




**AGENDA
BILL
Item 8.E**

**Eagleridge Water Booster Station
Conversion Project Update**

DATE SUBMITTED:	January 4, 2022	MEETING DATE:	January 12, 2022
TO: BOARD OF COMMISSIONERS	FROM: Justin Clary, General Manager		
GENERAL MANAGER APPROVAL			
ATTACHED DOCUMENTS	1. Eagleridge Booster Conversion Project report dated August 6, 2021		
	2. DOH Booster Conversion Project Approval letter dated November 23, 2021		
	3. Booster Conversion Project Notice letter to Eagleridge Water System Customers dated December 6, 2021 (revised January 4, 2022)		
TYPE OF ACTION REQUESTED	RESOLUTION <input type="checkbox"/>	FORMAL ACTION/ MOTION <input type="checkbox"/>	INFORMATIONAL /OTHER <input checked="" type="checkbox"/>

BACKGROUND / EXPLANATION OF IMPACT

The Eagleridge neighborhood, located within the District's service area, is a subdivision of 64 single family residential homes situated on the north shore of Lake Whatcom just outside of Bellingham city limits. The District provides water service to Eagleridge residents via an intertie with the City of Bellingham's water system. The neighborhood's water and sewer infrastructure was constructed by the private developer of the subdivision in 1988 and dedicated to the District.

The Eagleridge Water System is classified as a Group A water system regulated by the Washington State Department of Health (DOH) and serves the entire Eagleridge neighborhood, as well as six additional homes located immediately north of Donald Avenue (70 total homes). When the water system was originally designed and constructed, the City's water pressure at the location of the connection (intertie) between the two systems was not sufficient to serve the Eagleridge neighborhood. As a result, a booster pump station was constructed at the location of the intertie (2029 Northshore Road) that consists of a CMU (concrete masonry unit) building that houses three pumps for domestic (general) water service, two pumps for fire suppression, pump controls, and an auxiliary diesel generator (to ensure continuous water service throughout power outages).

At some point between infrastructure construction in 1988 and 2016, the City increased the water pressure in the service area the feeds the Eagleridge water system. During this same timeframe, the District began planning for replacement of the pump control system, which was approaching the end of its useful life. Based on this, a project was identified in

the District's most recent Water System Comprehensive Plan update (approved by DOH in 2018) to study whether part or all of the pump station could be decommissioned. In 2020, the District requested that Wilson Engineering perform a detailed hydraulic analysis to determine if the City's system pressure on their side of the intertie is sufficient to meet regulatory requirements in the Eagleridge system (Washington Administrative Code 246-290-230 requires that Group A water systems provide a minimum of 30 pounds per square inch [psi] pressure at service water meters).

Wilson Engineering's hydraulic analysis concluded that the domestic pumps are no longer necessary and can be removed from service, with the City's pressure being sufficient to meet regulatory requirements for the domestic demands of the Eagleridge system. However, the fire pumps must remain, as the analysis found that the City pressures were not sufficient to deliver the minimum required flow and pressure in a fire flow scenario. The hydraulic analysis did, however, find that the existing fire pumps are oversized, and concluded that the existing pump control valves for the fire pumps should be modified to add a pressure reducing function.

District Design and Construction Standards, as well as the District's Administrative Code establish a District-wide policy to provide a minimum of 30 pounds per square inch (psi) under peak hour demand at all water meters. The intent of this policy is to meet minimum design criteria defined in the "Water System Design Manual" published by the DOH and WAC Chapter 246-290. Based upon this policy, the District submitted a report to DOH in August 2021 seeking approval for removal of the domestic pumps. DOH granted project approval in November 2021. With the District's determination that system pressures meet current District policy and DOH's approval of the project, the District then provided outreach to Eagleridge system customers via a letter dated December 6, 2021. Since issuance of the December 6 letter, District staff have been contacted by a number of customers seeking additional information on the project.

FISCAL IMPACT

The estimated cost to retrofit the fire pumps and replace the domestic pumps is \$135,000, with operational costs of the 20-year planning horizon being \$50,000. The estimated cost to retrofit the fire pumps and remove the domestic pumps is \$13,000 with no associated operational costs anticipated. Therefore, removal of the domestic pumps would save the water utility approximately \$122,000 in near-term capital costs and \$50,000 in operational costs over the next 20 years.

APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)

Product Quality
Customer Satisfaction
Operational Optimization
Financial Viability

RECOMMENDED BOARD ACTION

No action is recommended at this time.

PROPOSED MOTION

Not applicable.