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## MEMORANDUM

**TO:** Kevin House, Parametrix  
**FROM:** Erik Miller-Klein, A<sup>3</sup> Acoustics  
**DATE:** December 6, 2017  
**PROJECT:** City of Olympia  
**SUBJECT:** Water St Lift Station Generator – Ambient Noise

This memorandum is a summary of our measurements of the ambient conditions at the Water Street Lift Station and the current noise impact from the emergency support generator radiated from the pump room through the louvers to the north.

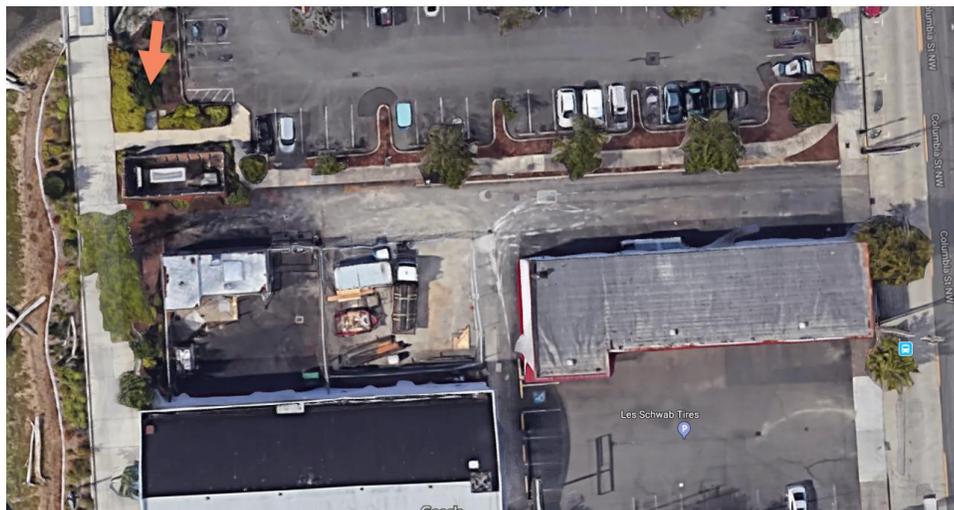
### Noise Code

The City of Olympia Chapter 8.32 Noise notes that state law must be satisfied. Washington Administrative Code (WAC) [173-60](#) defines the source and receiving properties by the property use. The future residential building adjacency would be defined as an *Environmental Designation for Noise Abatement (EDNA)* A “Residential”, and the Water Street Lift Station would be defined as an EDNA C “Industrial” because there is no habitable space, and supports utility operation.

As such the daytime limit from the pump station, with respect to [WAC 173-60-040](#), is 60 dBA, and the nighttime limit, due to increased sensitivity for EDNA during nighttime hours (10 PM – 7 AM) is 50 dBA. The generator during normal maintenance operation, which lasts between 25 to 35 minutes must not exceed 60 dBA at the nearest residential receiver.

### Ambient Noise

The ambient noise at the site was measured at the location noted below from Sunday November 19<sup>th</sup> to Friday November 24<sup>th</sup>, 2017 with a Svantek 971 Type 1 precision microphone with an environmental enclosure. The microphone was located 7-feet above the ground in the nearest tree with adequate foliage to hide the meter for the measurement period.



The hourly average noise level during daytime hours (Leq) was 54 dBA, and the average nighttime noise level 48 dBA. Based on our measurements and calculations the radiated noise level from the current diesel generator at 23-feet is 77 dBA.

Please contact us with any questions.

Sincerely,  
A<sup>3</sup> Acoustics, LLP

A handwritten signature in blue ink, appearing to read "Erik Miller-Klein".

**Erik Miller-Klein, PE, INCE Bd. Cert.**  
Partner & Acoustical Consultant

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