



2014 Annual Performance Report

DISTRICT OF SOOKE WASTEWATER SYSTEMS

2014 PERFORMANCE HIGHLIGHTS



OPERATIONAL EXCELLENCE

Operational Excellence is a philosophy of leadership, teamwork and problem solving resulting in continuous improvement throughout the organization by focusing on the needs of the customer, empowering employees, and optimizing existing activities in the process. Operational excellence includes activities related to the environment, quality assurance, community care and safety. This report will highlight our achievements from 2014 and outline opportunities we are pursuing in 2015.



OVERVIEW

Water quality in Sooke harbour is integral to the health of the environment and important to the economy of the District of Sooke. We are committed to ensuring that the effluent from the wastewater treatment and collection system exceeds the most stringent regulatory requirements in the province. Our ability to exceed these standards is our first priority. The District of Sooke's Wastewater Treatment Plant achieved effluent standards consistently better than regulatory standards in 2014. EPCOR also continued to exceed performance measures for lab quality control/quality assurance, staff training and safety activities.

FACILITIES

The District of Sooke owns the wastewater collection and treatment system, while EPCOR is responsible for its operation. The collection system includes:

- 51 km of piping
- 515 manholes
- Seven pump lift stations (Sooke Road, West Coast Road, Helgesen Road, Sunriver, Prestige, Mariner's Village and treatment plant)
- Marine discharge through a 500 mm diameter pipeline that travels 1.7 km to a 30 m deep outfall to Juan de Fuca Strait

To provide secondary wastewater treatment, the plant uses a Sequencing Batch Reactor (SBR) treatment process with UV disinfection. As a result, over 95 per cent of the total suspended solids and other regulated parameters are

removed, further enhancing the District of Sooke's natural environment.

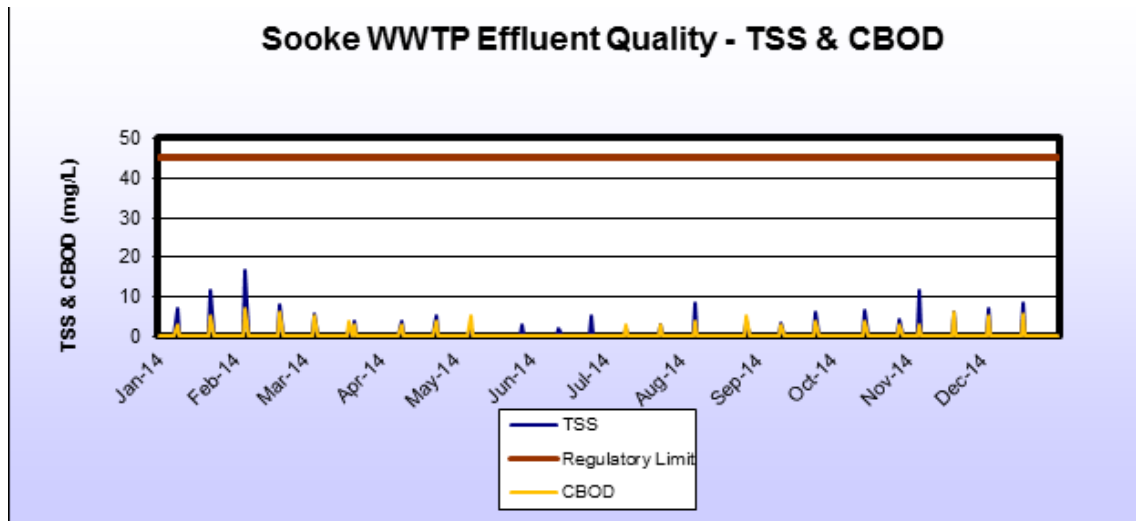
The plant has a design capacity of 3,000 cubic metres per day (annual average daily flow) and a peak wet weather flow capacity of 6,900 cubic metres per day. The plant is designed to accommodate an additional 3,000 cubic metres per day (average daily flow), if required.

Asset Management

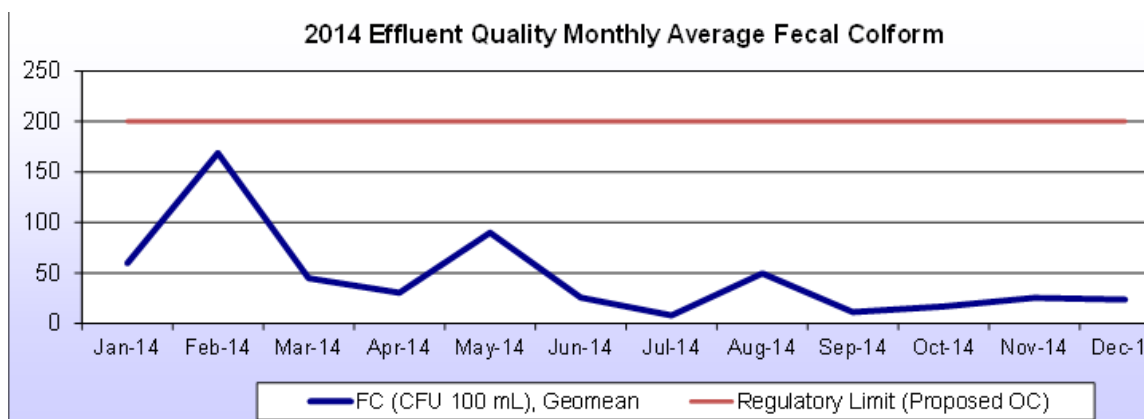
This year, EPCOR hired a diving contractor to inspect and remove debris from the outfall pipe. The contractor determined that the pipe and all related equipment are in good condition. The continued proper maintenance of equipment and excellent treatment quality are further assured with the replacement of air diffuser membranes in SBR #1.

WATER QUALITY

The District of Sooke's wastewater treatment system is capable of meeting some of the most stringent regulatory requirements in the province. All effluent standards were met in 2014, with a consistently better performance than regulated limits require. The plant monitors three very important parameters: total suspended solids (TSS), carbonaceous biochemical oxygen demand (CBOD), and fecal coliforms (FC). Water quality was better than regulatory standards, as shown by the effluent quality displayed in the two graphs below. Note: the lower the measure, the better the result.



- The Regulatory Limit for treated effluent parameters as proposed in the Operational Certificate (OC).
- Carbonaceous Biochemical Oxygen Demand: A measure of the quantity of oxygen used in the biochemical oxidation of organic matter in a specified time, at a specific temperature, and under specified conditions.
- Total Suspended Solids (TSS): The amount of insoluble solids floating and in suspension in the wastewater. The increase noted in March and April can be attributed to samples taken during high sludge volume.



- Fecal Coliform (FC): Fecal coliform is a bacteria originating in human or other warm-blooded animals, indicating contamination by fecal matter.
- Geomean: Geomean is a type of mean or average, defined as the nth root (where 'n' is the count of numbers) of the product of the numbers.

ENVIRONMENT

When it comes to the environment, EPCOR's focus is on protecting the watershed in the District of Sooke. Our environmental protection plan establishes the desired environmental outcomes for land, air and water. Highlights from 2014 include:

- Performing over 5,500 internal laboratory tests and 480 external laboratory tests on over 30 parameters; and
- Updating all emergency response procedures for the treatment plant and lift stations.

Water Quality & Environmental Performance Measures

| Activity | Actual Values | Target Values |
|---|---------------|---------------|
| | 2014 | Annual |
| Effluent Quality & Violations to Operational Certificates | 0 | 0 |
| Laboratory Quality Assurance/Quality Control Activities | 514 | 200 |
| Proactive Environmental/Quality Initiatives | 11 | 5 |
| Completion of Required Regulatory Reporting | 100% | 100% |



OUR PEOPLE

Our employees are the heart of our operations. EPCOR is committed to providing employees with opportunities to extend their learning in water and wastewater management and to seek certification. In 2014, training included professional wastewater treatment courses, construction safety, confined space entry, and standard first aid courses.

People & Safety Performance Measures

| Activity | Actual Values | Target Values |
|--------------------------------|---------------|---------------|
| | 2014 | Annual |
| Lost Time Accidents | 0 | 0 |
| Staff Training (hrs/employee) | 65 | 40 |
| Safety Preventative Activities | 116 | 30 |

SAFETY

Making sure our employees and contractors get home safely after work is a priority. In fact, our staff and contractors in Sooke achieved our ongoing goal of zero lost time incidents last year. The plant had one recordable safety incident.

Other safety highlights include:

- A confined space rescue training exercise for improved emergency preparedness;
- Continued safety preventative activities such as regular safety meetings, worksite inspections, workplace observations, and safe work plans prior to any non-routine tasks;
- Annual respirator fit and audiometric tests; and
- Near-miss tracking.

CUSTOMER SERVICE

EPCOR operations is committed to ensuring our shared community environment is protected. Our accredited wastewater operators are on call 24 hours per day year round in the event of an emergency. Our operators have access to EPCOR's diverse team of technical and emergency response specialists.

As part of its commitment to high-quality customer service, EPCOR responds to the District of Sooke's requests, concerns and public questions. Detailed records are maintained to ensure responses are valuable, timely and professional.

COMMUNITY INVESTMENT

EPCOR is proud to support the communities in which we operate through volunteering, partnerships and funding programs. This past year, EPCOR Sooke sponsored several local organizations and events:

- The Salmon Enhancement Society Annual Fishing Derby;
- Sooke Rotary Auction and Spring Fair;
- Legion Branch #54 Remembrance Day Ceremony;
- Sooke Chamber of Commerce Santa Parade;
- Sooke Harbourside Lions – Camp for Children with Disabilities;
- Shaw Ocean Discovery Centre;
- Communities in Bloom Presentation; and
- Sooke Fine Arts Show.



Sooke Rotary Fair - 2014

Customer Service & Efficiency Performance Measures

| Activity | Actual Values | Target Values |
|------------------------------|---------------|---------------|
| | 2014 | Annual |
| Service Outages < 24 hours | 100% | 90% |
| Community Related Activities | 8 | 4 |

