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REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION MEETING OF THURSDAY, FEBRUARY 20, 2014

SUBJECT REGIONAL SOURCE CONTROL PROGRAM – 2012 ANNUAL REPORT

ISSUE

To update the Saanich Peninsula Wastewater Commission (SPWWC) on the activities and accomplishments of the Regional Source Control Program (RSCP) in 2012 and to present the 2012 Annual Report for information.

BACKGROUND

On October 9, 2013, the Core Area Liquid Waste Management Committee received staff report #EPT 13-37, Core Area Liquid Waste Management Plan Programs – 2012 Consolidated Annual Report. The consolidated report includes a summary of the Regional Source Control Program 2012 Annual Report (executive summary attached). A copy of the annual report has been forwarded to the Ministry of Environment as recommended following approval by the Board. This staff report has been prepared for information and comment by the SPWWC. A detailed copy of the Regional Source Control Program 2012 Annual Report can be obtained upon request from the Environmental Partnerships Division.

FINANCIAL IMPLICATIONS

Preparation of the annual report was included in the RSCP budget for 2013.

ENVIRONMENTAL IMPLICATIONS

A long-term assessment (1990-2011) of wastewater trends for Macaulay Point, Clover Point and the Saanich Peninsula wastewater treatment plant was undertaken in 2012. Trend results confirmed findings of previous studies, showing even stronger evidence of stable or decreasing loads of priority substances in wastewater. These trends and observed reductions are attributed to a combination of source control efforts, which include application of regulations, public and industry education regarding product selection and use of proper waste treatment and disposal practices.

In 2012, the RSCP adopted a new "sector-by-sector" approach to inspections, focusing on four code-of-practice sectors (food service, dry-cleaning, vehicle washing and automotive repair). This approach resulted in a 40% increase in site visits, providing information for sector reviews and future bylaw amendments. Overall, business compliance rates remained high in 2012.

Outreach and education efforts focused on developing integrated messaging with other CRD programs but continued to maintain and adapt existing RSCP campaigns, while developing and initiating new campaigns. A partnership was established with the BC Pharmacy Association to promote the proper disposal of medications and health products for both residents and industry,

including residential outreach, educating pharmacists and an information session with health care workers (Island Health).


CONCLUSION


In addition to achieving high business compliance levels, maintaining a consistent inspection presence, further developing successful outreach initiatives and continuing decreasing trends for wastewater contaminants, the RSCP continued to be a key contributor to the mandate of the Environmental Partnerships Division. This included continuing coordinated inspections and development of integrated messaging with other programs within Parks & Environmental Services.

RECOMMENDATION

That the Saanich Peninsula Wastewater Commission receive the above report for information.


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Larisa Hutcheson, P.Eng.
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Ted Robbins
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Concurrence

HSL:km

Attachment: 1

REGIONAL SOURCE CONTROL PROGRAM 2012 ANNUAL REPORT

EXECUTIVE SUMMARY

Introduction

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

The CRD adopted a Sewer Use Bylaw in 1994 to regulate sanitary sewer discharges. 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 (COP) for commercial sectors in 1999. By the end of 2005, COP were developed, adopted and implemented to regulate discharges from approximately 2,000 businesses within 11 sectors. The RSCP works to ensure that the bylaw and its associated policies and procedures are applied consistently within all CRD sewage collection areas.

As part of the Environmental Partnerships Division (Partnerships), the RSCP shares a mission to deliver collaborative and responsible environmental services that engage and inspire changes in behaviour for the stewardship, protection and well-being of our region.

2012 Program Activities

Efforts to share information and coordinate inspections within Partnerships (Cross Connection Control and Demand Management), regulatory partners (Vancouver Island Health Authority and municipal inspectors) and other CRD divisions have been very successful, with 375 coordinated inspections being completed in 2012. It is anticipated that there will be increased collaboration between these programs, municipalities, business groups, institutions and other agencies in 2013 and beyond.

In 2012, the RSCP adopted a new "sector-by-sector" approach to COP inspections, which focused on four sectors (food services, dry cleaning, automotive repair and vehicle wash) providing information for a sector review and future COP amendments. This approach resulted in a greater number of inspections, repeat site visits and more comprehensive investigations in comparison to 2011. Overall, full compliance rates for COP, permitted industrial facilities and facilities operating under authorizations remained high in 2012.

A statistical assessment of local wastewater trends over the period 1990-2011 was undertaken in 2012. Trend results confirmed findings of previous studies, indicating stronger evidence of stable or decreasing loads in a range of priority substances in wastewater discharged from the region's main sewage outfalls. These continuing decreasing trends and recent changes in loads are thought to be largely due to a combination of the success of source control efforts at regulating contaminants, increasing public and industry awareness regarding product selection, and use of proper waste treatment practices.

In 2012, outreach and education efforts focused on developing integrated messaging with other CRD programs but continued to maintain and adapt existing RSCP campaigns, while developing and initiating new campaigns. Integrated messaging included development of industry videos and posters, taking a lead role in the development of themed campaigns under the umbrella initiative "Green 365" and ensuring new campaigns included linked key messaging.

The source control program continues to play an important part in achieving wastewater contaminant reductions and protecting sewage collection and treatment facilities throughout the region. This role will be particularly important once enhanced sewage treatment is established in the core area.

The 2012 annual report presents background information, a summary of program activities and accomplishments over the period January to December 2012, and a brief account of initiatives planned for 2013. The main activities and accomplishments of the program in 2012 are outlined below.

Industrial, Commercial and Institutional Liquid Waste Regulation

- COP inspections emphasized customer service in 2012 and a more qualitative "sector-by-sector" approach, with increased customer support - often requiring repeat site visits.
- This new approach focused on the food services, dry cleaning, automotive repair and vehicle wash sectors in 2012, providing an opportunity to review each sector and prepare for a future amendment of each COP.
- Increased number of site inspections carried out (815) compared to 2011 (577).
- Collaboration with dry cleaning businesses included multiple repeat samples and nine repeat site visits, allowing experimentation with technologies and modification of practices. Results included increased contaminant reduction, no tickets issued, two of the businesses investing in new filtering systems, and improved relations between the CRD inspectors and business owners.
- The vehicle wash and automotive sectors had three repeat visits, with overall high levels of compliance achieved through installation of properly-sized treatment works in past years.
- The food services sector saw a total of 62 repeat visits, including work with hauling companies, municipal staff, piloting emerging technologies, and developing best management practices.
- All permit inspections scheduled at the beginning of 2012 were completed within the year. Permits discharging priority contaminants received at least one or two additional inspections.

Monitoring

- Most monitoring targets set for 2012 were achieved.
- On average, there were two scheduled audit events per permit in 2012.
- All active operations within the dry cleaning COP sector were sampled in 2012.

Enforcement

- No tickets were issued under the CRD Ticket Information Authorization Bylaw.
- No charges were laid under the Sewer Use Bylaw in 2012.

Contaminants Management

- RSCP sponsored two investigative projects through the Royal Roads University (RRU) Environmental Science undergraduate program in 2012.
- A RRU Project titled *An Investigation into Unregulated Art Waste Discharges from Institutions, Businesses and Residences in the Capital Regional District* identified cadmium, chromium, copper and zinc used in paint and glaze pigments and chemicals used in textile dyeing as the main contaminants of concern.
- Another RRU Project titled *Emerging Contaminants of Concern* found Nonyl Phenols and Triclosan as the most suitable contaminants for targeting for reduction by the RSCP. Copper-based algaecides, silver nanoparticles and phthalates were found to be less suitable contaminants for targeting.
- A consultant was hired in late 2012 to undertake an inter-jurisdictional survey on arts and crafts waste management and prepare recommendations for the preparation of best management practices for the sector.

Contaminant Reductions

- Effluent trend assessment results for Macaulay and Clover points and Saanich Peninsula wastewater treatment plant influent and effluent monitoring over the period 1990-2011 have confirmed findings of previous studies indicating stronger evidence of stable or decreasing loads in a range of priority substances in wastewater discharged from the region's main sewage outfalls.

- Loads of priority metals (those presenting the greatest concern regarding aquatic toxicity), including cadmium, chromium, copper, lead, mercury, manganese, nickel and zinc, exhibited significant decreases ranging from 1% to 19% per year in core area effluent.
- Organic compounds, including certain polynuclear aromatic hydrocarbons, 1,4-dichlorobenzene and tetrachloroethene, showed significant decreases in loads, ranging from 2% to 16% per year in core area effluent.
- A significant decrease of 6% per year was also observed for total oil and grease at core area outfalls.
- For the fourth consecutive year, Ganges wastewater treatment plant mixed liquor results met the Class A criteria for all metals, including mercury.

Significant Incident Response

- There were two incidents involving fats, oils and grease build-up in municipal sewer lines in 2012 that were investigated by RSCP staff.

Residential Outreach

- A series of successful outreach events using the slogan "Fish Can't Say No to Drugs... Bring Old Meds to your Pharmacist" was held at local pharmacies during 2012. These events, promoting the provincial Medications Return Program, were supported by the Health Products Stewardship Association and the British Columbia Pharmacy Association (BCPhA).
- Joint CRD and BCPhA branded point-of-sale outreach material was distributed at local pharmacies during Pharmacy Awareness Week.
- The CRD continued to have one of the highest medication return rates per capita amongst regional districts in the province. Over 8.8 tonnes of medications were collected in the region during 2012.
- "Phat King", a social media campaign to promote the diversion of fats, oils and grease from the sanitary sewer, was delivered in 2012.
- "Slogan Master 2" challenged residents to create a slogan to promote reduced surfactant use.
- The "Save Your Soap" outreach campaign at local washing machine retailers and laundromats successfully highlighted the benefits of reduced surfactant use.
- "Clean Green" recipe cards were created to highlight low impact and proven recipes and clarify alternative household options. These cards were distributed at outreach events in 2012.
- All RSCP web pages showed increased use over 2011, with the highest increase related to residential medications return (137% increase).

Business Outreach

- Inspectors continued to be the front line staff delivering RSCP outreach messaging to local businesses. Outreach included distribution of RSCP sector-based posters and guidebooks. Inspectors delivered messaging regarding cross connection protection, water use reduction, the regional kitchen scraps strategy and other CRD initiatives.
- RSCP staff, in partnership with VIHA, delivered two Medications Return Program education sessions in 2012 for community health care staff and private clinicians who work with home-care patients throughout the CRD.
- Outreach events at local pharmacies promoting the slogan "Fish Can't Say No to Drugs... Bring Old Meds to your Pharmacist" not only benefited residents but were also opportunities to educate pharmacy staff about the Medications Return Program.
- The 2012 CRD EcoStar award event was co-sponsored by RSCP and staff again participated in the evaluation committee for the Water Stewardship category.
- Videos developed in 2011 for the food services and automotive repair sectors were distributed to the relevant stakeholders for review.

Partnerships Initiatives

- In total, 375 coordinated inspections were completed in 2012. These inspections included:
 - Providing access, information and/or services for two other programs within the division (Cross Connection Control and Demand Management).
 - Representation of other CRD Programs and initiatives to customers (e.g., Regional Kitchen Scraps Strategy)
 - Collaboration with other municipal or VIHA staff (including combined on-site inspections) to resolve sewer incidents, share discharge information and enhance reporting procedures.
- Partnerships with external agencies in 2012 included Metro Vancouver, VIHA, Royal Roads University, Camosun College and School District 61.
- RSCP was a major sponsor for integrating messaging from several divisions within the Environmental Services Department under the themed campaign initiative "Green 365" developed in 2012.

Data Management

- CRIMS Spatial, an integration of the RSCP regulatory database with the CRD geographic information system, was implemented in 2012.

Program Planning and Development

- For the first time, the RSCP annual report for 2011 was presented to the Core Area Liquid Waste Management Committee as part of a Consolidated Annual Report for all Liquid Waste Management Plan programs in March 2013. Copies of the annual report were subsequently sent to the Ministry of Environment.
- The RSCP continued to meet the commitments outlined in the Core Area and Saanich Peninsula LWMPs in 2012.

Performance Measures

- The percentage of regulated businesses with proper waste treatment installed in 2012 was 90%.
- For the fourth consecutive year, the percentage of mixed liquor samples that meet Class A standards for metals was 100%.
- Percentage of priority contaminants showing no increase in loads to the core area environment was 95% – based on a recent trend assessment for 1990-2011 core area wastewater data.

Next Steps–2013/2014

The main areas of program development in 2013/2014 include:

- Continued implementation of the RSCP five-year plan for 2011-2015.
- COP inspections in 2013 will focus on the dental, carpet cleaning, fermentation, food services, and recreation facility sectors.
- Review and development of standard operating procedures for the RSCP.
- Development of a new suite of performance measures for RSCP permit, authorization and COP inspections in 2013.
- Collaboration with internal and external partners to develop the division's "one window approach" to customer service for businesses.
- Development and implementation of pilot "Green 365" campaigns that include key complimentary residential outreach messaging from all divisions within Environmental Services.
- Continued research regarding priority and emerging contaminants.
- Review, update and amendment of the Sewer Use Bylaw in 2014.
- Preparation of a five-year review of the RSCP in 2014, covering the period 2009-2013



Regional Source Control Program 2012 Annual Report

Presentation to the
Saanich Peninsula Wastewater
Commission

Thursday, February 20, 2014

Introduction



Program Summary, Goals and Objectives

Pollution prevention



Protecting the marine environment



Protecting human health



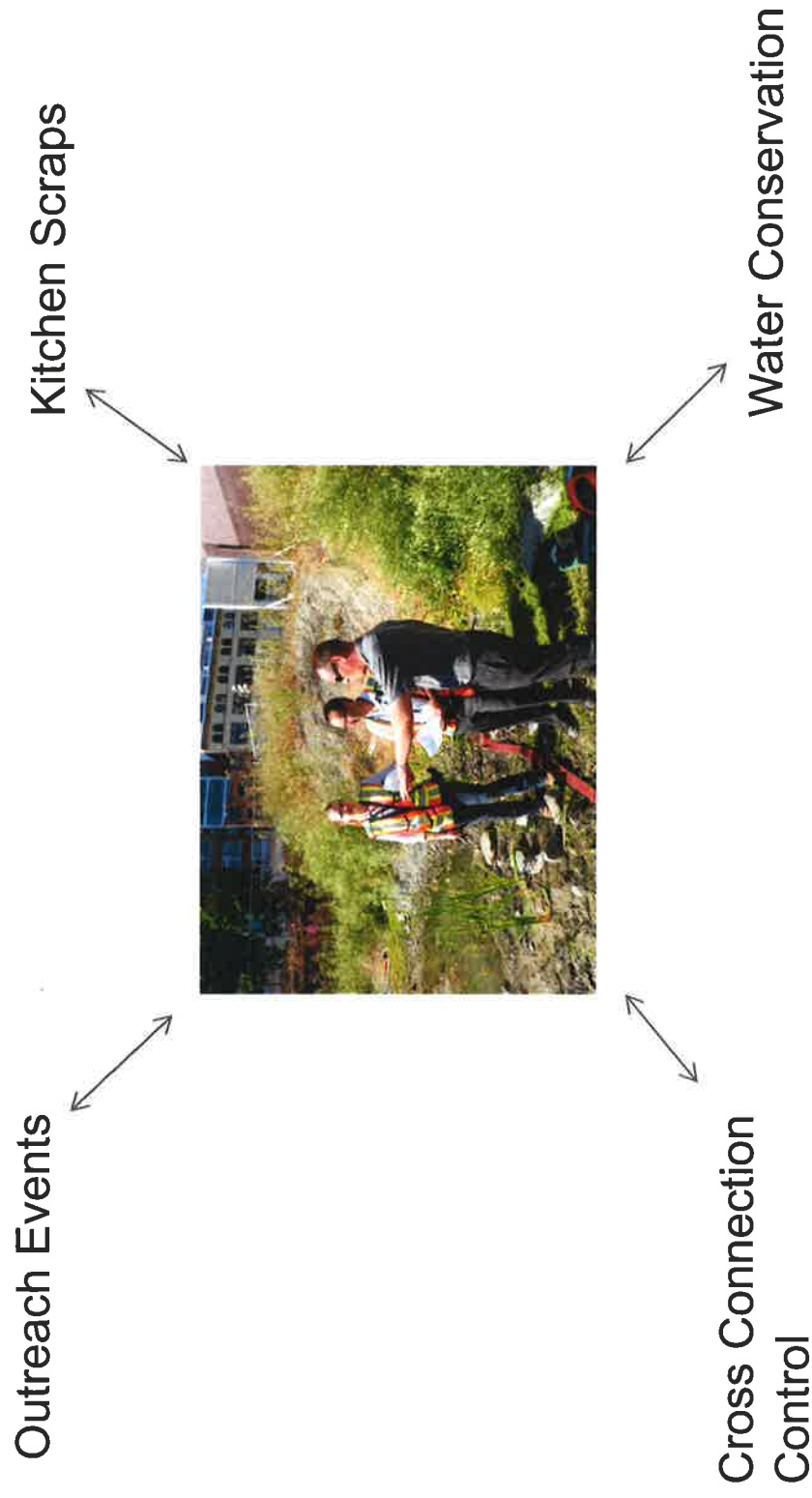
Protecting wastewater treatment and infrastructure



2012 Program Activities



Coordinated Efforts – Combined Messaging



2012 Program Activities

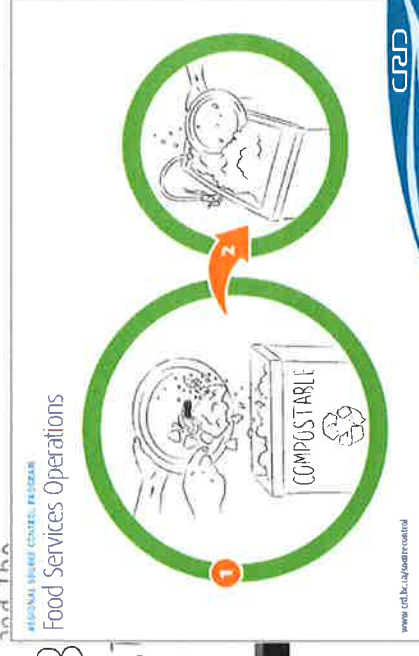


Outreach and Education:

- Residential
- Industrial, Commercial and Institutional



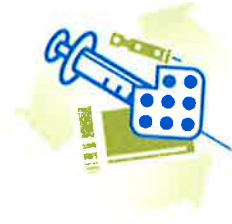
Pollution Prevention
Automotive Repair B
PART ONE: ENVIRONMENT



2012 Program Activities

CRPD

Working with Partners



HEALTH PRODUCTS
STEWARDSHIP
ASSOCIATION



British Columbia
Pharmacy Association

2012 Program Activities



Data Management: Efficient Planning and Faster Response



Performance Measures



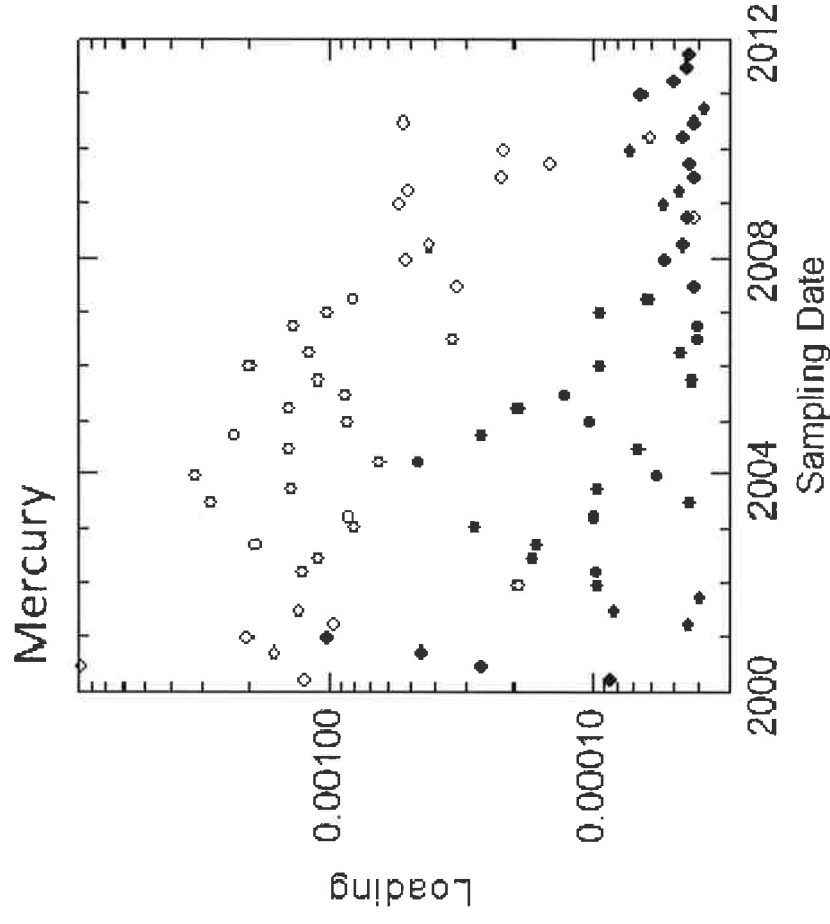
Regulatory Compliance: Pre-treatment at 90%



Performance Measures



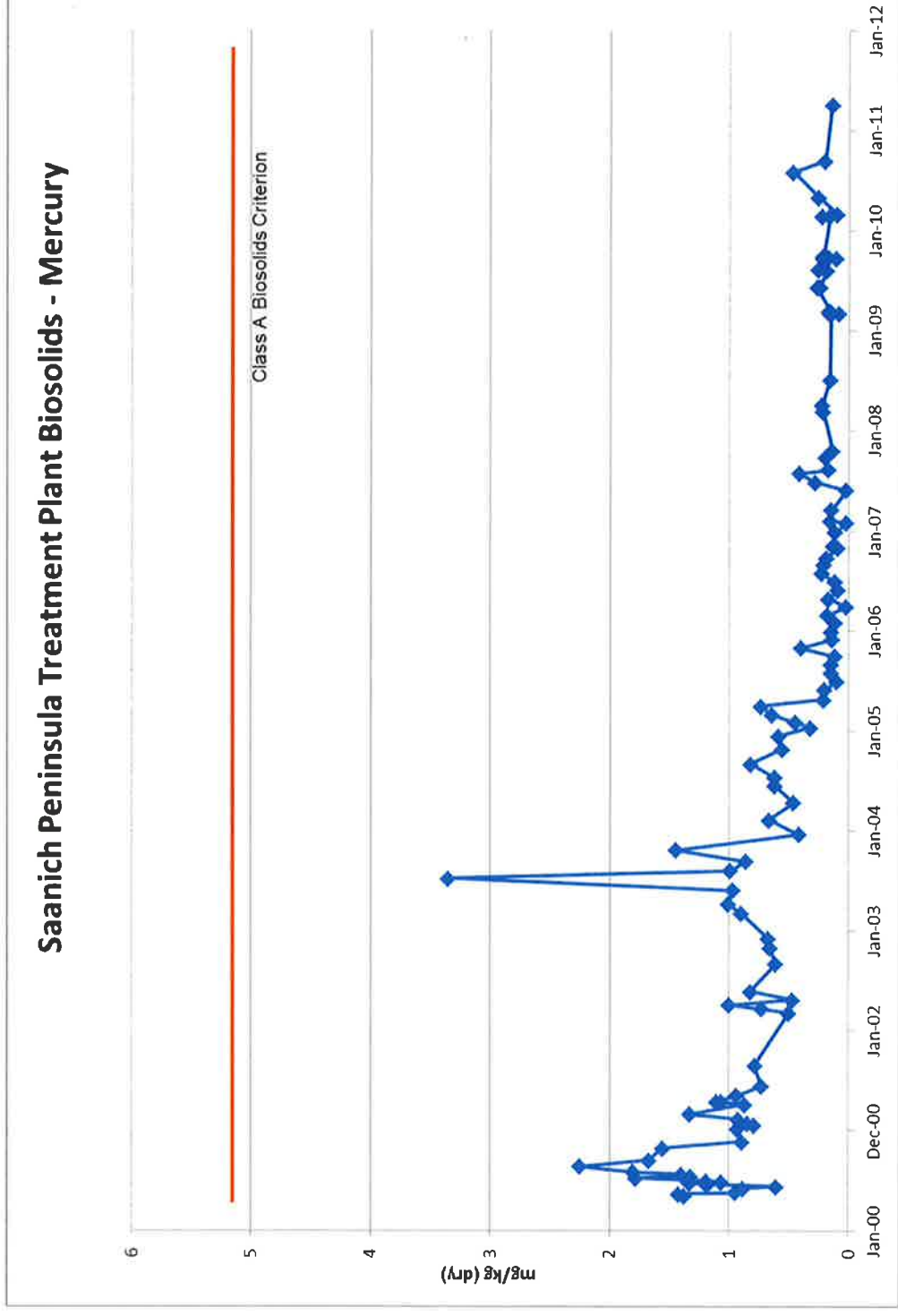
Contaminant Management: 95% of Priority Contaminants shows no increase



Performance Measures



Biosolids: Class "A" Biosolids for Four Consecutive Years



2013/2014 Next Steps

CRD

Development and implementation of integrated messaging with other CRD programs



Inspections strategy



2009-2013 Program review

