



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

West Point Treatment Plant
1400 Discovery Park Blvd.
Seattle, WA 98199

July 25, 2019

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

Terry Clements
Public Health Seattle-King County
401 5th Avenue
Seattle, WA 98104

Re: West Point Treatment Plant Bypass and Secondary Diversion, July 19, 2019

Dear Mr. McKone and Ms. Clements:

On July 19, 2019, at approximately 1:40 a.m., an estimated 2.1 million gallons (MG) of storm water and sewage bypassed West Point Treatment Plant and 0.1 MG of primary-treated flow was diverted around the plant's secondary process. The bypass was reported to the Department of Ecology and was assigned incident number 690723.

At 1:07 a.m., a power disturbance at the plant's primary substation (Canal Street) caused plant equipment to fall offline, including pumps at the Intermediate Pump Station (IPS) and at the Effluent Pump Station (EPS). At the time, plant flow was approximately 300 million gallons per day (MGD). The initiating event for the power disturbance was reported by Seattle City Light as a failed utility power pole for the Canal Street substation.

The high flows and shutdown of IPS and EPS resulted in the opening of the Emergency Bypass (EB) gate from 1:38 a.m. until 2:05 a.m. The secondary diversion occurred due to the hydraulic surge following the shutdown of IPS.

At EPS, a standby pump (EPS 3) started automatically in response to the EPS high wet well level. The EPS 3 pump reached 100% output by 1:13 a.m. only to fall offline due to high vibration. Staff are investigating the cause of the vibration trip.

Following the reset of the motor drives, each pump was restarted and placed back online with IPS and EPS pumping resuming at 1:27 a.m.

Before flow could be reestablished through the outfall, high wet well levels at the EPS triggered the closure of the primary effluent gates at 1:21 a.m. As water levels rose in the primary tanks, staff took steps to slow flow into the plant by reducing the speed of the Raw Sewage Pumps (RSPs). Staff also reduced flows coming into the plant through the Influent Control Structure (ICS). Eventually, a high level RSP wet well and a high ICS level resulted in the opening of the EB gate at 1:38 a.m.

Following the recovery and restart of the RSPs, IPS, and EPS, staff reestablished hydraulic control of the plant. With flow established through the deep water outfall, the EB gate was closed at approximately 2:05 a.m.

Plant staff successfully took grab samples of the bypass for testing with the following results:

TSS	177 mg/L
BOD	114 mg/L
Fecal Coliform	3.3 x 10 ⁶ CFU/100 ml

The estimated 2.1 MG bypass was discharged through the plant emergency marine outfall, which is approximately 35 feet below the surface and 490 feet offshore. After the bypass, staff posted the beaches to the north and south of the plant.

Additional samples were taken from eight different locations within the marine water (maps of the sample locations are attached), and the results from those samples are summarized in the tables below.

Water Quality Sampling — Fecal Coliform test results (cfu/100 ml)

Sample locations	Sample - date and time			
	July 19	July 20	July 21	July 22
South Beach, nearest to lighthouse (map point 5)	41	4	4	9
South Beach, farther from lighthouse (map point 6)	1	9	8	13
North Beach, nearest to lighthouse (map point 3)	8	2	6	<1
North Beach, farthest from lighthouse (map point 4)	160	5	3	<1
Golden Gardens, middle of beach (map point 2)	5	8	110	100
Golden Gardens, south of Meadow Point (map point 8)	7	50	48	
Golden Gardens, north of Shishole Marina (map point 9)	6	83	260	
Carkeek Park, south end of beach (map point 1)	22	24	59	71

Shawn McKone
 Terry Clements
 July 25, 2019
 Page 3

Water Quality Sampling – Enterococcus test results (cfu/100 ml)

Sample locations	Sample - date and time			
	July 19	July 20	July 21	July 22
South Beach, nearest to lighthouse (map point 5)	28	4	1	8
South Beach, farther from lighthouse (map point 6)	1	3	2	15
North Beach, nearest to lighthouse (map point 3)	<1	5	8	<1
North Beach, farthest from lighthouse (map point 4)	64	1	<1	1
Golden Gardens, middle of beach (map point 2)	2	23	25	41
Golden Gardens, south of Meadow Point (map point 8)	12	5	25	
Golden Gardens, north of Shishole Marina (map point 9)	20	16	48	
Carkeek Park, south end of beach (map point 1)	31	5	68	60

Although a bypass and secondary diversion resulted from the power disturbance, the plant’s safety interlocks operated as designed to prevent a potential flooding of the plant. In addition, staff responded quickly and competently to the event. It should be noted that their training was instrumental in their quick and capable response.

If you have additional questions concerning this event, please contact me at 206-263-9481 or Eugene Sugita at 206-477-9782.

Sincerely,

Robert Waddle
 Operations & Maintenance Section Manager

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 the 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.

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
 Karl Zimmer, West Section Assistant Manager, WTD, DNRP
 Al Williamson, West Section Assistant Manager, WTD, DNRP

Carkeek Park Sample Sites



Pictometry, King County

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

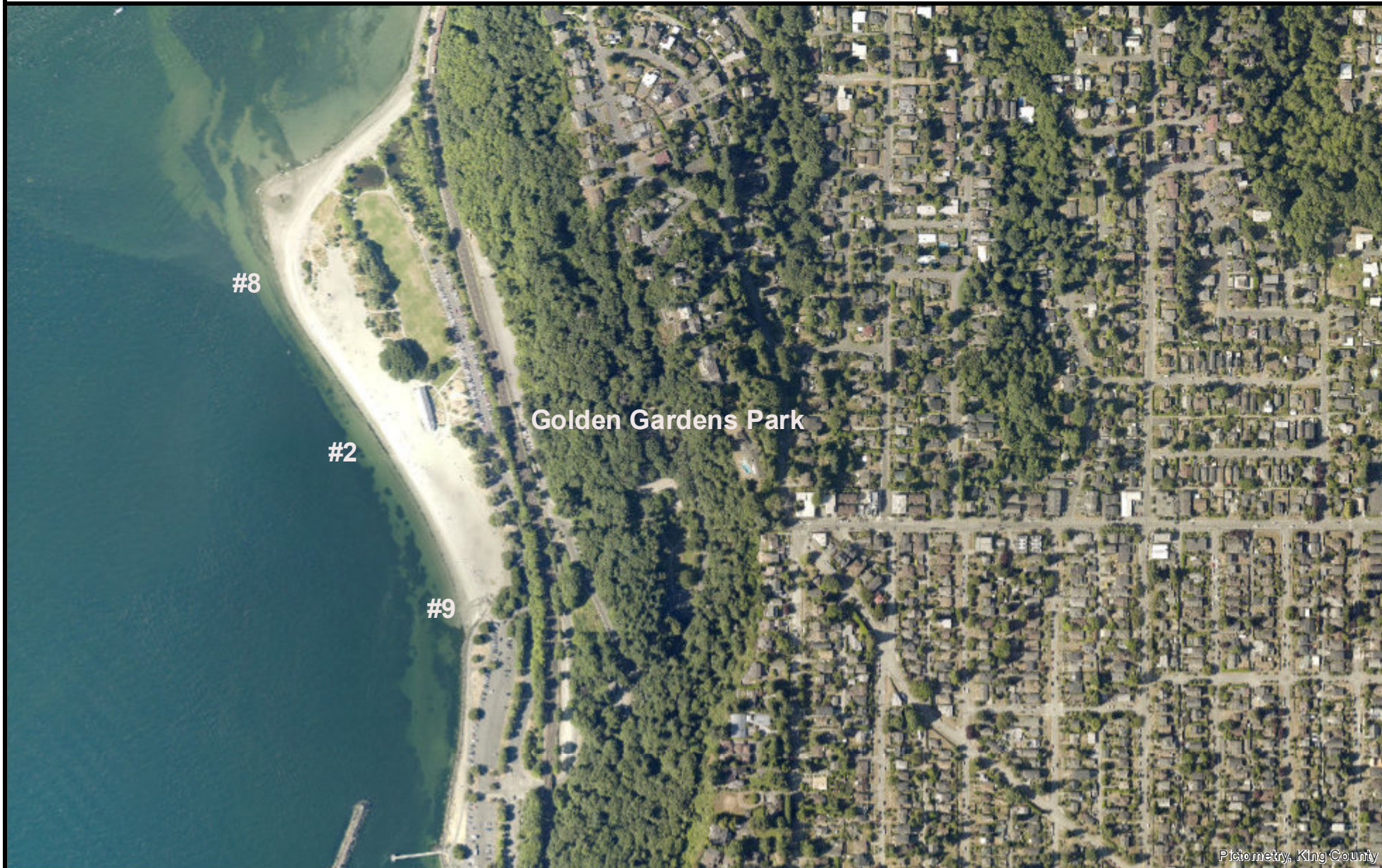
Date: 7/24/2019

Notes:



King County

Golden Gardens Park Sample Sites



Pictometry, King County

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 7/24/2019

Notes:



King County

West Point EBO Sample Sites



Pictometry, King County, King County

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 7/24/2019

Notes:



King County