



2004 ANNUAL CSO REPORT

PREPARED FOR THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

April 2005

TO COMPLY WITH
CONDITION S11 OF NPDES PERMIT NO. WA-0023973
AND
WAC 173-245-090(1)

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A. SUMMARY

This Report addresses the period from January 1, 2004 through December 31, 2004 with regards to the reporting requirements in the Permit. The City has five Combined Sewer Overflow (CSO) sites that are continuously monitored by Geotivity RMI1100 flow recorders. The City has a service contract with Geotivity, Inc., where they download the raw data, verify the data, and convert it to a format that can produce reports of varying length, as well as graphs.

The five CSO discharge outfalls are as follows:

- 001 - Pump Station #1, discharge into Strait of Juan De Fuca
- 006 - Oak & Railroad, discharge into Port Angeles Harbor
- 007 - Laurel & Railroad, discharge into Port Angeles Harbor
- 008 - 2nd & Lincoln, discharge into Peabody Creek culvert which discharges into into Port Angeles Harbor
- 010 - Francis Street (East Manhole), discharge into Port Angeles Harbor

B. CSO DISCHARGES - FREQUENCY AND VOLUME

Table 1 details for each site the number of overflows in 2004 and the total volumes, in gallons, of CSOs. The total for all five CSO sites was 1,796,488 gallons. This was much less than in previous years and is likely due to the more accurate flow monitoring devices (Geotivity Qtrek2s) that were installed at each site at the end of 2003.

C. CSO REDUCTION ACCOMPLISHMENTS IN 2004

The following projects were completed or initiated in 2004 as part of the City's CSO Reduction Plan:

1. Approximately \$50,000 was spent on disconnecting existing storm inlets/catch basins from sanitary sewer system.
2. A monthly maintenance program for the Qtrek2 flow monitoring devices was initiated in 2004. The City contracts with Geotivity, Inc. to not only host the CSO flow information on a website, but also inspect the flow recorders on a monthly basis to ensure that they stay in service.
3. Installed Tideflex valves at Oak and Laurel June 29-30, 2004. This eliminated most of the extreme high tide inflow of saltwater into the sewer system, which was triggering erroneous CSO flow recording,
4. The City eliminated CSO01 in December 2004. The actual physical disconnection occurred in January 2005, but practically speaking, potential overflows were eliminated with the completion of the gravity sewer line bypassing pump station #1 in December.
5. Installed screen in CSO01 and baffles in CSO 6,7,8, and 10 to intercept floatables.
6. Installed CSO notification signage at each CSO site, Hollywood Beach, and the City Pier, prepared and distributed CSO informational handouts, and placed CSO information on City's Website (www.cityofpa.us).

TABLE 1
FREQUENCY AND VOLUME OF 2004 CSO EVENTS AT EACH SITE BY MONTH

Month	CSO-001 ³		CSO-006		CSO-007		CSO-008		CSO-010	
	Freq.	Volume	Freq.	Volume	Freq.	Volume	Freq.	Volume	Freq.	Volume
Jan	0	0	2	64,989	3	336,884	0	0	0	0
Feb	0	0	0	0	1	394	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0
Apr	0	0	2	4,595	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0
Aug	2	5,280	2	27,968	0	0	0	0	0	0
Sep	1	71	1	1,600	1 ¹	1,000	0	0	1	69,043
Oct	0	0	1	15	2	7,187	0	0	0	0
Nov	1	8,677	3	2	4	66,000	0	0	0	0
Dec	0	0	0	0	4	175,223	0	0	2	1,027,560
Total	4	14,028	11	99,169	15	586,688	0	0	3	1,096,603

Notes:

- ¹ September 10, 2004 CSO event at CSO-007 could not be accurately quantified due to hardware problems. It was estimated to be 1,000 gallons, since no other CSO sites experienced an event that day.
- ² Total volume for all five CSO outfalls was 1,796,488 gallons.
- ³ CSO-001 was eliminated in December 2004

D. CSO PROJECTS PLANNED FOR 2005

1. Design and construction of repairs to outfall pipes located at CSO06 and CSO07, to eliminate saltwater intrusion through leaking joints and cracks during extreme high tide events.
2. Continue the disconnection program (\$50,000 per year on average) for storm inlets/catch basins and incorporate disconnections into adjacent public works projects.

E. NINE MINIMUM CONTROLS

The nine minimum controls as described in S11.B.1 to 9 of the permit are being followed as described in the Port Angeles WWTP Combined Sewer Overflow Pollution Prevention Plan, dated September 2004, which was submitted per item 7 of order DE 04WQSR-6042. The Plan was submitted along with a revised Sampling and Analysis Plan that was submitted per item 5 of the same order. Ecology has acknowledged receipt of these documents and that they meet the requirements in the order.

The following is a summary of activities in 2004 supporting the nine minimum controls:

1. Proper operation and regular maintenance program for the sewer system

Since May 17, 2004 Collections and WWTP staff have performed maintenance at all the lift stations according to the work orders set up in the City of Port Angeles HTE software program. Prior to this, weekly maintenance was recorded in the log books found at each pump station. Visual inspections of CSO outfalls, regulator structures, and signs are also tracked in the City of Port Angeles HTE software since June 2004. WWTP Staff started using CSO survey and inspection forms to record information found after each overflow event, as per the sampling plan, as of October 1, 2004. These are also a work order in the City of Port Angeles HTE software. Work orders to perform these tasks print out periodically at the WWTP office and are forwarded to work crews. Finished work orders are used to update the HTE work orders system maintained by WWTP staff. Finished work orders are then filed in the appropriate year 'CSO field reports' file in the Superintendent's office. The WWTP Superintendent also collects data from the Wastewater Collections crew monthly, and for 2004: 44,211 feet of sanitary sewer was jetted, 600 feet of storm sewer was jetted, 7,960 feet of sanitary sewer was root foamed, 15 backed up sewers were called in (in the City), and 33 backed up sewers were called in on private property.

2. Maximum use of the collection system for storage

The leachate ponds at the Port Angeles Landfill (PALF) were used for flow retention numerous times in late 2004 in order to allow construction for the removal of CSO 001. We have not added any significant storage to the collection system in 2004. The collection system does not have any appreciable oversized sewers or wet wells at pump stations to provide storage capacity.

3. Review and modification of pretreatment requirements to assure CSO impacts are minimized

In 2004, we have started to receive sewage from septage pumpers through the use of long term contracts. This is in preparation for the upcoming Fats, Oil, and Grease (FOG) inspection program (September 2005). The 2004 Pretreatment Report was mailed to Ecology on October 22, 2004 and it reflected one new and two revised permits. We also issued a temporary permit to Washington State DOT to take wash water from the graving yard archaeological site associated with the Hood Canal Bridge replacement project. The graving dock site has since closed and wash water is no longer being taken.

Enforcement for the pretreatment program has consisted of 11 telephone calls and 6 meetings for the year. We only had 14 permits in effect in 2004. None of the local limits in the City's sewer ordinance were exceeded. The POTW has not had any biological upsets or any pass through events. Sampling and monitoring of CSO sites have shown no appreciable impacts as is noted later in the report. We did clean one of the 250,000 gallon digesters in 2004 and it is now coming back to its previous mesophilic operating stage.

4. Maximization of flow to the publicly owned treatment works (POTW) for treatment

The City of Port Angeles has done some control improvements to the POTW in 2004 that will be finished in 2005. This includes controls for the Trickling Filter recycling and secondary bypass system. The secondary bypass controls will allow us to treat and disinfect flows above 10.6 mgd. We are also installing a flow recorder on the secondary bypass line. The emergency secondary bypass line will then no longer be used except in the event of a process failure. This work is scheduled for completion in June of 2005. The POTW has had all units on line and taken the maximum flow delivered from the sanitary sewer system in 2004.

5. Prohibition of CSOs during dry weather

Dry weather overflows are treated like a spill investigation and a City of Port Angeles "Pollution Investigation Checklist" is always used to report these. There has been no record of a dry weather overflow in 2004. We are continuing to receive reports from Geotivity on flows at the CSO sites and checking them for any dry weather flows. These records also show no dry weather overflows.

6. Control of solid and floatable materials in CSO's

A screen was installed on CSO 001 on May 17, 2004 to capture floatables. CSO 001 has since been disconnected from the sanitary system as of January 26, 2005 and the flow monitoring station was removed. Baffles were installed at CSO 006 on May 11, 2004, CSO 007 on May 12, 2004, CSO 010 on May 14, 2004, and CSO 008 on May 17, 2004. WWTP staff inspected the baffles and discharge areas after each overflow event. Survey reports show the baffles have successfully kept the floatables and solids out of the overflow discharge pipes.

7. Pollution Prevention

In 2004, the City of Port Angeles Street and Parks Division removed 419.57 wet tons of material through street sweeping maintenance. A total of 4,341 miles of road surface was swept in 2004. They also removed (by educting) 91.42 wet tons of combined catch basin material. A total of 569 catch basins were cleaned in 2004. These materials were dumped into the active pit at the Port Angeles Landfill (PALF). A household hazardous waste collection event was held in Port Angeles on September 24th and 25th (along with one in Sequim on September 26th) and a total of 68,379 pounds of waste was collected in Clallam County. The City of Port Angeles Street and Parks Division staff have labeled new catch basins for no dumping. They have also maintained the daily pickup of the downtown receptacles. Funding for the City of Port Angeles Pollution Prevention Plan has been maintained through sewer and stormwater billing to provide these services.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and impacts

Geotivity has maintained the internet notification system that emails stakeholders whenever a CSO event begins or ends. I have received no complaints on the operation of this system and it works well. The CSO notification signs located at each of the five discharge sites, Hollywood Beach, and at the City Pier have been maintained. The signs are being checked by the Wastewater Collection crew and a record of the inspection is entered using the HTE monthly work orders. Signs that are destroyed or missing are promptly replaced by WWTP staff. Four signs were replaced in 2004. In addition, there are handouts explaining the status of the City of Port Angeles CSO program at the front counter where citizens pay bills and take out permits. This information was mailed in the September 2004 utility billing. We also have that information available on the City of Port Angeles web site located at www.cityofpa.us.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls

As of October 1, 2004, WWTP staff are using the CSO survey and inspection forms to record information regarding each overflow event, as per the sampling plan. This sampling and survey information is kept in a binder in the WWTP Lab and is updated anytime a new survey or sampling event is performed. Following is the CSO lab data for 2004.

City of Port Angeles - WWTP

CSO Data 2004 Data

DISCHARGE LOCATIONS	Suspended Solids (mg/l)		Fecal Coliform (mg/100ml.)		Suspended Solids (mg/l)		Fecal Coliform (mg/100ml.)		Suspended Solids (mg/l)		Fecal Coliform (mg/100ml.)	
	Manhole	Strait	Manhole	Strait	Manhole	Strait	Manhole	Strait	Manhole	Strait	Manhole	Strait
	Date		Date		Date		Date		Date		Date	
	Results		Results		Results		Results		Results		Results	
Pump Stn. One (001)												
Oak & Railroad (006)	10/8/2004 108	10/8/2004 76.5	10/8/2004 310,000	10/8/2004 12.8	11/1/2004 218	11/1/2004 NA	11/1/2004 4.4 X 10 ⁷	11/1/2004 E3	12/8/2004 49	12/8/2004 NA	12/8/2004 2.0 X 10 ⁴	12/8/2004 12.4
Laurel & Railroad (007)	10/8/2004 127	10/8/2004 21.5	10/8/2004 E144,144	10/8/2004 10.4	11/1/2004 285.6	11/1/2004 NA	11/1/2004 4.8 X 10 ⁷	11/1/2004 E6	12/8/2004 170	12/8/2004 NA	12/8/2004 2.1 X 10 ⁷	12/8/2004 8
2nd & Lincoln (008)												
Francis Street (010)												

Note: "NA" indicates no data required for this site.