**Current HVAC Age**

- **Newer HVAC system (<15 years old)**
  - Utilize MERV ≥13 filters
  - Replace HVAC filters at least every two months, esp. during smoke events
  - Inspect outdoor air intake dampers (ex. on economizers) and indoor sensors (ex. CO₂ monitors in demand-controlled systems) regularly
  - Consider retro-commissions to ensure maximum energy efficiency

- **Older HVAC system (≥15 but < 30 years old)**
  - Utilize MERV ≥13 filters with sufficiently low air resistance to work with HVAC system
  - Use state technical assistance funds to evaluate possible energy-saving retro-commissions
  - Apply for federal and state grants for retrofits
  - Replace wall-mount packaged units >15 years old

- **Very old HVAC system (≥30 years old)**
  - Rely on outdoor ventilation so long as indoor air quality is acceptable (<50 AQI) but avoid ventilation with outdoor air during smoke events
  - Install MERV ≥13 filters with lower resistance, if possible
  - Apply for federal and state grants to finance upgrades

- **No preexisting HVAC system**
  - Prioritize energy efficient ventilation technologies and capacity for MERV ≥13 filters when choosing HVAC systems
  - Apply for federal and state grants to finance installation

**HVAC Recommendations**

**Portable HEPA Recommendations**

**Level of funds available to purchase and maintain HEPA filters?**

- **Higher budget (≥$2,750/classroom)**
  - Add HEPA devices proportionate to size of room to each classroom
  - Replace filters on HEPA devices at least quarterly
  - Run HEPA filters only during school hours to increase eACHs without high energy consumption

- **Lower budget (<$2,750/classroom)**
  - Add HEPA filters only to classrooms with greatest need based on readings from indoor air quality monitors
  - Use HEPA filters only during wildfire smoke events and school hours to reduce energy and maintenance costs
  - Rotate filters between classrooms based on readings from sensors

**Grants available for upgrades?**

- YES
  - Utilize MERV ≥13 filters at all times
  - Retrofit central HVAC systems to improve efficiency of system and increase eACH

- NO
  - Utilize MERV ≥13 filters only during wildfire season and lower MERV filters during normal air quality periods

**Before Upgrades**

- Replace wall-mount packaged units
- Consider replacing, rather than retrofitting, central HVAC systems with state-of-the-art HVAC systems
- Prioritize energy efficient ventilation technologies and capacity for MERV ≥13 filters

- Until HVAC installation, utilize HEPA filters in each classroom as primary defense against PM infiltration during wildfire smoke events
- See above recommendations for portable HEPA filters for after HVAC installation