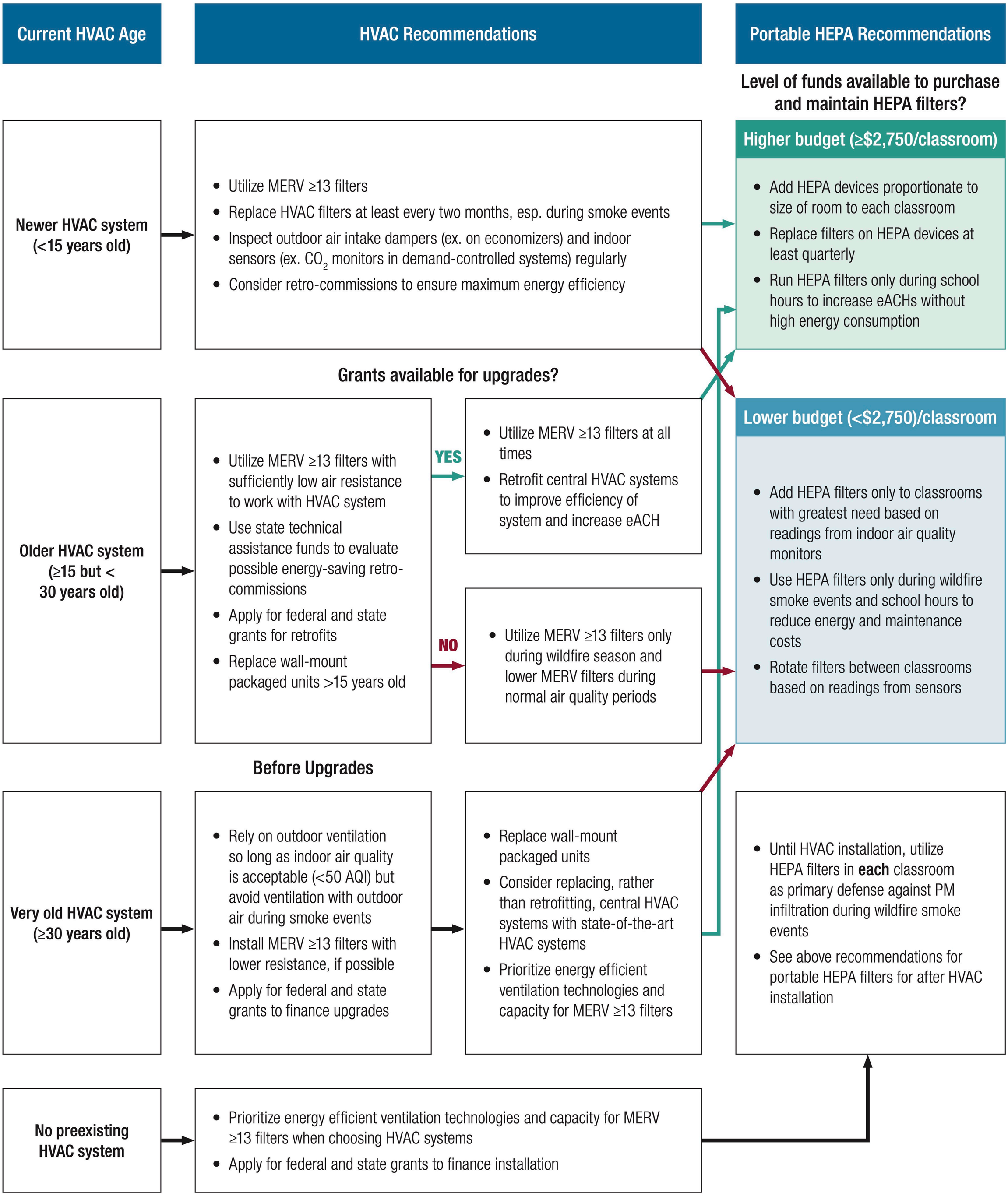
Current HVAC Age
HVAC Recommendations
Portable HEPA Recommendations
Level of funds available to purchase and maintain HEPA filters?
Higher budget (≥$2,750/classroom)
Lower budget (<$2,750)/classroom
Newer HVAC system (<15 years old)
• Utilize MERV ≥13 filters
• Replace HVAC filters at least every two months, esp. during smoke events
• Inspect outdoor air intake dampers (ex. on economizers) and indoor sensors (ex. CO_2 monitors in demand-controlled systems) regularly
• Consider retro-commissions to ensure maximum energy efficiency
• 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
Grants available for upgrades?
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
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
• 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
Before Upgrades
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
• 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
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