



ITEM FOR ACTION–CONSENT AGENDA

Date of Meeting

October 7, 2020

Title

District Wide – Ventilation System Upgrades

Presenter

Ryan Spain – Director of Facilities

Background

Since the onset of COVID-19, District staff have been monitoring Centers for Disease Control, Oregon Health Authority, Oregon Department of Education, & ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) recommendations on Heating, Ventilation, and Air Conditioning (HVAC) systems. Staff have been in contact with industry experts looking at options for HVAC improvements that will provide short and long-term air quality improvements across the District.

Based on these agency and industry expert recommendations, over the summer we have inspected ventilation systems to ensure that systems are operating properly. We have inspected and changed air filters (MERV 8 with antimicrobial). Where systems allow and when outside temperatures and air quality permit, ventilation systems will be programmed to provide at least double their normal or up to 100% outside air. We have programmed systems to start earlier in the morning and run longer after hours. We will operate exhaust fans 24 hours per day five days per week to increase air exchanges within the building. Some systems will require open windows/doors when sites are secure and when temperature and air quality allow, in combination with fans.

We are also recommending the addition of air purifying devices that install in each of our ventilation systems. The recommended technology, called needle-point bi-polar ionization (BPI), creates equal amounts of positive and negative ions. When air passes over the BPI device, ions produced by the device reduce pathogens, allergens, particles, smoke and odors in the air, creating a healthy environment without producing any harmful byproducts. When the ions come in contact with viruses, bacteria or mold, they remove the hydrogen molecules – without them, the pathogens have no source of energy and will die. The ions also attach to these particles, causing them to band together until they are large enough to be filtered by our ventilation systems.

BPI technology generates the same ions that nature creates with lightening, waterfalls, ocean waves, etc. Nature uses energy and shear to break apart molecules, naturally cleaning the air and producing a healthy environment. The only difference between the BPI technology and nature is that the BPI does it without developing harmful ozone. These devices are installed in schools, office buildings, airports, hospitals, and other community buildings around the world.

Budget/Resource Implications:

The ventilation modifications include procurement of equipment, materials as well as internal and external resources for installation. Budget estimates for the described work are \$540,000 and funding is available through our general fund operations reserve.

Board and Superintendent Goals

Goal 5 Stable, Sustainable Stewardship, Objective 5 Provide safe, secure, sustainable learning spaces that meet educational needs.

Recommendation

The superintendent recommends that we proceed with the district wide ventilation modifications to improve the indoor air quality of our building spaces.