

## **Appendix J**

### **Criteria Pollutant Plots for the 4 km Grid for the 2022 Future Year Modeling**

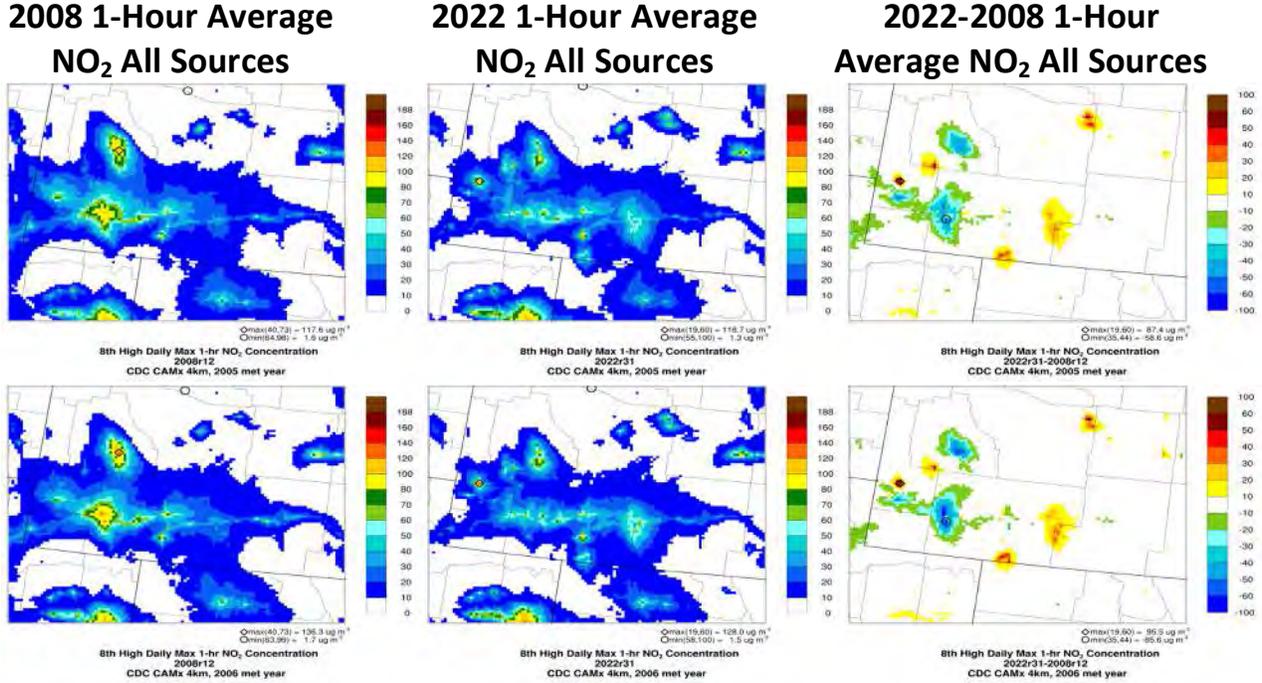
**APPENDIX J – CRITERIA POLLUTANT PLOTS FOR THE 4 KM GRID  
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**1.0. INTRODUCTION**

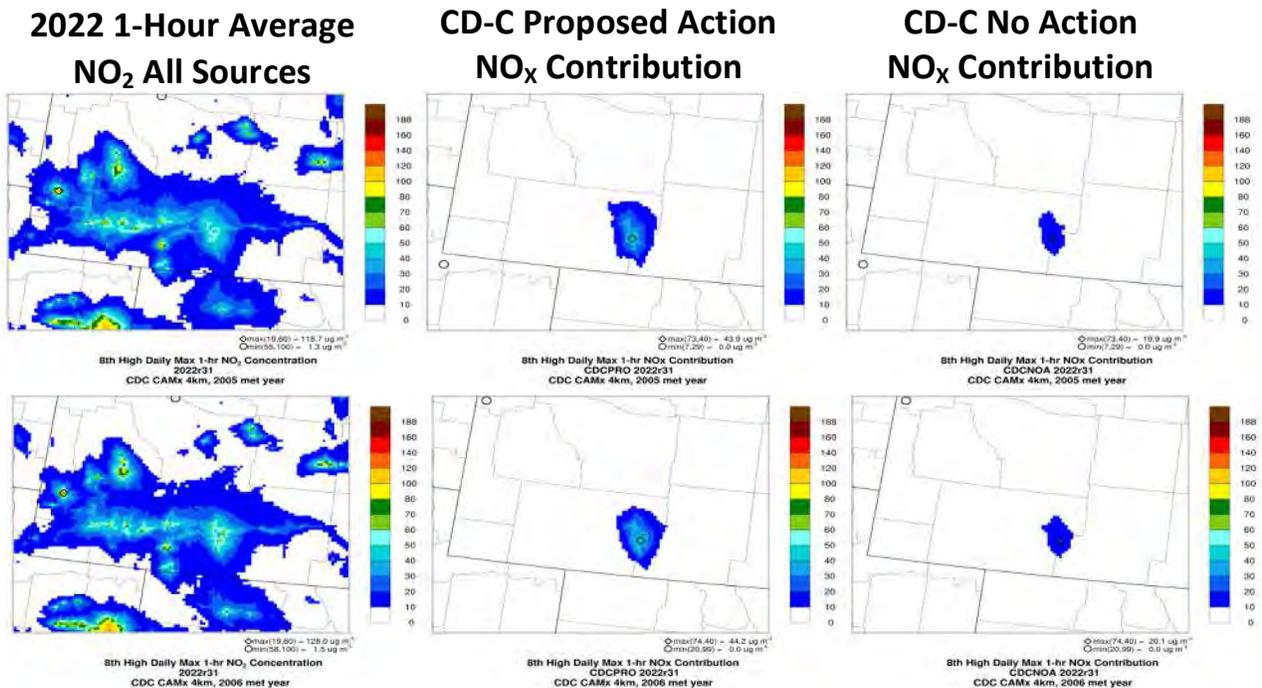
In Section 4.5.3, we presented the CAMx modeling results for Criteria Air Pollutants (CAPs) in the 4 km domain. The results shown in Section 4.5.3 are two year averages over the 2005 and 2006 meteorological years. The two year averages are presented as an approximation to the form of the NAAQS, many of which are defined in terms of a multi-year averaging period. In Appendix J, we present plots of the CAPs for both the 2005 and 2006 meteorological years separately in order to show the year-to-year variability of the CAPs results.

**APPENDIX J – CRITERIA POLLUTANT PLOTS FOR THE 4 KM GRID  
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**Figure J-1a. CAMx model results for 1-hour NO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for 1-hour NO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 1-hour NO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

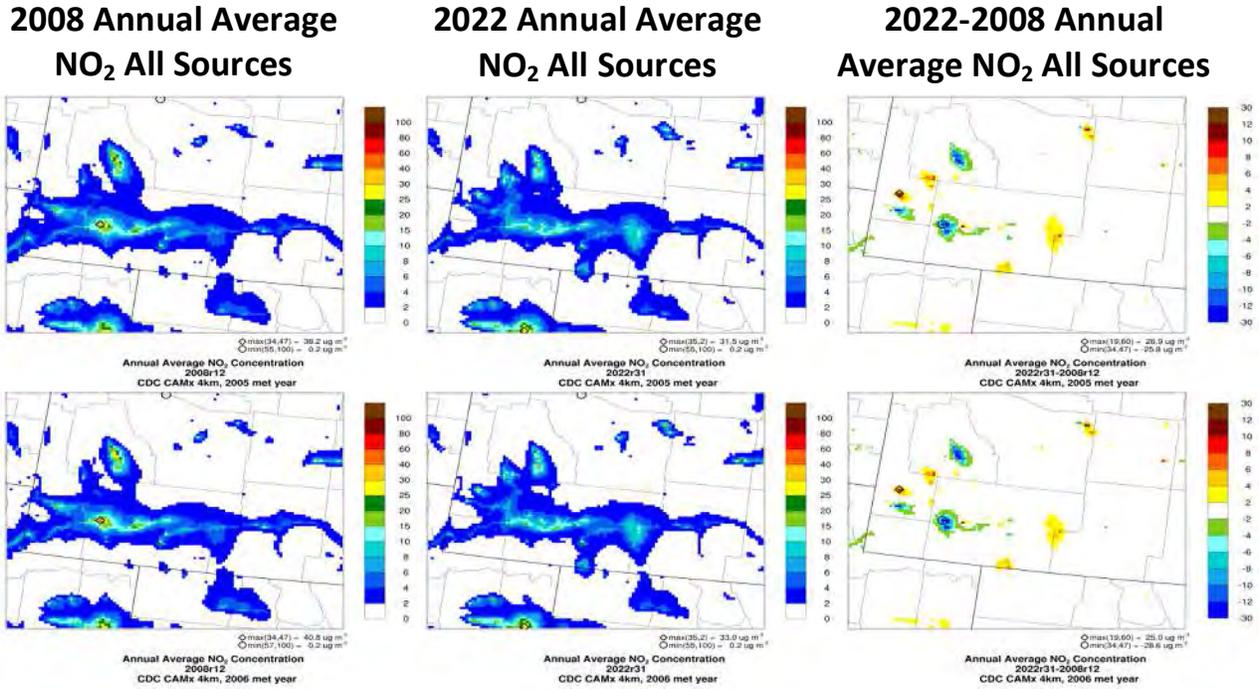


**Figure J-1b. Left panel: 2022 absolute model results for 1-hour NO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 1-hour NO<sub>x</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 1-hour NO<sub>x</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

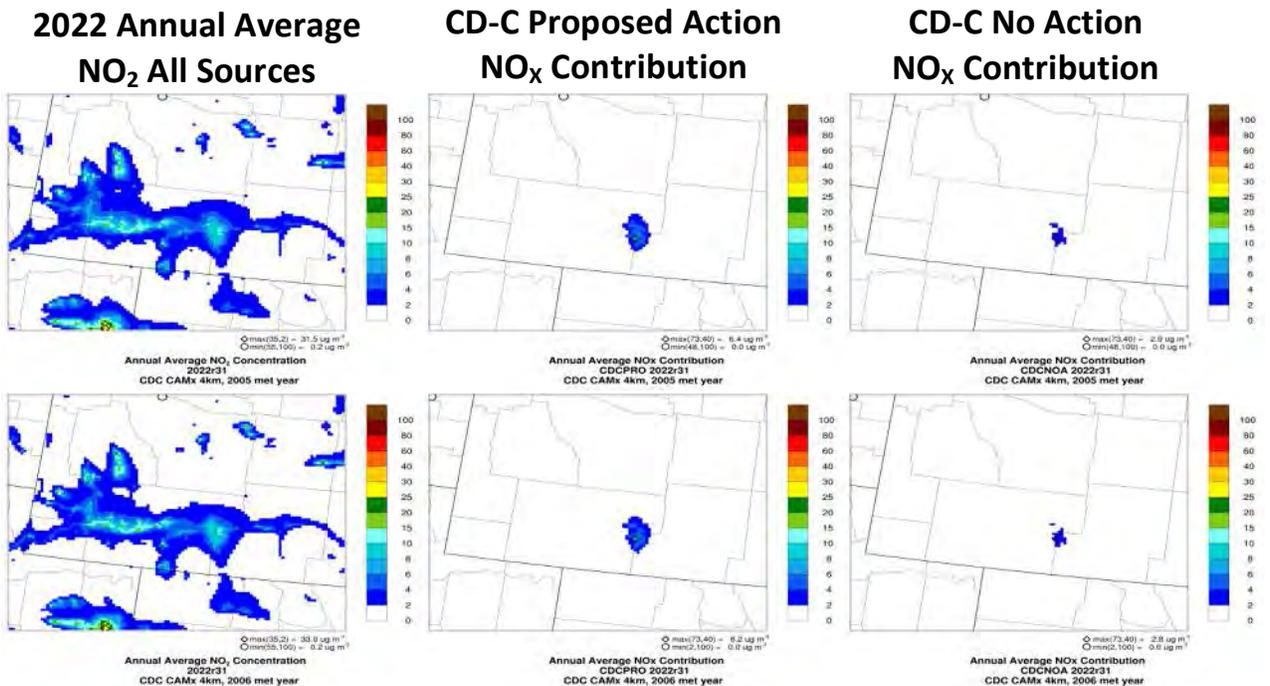


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**Figure J-2a. CAMx model results for annual average NO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for annual average NO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in annual average NO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

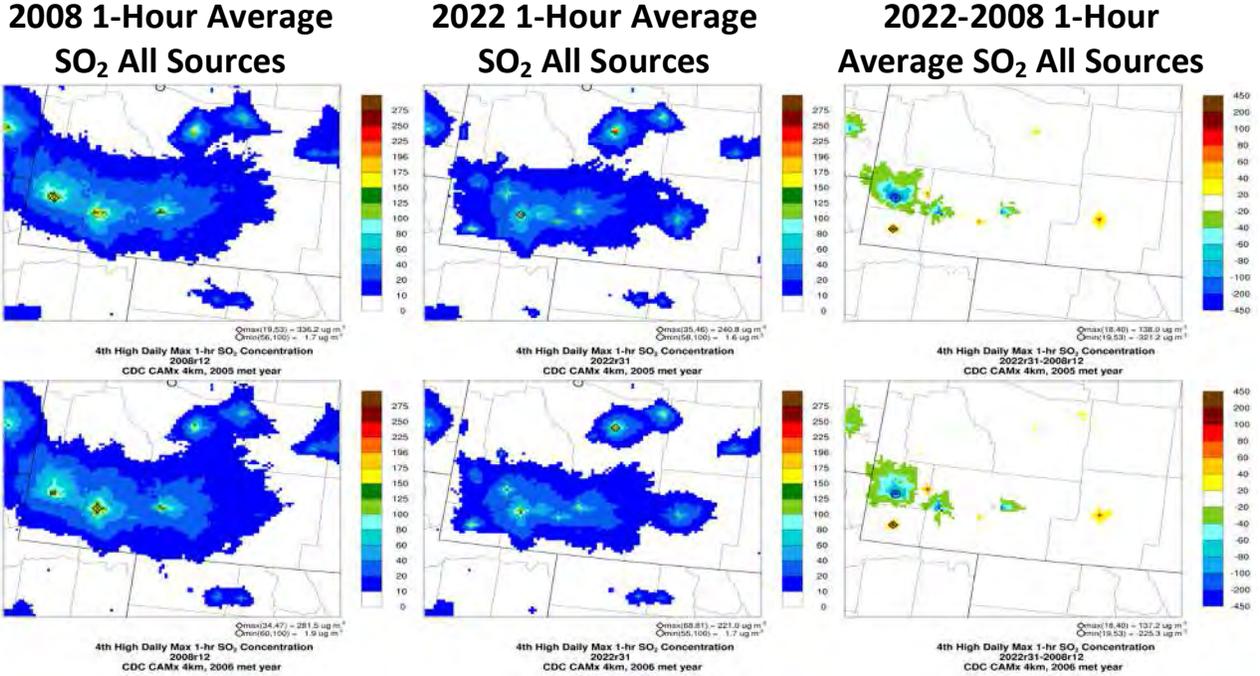


**Figure J-2b. Left panel: 2022 absolute model results for annual average NO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 annual average NO<sub>x</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 annual average NO<sub>x</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

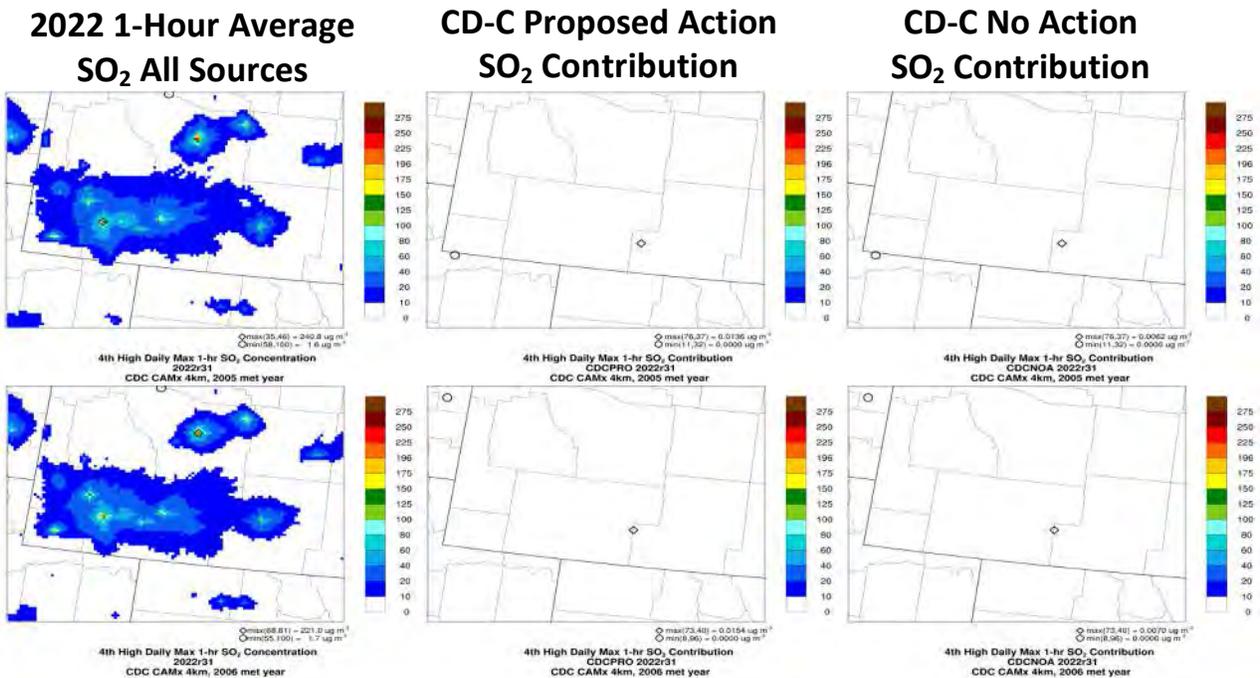


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**Figure J-3a. CAMx model results for 1-hour SO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for 1-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 1-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

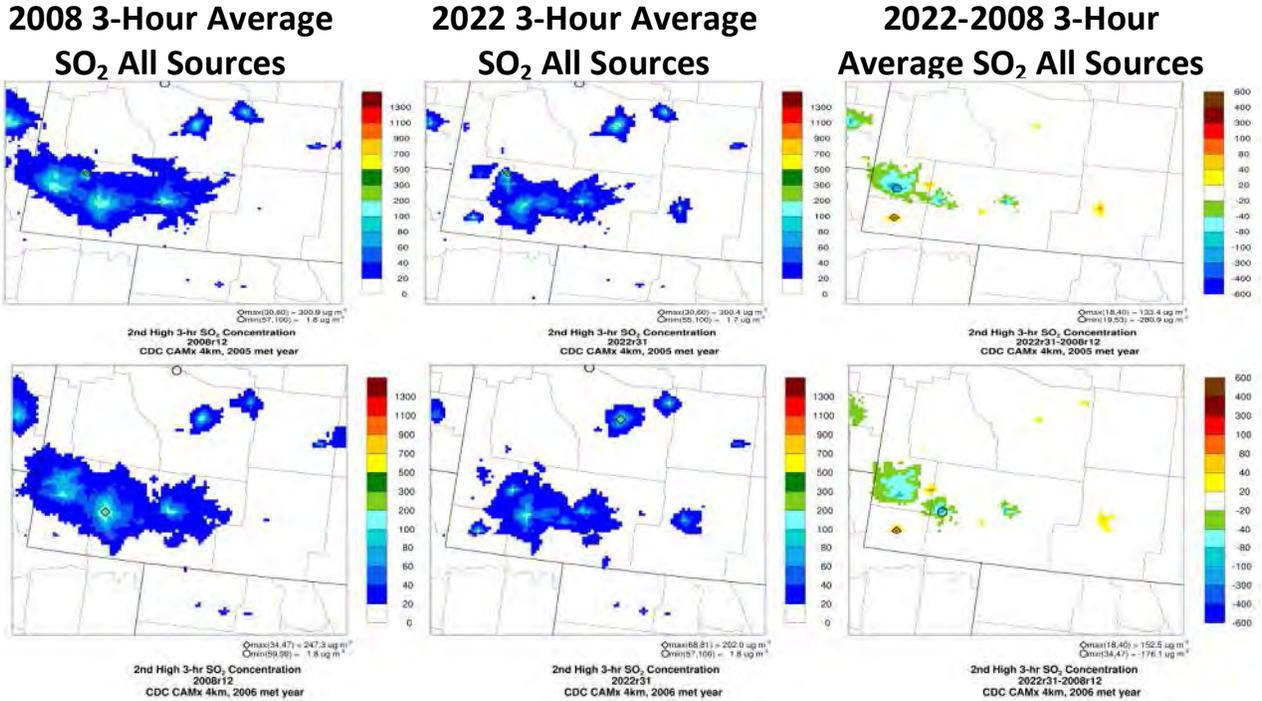


**Figure J-3b. Left panel: 2022 absolute model results for 1-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 1-hour SO<sub>2</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 1-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

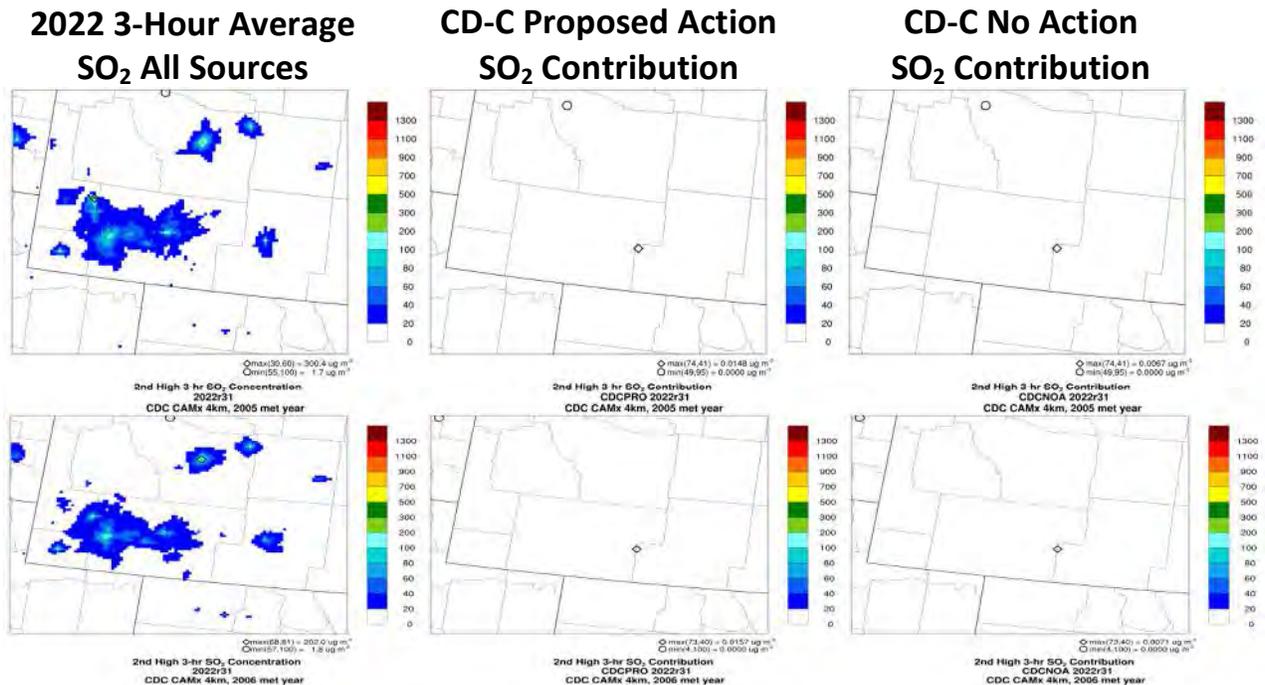


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**Figure J-4a. CAMx model results for 3-hour SO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for 3-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 3-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

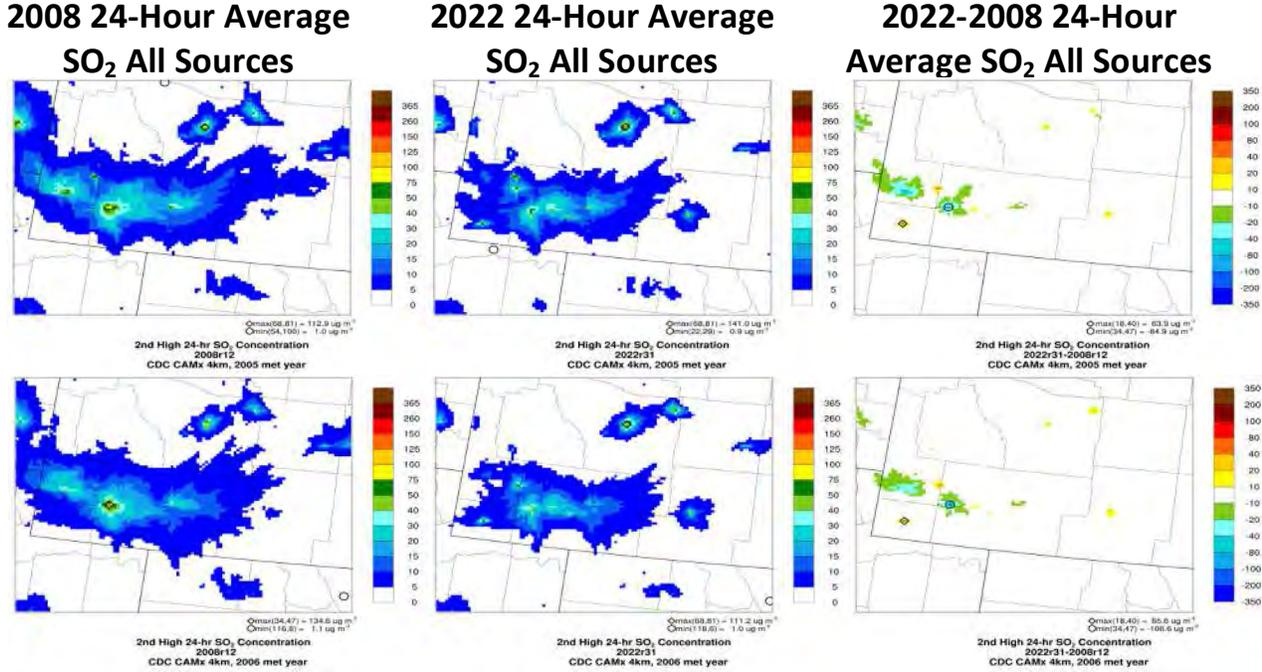


**Figure J-4b. Left panel: 2022 absolute model results for 3-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 3-hour SO<sub>2</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 3-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

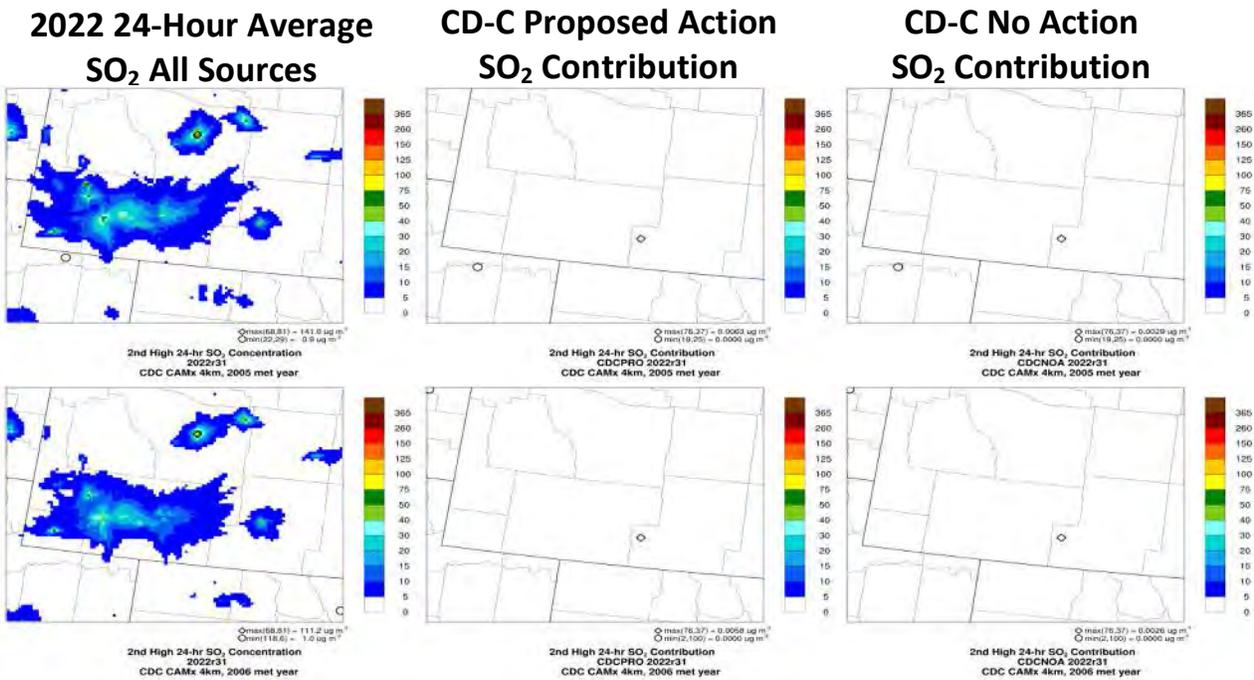


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**Figure J-5a. CAMx model results for 24-hour SO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for 24-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 24-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**



**Figure J-5b. Left panel: 2022 absolute model results for 24-hour SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 24-hour SO<sub>2</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 24-hour SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**



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Figure J-6a. CAMx model results for annual average SO<sub>2</sub>. Left and center panels: 2008 and 2022 absolute model results for annual average SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in annual average SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.

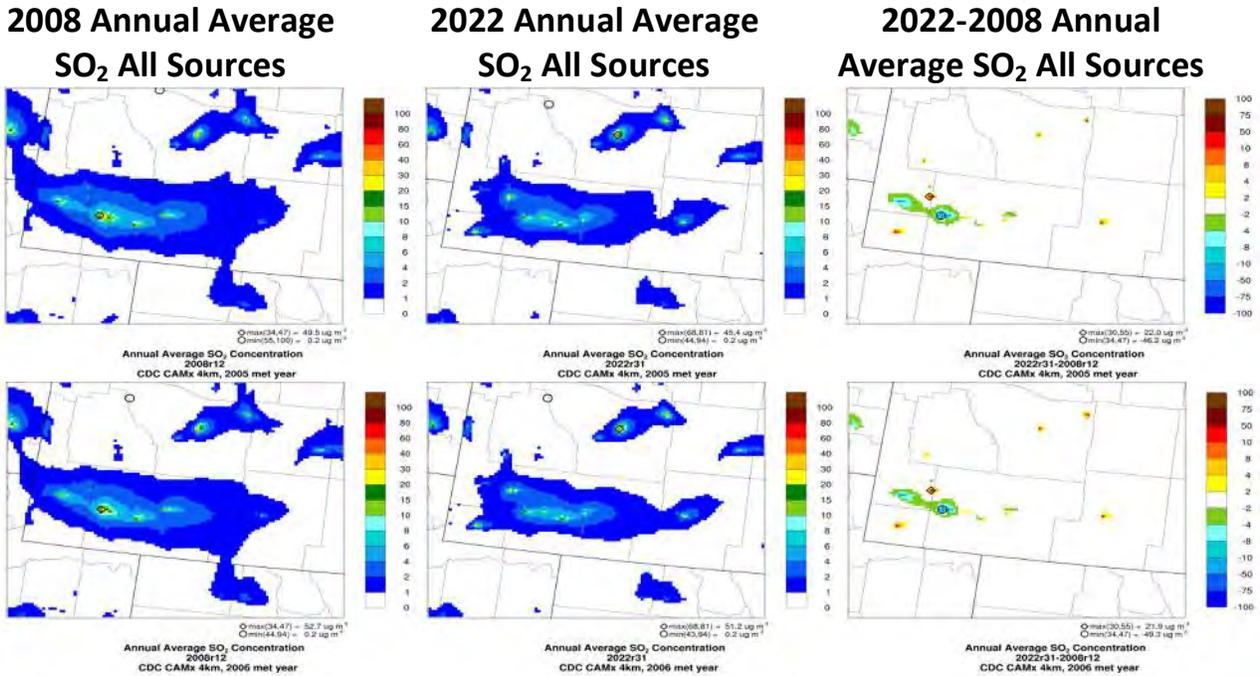
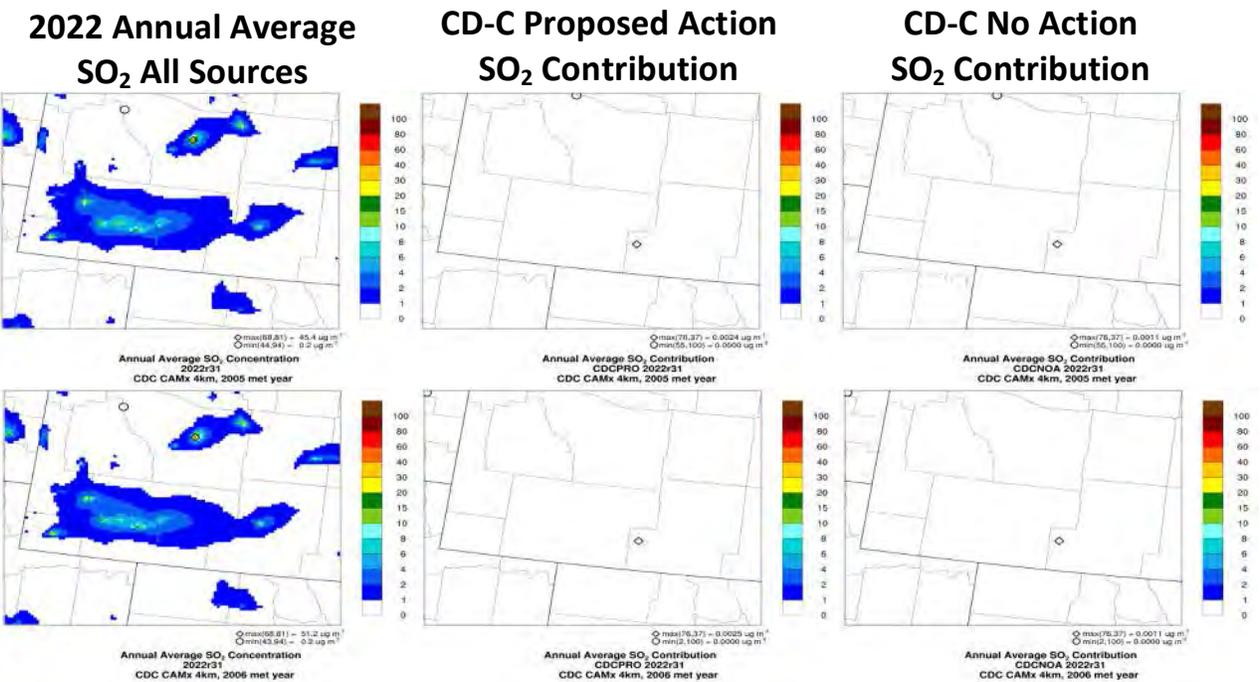


Figure J-6b. Left panel: 2022 absolute model results for annual average SO<sub>2</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 annual average SO<sub>2</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 annual average SO<sub>2</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.



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Figure J-7a. CAMx model results for 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub>. Left and center panels: 2008 and 2022 absolute model results for 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.

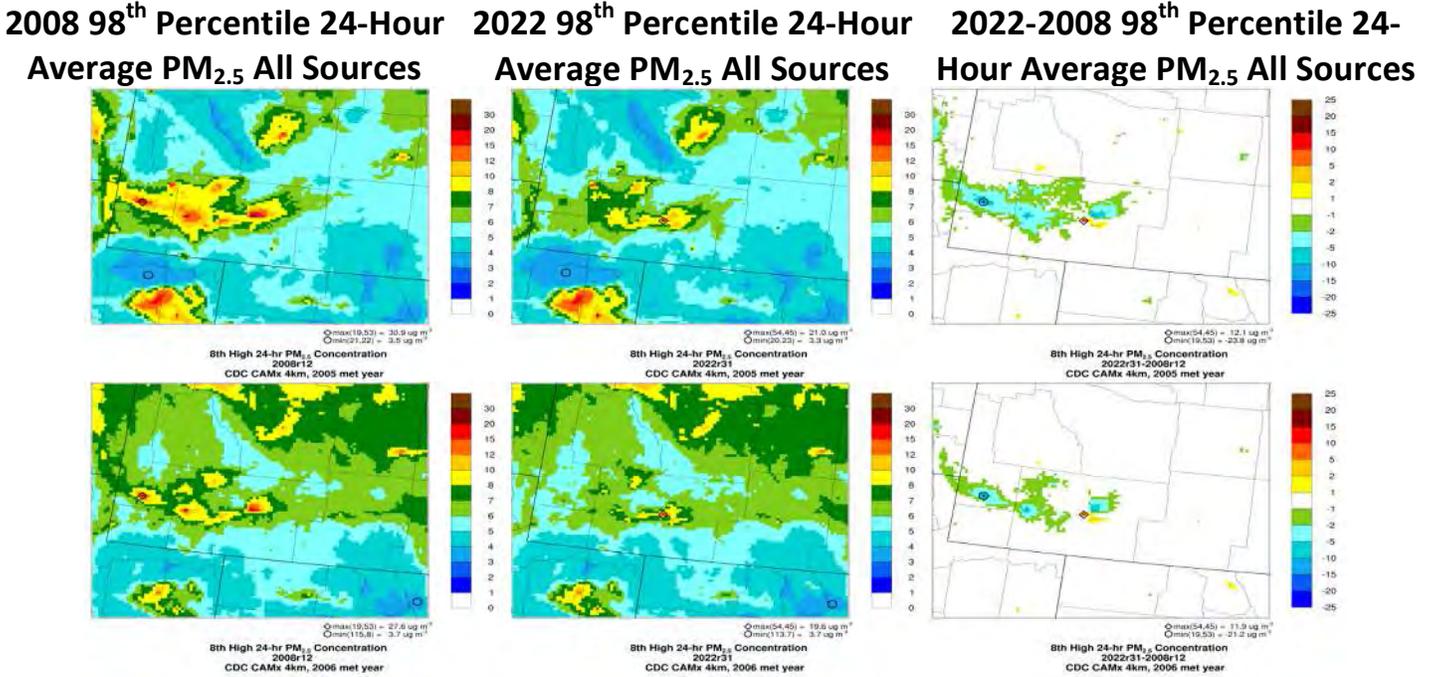
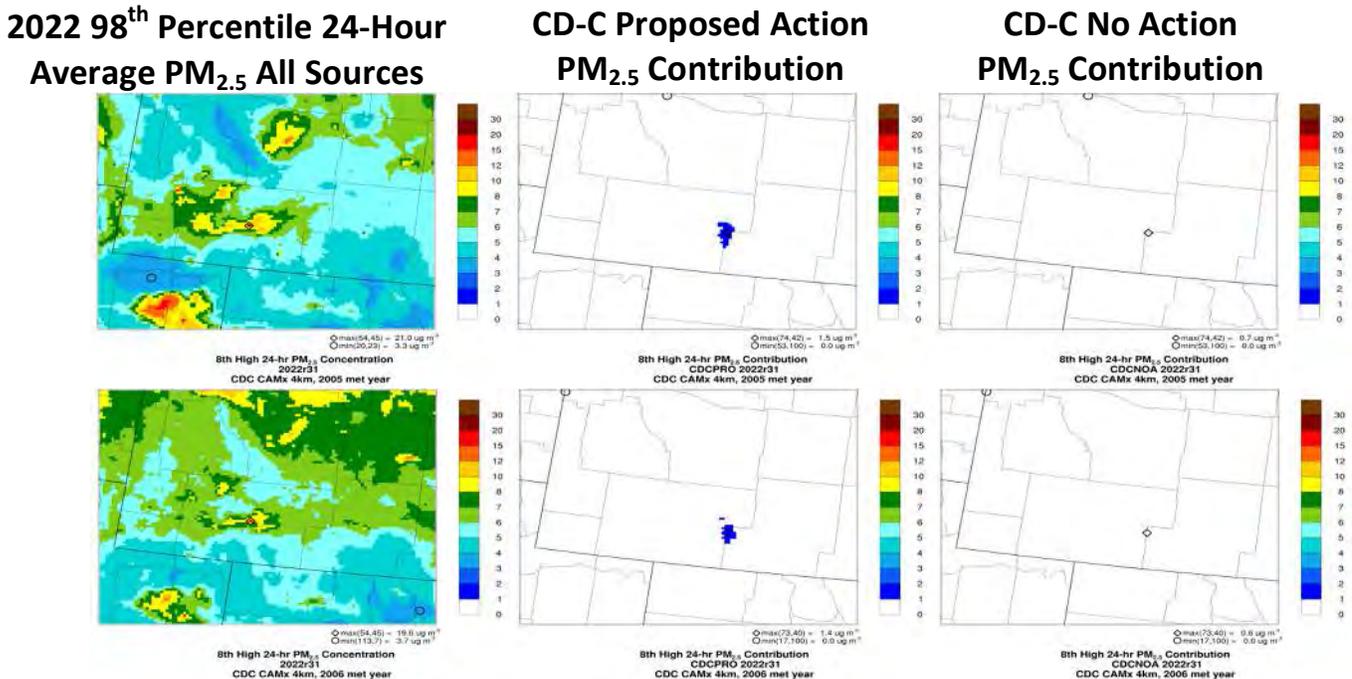
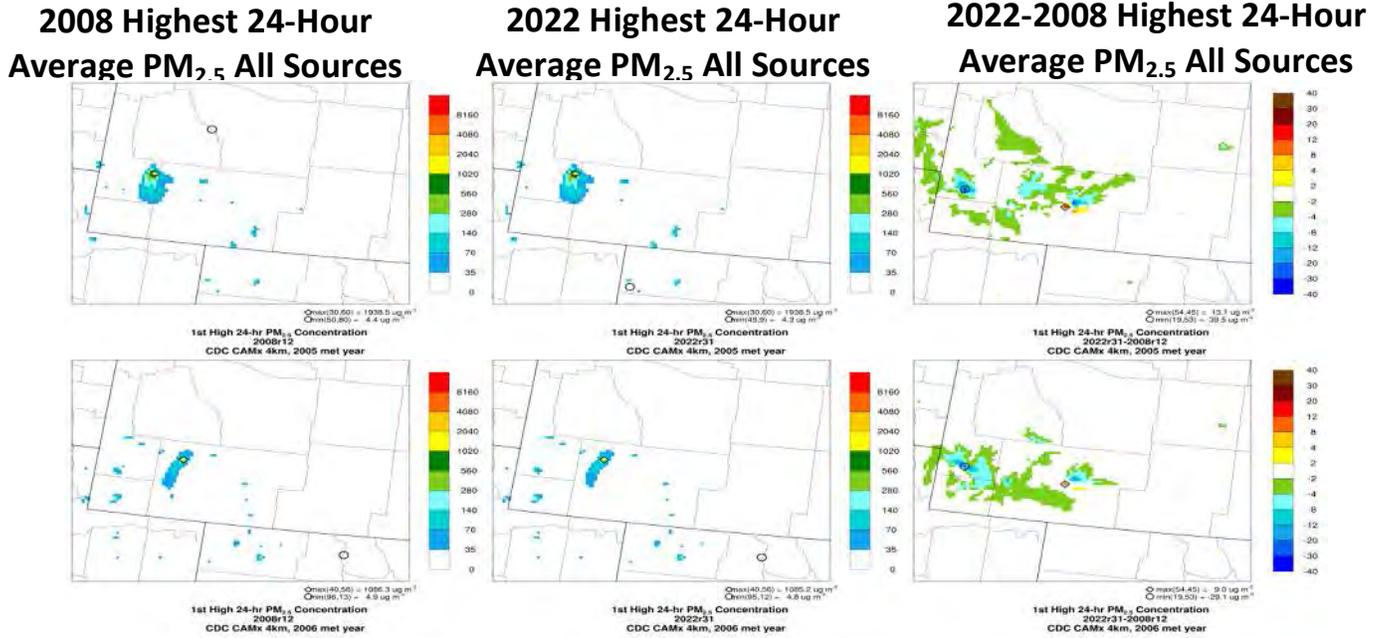


Figure J-7b. Left panel: 2022 absolute model results for 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 98<sup>th</sup> percentile 24-hour average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.

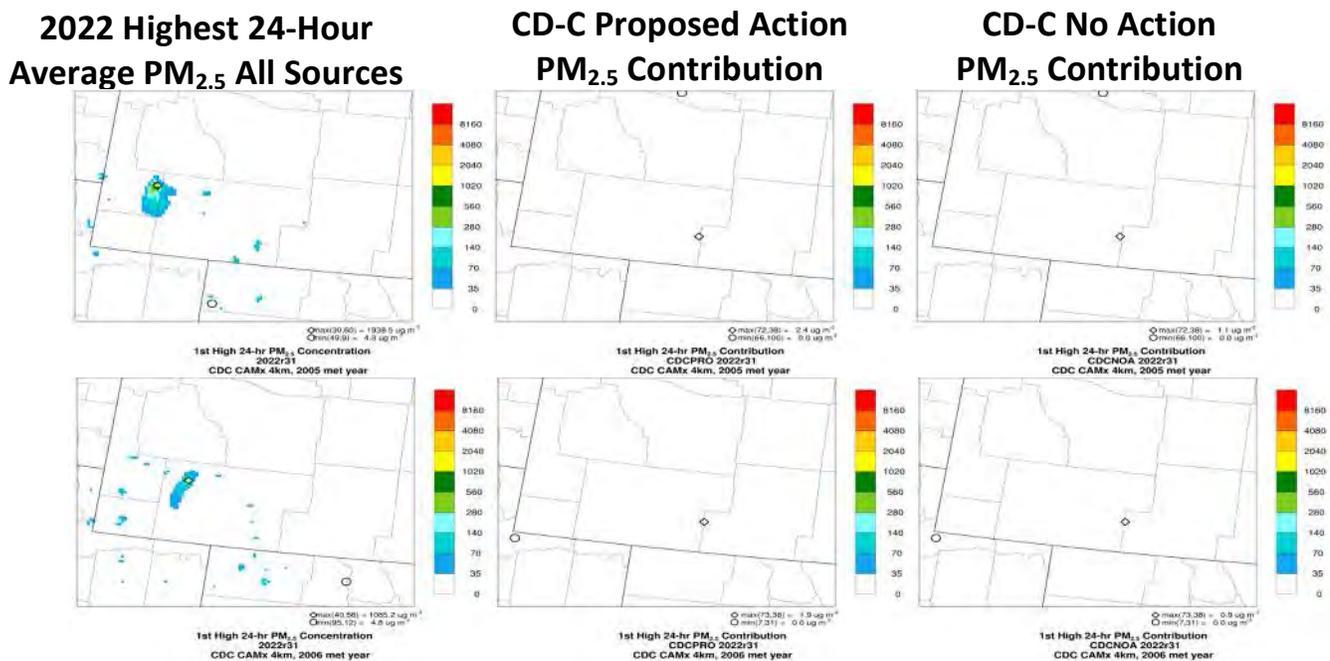


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**Figure J-8a. CAMx model results for highest 24-hour average PM<sub>2.5</sub>. Left and center panels: 2008 and 2022 absolute model results for highest 24-hour average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in highest 24-hour average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

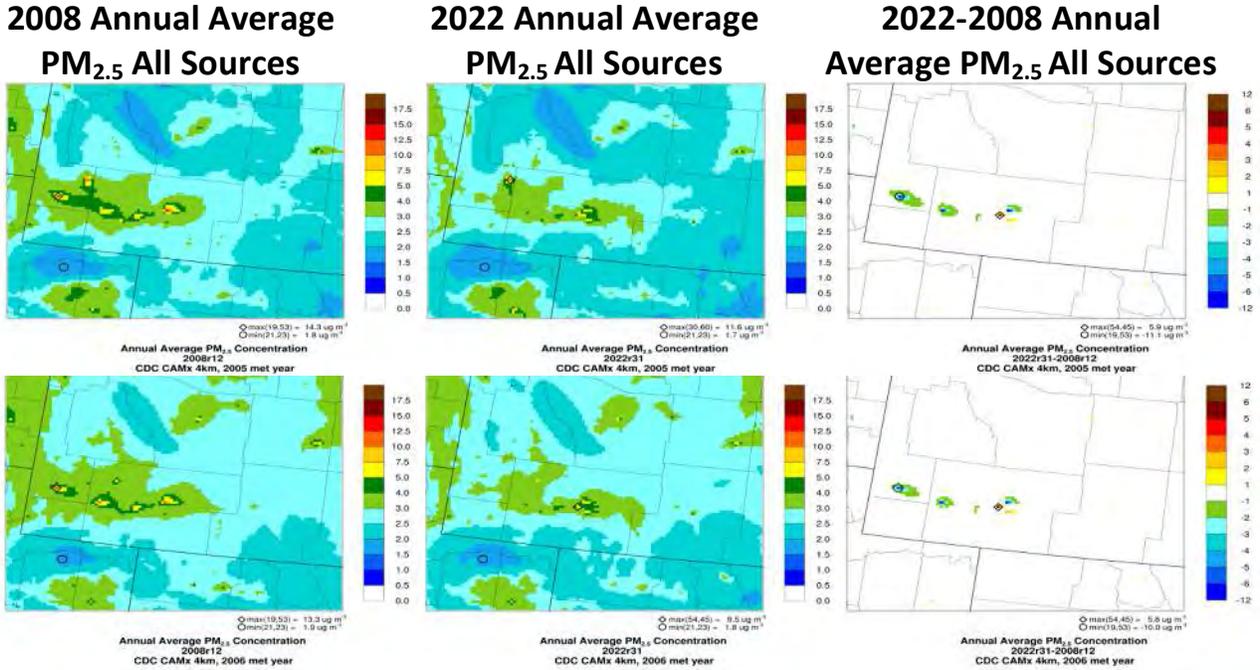


**Figure J-8b. Left panel: 2022 absolute model results for highest 24-hour average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 highest 24-hour average PM<sub>2.5</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 highest 24-hour average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

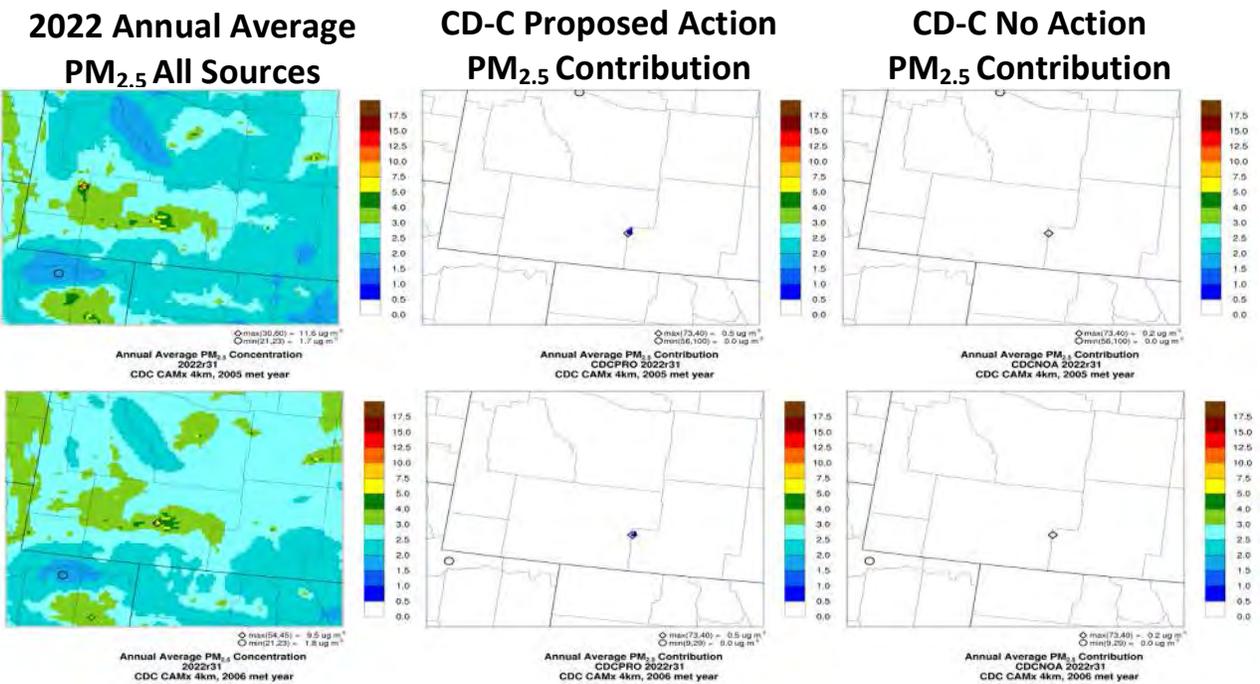


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**Figure J-9a. CAMx model results for annual average PM<sub>2.5</sub>. Left and center panels: 2008 and 2022 absolute model results for annual average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in annual average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

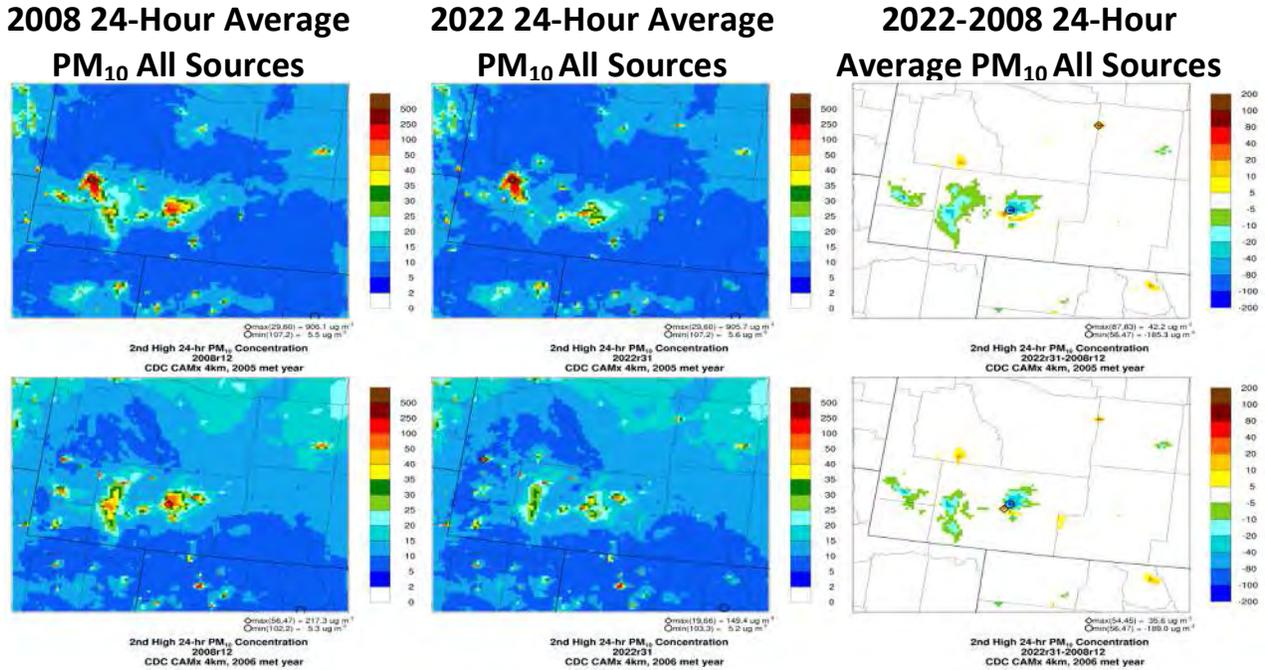


**Figure J-9b. Left panel: 2022 absolute model results for annual average PM<sub>2.5</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 annual average PM<sub>2.5</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 annual average PM<sub>2.5</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

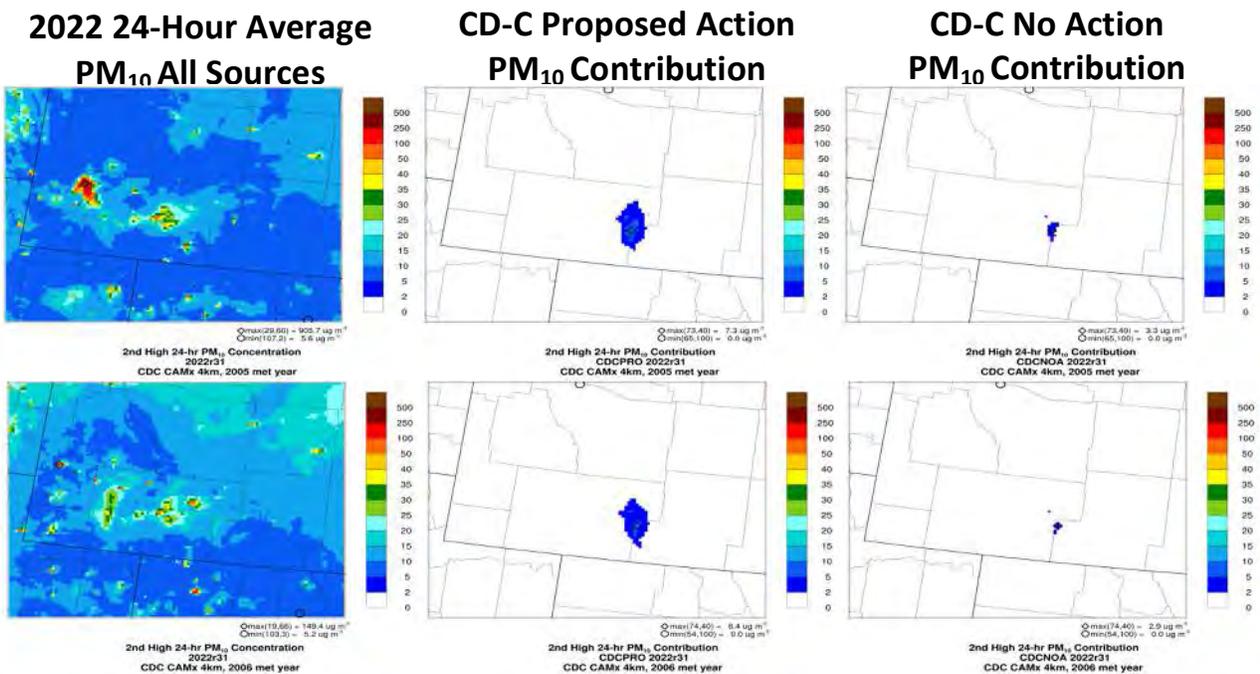


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**Figure J-10a. CAMx model results for 24-hour average PM<sub>10</sub>. Left and center panels: 2008 and 2022 absolute model results for 24-hour average PM<sub>10</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 24-hour average PM<sub>10</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

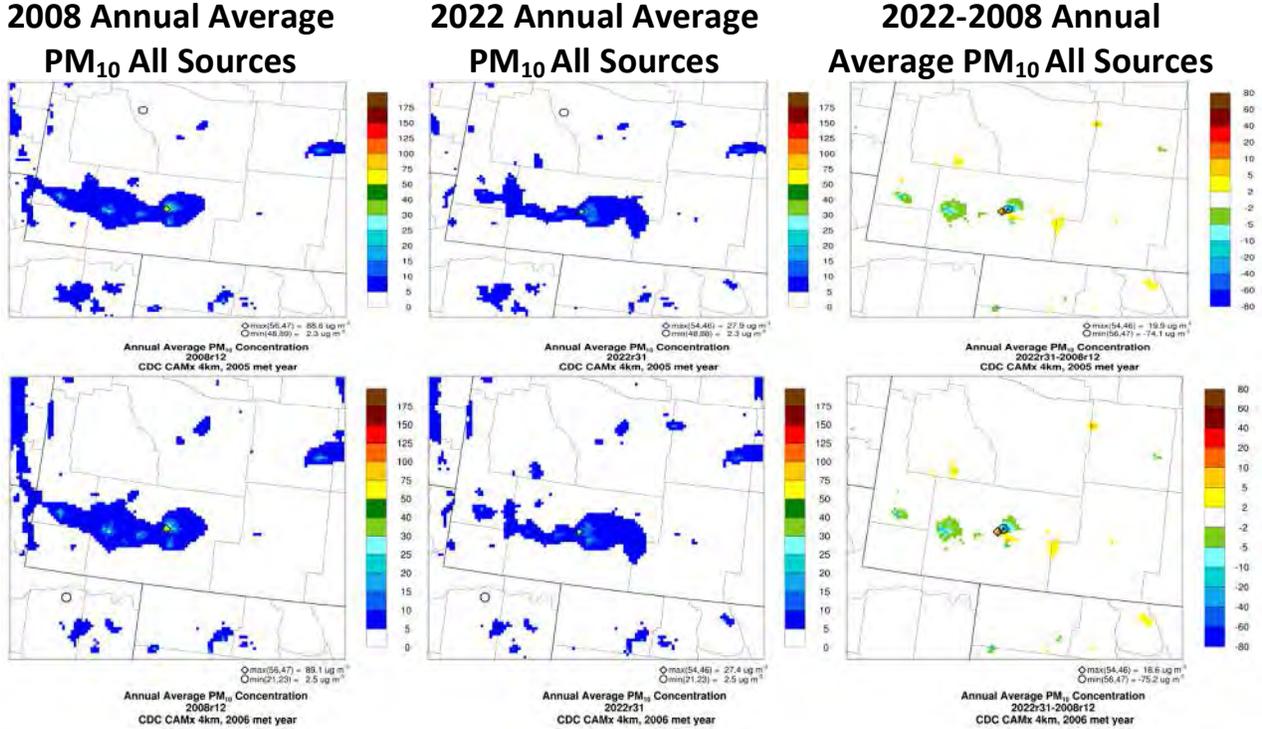


**Figure J-10b. Left panel: 2022 absolute model results for 24-hour average PM<sub>10</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 24-hour average PM<sub>10</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 24-hour average PM<sub>10</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

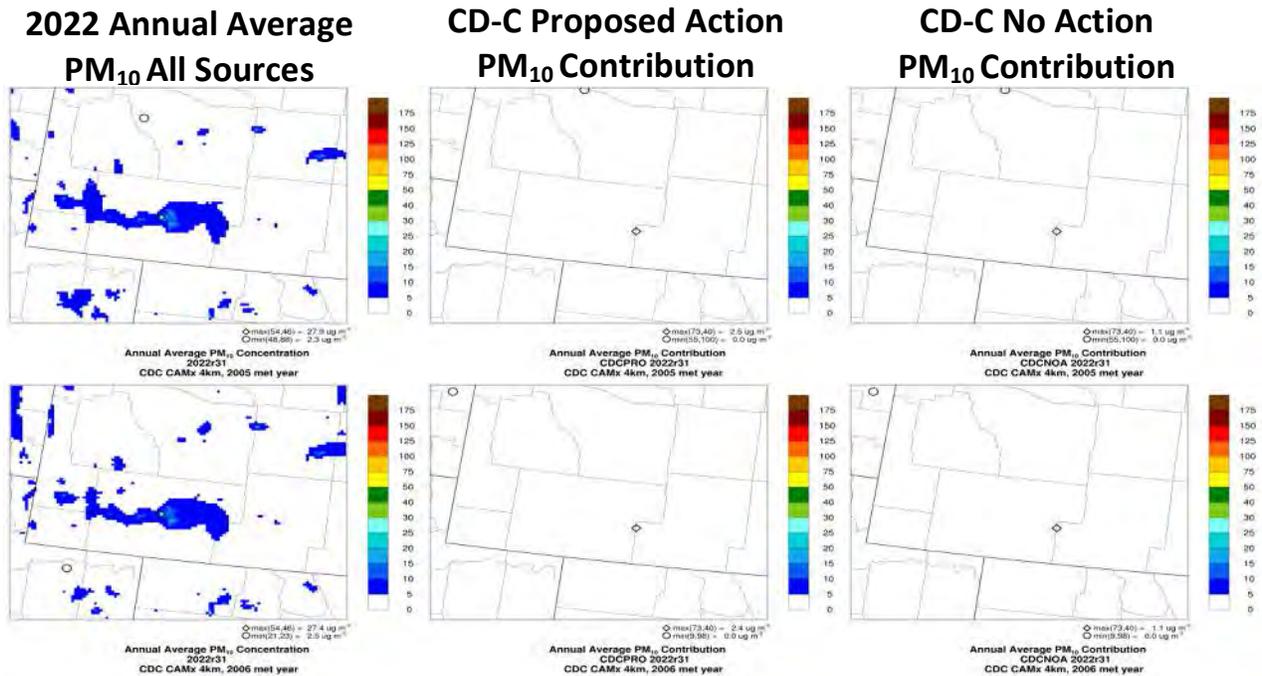


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**Figure J-11a. CAMx model results for annual average PM<sub>10</sub>. Left and center panels: 2008 and 2022 absolute model results for annual average PM<sub>10</sub> from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in annual average PM<sub>10</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

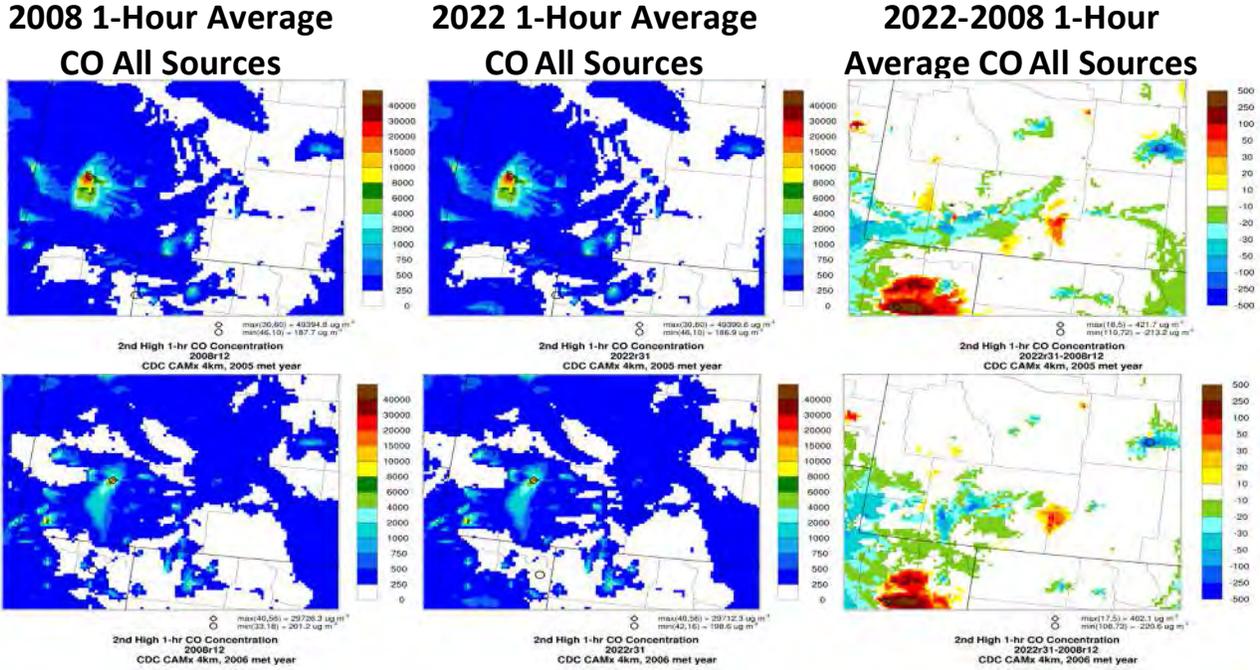


**Figure J-11b. Left panel: 2022 absolute model results for annual average PM<sub>10</sub> from all regional emissions sources, including CD-C Project. Center panel: CD-C Proposed Action contribution to 2022 annual average PM<sub>10</sub>. Right panel: CD-C No Action (existing wells) contribution to the 2022 annual average PM<sub>10</sub>. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**



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**Figure J-12. CAMx model results for 1-hour CO. Left and center panels: 2008 and 2022 absolute model results for 1-hour CO from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 1-hour CO. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**



**Figure J-13. CAMx model results for 8-hour CO. Left and center panels: 2008 and 2022 absolute model results for 8-hour CO from all regional emissions sources, including CD-C Project. Right panel: 2022-2008 difference in 8-hour CO. Upper panels show 2005 meteorological year. Lower panels show 2006 meteorological year.**

