

This document is to provide understanding of how the ventilation system at Crescent Valley High School functions, and how it will operate during the COVID-19 pandemic. It is based on strategies from the "District Wide" plan to minimize COVID-19 risk. Maintenance staff inspected every room and all HVAC components of this building. Included in this document is a summary of the ventilation system, how the ventilation will operate during the pandemic, actionable items for staff, and detailed space specific ventilation descriptions and instructions.

Summary of CV's Ventilation System

- There are ventilation zones. Each zone has a HVAC unit that provides air to multiple rooms. The HVAC unit takes fresh outside air, filters, and supplies to the room. Part of the air is then exhausted outside and the rest returned to the supply, filtered and recirculated.

Ventilation Operation During COVID-19

- The maximum supply of fresh outside air allowing for 70°F will be used beginning 1 hour prior to students arriving and end 1 hour after students leave. The temperature and air mixture is controlled remotely by Facilities.
- The building temperature will be kept at 68°F minimum 3 hours before and after students are present. This is controlled remotely by facilities.
- To increase ventilation, doors and or windows can be opened. This can be done during breaks to accelerate ventilation with minimal disruption to "flush" the room.
- Maintenance staff will inspect equipment for proper operation twice per month.

Actionable Items for Staff

1. **Masks:** Masks are the single most effective measure for air quality during the COVID-19 pandemic, followed by the operational blueprint, and then HVAC ventilation measures (See Corvallis School District COVID-19 Air Quality Plan - District Wide).
2. **Keep Clear:** To ensure proper ventilation, HVAC equipment such as vents, heaters, fans, and radiators should not be obstructed or have items stored on or within 2ft.
3. **Fan and Purifier Safety:** If staff use fans or air purifiers
 - a. Aim the airflow away from people.
 - b. If used in a window, direct the air outside.
 - c. Purifiers must be approved by facilities.
4. **Higher Risk Spaces:** Additional precautions should be taken for the following spaces
 - a. **Small Enclosed Spaces:** Small spaces with poor ventilation can be higher risk for aerosolized COVID-19. Staff should increase ventilation by opening windows, doors, and ventilate for 20 min prior to other staff entering the space.
 - b. **Offices:** Office spaces where staff remain unmasked for extended periods of time can increase risk to other people who enter the office. Staff should increase ventilation by opening windows, doors, and ventilate for 20 min prior to other people entering the space.
 - c. **Elevators:** These do not have mechanical ventilation.

- d. **C08 Server Room and Lounge:** Air enters through the doorways, there is not a dedicated source of outside air, and there is no exhaust. There is a ductless heat pump that tempers the air, but does not ventilate.
- e. **Kims office:** This space does not have an air supply. The door should be kept open at least 3 inches or an air purifier used.
- f. **C16, D63, E01:** These spaces have weak exhaust, likely because they are the last room on their branch of ductwork. These classrooms should keep a door open 3 inches to increase ventilation.
- g. **B29 and Office:** These spaces do not have air exhaust or supply. Doors should be kept open 3" for ventilation.

Detailed Space Specific Ventilation Descriptions and Instructions

- **Classrooms:** Classrooms have a common HVAC unit for groups of rooms (zones). Air is drawn from directly outside, combined with return air from the zone of classrooms, filtered, heated or cooled as needed, and then blown into the rooms. The air moves around the room and then returns through ductwork to the HVAC unit. Some air is exhausted outside while the rest is mixed with the new fresh outside air, filtered, and recirculated.
 - The outside air mixture ratio and temperature are controlled remotely by Facilities. During the pandemic, the maximum amount of fresh outside air that can maintain 70°F will be used.
 - Additionally, staff can open windows and or doors to increase ventilation.
- **Offices:** Ventilation operates in the same manner as the classrooms.
- **Hallways:** Ventilation operates in the same manner as the classrooms.
 - Additional ventilation is provided passively when doors are opened.
- **C08 Server Room and Lounge:** Air enters through the doorways. There is a ductless heat pump that tempers the air. There is not a source of outside air.
- **Restrooms:** Air is supplied from the hall through the doorway. The ceiling exhaust vents have a powered fan that exhausts 100% outside.
- **Library:** Ventilation for the library operates in the same manner as the classrooms.
- **Gym:** Ventilation operates in the same manner as the classrooms.
 - The ventilation runs at all times to circulate air.
 - To save energy, the HVAC will operate with minimum outside air. If the gym is to be used for physical activities or by more than 30 people, Facilities should be notified to increase the percentage of outside air.