

**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE  
MEETING OF WEDNESDAY, 23 MAY 2007**

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**SUBJECT      REGIONAL SOURCE CONTROL PROGRAM – 2006 ANNUAL REPORT**

**PURPOSE**

To present a summary of the activities and accomplishments of the Regional Source Control program (RSCP) in 2006.

**BACKGROUND**

The purpose of the RSCP is to reduce the amounts of contaminants that industries, businesses, institutions and households discharge into the district's sanitary sewer systems in order to protect sewage collection and treatment facilities, biosolids quality, public health and safety, and the receiving environment. A source control program is a key component of effective wastewater treatment and will form an integral part of the core area wastewater treatment strategy.

This staff report presents *Capital Regional District Regional Source Control Program Annual Report 2006*, dated April 2007. A summary of program activities and accomplishments in 2006 is provided in the report's executive summary (Appendix A). A full copy of the report is available on request from the Environmental Services department. This report does not include an overall assessment of the effectiveness of the program. The Core Area Liquid Waste Management Plan (LWMP) commits to reviewing the effectiveness of the program every five years. The next program review is scheduled for 2009.

**Summary of Main RSCP Accomplishments in 2006**

The annual report demonstrates that the RSCP made significant progress in 2006. Key accomplishments of the program are summarized below:

**Compliance Levels for Industry and Business**

In 2006, the highest compliance levels since the program began were reached, specifically:

- Record high levels for use of proper waste treatment were achieved in business sectors operating under codes of practice (COPs). Proper treatment works were installed or off-site waste management was being used at 100% of dental, dry cleaning, printing, fermentation and recreation facilities; 94% of carpet cleaning; 91% of automotive repair; 90% of vehicle wash; 78% of food services and 58% of laboratory operations inspected to date. The highest increase over 2005 data was recorded in the vehicle wash sector, where there was a 23% increase in use of proper waste treatment.
- The highest compliance levels since the program began were achieved by permitted industrial facilities and facilities operating under authorizations. Waste discharge permit compliance levels increased significantly from 90% in 2005 to 97% in 2006.

## **Inspections**

Inspection levels for business, industry and institutions met or exceeded their respective targets in 2006. The overall primary inspection level for COP operations was 22% in 2006, exceeding the target of 20% inspections per year. Waste discharge permit inspection levels in 2006 met the target of two inspections per permit per year.

## **Contaminant Reductions**

Reducing trends for contaminants in core area effluent and in sewage treatment plant biosolids have been maintained as a result of consistent district-wide application of source control regulations and outreach over the past 12 years.

- Results of sewage effluent data collected in the core area since the last trend analysis (2005) suggest that previously reported decreasing trends for key contaminants have continued.
- Levels of contaminants in sewage treatment plant biosolids have shown decreasing trends in recent years. Biosolids quality at the Saanich Peninsula wastewater treatment plant continued to meet Class A criteria. In 2006, mercury concentrations in biosolids showed further reductions to the lowest levels ever recorded at the plant, likely as a result of the implementation of the dental COP in 2001.
- Five-year contaminant reduction targets have been exceeded for the photographic imaging and dental sectors, based on inspections to date and progress on proper waste treatment within these sectors.

## **Outreach**

Preparation of a residential outreach plan, an important item in the RSCP five-year plan, was completed in 2006. The residential outreach plan focuses on reducing common contaminants in residential wastewater by raising public awareness and fostering behavioural change regarding current household waste disposal practices. The contaminant reductions achieved will compliment the reductions already gained through regulation of discharges from businesses and institutions and will further benefit the district's sewage collection and treatment systems and the environment. The plan is scheduled for implementation in early 2007, beginning with a general campaign launch emphasizing fats, oils and grease (FOG) reduction, to be followed by a surfactant (detergent) reduction initiative later in the year.

The above achievements underscore the effectiveness of the RSCP's approach to source control. In particular, the excellent compliance levels attained by businesses operating under COPs and permits are directly linked to the high levels of consistent inspection, education and followup provided by RSCP staff. In addition, the efforts expended by business, industry and institutions in the region play a very large part in the success of the program.

## **Next Steps – 2007**

The main areas of development of the program in 2007 will involve implementation of the key items in the RSCP five-year plan. These include:

- Completion of a contaminants management plan to identify priority and emerging contaminants and develop ways to target and address these contaminants. Contaminants management is an

important next step, building on the program's successful regulatory approach but involving a shift in focus towards avoidance, elimination or substitution of polluting products, processes or materials in order to make reductions in specific priority contaminants that have proven difficult to control or treat.

- Implementation of the residential outreach program component. RSCP outreach to date has focused on the industry/business sector. It is now time to duplicate the success in this area and address contaminants discharged by residents, using an educational approach. The residential outreach component was successfully launched in February 2007 with an initial emphasis on FOG reduction. The next phase of the plan, to be launched later in 2007, includes a surfactant (detergent) reduction initiative. Additional initiatives are planned for 2008.

### **ALTERNATIVES**

There are no alternatives.

### **FINANCIAL IMPLICATIONS**

Included in annual RSCP budget.

### **SUMMARY/CONCLUSIONS**

The annual report demonstrates that the RSCP made significant progress in 2006. The main accomplishments confirm the effectiveness of the RSCP's approach to source control. The excellent compliance levels achieved by regulated businesses are directly linked to the high levels of consistent inspection, education and followup provided by RSCP staff. In addition, the efforts expended by business, industry and institutions in the region play a very large part in the success of the program.

Reducing trends for contaminants in core area effluent and in sewage treatment plant biosolids have been maintained as a result of consistent district-wide application of source control regulations and outreach over the past 12 years.

Completion of a contaminants management plan and implementation of residential outreach initiatives in 2007 will help to ensure further reductions in priority contaminants are achieved in future. This will provide continued protection for sewage collection and treatment systems and the receiving environment.

### **RECOMMENDATIONS**

That the Core Area Liquid Waste Management committee recommend to the Board that:

1. the report, *Capital Regional District Regional Source Control Program Annual Report 2006*, dated April 2007, be received for information;
2. a copy of this report be forwarded to the Environment committee, the Saanich Peninsula Wastewater committee, the Ganges Sewer Local Service committee, the Highland Water and Sewer Local Services committee, the Magic Lake Estates Water and Sewer Local Services committee and the Port Renfrew Utility Services committee for information and comment; and
3. a copy of the report be sent to the Ministry of Environment to comply with Liquid Waste Management Plan reporting requirements.

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Laura A. Taylor, M.Sc.  
Senior Manager, Scientific Programs

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Dwayne Kalynchuk, PEng  
General Manager, Environmental Services  
Concurrence

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Kelly Daniels  
CAO Concurrence

**COMMENTS**

TS:bc  
Attachment: 1

**CAPITAL REGIONAL DISTRICT**

**REGIONAL SOURCE CONTROL PROGRAM**

**ANNUAL REPORT**  
**2006**

**April 2007**

**Prepared by:**

**Trevor Smyth, BSc**  
**Supervisor, Regional Source Control Program**

**CAPITAL REGIONAL DISTRICT  
REGIONAL SOURCE CONTROL PROGRAM ANNUAL REPORT 2006**

**EXECUTIVE SUMMARY**

The purpose of the Capital Regional District's (CRD) Regional Source Control program (RSCP) is to reduce the amounts of contaminants that industries, businesses, institutions and households discharge into the district's sanitary sewer systems in order to protect sewage collection and treatment facilities, biosolids quality, public health and safety, and the receiving environment.

The CRD Sewer Use Bylaw, adopted in 1994, serves as the main regulatory instrument for the RSCP. The program works to ensure that the bylaw and its associated policies and procedures are applied consistently within the separate collection areas for all CRD sewage facilities. Implementation of a region-wide program began in 1995 with regulation of larger industries under a permit system, followed by adoption of the first regulatory codes of practice (COPs) for commercial sectors in 1999. COPs regulating discharges from approximately 2,400 businesses within 11 sectors had been developed, adopted and implemented by the end of 2005.

The annual report demonstrates that the RSCP made significant progress in 2006. Sectors operating under COPs have reached record high levels for installation and use of proper waste treatment measures. Compliance levels at permitted industrial facilities and facilities operating under authorizations have also reached their highest points since the program began. Inspection levels for COPs and permits again met their respective targets in 2006. A key item in the RSCP five-year plan, preparation of a residential outreach plan, was completed in 2006. The program continued to meet the commitments set out in the Core Area and Saanich Peninsula Liquid Waste Management plans (LWMPs).

Results of sewage effluent data collected in the core area since the last trend analysis (in 2005) suggest that previously reported decreasing trends for key contaminants have continued. Levels of contaminants in sewage treatment plant biosolids have also shown decreasing trends in recent years. These contaminant reductions are thought to be due to the consistent district-wide application of source control regulations, including permits, authorizations, COPs and promotion of best management practices (BMPs) through business outreach by the RSCP since 1994.

The 2006 annual report presents background information, a summary of program activities and accomplishments over the period January to December 2006, and a brief account of initiatives planned for 2007. The main activities and accomplishments of the program in 2006 are outlined below.

**Industrial, Commercial and Institutional Liquid Waste Regulation**

- Use of proper waste treatment (treatment works installed or off-site waste management used) achieved record high levels in the following code sectors in 2006: dental, dry cleaning, printing, fermentation and recreation (100%); carpet cleaning (94%); automotive repair (91%); vehicle wash (90%); food services (78%); laboratory (58%). The highest increase over 2005 data was recorded in the vehicle wash sector (a 23% increase in use of proper waste treatment).
- A high level of proper waste treatment (94%) was also maintained within the photographic imaging sector.
- The overall primary inspection level for COP operations was 22% in 2006, meeting and exceeding the target of 20% inspections per year. A high number of repeat inspections were also required, particularly within the food services sector.
- Waste discharge permit compliance levels increased from 90% in 2005 to 97% in 2006.
- Authorization compliance levels were maintained at 100%.
- The level of waste discharge permit inspection in 2006 met the target of two inspections per permit per year and authorization inspections increased significantly over 2005 levels.

- Four major hospitals within the district were issued unique waste discharge permits that include compliance with applicable COPs, in addition to normal permit requirements to regularly monitor and report on waste discharges.

### **Monitoring**

- Two new key manhole sites were sampled within the Saanich Peninsula wastewater treatment plant (SPWWTP) collection area and the frequency of sampling at existing sites was increased.
- Waste discharge permit audit monitoring levels increased over 2005.
- The number of COP sectors sampled increased over 2005.

### **Enforcement**

- Thirty-one tickets were issued under the CRD Ticket Information Authorization (TIA) Bylaw as a result of 41 COP sector investigations by Bylaw Enforcement staff, mostly within the food services sector.
- Ten dischargers were subject to additional enforcement action in 2006; a conviction under the TIA Bylaw was obtained in one case.

### **Contaminants Management**

- Following conclusion of stakeholder discussions and development of sector outreach, a new regulation for kitchen equipment cleaning operations was adopted in November 2006.
- Investigations into the hair and aesthetics sector were completed and a BMP document was distributed to 259 businesses in the sector.
- An investigation into discharges from radiator repair operations was initiated.

### **Contaminant Reductions**

- Biosolids quality at the SPWWTP continued to meet Class A criteria. In 2006, mercury concentrations showed further reductions to the lowest levels ever recorded at the plant, likely as a result of the implementation of the dental COP in 2001.
- Preliminary assessment of sewage effluent data collected in the core and Saanich Peninsula areas in 2006 suggest that previously reported decreasing trends for key contaminants have likely continued.
- Five-year contaminant reduction targets have been exceeded for the photographic imaging and dental sectors, based on inspections to date and progress on proper waste treatment within these sectors. All other sectors are on track toward meeting their targets; however, their five-year inspection cycles have yet to be completed.
- All waste discharge permit holders have achieved, or are progressing toward achieving, their contaminant reduction targets.

### **Significant Incident Response**

- A plant upset at the SPWWTP was reported in January 2006. This incident resulted in increased inspection and monitoring within the collection system, review of sampling procedures and newspaper advisories regarding the impact of illegal discharges on the treatment plant and receiving environment. Although investigations into sources were inconclusive, no further incidents were reported in 2006.

### **Outreach**

- A residential outreach plan was completed as scheduled in the five-year plan.
- Revised guidebooks for dry cleaning, vehicle wash and laboratory COPs were finalized for distribution in 2007.

- News bulletins were completed and distributed to the dry cleaning and food services sectors.
- A brochure outlining the new regulation for kitchen equipment cleaning operations was distributed to the food services sector, kitchen cleaning businesses and municipal contacts in November 2006.
- RSCP staff participated in a local home show event to promote the success of the RSCP in reducing contaminant loads to sanitary sewer.

### **Program Planning and Development**

- Amendments to the Sewer Use Bylaw and RSCP policies were adopted in November 2006.
- The CRD TIA Bylaw was amended in December 2006.
- The process for amending the Source Control Local Services Establishing Bylaw was initiated in November 2006.
- The program continued to meet the commitments outlined in the Core Area and Saanich Peninsula LWMPs.

### **Next Steps – 2007**

The main areas of development of the program in 2007 will involve implementation of the key items in the five-year plan. These include:

- Completion of a contaminants management plan to identify priority and emerging contaminants, prepare reduction strategies and targets and report on trends. The plan will build on the program's successful regulatory approach, moving to a focus on avoidance, elimination or substitution of polluting products, processes or materials to achieve reductions in specific priority contaminants that have proven difficult to control or treat.
- Implementation of the residential outreach plan. The plan was successfully launched in February 2007 with an initial emphasis on fats, oils and grease reduction. The next phase of the plan, to be launched later in 2007, includes a surfactant reduction initiative.