

Councillor Request Inquiry

22-2019

2019

Please provide information on which County owned or run building/facilities use filters with a MERV rating of 13, to block small particulate caused by wildfire smoke, from entering through the air intake.

Councillor Berghofer,

For your council request from the June 25th council meeting, the following buildings have the MERV 13 filter rating.

County Air Filter Ratings

- Please provide information on which County owned or run building/facilities use filters with a MERV rating of 13, to block small particulate caused by wildfire smoke, from entering through the air intake.

The county uses MERV 13 rated filters for the main air handling (AHU) equipment at County Hall, Community Center and the Emerald Hills pool. Our typical filter rating we use for the majority of our buildings is a mid-efficiency filter with a MERV 8 rating. These are typically used in roof top units (RTU's) which make up the vast majority of our ventilation systems on our municipal facilities.

Sincerely,

Diehl Townsley
Director, Facility Services

Hi Diehl,

Thank-you for your response. I am glad that at least three buildings have these in place.

Are there current plans to upgrade the remaining facilities, especially recreation ones, that public head to when they can't exercise outdoors?

MP, GARC, ARENA, SOC, MOYER, etc.

With the failure of the MP system to keep smoke out on May 30 and swimmers coughing in the pool, I believe this should be examined.

Katie

Councillor Berghofer,

No we are not currently planning on upgrading the air filter systems for the recreation sites due to the type of ventilation equipment that is in place today. The majority of the systems at the recreation sites use a packaged roof top unit that has a basic filtration system where installing to higher MERV rated filter would negatively impact the systems performance.

Although improving the air filtration, the higher filters are 4 times the cost of the current filters and may require replacements 2 to 3 times more often if used on a roof top unit not designed for the higher MERV rating.

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For the facilities that may create a shelter in place venue, we do have a protocol in place that shuts down the ventilation to restrict outside air from entering the building. This protocol was developed to address the risk of accidental chemical release from the heavy industry in the area.

The opportunity to improve the filtration can occur when systems are renewed through the lifecycle program where the systems can be designed to work with the higher MERV filters.

For the May 30th event, the heavy layer of smoke did enter buildings across the region. The issue was compounded by the rapid drop in temperature where the building control systems went to what is called free cooling , where the outdoor temperature is lower than the required chilled air so the ventilation equipment switched to full outside air and shut down the refrigeration units. This is a normal energy efficiency method of operating. If the temperature had remained high, the units would have been operating on a minimum outside air intake and used the refrigeration cooling to control temperature in the building. As such the level of smoke in the buildings would not have been as bad as it was.

Sincerely,

Diehl Townsley
Director, Facility Services