

MEMORANDUM

_____ **Action**
_____ **Information**
 X **Discussion**

DATE: April 4, 2019

TO: Environmental Services Commission

FROM: Doug Lane, Utilities Senior Engineer

SUBJECT: Water Distribution System Seismic Vulnerability Assessment:
Post-Event Level of Service Goals and Critical Customer Criteria

Action Required at this Time

None

Fiscal Impact

Future impacts will be identified based on the level of service goals selected, the vulnerability findings, and the recommendations of the ongoing seismic vulnerability assessment.

Background

The Utilities Department is currently performing a Water Distribution System Seismic Vulnerability Assessment, and developing an Emergency Water Supply Master Plan. The ESC was most recently briefed on the scope of these efforts in November 2018.

In December 2018, Seattle Public Utilities released the results of its seismic vulnerability assessment, which indicated a loss of water service throughout its wholesale service area (including Bellevue) following certain potential seismic scenarios. Also, in late 2018 the Water Supply Forum released the results of its Phase 2 Regional Water Supply Resiliency Project (to which Bellevue contributed), with similar findings.

On April 4, Utilities staff will introduce the topic of post-event level of service (LOS) goals and open an initial discussion about what LOS goals might be appropriate for Bellevue and how to inform them. LOS goals describe the time to restore service following certain potential disaster or emergency events. These LOS goals will be important drivers for seismic resiliency policies and investments the Utility makes towards seismic resiliency. This will be the first discussion of

an iterative process, as the recommendations may change as the financial impacts of certain LOS goals are evaluated and reconsidered.

The guiding principles discussed with ESC in November 2018 were public safety, social equity, economic vitality, regional preparedness, value, and resilience. Staff will re-confirm the guiding principles with ESC and propose a framework to build criteria for LOS and defining critical customers based on the guiding principles.

There are no industry standard criteria for water restoration timeframes or levels of service following a disaster. The Washington State Department of Health acknowledges that service interruptions do occur¹, but leaves reliability criteria for emergency conditions up to customer expectations². Utilities staff will present benchmark examples of level of service goals and ask ESC for discussion and feedback.

The criteria for identifying critical customers will also be introduced for ESC feedback. Benchmark examples from other agencies of critical customer criteria are being evaluated for comparison and analysis. Some examples of these criteria will be shared at the meeting.

Critical customers are those for whom a higher level of service is justified due to their broader benefits to the City or region. Critical customers are relevant for prioritizing investment and resources for emergency mitigation, resiliency, preparation and response. They help to define where a resilient “backbone” piping system might be installed, where to consider potential sites for emergency wells or points of distribution, and how to prioritize disaster response. This topic can be controversial as it ranks some customers as more important than others, so ESC’s input will be important throughout the process.

Policy language for LOS goals and for defining critical customers will be proposed at a later ESC meeting for discussion. These policies will be drafted based on existing City priorities, industry benchmarks, and ESC’s input through the iterative feedback process.

¹ DOH 331-338 Responding to a pressure-loss event

² WAC 246-290-420