

**CORE AREA AND WEST SHORE WASTEWATER TREATMENT
MARINE ENVIRONMENTAL IMPACT STUDY AND WASTEWATER CHARACTERIZATION**

MARINE ENVIRONMENTAL IMPACT STUDY SUMMARY

Environmental Impact Studies (EIS) are required under the British Columbia Municipal Sewage Regulation. The CRD initiated the EIS work for two of the most likely marine outfall locations (*i.e.*, Albert Head and Finnerty Cove) at the end of 2007.

The “Stage 1” EIS for Albert Head and Finnerty Cove were completed in March 2009 and the process generally followed the steps outlined in Section 5.1 of the Ministry of Environment's "Environmental Impact Study Guideline". Specifically, the “Stage 1” EIS involved compiling existing information and characterizing the potential environmental conditions and effects associated with the proposed outfalls using conservative (*i.e.*, worst-case) estimates of future effluent quality, outfall design, and seasonal current and weather patterns. In addition, information about commercial, recreational, and First Nations fisheries and aquaculture resources in the proposed areas was compiled. Known rare and endangered species were also documented along with non-consumptive (*e.g.*, recreational) uses of the proposed outfall areas. Uncertainties were identified and used to prioritize gaps in the existing knowledge, and provide recommendations for the pre-discharge baseline environmental monitoring (*i.e.*, “Stage 2” of the EIS). The final “Stage 1” EIS document (Golder Associates, 2009) incorporated comments from Ministry of Environment staff in Nanaimo both in program design and review of the findings.

A proposed “Stage 2” design was developed by Golder Associates based on the results of the “Stage 1” assessment. The proposed program was reviewed by Ministry of Environment staff in May 2009 and was initiated immediately thereafter. This first round of sampling involved “Spring-season” water-column and background characterization at the Albert Head and Finnerty Cove locations. The remainder of the “Stage 2” assessment will be put out to bid through a competitive process during summer 2009 and the successful proponent will be required to undertake more detailed oceanographic modeling, field-based oceanographic characterization (*e.g.*, current meters), baseline environmental and aquatic resource studies, and more refined predictions of effluent quality and outfall design starting in August/September 2009. It is anticipated that this “Stage 2” EIS process will take a total of approximately two years to complete for Albert Head and Finnerty Cove.

If additional potential outfall locations are identified by the CRD during the summer of 2009, they will be reviewed in light of the “Stage 2” EIS for Albert Head and Finnerty Cove. If the additional locations are near to either Albert Head or Finnerty Cove, the data collected for these two sites may be sufficient to meet the EIS needs for the additional locations. It is anticipated that ongoing dialogue with Ministry of Environment staff will resolve the most appropriate means of addressing any additional outfall locations.

WASTEWATER CHARACTERIZATION SUMMARY

Treatment design engineers will require detailed wastewater characterization data to determine future treatment plant capacities and process requirements. Since December 2008, CRD staff have been undertaking a comprehensive dry-weather, wet-weather and storm sampling effluent monitoring program at Macaulay and Clover points, as well as more frequent daily sampling. It is anticipated that these sampling programs will continue at Macaulay and Clover for at least the remainder of 2009, but more likely until spring 2010 to ensure adequate wet-weather data. This sampling will provide the daily, weekly and seasonal loading information required by future design engineers.

Depending on decisions made during the summer of 2009, additional up-stream sampling may also be required if future decentralized treatment plant locations are identified by the CRD.