizes revenue generation from resource recovery?
- (c) Are there any missed opportunities for integrated resource management including organics?
- (d) Has adequate assessment been done on the availability and viability of markets for biosolids, reclaimed water, and heat from effluent or raw sewage.

**5. Other**

- (a) Are there other significant topics that have not been adequately addressed in the work done to date?