

# Sewer Use Bylaw Limits Review (Source Control Evaluation)

		City						Parameter	Current Limit	Proposed Limit
Parameter	Units	GVRD	Calgary	CRD (Vtoria)	Edmonton	Halifax				
lower pH limit	pH units	55	55	55	6	-	lower pH limit	50-55	50-55	
upper pH limit	pH units	105	10	95	10.5	-	upper pH limit	10.5-11.0	11.5-12.0	
BOD	mg/L	500	1200	500	10000	300	BOD	500	500	
TSS	mg/L	600	1200	300	3000	350	TSS	600	600	
OMG (Hydrocarbon)	mg/L	15	50	15	50	15	OMG	1500	1500	
OMG (Total)	mg/L	150	450	100	800	150				
Chlorides	mg/L	-	1500	-	-	1500				
Chlorine	mg/L	-	-	-	5	-				
Sulphates	mg/L	1500	1500	1500	800	1500				
Sulphides	mg/L	1	3	1	1	2				

The Greater Vancouver Sewerage and Drainage District's Sewer Use Bylaw (Bylaw 164), was reviewed in 2001 and proposed changes were presented to reflect "...the most recent scientific and technical knowledge regarding the impact of substances discharged to sewer on human health and safety, performance of the collection system and the receiving environment."

Focus was given to ten parameters; lower pH limit, upper pH limit, BOD, TSS, oil and grease (total), oil and grease (hydrocarbon), sulphates, sulphides, chlorine and chlorides. In developing a sewer use bylaw that would set appropriate limits for the ten parameters, a multi-city bylaw review was completed, as well as a comparison with the Ontario MOE Model Sewer Use Bylaw.

The physical impact of the ten parameters on infrastructure was included in the study; including the degree of corrosion and chemical degradation, concrete corrosion/erosion, steel/reinforced concrete corrosion, PVC degradation, and flow obstruction.

After a complete study of the various bylaw limits from other cities, and managing concerns from the GVRD, a proposed set of discharge limits for the ten parameters was developed. In general, the GVSDD discharge limits were within the range found in other cities. A cost impact study was also completed regarding the implementation of the limit changes to the GVRD. This was a brief study and detailed cost values were not included. Several pre-treatment options were also examined as part of this study.

Findings from this study were also presented at a stakeholders workshop attended by many industrial, commercial and institutional dischargers.

## PROJECT DETAILS

CLIENT: Greater Vancouver Regional District, Policy and Planning Dept

LOCATION: British Columbia, Canada

## REFERENCE INFORMATION

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## PROBLEM

The GVRD Liquid Waste Management Plan mandated that the district would upgrade their Regional Sewer Use Bylaw by 2001. Earth Tech assisted in the review of the Greater Vancouver Sewerage and Drainage District's Sewer Use Bylaw (Bylaw 164).

## CHALLENGES

Vapour space safety concerns and physical impact concerns with respect to the collection system were considered when developing appropriate limits for ten focus parameters.

## SOLUTION

Earth Tech consulted with various municipalities and provincial authorities to conduct a bylaw review of representative cities. The detailed study of physical impacts to the infrastructure and vapour space safety was based on an extensive literature review, and consultation with industry experts

## BENEFITS

Limits for ten focus parameters were clearly developed. An individual cost impact associated with the proposed bylaw limit changes was also completed, although a detailed analysis of the exact dollars was beyond the scope of the project.