

Confederated Tribes of the Colville Reservation Air Quality Program



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Protecting Yourself from Wildfire Smoke

Box Fan and Filter Instruction Guide To Decreasing Smoke in Your Home

A box fan combined with furnace filter(s) that collect smoke sized particles or smaller have become popular during wildfire smoke episodes. This combination is easily constructed, effective and economical. Adding a filter to the box fan can reduce air flow up to 75%. The air flow arrow should face the intake side of the fan.

Single Filter Configuration

One Step: Tape filter onto the intake side of fan, allow spaces for greater air flow needed by the fan. Alternative - turn on the fan and add the filter. The air flow will hold the filter to the fan



Tip for Using Box Fan and Filter

- **Do not** use the fan/filter while sleeping and remember to turn off when you leave home Close all windows and doors while fan/filter is in use
- Better to use in the room that you are in at that time.
- Position the fan/filter toward the middle of the room, away from walls and big objects.
- Replace filters when they look dirty/dark

Performance Comparison



Manufactured air filters are the best method and investment to protect your health from wildfire smoke in your home.



Price:

Box Fan about \$22

Filter Prices Range \$5 to \$18, depending on brand and quality purchased

Double Filter Configuration

Twice the filtration and airflow than single, and is easier on the fan

Step 1: Lay two filters side by side with the flow arrow facing up and tape together to form a hinge.

Step 2: Stand filter up and tape a cardboard triangle to the top, flip over and tape the second triangle on.

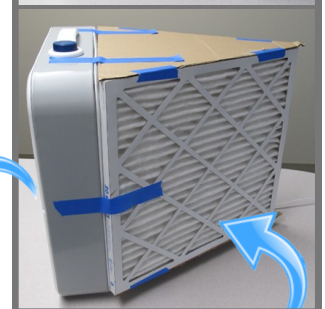
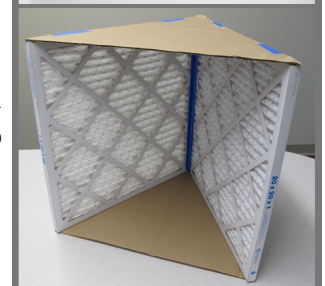
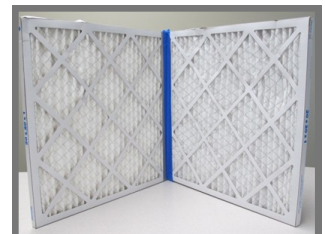
Step 3: All that remains is to tape the filters to the box fan. Gaps are OK and help with air flow. Use a spacer under the filter assembly to match the fan better.

Filtered Air comes out of the front of the fan producing up to 95% reduction of harmful materials.

For more information go to:
<https://www.colvilletribes.com/environmental-trust> or email
Air.Quality@colvilletribes.com

Materials needed:

- 20 Inch Box Fan - Make sure the controls are on top
- **MERV 13 Rated** 20" x 20" x 1" pleated filters
- Tape - Painter or Duct
- Two Cardboard triangles 21" on all sides



Smoke Pollution

Particulate matter & toxic gases are pulled in through the back of the fan.