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Title: AN ORDINANCE providing for an implementation plan and reports related to implementation of recommendations of the West Point Treatment Plant Independent Assessment Final Report and the administrative order of the Washington state Department of Ecology, and requiring capital project oversight of the execution of the implementation plan.

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Indexes: West Point

Code sections:

Attachments: 1. Ordinance 18628.pdf, 2. 2017-0429_SR_West Point Independent Assessment Implementation Plan.docx, 3. 2017-0429_ATT2_Amendment 1 Ritzen edits 10-26-17.docx, 4. 2017-0429_SR-revised_West Point Independent Assessment Implementation Plan.docx, 5. 2017-0429_SR_West Point Implementation Plan.docx

Date	Ver.	Action By	Action	Result
12/11/2017	2	Metropolitan King County Council	Hearing Held	
12/11/2017	2	Metropolitan King County Council	Passed	
12/5/2017	2	Transportation, Economy, and Environment Committee	Recommended Do Pass Consent	Pass
11/1/2017	1	Regional Water Quality Committee	Recommended Do Pass Substitute	Pass
10/16/2017	1	Metropolitan King County Council	Introduced and Referred	

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

STATEMENT OF FACTS:

1. In response to the February 9, 2017, system failure event at the West Point Treatment Plant, the council passed Motion 14826, commissioning an independent assessment of circumstances leading to the event, and identification of appropriate responses.

2. AECOM Technical Services, the selected consultant, delivered the West Point Treatment Plant Independent Assessment Final Report on July 18, 2017.
3. The executive was consulted extensively in preparation of the report, and the development of recommendations. The executive has indicated support of the report's recommendations.
4. There were several concerns and recommendations that the report emphasized, including:
 - a. The need for systems redundancy. Major West Point Treatment Plant systems, such as influent and effluent pumping, sedimentation tanks, contact channels, weir gates and other systems, operate with little or no margin for error during major storms. If an operational unit of one of these systems fails, the hydraulic processing capacity of the larger plant can be significantly impacted, requiring that staff either attempt to quickly restore the system or to initiate emergency bypass. The federal Environmental Protection Agency encourages building in a safety margin through system redundancy in wastewater treatment facilities. The report recommends significantly strengthened redundancy throughout the plant;
 - b. Strengthened emergency response training. The report found shortcomings in the training provided to staff, noting that current training does not clearly define when emergency bypass is appropriate, and further noting that current emergency response training does not anticipate the kind of event that occurred on February 9, 2017. The report recommends strengthened emergency response training; and
 - c. Management of complexity. The report notes that, as demands have increased, the West Point Treatment Plant has grown to be a large, complex treatment facility with numerous complex mechanical, chemical, biological and electrical systems. In such systems, the report notes that the impact of single plant elements on overall operability is not readily apparent and that interdependency between systems and communications between operating teams is critical. The report recommends a thorough, systemic evaluation of the function, performance and safety

of plant systems, to improve vertical and horizontal communications regarding plant risks, strengthen decision documentation and improve maintenance levels. This recommendation is based on approaches used in the chemical industry, and is referred to in the report as life safety management.

5. The recommendations are presented in two formats:

a. Summary recommendations:

- (1) Implement a life safety management system;
- (2) Conduct comprehensive emergency response training; and
- (3) Conduct an integrated evaluation to address plant constraints and improve redundancy.
- (4) Optimize a capital improvement plan to maximize redundancy; and

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

- (1) Plant hydraulics;
- (2) Process and mechanical;
- (3) Preliminary treatment;
- (4) Raw sewage pump station;
- (5) Preaeration and primary sedimentation tanks;
- (6) Flow diversion structure;
- (7) Effluent pump station;
- (8) Electrical;
- (9) Instrumentation and control;
- (10) Operations;
- (11) Staffing;
- (12) Operator performance;

- (13) Operator training;
- (14) Equipment and systems testing procedures; and
- (15) Maintenance procedures.

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

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

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The executive shall develop an implementation plan addressing the recommendations of the West Point Treatment Plant Independent Assessment Final Report, including both the Summary Recommendations and the Mitigation Strategies provided in the final report as well as the requirements of the administrative order against King County wastewater treatment division issued on September 12, 2017, by the Washington state Department of Ecology. The plan shall include a timeline for accomplishment of the recommendations and the requirements of the administrative order. If the executive believes that a given recommendation is impractical or inappropriate, the plan shall so indicate and shall provide an explanation supporting the executive's reasoning.

SECTION 2. The executive shall prepare and transmit quarterly reports describing progress in implementing the West Point Treatment Plant Independent Assessment Final Report Implementation Plan and

the requirements of the administrative order against King County wastewater treatment division issued on September 12, 2017, by the Washington state Department of Ecology. The reports shall address both the summary recommendations and the mitigation strategies of the independent assessment; they shall also address the corrective action requirements of the Washington state Department of Ecology administrative order. The executive shall prepare and transmit an implementation plan by February 15, 2018, with quarterly reports transmitted no later than forty-five days after the close of each fiscal quarter thereafter, through the date that the implementation plan timeline required by section 1 of this ordinance indicates completion of accomplishment of recommendations.

SECTION 3. The reports and plan required under sections 1 and 2 of this ordinance, respectively, may be combined with the quarterly reports required by Motion 14813, through the end of the reporting period required by that motion. Following that date, the quarterly reports shall separately continue through the end of the timeline for accomplishment required by section 1 of this ordinance.

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

SECTION 5. The plan and reports required by section 1, section 2 and section 4 of this ordinance shall be transmitted in the form of a paper original and an electronic copy to the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff and the lead staff for the transportation, economy and environment committee and regional water quality committee, or their successors.