



## **King County**

Department of Natural Resources and Parks  
Wastewater Treatment Division

### **West Section**

WTP-NR-0100  
1400 Discovery Park Blvd  
Seattle, WA 98199  
206-263-3800 Fax 206-263-3850  
TTY Relay: 711  
<http://dnr.metrokc.gov/wtd/>

January 8, 2018

Shawn McKone  
Department of Ecology  
Northwest Regional Office  
3190 160th Avenue SE  
Bellevue, WA 98008-5452

**Re:** Hanford Street Regulator / Outfall Station, December 29, 2017 – January 1, 2018

Dear Mr. McKone:

On December 29, significant rainfall resulted in CSOs to discharge throughout the area, including from the Hanford Street Outfall Station.

As the storm passed, the Hanford overflow gate remained partially open. Staff later noticed unusually high flows at Interbay and initiated an investigation. Staff discovered the open gate and manually closed the gate on January 1 at 2 p.m. After its discovery, staff reported the overflow to DOE and the incident was assigned ERTS # 678207.

The Hanford Regulator Station is located at 2999 East Marginal Way South, and the Hanford Outfall Station is located at 2999-1/2 East Marginal Way South. A system flow schematic for that location has been attached for your reference.

We have estimated the non-CSO overflow volume at 5.5 million gallons over 15.9 hours.

Maintenance staff from both the mechanical and instrumentation/electrical groups thoroughly examined the station and the event data. They have determined that the failure of the Hanford Outfall Gate to close was caused by a failure of the Outfall Gate Close Auto Relay (OCAR) during the event.

A review of the event data showed the gate modulating and controlling as required at the start of the event. The relay appeared to have failed mid-event around 1:20 p.m. on December 29 when modulation in the closed direction stopped. However, there were no non-CSO overflows until December 30, starting at 4:55 p.m.

Prior to that time, the interceptor level remained above the setpoint where the regulator gate is closed so any flow out through the gate would have been considered a CSO. If the tide level was above the trunk level, there would have been flow into the collection system.

The table below summarizes when there were discharges/overflows (out) from Hanford, during the December 29 through January 1 period. During periods outside of those listed, saltwater intrusion was occurring with water entering the collection system, rather than sewage going out.

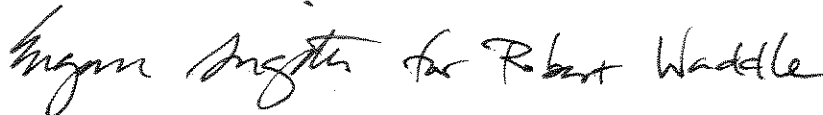
<b>Overflow periods (starting and ending times)</b>	<b>CSO or non-CSO</b>	<b>Volume (MG)</b>	<b>Time (Hrs)</b>
12/29 06:55 – 12/30 05:30	CSO	50.0	22.7
12/30 11:15 – 12/30 16:10	CSO	7.3	4.9
12/30 16:55 – 12/31 00:15	Non-CSO	1.6	7.3
12/31 13:30 – 12/31 15:40 (intermittently)	Non-CSO	1.7	1.5
12/31 17:50 – 1/1 00:55	Non-CSO	2.2	7.1

The faulty relay has since been replaced, and staff have completely tested the gate control and confirmed that it is operating properly.

In addition, a “gate out of position” alarm will be added at Hanford to provide supplementary indication for collection system.

Please feel free to contact me at 206-263-9481, or Eugene Sugita at 206-477-9782, if you have any questions. I look forward to discussing the content of this letter with you and your staff as needed.

Sincerely,



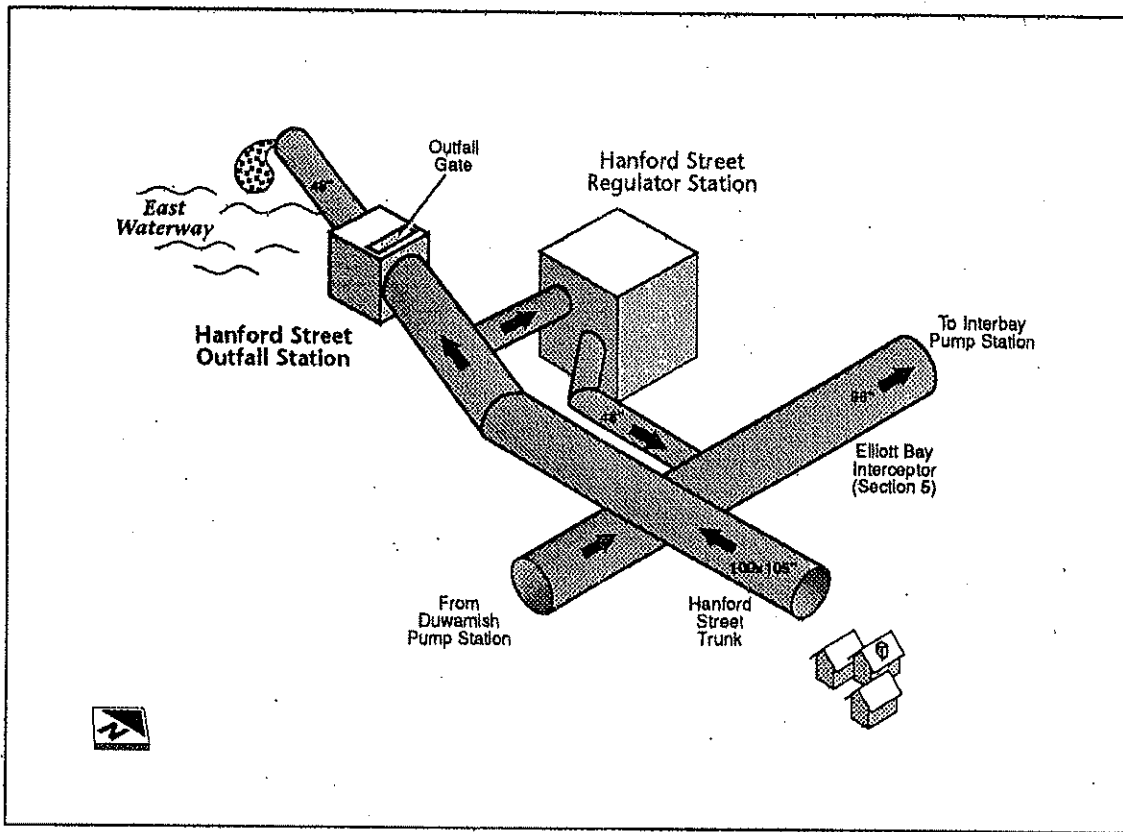
Robert Waddle  
WTD Operations and Maintenance Section Manager

Enclosure

Shawn McKone  
January 8, 2018  
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cc: Amy Jankowiak, Compliance Specialist, Department of Ecology (DOE)  
Mark Isaacson, Division Director, Wastewater Treatment Division (WTD),  
Department of Natural Resources and Parks (DNRP)  
Jeff Lafer, Project/Program Manager IV, WTD, DNRP  
Eric Mandel, CSO Program Coordinator / Wastewater Capital Project Manager IV,  
WTD, DNRP  
Karl Zimmer, West Section Assistant Manager, WTP, DNRP  
Janice Johnson, Engineer III, WTD, DNRP





Flow Schematic

### System Relationship

Excess stormwater overflows from Hanford Street Regulator Station through the station's outfall gate into the East Duwamish Waterway.

### Flow/Construction Information

The Hanford Street Regulator Station and Hanford Street Outfall Station are considered one system. See *Hanford Street Regulator Station* for information.

### Critical Information

Emergency Power:	Standby Generator
Invert Elevation	
Outfall Gate:	98.00 feet
Overflow Location:	Duwamish East Waterway; through a 144- by 96-inch-diameter outfall gate into a 48-inch-diameter submarine outfall 150 feet long

