



**KING COUNTY**

1200 King County Courthouse  
516 Third Avenue  
Seattle, WA 98104

**Signature Report**

**December 12, 2017**

**Ordinance 18628**

**Proposed No. 2017-0429.2**

**Sponsors Kohl-Welles and Lambert**

1 AN ORDINANCE providing for an implementation plan  
2 and reports related to implementation of recommendations  
3 of the West Point Treatment Plant Independent Assessment  
4 Final Report and the administrative order of the  
5 Washington state Department of Ecology, and requiring  
6 capital project oversight of the execution of the  
7 implementation plan.

8 **STATEMENT OF FACTS:**

- 9 1. In response to the February 9, 2017, system failure event at the West  
10 Point Treatment Plant, the council passed Motion 14826, commissioning  
11 an independent assessment of circumstances leading to the event, and  
12 identification of appropriate responses.
- 13 2. AECOM Technical Services, the selected consultant, delivered the  
14 West Point Treatment Plant Independent Assessment Final Report on July  
15 18, 2017.
- 16 3. The executive was consulted extensively in preparation of the report,  
17 and the development of recommendations. The executive has indicated  
18 support of the report's recommendations.
- 19 4. There were several concerns and recommendations that the report

20 emphasized, including:

21 a. The need for systems redundancy. Major West Point Treatment Plant  
22 systems, such as influent and effluent pumping, sedimentation tanks,  
23 contact channels, weir gates and other systems, operate with little or no  
24 margin for error during major storms. If an operational unit of one of  
25 these systems fails, the hydraulic processing capacity of the larger plant  
26 can be significantly impacted, requiring that staff either attempt to quickly  
27 restore the system or to initiate emergency bypass. The federal  
28 Environmental Protection Agency encourages building in a safety margin  
29 through system redundancy in wastewater treatment facilities. The report  
30 recommends significantly strengthened redundancy throughout the plant;

31 b. Strengthened emergency response training. The report found  
32 shortcomings in the training provided to staff, noting that current training  
33 does not clearly define when emergency bypass is appropriate, and further  
34 noting that current emergency response training does not anticipate the  
35 kind of event that occurred on February 9, 2017. The report recommends  
36 strengthened emergency response training; and

37 c. Management of complexity. The report notes that, as demands have  
38 increased, the West Point Treatment Plant has grown to be a large,  
39 complex treatment facility with numerous complex mechanical, chemical,  
40 biological and electrical systems. In such systems, the report notes that  
41 the impact of single plant elements on overall operability is not readily  
42 apparent and that interdependency between systems and communications

43 between operating teams is critical. The report recommends a thorough,  
44 systemic evaluation of the function, performance and safety of plant  
45 systems, to improve vertical and horizontal communications regarding  
46 plant risks, strengthen decision documentation and improve maintenance  
47 levels. This recommendation is based on approaches used in the chemical  
48 industry, and is referred to in the report as life safety management.

49 5. The recommendations are presented in two formats:

50 a. Summary recommendations:

51 (1) Implement a life safety management system;

52 (2) Conduct comprehensive emergency response training; and

53 (3) Conduct an integrated evaluation to address plant constraints and  
54 improve redundancy.

55 (4) Optimize a capital improvement plan to maximize redundancy; and

56 b. System evaluation recommendations: potential failure mechanisms  
57 and mitigation strategies:

58 (1) Plant hydraulics;

59 (2) Process and mechanical;

60 (3) Preliminary treatment;

61 (4) Raw sewage pump station;

62 (5) Preaeration and primary sedimentation tanks;

63 (6) Flow diversion structure;

64 (7) Effluent pump station;

65 (8) Electrical;

- 66 (9) Instrumentation and control;
- 67 (10) Operations;
- 68 (11) Staffing;
- 69 (12) Operator performance;
- 70 (13) Operator training;
- 71 (14) Equipment and systems testing procedures; and
- 72 (15) Maintenance procedures.

73 6. On September 12, 2017, the Washington state Department of Ecology  
74 issued an administrative order, WDOE Administrative Order Docket No.  
75 15325, requiring King County to comply with specified provisions of the  
76 Revised Code of Washington, the Washington Administrative Code and  
77 National Pollution Discharge Elimination System Permit No.  
78 WA0029181. The order includes findings regarding the February 9, 2017,  
79 system failure event.

80 7. The council's oversight and accountability function requires that, for  
81 major system failure events such as the February 9 West Point Treatment  
82 Plant event, a comprehensive monitoring and reporting process,  
83 addressing progress in implementing corrective recommendations, be  
84 instituted. Motion 14826 provides that the council, by subsequent council  
85 action, is to provide for reporting on the implementation of the  
86 recommendations of the independent assessment.

87 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

88 SECTION 1. The executive shall develop an implementation plan addressing the

89 recommendations of the West Point Treatment Plant Independent Assessment Final  
90 Report, including both the Summary Recommendations and the Mitigation Strategies  
91 provided in the final report as well as the requirements of the administrative order against  
92 King County wastewater treatment division issued on September 12, 2017, by the  
93 Washington state Department of Ecology. The plan shall include a timeline for  
94 accomplishment of the recommendations and the requirements of the administrative  
95 order. If the executive believes that a given recommendation is impractical or  
96 inappropriate, the plan shall so indicate and shall provide an explanation supporting the  
97 executive's reasoning.

98       SECTION 2. The executive shall prepare and transmit quarterly reports  
99 describing progress in implementing the West Point Treatment Plant Independent  
100 Assessment Final Report Implementation Plan and the requirements of the administrative  
101 order against King County wastewater treatment division issued on September 12, 2017,  
102 by the Washington state Department of Ecology. The reports shall address both the  
103 summary recommendations and the mitigation strategies of the independent assessment;  
104 they shall also address the corrective action requirements of the Washington state  
105 Department of Ecology administrative order. The executive shall prepare and transmit an  
106 implementation plan by February 15, 2018, with quarterly reports transmitted no later  
107 than forty-five days after the close of each fiscal quarter thereafter, through the date that  
108 the implementation plan timeline required by section 1 of this ordinance indicates  
109 completion of accomplishment of recommendations.

110       SECTION 3. The reports and plan required under sections 1 and 2 of this  
111 ordinance, respectively, may be combined with the quarterly reports required by Motion

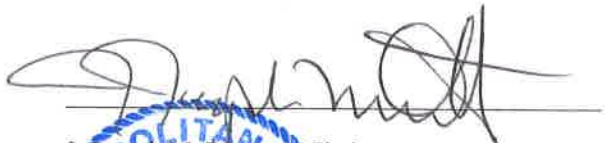
112 14813, through the end of the reporting period required by that motion. Following that  
113 date, the quarterly reports shall separately continue through the end of the timeline for  
114 accomplishment required by section 1 of this ordinance.

115 SECTION 4. The county auditor shall conduct oversight of the executive's  
116 execution of the implementation plan required by section 1 of this ordinance, and prepare  
117 a report describing the results of this oversight. The report shall be provided to the  
118 council by March 1, 2019.

119 SECTION 5. The plan and reports required by section 1, section 2 and section 4  
120 of this ordinance shall be transmitted in the form of a paper original and an electronic  
121 copy to the clerk of the council, who shall retain the original and provide an electronic  
122 copy to all councilmembers, the council chief of staff and the lead staff for the

123 transportation, economy and environment committee and regional water quality  
124 committee, or their successors.  
125

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

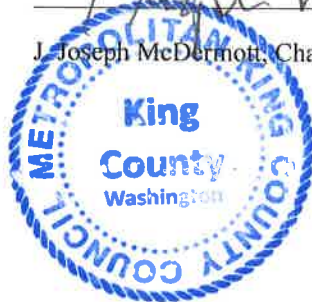


J. Joseph McDermott, Chair

ATTEST:



Melani Pedroza, Clerk of the Council



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KING COUNTY COUNCIL  
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APPROVED this 21<sup>st</sup> day of DECEMBER, 2017



Dow Constantine, County Executive

Attachments: None