

CITY OF ANACORTES 2012 CSO REPORT

GENERAL INFORMATION

The NPDES permit number WA-002025-7 is issued to the City of Anacortes. The permit identifies CSO by discharge number. This report will refer to the CSO as they are identified in the permit. The CSO are located as identified in the following table:

Discharge No.	Location		Receiving Water
002	Northernmost end of B Avenue	Latitude: 48 30'55" Longitude: 122 38'03"	Guemes Channel
004	Northernmost end of Q Avenue	Latitude: 48 31'18" Longitude: 122 36'34"	Guemes Channel

Discharge number 002 is monitored with a Marsh-McBirney Model 256A flow meter. The Model 256A flow meter measures level and velocity and reports flows to the treatment plant via a radio telemetry system. When the meter is active the plant control system is programmed to activate an alarm that indicates overflow at this CSO. The plant data acquisition system computes daily flow totals. The following information applies to the Marsh-McBirney flow meter systems at Discharge #002:

1. The flow meter level and velocity-sensing device is located directly in the outfall pipe.
2. The flow meter will detect a level in excess of 0.4 inches. Any flow that does not reach or exceed 0.4 inches will not be measured.
3. The flow meter is capable of detecting velocity only when the level in the pipe is in excess of one inch. Total flow is computed from the velocity and level measurements, therefore the flow cannot be totaled unless the level in the pipe exceeds one inch.
4. The flow meter is set to record the level and velocity for 60 seconds, once every fifteen minutes.
5. Flow information is reported from 12:00 p. m. (midnight) to 11:59:59 p. m. (midnight) on the indicated day.

Discharge number 003 – As reported in the 2010 CSO Reduction Plan Update discharge number three has been decommissioned. Improvements over the years have eliminated overflow events at this location. The outfall pipe has been plugged.

Discharge number 004 is monitored with a Krohne Magmeter, type IFS-4000/PF. The rate of flow measured by this meter is reported to the wastewater treatment plant via a radio telemetry system. The plant data acquisition system totals the flow data and includes the information on plant reports. A float switch also monitors this CSO. When the level in the sewer system approaches the height of the overflow weir the float is activated. This float switch activates an alarm at the wastewater treatment. Plant personnel are alerted of the impending CSO activity.

Rainfall reported is recorded at the Anacortes Wastewater Treatment Plant by a tipping bucket rain gauge. Rainfall totals are reported from 7:00 a. m. on the indicated day to 6:59:59 a. m. on the following day.

Daily flow totals for Discharge #002 and #004 are included in appendix A.

CSO #003 has been decommissioned and is no longer in service.

Rainfall data is included in appendix B.

Appendix C contains a copy of the public notice advertised in the Anacortes American, the City of Anacortes official newspaper of record, announcing the availability of the annual CSO report.

**DETAIL OF FREQUENCY, VOLUME AND COMPARISON TO BASELINE
CONDITION, DISCHARGE NO. 002, "B" AVE. CSO**

FREQUENCY and VOLUME

As stated previously, discharge number 002 is monitored with a Marsh-McBirney Model 256A flow meter. Flow information from this meter is transmitted to the treatment plant via a radio telemetry system. Reports containing this flow information are generated on a daily and monthly basis.

There are no overflow events at this CSO site to report for 2012.

Total rainfall measured at the Anacortes Wastewater Treatment Plant in 2012 was 26.64".

COMPARISON TO BASELINE

There has not been an overflow event at this CSO since 1997. A chart comparing current data to a baseline for this site is not included in this report as there is no data to put into the chart.

DETAIL OF FREQUENCY, VOLUME AND COMPARISON TO BASELINE CONDITION, DISCHARGE NO. 004, "Q" AVE. CSO

This CSO site is monitored with a Krohne Magmeter, type IFS-4000/PF. The rate of flow measured by this meter is reported to the wastewater treatment plant via a radio telemetry system. The plant data acquisition system totals the flow data and includes the information on plant reports. Impending over flow events are detected via a float switch which provides an alarm at the treatment plant.

There are no overflow events at this CSO site to report for 2012.

Total rainfall measured at the Anacortes Wastewater Treatment Plant in 2012 was 26.64".

COMPARISON TO BASELINE

Flow monitoring was installed on this CSO in January of 1998. A total of five overflow events caused by precipitation have occurred during the fifteen year time period that flow has been monitored at this site; one in 2003, and two caused by back to back storm events in 2007, one in 2009, and one in 2010.

The average frequency of overflow events at this CSO since flow monitoring was installed is equivalent to one event every three years, or a 33.3% probability of an overflow event occurring during any given year.

The NPDES permit requires that a summary be provided of the five year moving average number of CSO events be calculated and reported. During the last five years there have been two events at this CSO. This equates to an average of 0.4 events per year, or a 40% probability that a CSO event would occur during any given year.

A chart detailing overflow events and rainfall information for this CSO site during the most recent five year period is included at the end of this section.

CSO REDUCTION ACCOMPLISHMENTS

1. During this reporting period nineteen manholes and 3149 feet of sewer pipe was replaced. This work was part of what was intended to be the final phase of the “L” drainage basin I&I reduction project. Some of the conditions found in the ground during this work caused a significant increase in cost over the project estimate, and subsequently, the actual bid price of this work. As a result of this cost increase some of the work that was intended to be completed during 2012 was delayed until 2013. Three phases of the “L” drainage basin work have been completed. The expenditure to complete the most recent phase was \$564,243. Total amount spent to date on this project is \$1,118,656.

PLANNED IMPROVEMENTS

The improvements planned for 2013 are as follows:

1. The City will complete the final phase of the “L” drainage basin I&I reduction project. This final portion of the work in this basin is a CIPP project. At the time of the writing of this report the work is complete. Detail will be provided in the 2013 CSO report. To the extent possible, analysis of the effectiveness of the “L” drainage basin project will be conducted during 2013.
2. The City of Anacortes planned to study the Q Avenue drainage basin to determine the maximum possible height of the overflow weir that serves as the control device for discharge number four. Due to financial constraints this work will be conducted by City of Anacortes engineering staff. Engineering staff was also limited during 2012, and this prevented the completion of this project. During 2013 this study will be completed and the elevation of the weir at CSO #4 will be adjusted accordingly.