



**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, 28 MAY 2008**

SUBJECT **REGIONAL SOURCE CONTROL PROGRAM ANNUAL REPORT 2007**

PURPOSE

To present a summary of the activities and accomplishments of the Regional Source Control program (RSCP) in 2007.

BACKGROUND

The purpose of the RSCP is to reduce the amount 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 2007*, dated April 2008. A summary of program activities and accomplishments in 2007 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 RSCP Accomplishments in 2007

The annual report demonstrates that the RSCP made significant progress in 2007. Key accomplishments of the program are summarized below:

Compliance Levels for Industry and Business

In 2007, 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 (COP). Proper treatment works were installed or offsite waste management was being used at 100% of photographic imaging, dry cleaning, printing, fermentation, carpet cleaning and recreation facilities; 98% of dental, 97% of automotive repair; 93% of vehicle wash; 91% of laboratory and 77% of food services operations inspected to date. The highest increase over 2006 data was recorded in the laboratory sector, where there was a 33% increase in use of proper waste treatment.
- The highest compliance levels since the program began were maintained by permitted industrial facilities and facilities operating under authorizations. Waste discharge permit compliance levels remained at 97%, the same as reported in 2006.

Inspections

Inspection levels for business, industry and institutions met and exceeded their respective targets in 2007. Regular inspections provide an important means of encouraging businesses to reduce their contaminant discharges to sewer.

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 in 2005 suggest that previously reported decreasing trends for key contaminants have continued or have reached a point of no significant change.
- 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. Mercury concentrations in biosolids were maintained at a very low level, likely as a result of the implementation of the dental COP in 2001.

Outreach

A key item in the RSCP five-year plan, a new residential outreach component, “Clean Water Begins at Home”, was launched in 2007. This initiative was comprised of two campaigns in 2007: one targeting reduction of fats, oils and grease and the other targeting reduction in use of laundry detergents.

These residential outreach campaigns focus 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.

Next Steps – 2008

The main areas of development of the program in 2008 will involve implementation of the key items in the five-year plan. These include:

- Completion and implementation 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.
- Continuing the implementation of the residential outreach plan to include a campaign to encourage the proper disposal of unused or expired pharmaceuticals.
- Internal review of RSCP objectives, program components and focus of activities for the next three years.

ALTERNATIVES

There are no alternatives.

FINANCIAL IMPLICATIONS

Included in the annual RSCP budget.

SUMMARY/CONCLUSIONS

The accomplishments outlined above underscore the effectiveness of the RSCP's approach to source control. In particular, the excellent compliance levels attained by businesses operating under COP 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.

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 13 years.

Completion and implementation of a contaminants management plan and continuing implementation of residential outreach initiatives in 2008 will help to ensure that 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 2007*, dated April 2008, be received for information;
2. a copy of this report be forwarded to the Environment committee, the Saanich Peninsula Wastewater commission, 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 Core Area Liquid Waste Management Plan reporting requirements.

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

Dwayne Kalynchuk, PEng
General Manager, Environmental Services
Concurrence

Kelly Daniels
CAO Concurrence

COMMENTS

TS:cam
Attachment: 1

**CAPITAL REGIONAL DISTRICT
REGIONAL SOURCE CONTROL PROGRAM ANNUAL REPORT 2007**

EXECUTIVE SUMMARY

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

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 with regulation of larger industries under a permit system in 1995, followed by adoption of the first regulatory codes of practice (COP) for commercial sectors in 1999. COP regulating discharges from approximately 2,200 businesses within 11 sectors had been developed, adopted and implemented by the end of 2005.

The annual report demonstrates that the RSCP made further progress in 2007. A key item in the RSCP five-year plan—"Clean Water Begins at Home", a new residential outreach component—was launched in 2007. Sectors operating under COP 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 maintained their highest points since the program began. Inspection levels for COP and permits exceeded their respective targets in 2007. The program continued to meet the commitments set out in the Core Area and Saanich Peninsula Liquid Waste Management plans (LWMP).

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 or reached a point of no significant change. 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, COP and promotion of best management practices (BMP) through business outreach by the RSCP since 1994.

The 2007 annual report presents background information, a summary of program activities and accomplishments over the period January to December 2007, and a brief account of initiatives planned for 2008. The main activities and accomplishments of the program in 2007 are outlined below.

Industrial, Commercial and Institutional Liquid Waste Regulation

- Use of proper waste treatment measures (treatment works installed or offsite waste management used) achieved record high levels in the following code sectors in 2007: photographic imaging (100%), carpet cleaning (100%), automotive repair (97%), vehicle wash (93%) and laboratory (91%).
- The highest increase over 2006 data was recorded in the laboratory sector (a 33% increase in use of proper waste treatment).
- High levels of proper waste treatment (77 to 100%) were also maintained within the remaining six code sectors.
- The overall primary inspection level for COP operations reached a record high of 25.5% in 2007, exceeding the target of 20% inspections per year. The individual sector inspection targets were met or exceeded for all sectors for the first time in 2007.
- Waste discharge permit compliance levels were maintained at 97%, the same as reported in 2006.
- Authorization compliance levels were maintained at 100%.
- The level of waste discharge permit inspection in 2007 exceeded the target of two inspections per permit per year and authorization inspections increased significantly over 2006 levels.

Monitoring

- COP monitoring was completed within all 11 sectors for the first time in 2007, and a record number of samples were collected and analysed.

Enforcement

- Fifteen tickets were issued under the CRD Ticket Information Authorization (TIA) Bylaw as a result of 28 COP sector investigations by Bylaw Enforcement staff—mostly within the food services sector.
- Fourteen dischargers were subject to additional enforcement action in 2007; charges under the Sewer Use Bylaw were laid against five businesses in 2007, resulting in two successful prosecutions.

Contaminants Management

- Initiatives aimed at further reducing the discharge of metals to sanitary sewers in 2007 included investigations into: the boatyard repair sector, sources of zinc in automotive repair wastewater, the use of molybdate corrosion inhibitors in heating and cooling systems, radiator repair operations and construction sector wastes. These initiatives have identified further opportunities for business regulation and outreach.
- A preliminary strategy for reducing the use of products containing 1,4-dichlorobenzene was prepared in 2007.

Contaminant Reductions

- Biosolids quality at the Saanich Peninsula wastewater treatment plant (SPWWTP) continued to meet Class A criteria in 2007. Mercury concentrations in biosolids were maintained at a very low level, likely as a result of the implementation of the dental COP in 2001.
- Preliminary assessment of sewage effluent data collected in the Core Area and Saanich Peninsula in 2007 suggests that previously reported decreasing trends for key contaminants have continued or reached a point of no significant change.
- 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 moving toward meeting their targets; however, with the exception of the food services sector, their 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

- There were no significant incidents reported at CRD sewage treatment plants in 2007.
- All incidents reported within sewage collection systems were investigated and successfully resolved.

Outreach

- A new residential outreach component, “Clean Water Begins at Home”, was launched as scheduled in the RSCP five-year plan. This initiative was comprised of two campaigns in 2007: one targeting reduction of fats, oils and grease (FOG) and the other targeting reduction in use of laundry detergents.
- Revised guidebooks for dry cleaning, vehicle wash and laboratory COP were finalized for distribution in 2007. Work was also initiated on a revised guidebook and a poster for food services.
- The 2007 EcoStar award for Pollution Prevention was presented to the Occupational Health, Safety and Environment Department of the University of Victoria for its systematic management of industrial and laboratory chemicals used by staff and students.
- RSCP web pages were redesigned to improve access to services and outreach information.

Data Management

- A project to enhance the RSCP database was initiated in 2007, in cooperation with CRD Water Services.

Program Planning and Development

- The Source Control Local Services Establishing Bylaw was amended in March 2007.
- The program continued to meet the commitments outlined in the Core Area and Saanich Peninsula LWMP.

Next Steps – 2008

The main areas of development of the program in 2008 will involve implementation of the key items in the five-year plan. These include:

- completion and implementation 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.
- continuing implementation of the residential outreach plan to include a campaign to encourage the proper disposal of unused or expired pharmaceuticals
- internal review of RSCP objectives, program components and focus of activities for the next three years