



Mayor
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Fort Collins, CO 80522
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March 12, 2020

Air Quality Advisory Board
c/o Jakob Lindaas, Chair
PO Box 580
Fort Collins, CO 80522

Dear Mr. Lindaas and Board Members:

On behalf of City Council, thank you for providing us the March 11, 2020 memorandum regarding "Air Quality 2020 Priorities."

We appreciate you sharing your thoughts and recommendations on this important topic, as detailed in your memo.

We sincerely appreciate your comments. Thank you again for writing.

Best Regards,

A handwritten signature in black ink that reads "Wade Troxell". The signature is stylized and cursive.

Wade Troxell
Mayor

/sek

Cc: City Council Members
Darin Atteberry, City Manager
Cassie Archuleta, Manager, Environmental Sustainability

MEMORANDUM

Date: March 11, 2020

To: Mayor and City Councilmembers

From: Jakob Lindaas, AQAB Chair

CC: Air Quality Advisory Board; Darin Atteberry, City Manager

Re: Air Quality 2020 Priorities

The Air Quality Advisory Board (AQAB) members appreciate and support City Council's priority to improve the City's air quality. (City Council Priorities - Improved Air Quality June 2019 <https://www.fcgov.com/council/files/council-priorities.pdf?1574094440>). Continued progress on policies, actions, and messaging around air quality issues can improve public health, the environment, and the community's well-being. We think that a focus on the following actions will result in the most rapid, efficient, and equitable improvements to air quality in Fort Collins.

Enhanced air quality monitoring: We recommend the City explore ways to enhance its air quality monitoring capabilities. Actions may include monitoring by the City itself, or working to support and lobby County and State entities to augment existing air quality monitoring in and near Fort Collins. This recommendation is consistent with the City Council's stated priorities on improving air quality. The National Center for Atmospheric Research produced an assessment report in 2017 (<https://www.fcgov.com/airquality/reports>) for the City of Fort Collins current ozone monitoring network based on analysis of observations and model simulations.

The NCAR recommendations are as follows:

- Oil and gas emission sources, most of which are outside the City boundaries, are the main contributors to locally produced Fort Collins ozone.
- A wind sensor should be added to Fort Collins west ozone monitoring site.
- A NO_x sensor should be installed within City limits.
- Establishment of a measurement site South/South-East of the city – including ozone, wind, NO_x and (at least episodic) VOC measurements
- Establishment of a few key sites with continuous ozone, NO_x, VOC and meteorological data located at strategic sites.

Because many of the ozone precursor emission sources are outside the City, we encourage the City to lead regional and state partners towards finding ways to reduce the emissions. Specifically, leaders from Fort Collins could participate more directly in the stakeholder process of air quality legislation and regulations.

Identifying gaps in climate education

Climate Change is a defining global and local issue of our current generation, and a critical problem our kids will have to face. We recommend expanding efforts to educate City residents, especially Youth,

about the threat posed by climate change, and the challenges and opportunities for our local area. Possible actions include:

- Explore currently available educational options
- Developing a downloadable information packet aimed at Youth
- Harmonization with programs already in place (Parks and Recreation programs, etc.)
- Looking to other similar communities for ideas and best practices.
- More climate-related educational activities at events that children attend
- Working with the Youth Advisory Board to gain support and advocacy
- Develop public message campaigns linking air quality improvement to public benefit, reaching diverse populations throughout the City
- Engaging youth via events like “invention fairs” that could be hosted by the City at a low cost and judged by AQAB with other Board and Commission members
- Sending a representative to the school board to advise and recruit support
- Utilizing tools and partnerships already in place (ozone bench and CSU)

Quantifying transportation emissions

The transportation sector produces the majority of the air pollutant emissions within Fort Collins City limits, which the City can directly influence. We encourage the City to continue to use the best available methods and/or update current techniques to accurately quantify air pollutant emissions from transportation (e.g. Nitrogen Oxides, Volatile Organic Compounds). The City can use insights from this data to help guide transportation planning for the future, with added value in identifying the precise tradeoffs between different transportation options. With better quantification of air pollutant emissions, the City can assess costs, benefits, and tradeoffs of future policies intending to encourage more electric vehicles, more public transportation, or more alternative modes of transport for example. Tools that the City may use to do this exist in the “Transportation Air Quality Impacts Guidance Manual” produced for the City in 2017.

Radon mitigation

Radon is the most prevalent indoor air pollutant in our City and can be effectively mitigated in most cases. We believe more can be done to increase testing and mitigation of Radon in residential structures throughout Fort Collins. Echoing this Board’s recommendations in spring 2019 (see attached), we recommend the City:

- Require radon testing and disclosure in residential house sales and residential rental transactions
- Require all radon contractors and/or all persons performing radon mitigation work to be certified
- Offer mitigation assistance based on staff recommendation for maximum gain
- Provide support for additional education and outreach ideas as presented by staff

*Note: The City's updated Air Quality Plan reflects these aforementioned priorities (among others), although timelines and supporting resources have not all been identified.

Resource Appendices

Additional ozone and air quality monitoring resources:

- Air Quality Control Commission: <https://www.colorado.gov/pacific/cdphe/aqcc>
- Regional Air Quality Council: <https://raqc.org/>
- Recent Review paper: “Air quality impacts from oil and natural gas development in Colorado”, link here: <https://doi.org/10.1525/elementa.398>
- Detlev Helmig’s monitoring at Boulder Reservoir and a recent contract with the City of Longmont for 2 monitoring stations. http://instaar.colorado.edu/ar/boulder_reservoir.html
- Recent Colorado Public Radio report detailed inaccurate methane data from CDPHE’s Denver and Platteville monitoring sites. Dr. Helmig’s monitoring, which includes methane, VOCs and nitrogen oxides, from oil and gas operations, as well as secondary pollutants, such as ozone, and is publicly available 24/7 in real time. <https://www.cpr.org/2019/12/05/colorado-talks-a-mean-game-on-methane-bad-data-no-best-practices-say-otherwise/>
- Longmont City Council Meeting March 5, 2019:
Dr. Helmig’s presentation to Longmont Council
<http://webapp.ci.longmont.co.us/mtgviewer.aspx?meetid=1148&doctype=AGENDA>
- Boulder County Government Panel Discussion Jan. 16, 2020:
<https://www.bouldercounty.org/environment/air/ozone/>
Discussed impacts of air quality on public health and the link to climate change, with this panel of scientific and policy experts:
 - Brenda Ekwurzel, Director of Science, Union of Concerned Scientists
 - John Putnam, Director of Environmental Programs, Colorado Department of Public Health and Environment
 - Detlev Helmig, Associate Research Professor, Institute of Alpine and Arctic Research (INSTAAR)
 - Gabrielle Petron, Research Scientist, Cooperative Institute for Research in Environmental Sciences

Additional Radon resources:

- CDPHE Radon website: <https://www.colorado.gov/pacific/cdphe/radon-and-your-health>
- Radon from a Physician's Perspective: http://www.certi.us/CDPHE_DO/Part4.html
- EPA Radon Success Case Studies: https://www.epa.gov/sites/production/files/2014-11/documents/success_stories.pdf
- Key Radon Statistics: <https://www.cancer.org/cancer/non-small-cell-lung-cancer/about/key-statistics.html>
- Radon Map: <https://www.epa.gov/sites/production/files/2015-07/documents/zonemapcolor.pdf>
- CDC suggestions for easy things to do to protect your health:
<https://www.cdc.gov/family/minutes/index.htm>



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April 24, 2019

Air Quality Advisory Board
c/o Arsineh Hecobian, Chair
PO Box 580
Fort Collins, CO 80522

Dear Ms. Hecobian and Board Members:

On behalf of City Council, thank you for providing us the April 24, 2019 memorandum regarding "Air Quality Advisory Board: Radon Program Recommendation."

We appreciate you sharing your thoughts and recommendations on this important topic, as detailed in your memo.

We sincerely appreciate your comments. Thank you again for writing.

Best Regards,

A handwritten signature in blue ink, appearing to read "Wade Troxell". The signature is stylized and fluid.

Wade Troxell
Mayor

/sek

Cc: City Council Members
Darin Atteberry, City Manager
Cassie Archuleta, Manager, Environmental Sustainability



Environmental Services
222 LaPorte Avenue
PO Box 580
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MEMORANDUM

Date: April 24, 2019
To: Mayor and City Councilmembers
From: Arsineh Hecobian, AQAB Chair

CC: Air Quality Advisory Board
Darin Atteberry, City Manager

Re: **Air Quality Advisory Board: Radon Program Recommendations**

Long term exposure to Radon can be deadly¹. Radon is an odorless, colorless, and radioactive gas that occurs naturally. It can seep into buildings and accumulate in areas that are not properly ventilated. Radon is the second-leading cause of lung cancer in smokers in the United States and the leading cause of lung cancer in non-smokers². Indeed, there is a 50% increased risk of having lung cancer after 15 years of exposure to radon at USEPA's action level of 4 picocuries per liter (pCi/L)³. Lung cancer is the leading cause of cancer death in men and women each year⁴. In Colorado we have high levels of radon in our soils⁵, which based on points presented above makes radon awareness, testing, and mitigation important in reducing occurrences of lung cancer and improving quality of life in our state.

The good news is that when elevated radon levels are found in a house, they can be reduced¹. Testing for radon levels in houses is inexpensive and easy⁶. Based on information provided to AQAB from the City of Fort Collins staff, our existing radon programs are only partially successful in encouraging residential radon testing and mitigation. Thus, our recommendations, following solutions provided by the City of Fort Collins staff in a presentation on February 25, 2019 are:

- Require radon testing and disclosure in residential house sales and residential rental transactions
- Require all radon contractors and/or all persons performing radon mitigation work to be certified
- Offer mitigation assistance based on staff recommendation for maximum gain
- Provide support for additional education and outreach ideas as presented by staff

More details on each bullet point are provided below:

Require radon testing and disclosure in residential house sales and residential rental transactions

This is not a call to test all residential structures but will eventually result in testing most, which is important as Colorado and Fort Collins is located on a high radon zone (USEPA zone 1). In the latest

¹ https://www.epa.gov/sites/production/files/2014-11/documents/success_stories.pdf

² <https://www.colorado.gov/pacific/cdphe/radon-and-your-health>

³ http://www.certified.us/CDPHE_DO/Part4.html

⁴ <https://www.cancer.org/cancer/non-small-cell-lung-cancer/about/key-statistics.html>

⁵ <https://www.epa.gov/sites/production/files/2015-07/documents/zonemapcolor.pdf>

⁶ <https://www.cdc.gov/family/minutes/index.htm>



survey of Fort Collins residents where houses tested above the recommended action level for radon, 36% of those with elevated levels did not perform any mitigation action. Also, many houses are never tested, as currently the test is voluntary. Staff has observed in the past that when homeowners test and have high radon levels, they will frequently proceed with mitigation, so the requirement during home sales will inevitably result in a much better rate of cancer avoidance. In addition, in keeping with the well established premise of environmental right-to-know, tenants should be provided with the information so they can make their own decisions on where it is best to live.

Require all radon contractors and/or all persons performing radon mitigation work to be certified

This is not a requirement for the certification of all individuals conducting radon mitigation work, but for the presence of one certified individual in the company. This model is currently being followed by companies who are certified via the National Radon Proficiency Program⁷.

Offer mitigation assistance based on staff recommendation for maximum gain

Fort Collins has historically had a loan assistance program that covered, among other things, radon mitigation (zero interest loans)⁸. Unfortunately, this program was cancelled this year. The AQAB members recommend reinstatement of this or a similar program (any combination or one of loans, rebates, or grants as recommended by City of Fort Collins staff) that can be used to assist the public in addressing radon mitigation costs specifically.

Provide support for additional education and outreach ideas as presented by staff

The current plans for education on the serious nature of radon in houses in Fort Collins can be greatly improved. The City of Fort Collins staff have already started to address some of the gaps in the radon education program but much more can be done if they are provided with sufficient resources. Another challenging aspect of addressing radon is evaluating the cost/benefit aspect of testing and mitigating radon when compared to saving lives, hospital visits, workdays missed, etc. The City of Fort Collins did not have adequate resources to address this during this phase. Having results from a cost benefit analysis would be very helpful in clarifying the direction of action for radon testing and mitigation in Fort Collins and thus improving air quality and life experience for the residents of our City.

⁷ <https://certifiedradonpros.org/co.html>

⁸ https://www.fcgov.com/utilities/img/site_specific/uploads/zilch_loan_application.pdf