



## ANACORTES PUBLIC WORKS DEPARTMENT

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As required by NPDES Permit No. WA-002025-7, the City of Anacortes has enclosed the 2007 Combined Sewer Overflow reports for your review. If you have any questions, please contact me at 360.299.0953.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Thank you,

John B. Franz  
City of Anacortes  
Wastewater Treatment  
Plant Manager

**CITY OF ANACORTES  
2007 CSO REPORT**

**GENERAL INFORMATION**

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

<b>Discharge No.</b>	<b>Location</b>		<b>Receiving Water</b>
002	Northernmost end of B Avenue	Latitude: 48 30'55" Longitude: 122 38'03"	Guemes Channel
003	Northernmost end of M Avenue	Latitude: 48 31'14" Longitude: 122 36'56"	Guemes Channel
004	Northernmost end of Q Avenue	Latitude: 48 31'18" Longitude: 122 36'34"	Guemes Channel

Discharge number 002 was 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.

Discharge number 003 was monitored with Marsh-McBirney Model 260 portable flow meter system.

The Model 260 flow meter measures level and velocity. The level and velocity measurements are stored in the meter, in the field. The meter is periodically "uploaded" to a laptop computer. During the upload; level, velocity and error logs are transferred to the computer. The Marsh-McBirney Co. Floware for Windows version 2.80.2.8 software package was used to compute flows from this information.

The following information applies to the flow meter systems at Discharge #002 and #003:

1. The flow meter level and velocity-sensing device is located directly in the outfall pipe.
2. The flow meters detect levels in excess of 0.4 inches. In pipe flows that do not reach or exceed 0.4 inches are not measured.
3. The flow meters detect velocity only when the level 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 meters were 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 004 was 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.

Daily flow totals for Discharge #003 are included in appendix B.

Rainfall data is included in appendix C.

Appendix D 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 was monitored with a Marsh-McBirney Model 256A flow meter. Flow information from the meter is transmitted to the treatment plant via a radio telemetry system. Reports of this flow data are generated on a daily and monthly basis. This meter occasionally reports discharge amounts of from one to three gallons. These amounts reported are a result of noise from the flow meter or in the telemetry system. The day after this shows up on the report the flow channel has been examined and no evidence of any overflow exists.

There are no overflow events to report for 2007.

Total rainfall measured at the Anacortes Wastewater Treatment Plant in 2007 was 20.41".

Discharge from this CSO can be caused by failure of an adjacent wastewater pump (PS #3) station. No overflow events occurred in 2007 as a result of failure of PS #3. During the year 2000 significant improvements were made to PS #3. Most notably the pump station is now connected to a standby emergency power generator.

**COMPARISON TO BASELINE**

There has not been an overflow event at this CSO since 1997. Overflow events and the annual baseline are charted and included at the end of this section.

**DETAIL OF FREQUENCY, VOLUME AND COMPARISON TO BASELINE  
CONDITION, DISCHARGE NO. 003, "M" AVE. CSO**

The CSO is monitored with a portable flow meter. The flow meter is routinely read on a monthly basis. A meter was in service continuously for the entire monitoring period.

There were no overflow events in 2007.

Total rainfall measured in 2007 was 20.41"

**COMPARISON TO BASELINE**

There has not been an overflow event at this CSO since 1997. Overflow events and the annual baseline are charted and included at the end of this section.

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

There were two overflow events in 2007, both of these events occurred during January.

The first CSO event occurred on January 2<sup>nd</sup> and was the result of a rainstorm that began on January 1<sup>st</sup> and continued through January 2<sup>nd</sup>. The total rainfall for this event was 1.60"; 0.5 inches on January 1<sup>st</sup>, and 1.1" on the 2<sup>nd</sup>. This rainfall event caused the CSO to discharge 30,548 gallons during a 2.6 hour period.

The second event occurred on January 5<sup>th</sup>; flows in the sewer system were still significantly elevated from the rainfall event on January first and second, rain continued to fall with 0.31" recorded on the third, 0.04" on the fourth and then 0.87" on the fifth. The cumulative effect of this rainfall caused the CSO to discharge 7664 gallons over a period of 0.9 hours.

The rain that fell during the first five days of January represented 13.8% of the rainfall total for the entire calendar year.

Total amount of overflow during both events was 38,212 gallons.

Total duration of overflow was 3.5 hours.

Total rainfall measured in 2007 was 20.41"

**COMPARISON TO BASELINE**

Flow monitoring was installed on this CSO in January of 1998. The only other measured overflow event on this CSO since monitoring was installed occurred in 2003.

## **CSO REDUCTION ACCOMPLISHMENTS**

1. A storm sewer directly connected to the sanitary sewer was discovered in 1998. The storm sewer serves a three-square block area, Commercial Avenue to O Avenue (one block) and from 10<sup>th</sup> Street to 13<sup>th</sup> Street. This area is in the down town area of Anacortes and is mostly impervious surface. The City of Anacortes in cooperation with the Dept. of Ecology and Port of Anacortes executed a project that separated this storm drainage system from the sanitary sewer system.
2. Replaced 370 feet of old 6 inch clay sewer pipe, 696 feet of old, 8 inch clay or concrete sewer line, 345 feet of old 12 inch clay or concrete sewer line, and replaced 7 old and leaking sewer manholes.
3. A block (from 10<sup>th</sup> Street to 11<sup>th</sup> Street of Commercial Avenue) of the Central Business District sidewalks was replaced, and a large commercial parking lot storm drainage system was removed from the sanitary sewer collection system and diverted into the storm sewer system.

## **PLANNED IMPROVEMENTS**

The improvements planned for 2008 are as follows:

1. A block (from 2nd Street to 3rd Street of Commercial Avenue) of the Central Business District sidewalks will be replaced, and the adjacent building roof drains from commercial buildings collected and diverted into the storm sewer system.
2. The City is working on a plan to line or replace 3000 feet of old clay and concrete, deteriorated sanitary sewer pipe and 10 leaking manholes in the "L" drainage basin.
3. The City of Anacortes is preparing an update the Comprehensive Sanitary Sewer Plan including an update to the Combined Sewer Overflow Reduction Plan. The CSO Reduction Plan update is intended to comply with the conditions described in paragraph S12 of the NPDES permit. Specific projects will be identified in this plan to remove additional storm water from the sanitary sewer collection system.