

## Book Chapters

Wheeler N.J.M., Raffuse S.M., Sullivan D.C., Craig K.J., and Reid S.B. (2010) Daily air quality predictions from the BlueSky Gateway. NATO Science for Peace and Security Series - C: Environmental Security Air Pollution Modeling and Its Application XX, D.G. Steyn and S.T. Rao eds., Springer Science + Business Media B.V., Dordrecht, The Netherlands, 307-311 (doi: 10.1007/978-90-481-3812-8).

Wheeler N.J.M., Craig K.J., and Reid S.B. (2010) An investigation of aloft model performance for two episodes during the 2000 Central California ozone study. NATO Science for Peace and Security Series - C: Environmental Security Air Pollution Modeling and Its Application XX, D.G. Steyn and S.T. Rao eds., Springer Science + Business Media N.V., Dordrecht, The Netherlands, 603-607 (doi:10.1007/978-90-481-3812-8).

## Journal Articles

Coughlin J., Chang S., Craig K., Scarborough C., Driscoll C., Clark C., and Pavlovic N. (2024) Characterizing localized nitrogen sensitivity of tree species and the associated influences of mediating factors. *Ecosphere*, 15, July. Available at <https://doi.org/10.1002/ecs2.4925>.

Pavlovic N.R., Chang S.Y., Huang J., Craig K., Clark C., Horn K., and Driscoll C.T. (2023) Empirical nitrogen and sulfur critical loads of U.S. tree species and their uncertainties with machine learning. *Science of The Total Environment*, 857, 159252, January. Available at <https://doi.org/10.1016/j.scitotenv.2022.159252>.

Pavlovic N.R., Chang S.Y., Huang J., Craig K., Clark C., Horn K., and Driscoll C.T. (2023) Empirical nitrogen and sulfur critical loads of U.S. tree species and their uncertainties with machine learning. *Science of The Total Environment*, 857, 159252, January 20. Available at <https://www.sciencedirect.com/science/article/pii/S0048969722063513>.

Hao H., Eckel S.P., Hosseini A., Van Vliet E.D.S., Dzurbur E., Dunton G., Chang S.Y., Craig K., Rocchio R., Bastain T., Gilliland F., Okelo S., Ross M.K., Sarrafzadeh M., Bui A.A.T., and Habre R. (2022) Daily associations of air pollution and pediatric asthma risk using the Biomedical REAI-Time Health Evaluation (BREATHE) kit. *Int J Environ Res Public Health*, doi: DOI: 10.3390/ijerph19063578, March 17. Available at <https://pubmed.ncbi.nlm.nih.gov/35329265/>.

Hao H., Eckel S.P., Hosseini A., Van Vliet E.D.S., Dzurbur E., Dunton G., Chang S.Y., Craig K., Rocchio R., Bastain T., Gilliland F., Okelo S., Ross M.K., Sarrafzadeh M., Bui A.A.T., and Habre R. (2022) Daily associations of air pollution and pediatric asthma risk using the biomedical real-time health evaluation (BREATHE) kit. *International Journal of Environmental Research and Public Health*, 19(6), 3578. Available at <https://www.mdpi.com/1660-4601/19/6/3578>.

Eisinger D., Craig K., Landsberg K., Mukherjee A., DeWinter J., McCarthy M., and Brown S. (2021) Near-road air quality insights from a U.S. DOT five-year transportation pooled fund study. *TR News*, (332), 20-27, March-April. Available at <http://www.trb.org/Publications/Blurbs/182193.aspx>.

Craig K.J., Baringer L.M., Chang S.-Y., McCarthy M.C., Bai S., Seagram A.F., Ravi V., Landsberg K., and Eisinger D.S. (2020) Modeled and measured near-road PM<sub>2.5</sub> concentrations: Indianapolis and

- Providence cases. *Atmos. Environ.*, 240, 117775 (STI-6696), November. Available at <https://www.sciencedirect.com/science/article/abs/pii/S1352231020305070>.
- Craig K., Erdakos G., Chang S.Y., and Baringer L. (2020) Air quality and source apportionment modeling of Year 2017 ozone episodes in Albuquerque/Bernalillo County, New Mexico. *J. Air Waste Manage.*, 70(11), 1101-1120, (STI-7231), May 15. Available at <https://doi.org/10.1080/10962247.2020.1764879>.
- Capps S.L., Driscoll C.T., Fakhraei H., Templer P.H., Craig K.J., Milford J.B., and Lambert K.F. (2016) Estimating potential productivity cobenefits for crops and trees from reduced ozone with U.S. coal power plant carbon standards. *Journal of Geophysical Research Atmospheres*, 121, 14679–14690, doi: 10.1002/2016JD025141.
- Reid S., Bai S., Du Y., Craig K., Erdakos G., Baringer L., Eisinger D., McCarthy M., and Landsberg K. (2016) Emissions modeling with MOVES and EMFAC to assess the potential for a transportation project to create particulate matter hot spots. *Transportation Research Record: Journal of the Transportation Research Board*, 2570, 12-20, doi: 10.3141/2570-02 (STI-6330).
- Raffuse S.M., McCarthy M.C., Craig K.J., DeWinter J.L., Jumbam L.K., Fruin S.A., Gauderman W.J., and Lurmann F.W. (2013) High-resolution MODIS aerosol retrieval during wildfire events in California for use in exposure assessment. *Journal of Geophysical Research*, 118(19), 11242-11255, doi: 10.1002/jgrd.50862 (STI-5433), October. Available at <http://onlinelibrary.wiley.com/doi/10.1002/jgrd.50862/abstract>.
- Strand T.M., Larkin N., Craig K.J., Raffuse S., Sullivan D., Solomon R., Rorig M., Wheeler N., and Pryden D. (2012) Analysis of BlueSky Gateway PM<sub>2.5</sub> predictions during the 2007 southern and 2008 northern California fires. *J. Geophys. Res.*, 117(D17301), (doi:10.1029/2012JD017627). Available at <http://www.agu.org/pubs/crossref/2012/2012JD017627.shtml>.
- Raffuse S., Craig K., Larkin N., Strand T., Sullivan D., Wheeler N., and Solomon R. (2012) An evaluation of modeled plume injection height with satellite-derived observed plume height. *Atmosphere*, 3, special issue: Biomass Emissions, Dr. Charles Ichoku, ed., 103-123 (STI-908054-3870, doi: 10.3390/atmos3010103).
- Koracin D., Vellore R., Lowenthal D.H., Watson J.G., Koracin J., McCord T., DuBois D.W., Chen L.-W.A., Kumar N., Knipping E.M., Wheeler N.J.M., Craig K., and Reid S. (2011) Regional source identification using Lagrangian Stochastic Particle Dispersion and HYSPLIT backward-trajectory models. *J. Air Waste Manage. Assoc.* 61 (June), 660-672 (STI-4156).
- Chen L.-W.A., Lowenthal D.H., Watson J.G., Koracin D., Kumar N., Knipping E.M., Wheeler N., Craig K., and Reid S. (2010) Toward effective source apportionment using positive matrix factorization: experiments with simulated PM<sub>2.5</sub> data. *J. Air & Waste Manag. Assoc.* 60, 43–54 (doi: 0.3155/1047-3289.60.1.43).
- Lowenthal D.H., Watson J.G., Koracin D., Chen L.-W.A., Dubois D., Vellore R., Kumar N., Knipping E.M., Wheeler N.J.M., Craig K.J., and Reid S.B. (2010) Evaluation of regional-scale receptor modeling. *J. Air & Waste Manage. Assoc.* 60, 26–42 (doi:10.3155/1047-3289.60.1.26).

## Whitepapers

Craig K. (2022) Summary of PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024. March 28. STI-7682. Available at <https://www.linkedin.com/pulse/summary-pfas-strategic-roadmap-epas-commitments-/>.

Craig K. (2022) EPA PFAS Strategic Roadmap Update: New Drinking Water Health Advisories and Grant Funding to Address PFAS Contamination. June 21. STI-7682. Available at <https://www.linkedin.com/pulse/epa-pfas-strategic-roadmap-update-new-drinking-/>.

## Meeting Presentations, Webinars, and Conference Proceedings

Craig K. (2024) Accelerating electric vehicle penetration: air quality benefits and environmental justice implications. Presentation given to the *Transportation Research Board, Environmental Justice and Goods Movement Subcommittee, Washington D.C., January 10*, by Sonoma Technology, Petaluma, CA. STI-8063.

Chang S.Y., Pavlovic N., Huang J., Craig K., Scarborough C., Driscoll C., Coughlin J., Herrick J., Clark C., and Horn K. (2023) Quantification of impacts and uncertainties of nitrogen/sulfur deposition and ozone exposure on growth and survival for U.S. tree species with machine learning. Presentation given at the *Community Modeling and Analysis System Conference, Chapel Hill, NC, October 16-18*, by Sonoma Technology, Petaluma, CA. STI-7932.

Coughlin J.G., Pavlovic N.R., Chang S.Y., Craig K.J., Scarborough C.R., Clark C.M., Herrick J.D., Harofteh A.Z., Kumar N., and Driscoll C.T. (2023) Developing background condition nitrogen critical loads and ozone critical levels for U.S. tree species using North American background levels. Poster presented at the *National Atmospheric Deposition Program Conference, Madison, Wisconsin, October 23-26*, by Sonoma Technology, Petaluma, CA. STI-8012.

Coughlin J., Chang S.Y., Pavlovic N.R., Huang J., Craig K.J., Scarborough C., and Driscoll C.T. (2023) Spatially varying nitrogen critical loads and the influences of mediating factors. Presentation given at the *NADP Spring Meeting, Madison, WI, May 1-5*, by Sonoma Technology, Petaluma, CA. STI-7898.

Pavlovic N.R., Chang S.Y., Huang J., Craig K., Clark C., Horn K., and Driscoll C.T. (2023) Empirical nitrogen and sulfur critical loads of U.S. tree species and their uncertainties with machine learning. *Science of The Total Environment*, 857, 159252, January. Available at <https://www.sciencedirect.com/science/article/pii/S0048969722063513>.

Chang S.Y., Pavlovic N.R., Coughlin J., Huang J., Craig K.J., Scarborough C., Horn K., Driscoll C.T., and Herrick J. (2022) Empirical critical levels of ozone for U.S. tree species and their uncertainties with machine learning. Presentation given at the *National Atmospheric Deposition Program 2022 Science Symposium, Knoxville, TN, November 17*, by Sonoma Technology, Petaluma, CA, the Freedom Consulting Group, Columbia, MD, and the Syracuse University Department of Civil and Environmental Engineering, Syracuse, NY. STI-7769.

Pavlovic N.R., Coughlin J.G., Chang S., Huang J., Craig K.J., Scarborough C., Horn K., and Driscoll C.T. (2022) Mapping variability of nitrogen critical loads using machine learning. Poster presented at the *2022 National Atmospheric Deposition Program Conference, Knoxville, TN, November 14-18*, by Sonoma

Technology, Petaluma, CA, the Freedom Consulting Group, Columbia, MD, and the Syracuse University Department of Civil and Environmental Engineering, Syracuse, NY. STI-7770.

Pavlovic N.R., Chang S., Huang J., Craig K.J., Clark C., Horn K., and Driscoll C.T. (2021) Empirical nitrogen and sulfur critical loads of U.S. tree species and their uncertainties with machine learning. Poster presented at the *AGU Fall Meeting, New Orleans, LA, December 13-17*, by Sonoma Technology, Inc., Petaluma, CA. STI-600600-7576.

Pavlovic N.R., Driscoll C.T., Craig K., Huang J., Chang S.Y., Clark C.M., and Horn K. (2021) An application of machine learning to determine critical loads of nitrogen and sulfur in forest ecosystems in the U.S. Presentation given at the *NADP 2021 Fall Meeting and Symposium, virtual event, October 27*, by Sonoma Technology, Petaluma, CA. STI-7667.

Chang S.Y., Craig K., and Lurmann F. (2021) An environmental data web service based on near road dispersion modeling to support the Los Angeles Pediatric Research Integrating Sensor Monitoring Systems (PRISMS) Informatics Center. Presentation *International Society of Exposure Science, virtual conference*. STI-7589.

Driscoll C.T., Scarborough C., Huang J., Craig K., Pavlovic N.R., and Chang S.Y. (2021) Constraining uncertainties of critical loads for atmospheric nitrogen and sulfur deposition with machine learning. Presented to Syracuse University, May 3, by Sonoma Technology, Inc., Petaluma, CA.

Chang S.Y., Pavlovic N., Craig K., Kirk-Davidoff D., and Wang Q. (2021) Predicting fog and stratus dissipation for solar energy applications in California using meteorological measurements and machine learning. Presentation given at the *101st Annual AMS Conference, virtual event, January*, by Sonoma Technology, Petaluma, CA. STI-7426.

Pavlovic N.R., Driscoll C.T., Craig K., Huang J., Chang S.Y., and Clark C.M. (2020) An application of machine learning to determine critical loads of nitrogen and sulfur in forest ecosystems in the U.S. Presentation given at the *NADP 2020 Fall Meeting and Symposium, virtual event, October 29*, by Sonoma Technology, Petaluma, CA. STI-7420.

Craig K., Moffet R., Marrero J., and Roberts P. (2020) Piloting next-generation sensor technology at upstream oil and gas facilities. Presentation given at the *A&WMA 113th Annual Conference and Exhibition (ACE 2020), June 30*, by Sonoma Technology, Petaluma, CA. STI-7212.

Craig K., Baringer L., Chang S.Y., Eisinger D., and Landsberg K. (2020) The Near-Road Air Quality Transportation Pooled Fund – lessons learned from a 5-year research program: measurements compared to modeled concentrations. Presented at the *U.S. Transportation Research Board, 99th Annual Meeting, Workshop 1772 "Near-Road Air Quality: Current Conditions and Analysis Insights," Washington, D.C., January 16*, by Sonoma Technology, Inc., and the Washington State Department of Transportation. STI-7227.

Kirk-Davidoff D.B., Craig K., Tuohy A., and Wang Q. (2020) Improving coastal and valley fog forecasts by assimilating boundary layer observations. Poster presented at the *American Meteorological Society 100th Annual Meeting, Boston, MA, January 15*. Available at <https://ams.confex.com/ams/2020Annual/meetingapp.cgi/Paper/370449>.

- Craig K., Erdakos G., Chang S.-Y., and Baringer L. (2019) Source apportionment modeling to investigate local and non-local contributions to ground-level ozone in Albuquerque, New Mexico. Presentation given at the *2019 CMAS Conference, Chapel Hill, NC, October 23*, by Sonoma Technology, Inc., Petaluma, CA. STI-7145.
- Craig K., Chang S.Y., Erdakos G., and Baringer L. (2019) Projecting future ground-level ozone concentrations in Albuquerque, New Mexico. Poster presented at the *2019 CMAS Conference, Chapel Hill, NC, October 21-23*, by Sonoma Technology, Inc., Petaluma, CA. STI-7175.
- Brown S., Craig K., Eisinger D., Landsberg K., Mukherjee A., Baringer L., Chang S.Y., DeWinter J., McCarthy M., and Huang S. (2019) National assessment of near-road (NR) air quality: requirements, trends, and analysis insights. Presented for the U.S. Transportation Research Board webinar series, September 30, by Sonoma Technology, Inc., and the Washington State Department of Transportation.
- Brown S., Craig K., Eisinger D., Landsberg K., Mukherjee A., Baringer L., Chang S.Y., DeWinter J., McCarthy M., and Huang S. (2019) National assessment of near-road (NR) air quality: requirements, trends, and analysis insights. Presented to the AASHTO Committee on Environment and Sustainability, 2019 Annual Meeting, Minneapolis, MN, August 7, by Sonoma Technology, Inc., Petaluma, CA, and the Washington State Department of Transportation, Olympia, WA. STI-7154.
- Craig K., Moffet R., Marrero J., and Roberts P. (2019) Piloting next-generation sensor technology at upstream oil and gas facilities. Webinar presented to the Petroleum Technology Alliance of Canada (PTAC), February 28, by Sonoma Technology, Petaluma, CA. STI-917057-7081.
- Craig K.J., Huang S., Pavlovic N., Chang S.Y., Cavallaro A., and Drury S. (2019) Improving spatial resolution of wildland fire location and fuel biomass data inputs to NOAA's NAQFC. Presentation given at the *International Fire Behavior and Fuels Conference, Albuquerque, NM, April 30*, by Sonoma Technology Inc., Petaluma, CA. STI-7017.
- Craig K., Baringer L., Chang C., Bai S., Landsberg K., and Eisinger D. (2019) Near-road PM<sub>2.5</sub>, modeled vs. monitored data comparison: Indianapolis case study. Presented at the Transportation Research Board 2019 Annual Meeting, Analysis Subcommittee, Transportation and Air Quality Committee, January 14, by Sonoma Technology, Inc., Petaluma, CA, and the Washington State Department of Transportation, Olympia, WA. STI-7020.
- Kirk-Davidoff D., Tuohy A., Craig K., and Kumar N. (2019) Sensitivity of solar generation forecast skill to WRF parameterization choices under Central Valley and coastal fog conditions. Presentation given at the *American Meteorological Society 99th Annual Meeting, Phoenix, AZ, January 7*. Available at <https://ams.confex.com/ams/2019Annual/meetingapp.cgi/Paper/351523>.
- Pavlovic N.R., Craig K.J., and Zahn P.H. (2018) Managing air quality impacts from agricultural burning: case studies and lessons learned from smoke information systems developed in the United States. Presented at the *2018 Better Air Quality Conference, Kuching, Malaysia, November 13*, by Sonoma Technology, Inc., Petaluma, CA. STI-6928.
- Craig K., Baringer L., Eisinger D., Brown S., and McCarthy M. (2018) Near-Road Air Quality Transportation Pooled Fund (TPF): TO 2 Indianapolis case study results. Webinar presented to the Arizona, California, Colorado, Ohio, Texas, Virginia, and Washington State Departments of Transportation and the U.S.

Federal Highway Administration, November 5, by Sonoma Technology, Inc., Petaluma, CA. STI-914202-7020.

Mukherjee A., Brown S.G., McCarthy M.C., Craig K.J., Snyder J.L., D'Andrea S., and Kennard A. (2018) Sensor variations in wintertime PM among communities in Sacramento measured with a combination of traditional and low-cost sensor methods use for real-world applications. Poster presented at the *17th Annual CMAS Conference, October 22-24, Chapel Hill, NC* by Sonoma Technology, Inc., Petaluma, CA. STI-6907.

Chang S.Y., Craig K., Seagram A., Lurmann F., Hosseini A., Sarrafzadeh M., Rocchio R., Habre R., and Bui A. (2018) An environmental data web service based on near-road dispersion modeling to support the Los Angeles Pediatric Research Integrating Sensor Monitoring Systems (PRISMS) Informatics Center. Poster presented at the *2018 CMAS Conference, October 22-24, Chapel Hill, NC*, by Sonoma Technology, Inc., Petaluma, CA. STI-6994.

Craig K.J., Huang S., Pavlovic N., Chang S.Y., and Cavallaro A. (2018) Improving spatial resolution of wildland fire location and fuel biomass data inputs to NOAA's NAQFC. Presentation given at the *17th Annual CMAS Conference, Chapel Hill, NC, October 23*, by Sonoma Technology, Inc., Petaluma, CA. STI-6993. Available at [https://www.cmascenter.org/conference//2018/slides/craig\\_improving\\_spatial\\_2018.pdf](https://www.cmascenter.org/conference//2018/slides/craig_improving_spatial_2018.pdf).

Craig K. (2018) Air quality modeling of 2017 ozone episodes in the City of Albuquerque. Presented to the City of Albuquerque Air Quality Control Board, Albuquerque, NM, October 18, by Sonoma Technology, Inc., Petaluma, CA. STI-918015-7000.

Craig K. and Erdakos G. (2018) Air quality modeling of 2017 ozone episodes in the City of Albuquerque. Presented to the City of Albuquerque Air Quality Program, Albuquerque, NM, October 18, by Sonoma Technology, Inc., Petaluma, CA. STI-918015-7000.

Pavlovic N., Brown S., O'Brien T., Huang S., Craig K., Zahn P., Penfold B., and Jaffe D. (2018) Wildland fire smoke from long-range transport enhances ozone in the Southeastern U.S. Presentation given at the *National Ambient Air Monitoring Conference, Portland, OR, August 16*, by Sonoma Technology, Inc., Petaluma, CA, and the University of Washington, Bothell, WA. STI-6934.

Craig K., Seagram A., Du Y., Bai S., Eisinger D., Baringer L., Erdakos G., and Brown S. (2017) TPF TO 2 phase III, case study 1 – Providence, RI: work update. Webinar presented to the Transportation Pooled Fund participants, December 11, by Sonoma Technology, Inc., Petaluma, CA. STI-914202-6838.

Bai S., Du Y., Seagram A.F., and Craig K.J. (2017) MOVES-based NO<sub>x</sub> analyses for urban case studies in Texas. Presented at the *16th Annual CMAS Conference, Chapel Hill, NC, October 23-25*. STI-6760.

Craig K., Erdakos G., Baringer L., and Chang S.Y. (2017) Source apportionment modeling to investigate background, regional, and local contributions to ozone concentrations in Denver, Phoenix, Detroit, and Atlanta. Presentation given at the *16th Annual CMAS Conference, Chapel Hill, NC, October 23*, by Sonoma Technology, Inc., Petaluma, CA. STI-6759.

Bai S., Du Y., Seagram A.F., and Craig K.J. (2017) MOVES-based NO<sub>x</sub> analyses for urban case studies in Texas. Extended abstract for the *16th Annual CMAS Conference, Chapel Hill, NC, October 23-25*. STI-6760.

- Craig K., Erdakos G., Baringer L., and Chang S.Y. (2017) Source apportionment modeling analysis findings. Webinar presented to the Electric Power Research Institute, August 30, by Sonoma Technology, Inc., Petaluma, CA. STI-916029-6786.
- Bai S., Du Y., Seagram A., and Craig K. (2017) MOVES-based NO<sub>x</sub> analyses for urban case studies in Texas. Presented at the *2017 International Emission Inventory Conference, Baltimore, MD, August 14-18*. STI-6727.
- Bai S., Du Y., Seagram A., and Craig K. (2017) MOVES-based NO<sub>x</sub> analyses for urban case studies in Texas. Presented at the University of Texas at Austin, Air Quality Research Program, Austin, TX, August 3, by Sonoma Technology, Inc., Petaluma, CA. STI-916046-6781.
- Craig K.J., Erdakos G.B., Song B., and Reid S. (2017) Roadway Source Setup in AERMOD View. Webinar presented to the California Department of Transportation, Sacramento, CA, May 31, by Sonoma Technology, Petaluma, CA. STI-914103-6719.
- Erdakos G., Craig K., and Bai S. (2017) Overview of the Design Value Tool: DVTool v3.0. Webinar presented to the California Department of Transportation, Sacramento, CA, May 16, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6718.
- Erdakos G.B., Craig K.J., and Bai S. (2017) AERMOD modeling with depressed and elevated roadways. Webinar presented to the California Department of Transportation, Sacramento, CA, May 9, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6714.
- Craig K., Seagram A., Erdakos G., and Bai S. (2017) Overview of the ArcGIS web-based tool and CTM-based PM background concentration spreadsheet. Webinar presented to the California Department of Transportation, April 11, by Sonoma Technology, Inc. STI-914103-6708.
- Craig K., Erdakos G., Baringer L., Reid S., and Kumar N. (2017) Source apportionment modeling to investigate background, regional, and local contributions to ozone concentrations in Denver and Phoenix. Presented at the Background Ozone Scientific Assessment Workshop, Denver, CO, March 29, by Sonoma Technology, Inc., Petaluma, CA. STI-6735.
- Craig K., Erdakos G., Baringer L., and Reid S. (2016) Ozone source apportionment modeling to support policy initiatives in the eastern United States. Presented at the *15th Annual CMAS Conference in Chapel Hill, NC, October 26*, by Sonoma Technology, Inc., Petaluma, CA. STI-6537.
- Erdakos G.B., Bai S., and Craig K.J. (2016) AERMOD View modeling quality assurance. Webinar presented to the California Department of Transportation, Sacramento, CA, August 17, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6565.
- Erdakos G.B. and Craig K.J. (2016) AERMOD View receptor and meteorology pathways. Webinar presented to the California Department of Transportation, Sacramento, CA, August 4, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6562.
- Erdakos G.B. and Craig K.J. (2016) AERMOD View source pathway. Webinar presented to the California Department of Transportation, Sacramento, CA, June 30, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6541.

- Reid S., Bai S., Du Y., Craig K., Erdakos G., Baringer L., Eisinger D., and McCarthy M. (2016) Emissions modeling with MOVES and EMFAC to assess the potential for a transportation project to create particulate matter hot spots. Presentation given at the *2016 Transportation Research Board Annual Meeting, Washington, DC, January 13*, by Sonoma Technology, Inc., Petaluma, CA. STI-914202-6417.
- Craig K.J., Raffuse S., Larkin S., Huang S., and Drury S. (2015) Megafires and smoke exposure under future climate scenarios in the contiguous United States. Presented at the *14th Annual CMAS Conference, Chapel Hill, NC, October 5-7*. STI-6361.
- Erdakos G.B., Craig K.J., DeWinter J.L., and Reid S.B. (2015) MetDat meteorological database system: data acquisition, processing, and accessibility through the AirNow Portal. Poster presented at the *14th Annual CMAS Conference, Chapel Hill, NC, October 5-7*. STI-6353.
- Craig K.J. (2015) Project update: transition season modeling challenges and Great Lakes meteorological modeling challenges. Presented to Electric Power Research Institute Palo Alto, CA, September 4, by Sonoma Technology, Inc., Petaluma, CA. STI - 915030-6348.
- Craig K.J. and Erdakos G.B. (2015) Review and quality control (QC) of quantitative PM hot-spot dispersion modeling results. Presented to the California Department of Transportation, Sacramento, CA, June 17, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6301.
- Craig K., Graham A., and Reid S. (2015) Development of background PM concentrations for PM hot-spot analysis. Presented to the California Department of Transportation, Sacramento, CA, May 20, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6281.
- DeWinter J.L., Raffuse S.M., Brown S.G., and Craig K.J. (2015) Reducing the potential for black carbon to impact the Arctic. Presented at the *Transportation for Sustainability: Sustainable Transportation for Climate Change, Washington, DC, May 7*. STI-6260.
- Craig K., Du Y., Reid S., Gross T., and Watson D. (2015) Developing agricultural burning emissions inventories to support the quantification of fire-related ozone impacts for an exceptional event demonstration. Presentation and paper presented at the *2015 International Emission Inventory Conference, San Diego, CA, April 12-16*, by Stephen Reid, Sonoma Technology, Inc., Petaluma, CA. STI-6135, STI-6222.
- DeWinter J.L., Raffuse S.M., Craig K.J., Brown S.G., and Roberts P.T. (2015) Global modeling and analysis system for 30-year assessment of long-range transport. Poster presented at the *San Joaquin Valley Air Pollution Control District's Transboundary Ozone Pollution Conference in Yosemite, CA, March 31-April 2*. STI-6225.
- Reid S., Raffuse S., Craig K., and Bai S. (2015) Estimating emissions and air quality impacts from crop residue burning. Presented at the *Yangtze River Delta Clean Air Forum, Shanghai, China, March 24*, by Song Bai, Sonoma Technology, Inc., Petaluma, CA. STI-6210.
- Erdakos G. and Craig K. (2015) Representing roadway emission sources in AERMOD (webinar 2 of 2). Webinar presented to the California Department of Transportation, Sacramento, CA, February 19, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6108.

- Erdakos G. and Craig K. (2015) Representing roadway emission sources in AERMOD (webinar 1 of 2). Webinar presented to the California Department of Transportation, Sacramento, CA, February 17, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6107.
- Huang S., Larkin N.K., Raffuse S.M., Lorentz K.A., Drury S.A., and Craig K.J. (2014) Megafires and smoke exposure under future climate scenarios in the contiguous United States. Poster presented at the *AGU Fall Meeting, San Francisco, CA, December 15-19*, by Sonoma Technology, Inc., Petaluma, CA. STI-6041.
- Rodriguez M.A., Chien C.-J., Wang Z., Taylor C., Reid S., Craig K., and Herr L. (2014) Uinta Basin winter ozone model performance for the Utah Bureau of Land Management's Air Resource Management Strategy (ARMS) modeling study. Poster presented at the 13th Annual CMAS Conference, Chapel Hill, NC, October 27-29. STI-6114.
- Reid S., Craig K., Erdakos G., Driscoll C., Fakhraei H., Lambert K.F., Schwartz J., Buonocore J., and Levy J. (2014) Modeling the co-benefits of carbon standards for existing power plants. Presented at the *13th Annual CMAS Conference, Chapel Hill, NC, October 29*, by Sonoma Technology, Inc., Petaluma, CA. STI-6102.
- Raffuse S.M., DeWinter J.L., McCarthy M.C., Craig K.J., and Lurmann F. (2014) A high-spatial-resolution MODIS aerosol optical depth product for evaluating aerosol during large wildfire events. Presented at the *2014 Global Emissions Initiative Conference, Boulder, CO, June 10-11*. STI-5990.
- Craig K.J., Alrick D.M., Du Y., Erdakos G.B., MacDonald C.P., Gross T., and Watson D. (2014) Use of photochemical grid modeling to quantify ozone impacts from fires in support of exceptional event demonstrations. Presented at the *2014 Midwest and Central States Air Quality Workshop, St. Louis, MO, April 23*, by Sonoma Technology, Inc., Petaluma, CA. STI-5704.
- Haderman M., Larkin N., Cavallaro A., Beach C.M., Stille J., DeWinter J., Craig K., and Raffuse S. (2013) BlueSky Cloud: rapid infrastructure using Amazon's cloud for wildfire emergency response. Presented at the *AGU Fall Meeting, San Francisco, CA, December 9-13*, by Sonoma Technology, Inc., Petaluma, CA. STI-5735.
- Craig K.J., Alrick D.M., Du Y., Erdakos G.B., MacDonald C.P., Gross T., and Watson D. (2013) Use of photochemical grid modeling to quantify ozone impacts from fires in support of exceptional event demonstrations. Presented at the *12th Annual CMAS Conference, Chapel Hill, NC, October 28-30*, by Sonoma Technology, Inc., Petaluma, CA. STI-5704.
- Craig K., Reid S., Erdakos G., Wang Z., Taylor C., Reed J., and Herr L. (2013) Annual WRF simulations for the Utah Bureau of Land Management's Air Resource Management Strategy (ARMS) air quality modeling. Poster presented at the *12th Annual CMAS Conference, Chapel Hill, NC, October 28-30*, by Sonoma Technology, Inc., Petaluma, CA (STI-5707).
- DeWinter J.L., Raffuse S.M., McCarthy M.C., Craig K.J., Jumbam L.K., and Lurmann F.W. (2013) Developing a high spatial resolution aerosol optical depth product using MODIS data for evaluating aerosol during large wildfire events. Presented at the *12th Annual CMAS Conference, Chapel Hill, NC, October 28-30*, by Sonoma Technology, Inc., Petaluma, CA. (STI-5701).
- Rodriguez M.A., Chien C.-J., Wang Z., Taylor C., Reid S., Craig K., and Herr L. (2013) Uinta Basin winter ozone model performance for the Utah Bureau of Land Management's Air Resource Management

- Strategy (ARMS) modeling study. Poster presented at the *12th Annual CMAS Conference*, Chapel Hill, NC, October 28-30, STI-5871.
- Drury S.A., Rorig M.L., Wheeler N.J.M., Craig K.J., Stille J.C., Gray E.A., and Erdakos G.B. (2012) Real-time analysis of fire weather prediction accuracy: year two. Poster presented at the *5th International Fire Ecology and Management Conference, Portland, OR, December 3-7* (STI-5455).
- Craig K.J., MacDonald C.P., Wheeler N.J., Healy A.N., Zahn P.H., Gross T., and Watson D. (2012) A prescribed burn decision support system for the Kansas Flint Hills region. Poster presented at the *11th Annual CMAS Conference, Chapel Hill, NC, October 15-17* (STI-5484).
- Craig K.J., Raffuse S., Sakiyama S., Lyder D., and Hicks G. (2012) The BlueSky Western Canada smoke forecasting system. Poster presented at the *11th Annual CMAS Conference, Chapel Hill, NC, October 15-17* (STI-5486).
- DeWinter J.L., Raffuse S.M., McCarthy M.C., Craig K.J., Jumbam L.K., and Lurmann F.W. (2012) Developing a high spatial resolution aerosol optical depth product using MODIS data for evaluating aerosol during large wildfire events. Presented at the *Air and Waste Management Association Visibility and Air Pollution Conference, Whitefish, MT, September 26*, by Sonoma Technology, Inc., Petaluma, CA (STI-5384).
- Drury S.A., Rorig M.L., Wheeler N., J. M., Craig K.J., Stille J.C., Gray E.A., and Erdakos G.B. (2012) Real-time analysis of fire weather prediction accuracy. Poster presented at the *Southwest Fire Ecology Conference, Santa Fe, New Mexico, February 28* (STI-4301).
- Drury S.A., Rorig M., Craig K.J., Wheeler N.J.M., Strenfel S.M., Erdakos G.B., and Bothwell P. (2012) Uncertainty in model-generated fire weather values: how does model variability influence the reliability of dry thunderstorm risk and ignition potential predictions? Year 1 update. Presented at the *2012 Annual Meeting of the Association of American Geographers, New York, NY, February 24-28* by Sonoma Technology, Inc., Petaluma, CA; Pacific Northwest Research Station, Seattle, WA; and NOAA NWS Storm Prediction Center, Norman, OK (STI-4241).
- Pasch A.N., Bai S., Eisinger D.S., Craig K.J., Andrews J., and Elder J. (2012) PM hot-spot analysis using AERMOD & EMFAC2011: technical issues and lessons learned. Presented at the *TRB 91st Annual Meeting, Washington, D.C., January 22*, by Sonoma Technology and the California Department of Transportation (STI-4332).
- Pryden D., Raffuse S.M., Larkin N.K., Dedecko T.M., DeWinter J.L., and Craig K.J. (2012) A system for storing and analyzing a massive climatological database of modeled air mass trajectories. Presented at the *American Meteorological Society's 92nd Annual Meeting, Second Symposium on Advances in Modeling and Analysis Using Python, New Orleans, LA, January 23*, by Sonoma Technology, Petaluma, CA, and USDA Forest Service, Pacific Northwest Research Station, Seattle, WA (STI-4186).
- Raffuse S., Craig K., Wheeler N., Larkin N., Strand T., and Solomon R. (2011) Validation of modeled smoke plume injection heights using MISR and CALIPSO. Presented at the *2011 MISR Data Users Symposium, Pasadena, CA, December 14* (STI-4314).

- Raffuse S.M., McCarthy M.C., Craig K.J., DeWinter J.L., Jumbam L.K., and Lurmann F.W. (2011) High resolution MODIS aerosol retrieval during wildfire events in California for use in exposure assessment. Poster presented at the *AGU Fall Meeting, San Francisco, CA, December 9* (STI-4183).
- DeWinter J.L., Larkin N.K., Strand T.T., Raffuse S.M., Brown S.G., Craig K.J., and Roberts P.T. (2011) Synoptic scale patterns and variability in long-range transport from the CONUS to the Arctic Circle: informing controlled burn strategy and regulation. Poster presented at the *AGU Fall Meeting, San Francisco, CA, December 7* (STI-4184).
- DeWinter J.L., Raffuse S.M., Larkin N.K., Strand T.T., Brown S.G., Craig K.J., and Roberts P.T. (2011) Mitigating the impact of prescribed burning in the continental United States using trends in synoptic scale transport to the Arctic region. Presented at the *A&WMA Greenhouse Gas Strategies in a Changing Climate Specialty Conference, San Francisco, CA, November 16-17* by Sonoma Technology, Inc., Petaluma, CA, and U.S. Forest Service Pacific Northwest Research Station, Seattle, WA (STI-4148).
- Wheeler N.J.M., Craig K.J., Drury S.A., Rorig M.L., Gray E.A., and Erdakos G.B. (2011) Real-time analysis of weather prediction accuracy. Poster presented at the *10th Annual CMAS Conference, Chapel Hill, NC, October 24*, by Sonoma Technology, Inc., Petaluma, CA (STI-4238).
- Drury S.A., Rorig M., Craig K.J., Wheeler N.J.M., Strenfel S.J., Erdakos G.B., and Bothwell P. (2011) Uncertainty in model-generated fire weather values: how does model variability influence the reliability of dry thunderstorm risk and ignition potential predictions? Year 1 update. Presented at the *Ninth Symposium on Fire and Forest Meteorology, Palm Springs, CA, October 18-20* by Sonoma Technology, Inc., Petaluma, CA; Pacific Northwest Research Station, Seattle, WA; and NOAA NWS Storm Prediction Center, Norman, OK (STI-4243).
- Raffuse S.M., Craig K.J., Larkin N.K., Strand T.T., Sullivan D.C., Wheeler N.J.M., and Solomon R.C. (2011) Assessment of plume injection height from the BlueSky Smoke Modeling Framework with MISR and CALIPSO. Poster presented at the *First Workshop on Satellite and Above Boundary Layer Observations for Air Quality Management, Boulder, CO, May 9*. (STI-4133).
- MacDonald C.P., Miller D.S., Dye T.S., Craig K.J., and Alrick D.M. (2011) Adjusting numerical model data in real time: AQMOS. Presented at the *2011 National Air Quality Conferences, San Diego, CA, March 7-10*, Sonoma Technology, Inc., Petaluma, CA. (STI-4096).
- Wheeler N., Hafner H., Roberts P., Craig K., MacDonald C., Gray E., and Reid S. (2011) Design recommendations for the three-state pilot study. Presented at the *Federal Leadership Forum, Denver, CO, January 19* by Sonoma Technology, Inc., Petaluma, CA (STI-910208-4079).
- McCarthy M.C., Raffuse S.M., DeWinter J.L., Craig K.J., Lurmann F.W., and Fruin S.A. (2010) Development and evaluation of a high-resolution AOD product for the Southern California region during the October 2007 wildfires. Poster presented at the *AGU Fall Meeting, San Francisco, CA, December 13-17* by Sonoma Technology, Inc., Petaluma, CA, and University of Southern California, Los Angeles, CA (STI-3997).
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Technology, Inc., Petaluma, CA, and U.S. Forest Service Pacific Northwest Research Station, Seattle, WA (STI-3998).

DeWinter J.L., Larkin N.K., Strand T.T., Raffuse S.M., Brown S.G., Craig K.J., Roberts P.T., and Draxler R.R. (2010) Climatology of air mass transport to the Arctic from locations of prescribed burning in the United States. Poster presented at the *AGU Fall Meeting, San Francisco, CA, December 13-17* by Sonoma Technology, Inc., Petaluma, CA, and U.S. Forest Service Pacific Northwest Research Station, Seattle, WA (STI-3996).

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Miller D., MacDonald C., Dye T., Craig K., and Alrick D. (2010) AQMOS: air quality model output statistics from CMAQ model forecasts. Poster presented at the *9th Annual CMAS Conference, Chapel Hill, NC, October 11-13* by Sonoma Technology, Inc., Petaluma, CA (STI-3897).

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Craig K., Wheeler N., Raffuse S., Sullivan D., Reid S., MacDonald C., Larkin S., Solomon R., and Strand T. (2010) Experimental air quality predictions from the BlueSky Gateway. Poster presented at the *National Air Quality Conference, Raleigh, NC, March 15-18* by Sonoma Technology, Inc., Petaluma, CA, and the USDA Forest Service, Pacific Northwest Research Station, Seattle, WA (STI-3803).

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*Conference, Chapel Hill, NC, October 19-21*, by Sonoma Technology, Inc., Petaluma, CA, and the U.S. Forest Service Pacific Northwest Research Station, Seattle, WA (STI-3715).

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- Wheeler N.J.M., Craig K.J., and Reid S.B. (2009) An investigation of aloft model performance for two episodes during the 2000 Central California ozone study. Paper presented at the *30th NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, San Francisco, CA, May 18-22* by Sonoma Technology, Inc., Petaluma, CA (STI-3594).
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- Sullivan D.C., Raffuse S.M., Wheeler N.J.M., and Craig K.J. (2008) Emergency smoke response systems. Slide show presented at the *California Air Response Planning Alliance, Air Quality in Emergency Response: Monitoring, Modeling, Messaging, and Media, Sacramento, CA, October 15-16*, by Sonoma Technology, Inc., Petaluma, CA (STI-3510).
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- Sullivan D.C., Raffuse S.M., Pryden D.A., Craig K.J., Reid S.B., Wheeler N.J.M., Chinkin L.R., Larkin N.K., Solomon R., and Strand T. (2008) Development and applications of systems for modeling emissions and smoke from fires: the BlueSky smoke modeling framework and SMARTFIRE. Paper presented at the *17th International Emissions Inventory Conference, Portland, OR, June 5*, by Sonoma Technology, Inc., Petaluma, CA, and the U.S. Forest Service, Seattle, WA (STI-3378).
- Wheeler N.J.M., Craig K.J., Reid S.B., Gilliland E.K., Sullivan D.C., and Chinkin L.R. (2008) The BlueSky Gateway air quality forecast system for fire management. Presented at the *BlueSky Smoke Modeling Framework Stakeholders' Meeting, Boise, ID, May 20-22* (STI-905028-3367).
- Raffuse S.M., Craig K.J., Wheeler N.J.M., Sullivan D.C., Larkin N.K., Solomon R., and Strand T. (2008) PM<sub>2.5</sub> emissions and smoke predictions from the BlueSky Smoke Modeling Framework. *Presentation at the Aerosol & Atmospheric Optics: Visual Air Quality and Radiation, Moab, UT, May 2* (STI-3324).

- Wheeler N.J.M., Craig K., and Reid S. (2008) Meteorological modeling analyses of data captured during the CRPAQS field program. Final presentation to the CRPAQS Technical Committee, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-905030-3648, October 1.
- Wheeler N.J.M., Craig K.J., and Reid S.B. (2008) Central California Ozone Study (CCOS) improvement of air quality model aloft performance. Presented to CCOS Technical Committee, Sacramento, CA, Sonoma Technology, Inc., Petaluma, CA, STI-905030-3560 (05-2CCOS), October 1.
- Craig, K.J., Wheeler N.J.M., Reid S.B., Gilliland E.K., and Sullivan D.C. (2007) Development and operation of national CMAQ-based PM<sub>2.5</sub> forecast system for fire management. Presented at the *Sixth Annual Community Modeling and Analysis System (CMAS) Conference, Chapel Hill, NC, October 1-3* (STI-3228).
- Wheeler N.J.M., Craig K.J., Reid S.B., Gilliland E.K., Kumar N., Knipping E.M., Lowenthal D.H., Chen L.-W.A., Watson J.G., and Koracin D. (2007) Simulating IMPROVE-like data for use in evaluating receptor models. Poster presented at the *2007 Aerosol Conference, Reno, NV, September 24-28*, by Sonoma Technology, Inc., Petaluma, CA; EPRI, Palo Alto, CA; and Desert Research Institute, Reno, NV (STI-3155).
- Wheeler N.J.M., Reid S.B., and Craig K.J. (2007) Air quality training on photochemical modeling. Presentation for RasGas Company Limited, Houston, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-906066.01-3147, March 14-16.
- Wheeler N.J.M., Craig K.J., and Penfold B.M. (2006) Generating shapefiles from CMAQ, SMOKE, and CAMX files. Poster presentation for the *Community Modeling and Analysis System (CMAS) Conference, Chapel Hill, NC, October 16-18*, by Sonoma Technology, Inc., Petaluma, CA (STI-3008).
- Wheeler N.J.M. and Craig K.J. (2006) Evaluating meteorological inputs to air quality models with inert tracer simulations. Presentation for the *Fifth Annual Community Modeling and Analysis System (CMAS) Conference, Chapel Hill, NC, October 16-18*, by Sonoma Technology, Inc., Petaluma, CA (STI-3006).
- Davis K.J., Craig K.J., Kang S.L., Mecikalski J.R., and Chen F. (2006) Evaluation of surface flux maps over the southern Great Plains in IHOP. Presented at the *17<sup>th</sup> Symposium on Boundary Layers and Turbulence, American Meteorological Society, San Diego, CA, May 22-25*.
- Davis K.J., Craig K.J., Desai A.R., Kang S., Reen B.R., and Stauffer D.R. (2004) Observations and simulations of ABL and land surface heterogeneity during IHOP. Poster presented at the *Second International H<sub>2</sub>O Project (IHOP\_2002) Science Workshop, Toulouse, France, June*.
- Davis K.J., Craig K.J., Desai A.R., Kang S., Seaman N.L., Stauffer D.R., Reen B.R., and Richardson S.J. (2003) Mesoscale variability in CBL structure observed during IHOP: Causes and implications for convective initiation. Presented at the *American Meteorological Society Annual Meeting, Symposium on Observing and Understanding the Variability of Water in Weather and Climate, Long Beach, CA, February 9-13*.
- Craig K.J. and Bornstein R.D. (2002) MM5 simulations of urban induced convective precipitation over Atlanta. In *Preprints of the Fourth Symposium on the Urban Environment, Norfolk, VA, American Meteorological Society, Boston, MA*.
- Craig K.J. and Bornstein R.D. (2001) Urbanization of numerical mesoscale models. In *Proceedings of COST Action 715 Workshop on Urban Boundary Layer Parameterisation, Zurich, Switzerland, May 24, 17-30*.

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## Formal Reports

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Erdakos G.B., Craig K.J., and Houk J.A. (2024) I-70/I-270 direct connect ramps - I-70 East record of decision 2: air quality draft technical report. Report prepared for the Colorado Department of Transportation, Denver, CO, by Sonoma Technology, Petaluma, CA, STI-8142.

Klobas J.G., Erdakos G.B., and Craig K.J. (2024) Assembly Bill 617 Community Air Protection Program (AB 617 CAPP): 2024 community status update. Technical memorandum prepared for the California Department of Transportation, Division of Environmental Analysis, Sacramento, CA, by Sonoma Technology, Petaluma, CA, CTAQ-TM-24-435.01.08, STI-8123, May.

Erdakos G., Craig K., Ekstrand A., and Marcus D.L. (2023) Scoping outcomes for CAL-CET202X upgrade. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Petaluma, CA, STI-8155, CTAQ-TM-23-435.03.02, July.

Alley L. and Craig K. (2023) Analysis of air quality impacts from onroad mobile sources on ozone nonattainment areas in Connecticut, Illinois, Maryland, Michigan, New Jersey, and Pennsylvania. Final report prepared for the Sierra Club by Sonoma Technology, Petaluma, CA. STI-8201, May.

Erdakos G.B. and Craig K. (2021) Project-level case studies of new technologies and innovative measures to reduce air pollution and emissions from mobile sources and transportation projects. Final report prepared for California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc, Petaluma, CA, STI-917101-7480-FR, July 26.

Erdakos G.B. and Craig K.J. (2021) Using EMFAC2021 for project-level assessment. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Petaluma, CA, STI-917101-7555, July.

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- Baringer L.M, Craig K.J. (2020) Assessment of paved road dust emissions modeling methods. Technical memorandum prepared for the California Department of Transportation, CTAQ-TM-19-368.01.11, STI-6897, June 30.
- Houk J., Craig K., and Chang S.Y. (2020) MOVES modeling analysis for Johnson and Wyandotte counties, Kansas. Final report prepared for the Kansas Department of Health & Environment, Topeka, KS by Sonoma Technology, Petaluma, CA, STI-919054-7262, June 19.
- Craig K. and Chang S.Y. (2020) Machine learning for very short-term predictions: Chapter 4 in Development, implementation, and integration of a holistic solar forecasting system for California. Report prepared for the California Energy Commission, EPC 17-006, April.
- Craig K. (2020) Best practices guidance on project-level travel activity data processing and quality checking. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-917103-7199, April 1.
- Craig K., Baringer L., Chang S.-Y., McCarthy M., Bai S., Ravi V., Eisinger D., and Landsberg K. (2019) Analysis of modeled and measured near-road PM<sub>2.5</sub> concentrations in Indianapolis and Providence during 2015 and 2016. Final report prepared for the Washington State Department of Transportation, Olympia, WA, by Sonoma Technology, Inc., Petaluma, CA, and the Washington State Department of Transportation, Olympia, WA, STI-914202-7127, October.
- Baringer L., Bai S., and Craig K. (2019) Assessment of paved road dust emissions modeling methods. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-917101-6897-TM, September 12.
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- Craig K., Baringer L., and Bai S. (2019) Estimating future-year background PM concentrations using Chemical Transport Model (CTM) data. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, CTAQ-TM-19-368.06.01; STI-917106-7059-TM, May 14.
- Pavlovic N., Huang S., Craig K., and Zahn P. (2019) Smoke information system for Mexico City: understanding and managing air quality impacts of smoke from wildland fires and agricultural burning. White paper prepared by Sonoma Technology, Inc., Petaluma, CA, STI-7100, May 2.
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- Craig K. and Erdakos G. (2018) CAMx base case photochemical model performance evaluation for the June-July 2017 Albuquerque ozone episodes. Technical memorandum prepared for the Environmental Health Department, City of Albuquerque, NM, by Sonoma Technology, Inc., Petaluma, CA, STI-918015-6933-TM, August 1.
- Craig K.J., Huang S., Pavlovic N.R., Erdakos G.B., and Drury S.A. (2018) Improving spatial resolution of wildland fire location and fuel biomass data inputs to NOAA's NAQFC. Final report prepared for the National Oceanic and Atmospheric Administration by Sonoma Technology, Inc., STI-916034-6927-FR, July 20.
- Craig K. and Baringer L. (2018) WRF meteorological model performance evaluation to support modeling of June-July 2017 ozone episodes. Technical memorandum prepared for the Environmental Health Department, City of Albuquerque, NM, by Sonoma Technology, Inc., Petaluma, CA, STI-918015-6933-TM, May.
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## Software and Software Documentation

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## Courses Taught

Craig K.J. and Erdakos G.B. (2023) Introduction to dispersion modeling with AERMOD View for project-level analysis: two-day hands-on workshop. Training course presented to the California Department of Transportation, February 23-24, by Sonoma Technology, Petaluma, CA. STI-922102-7875.

Craig K.J. and Erdakos G.B. (2023) Caltrans Construction Emissions Tool (CAL-CET2021 v1.0.2) for project-level analysis: hands-on workshop. Training course presented to the California Department of Transportation, January 27, by Sonoma Technology, Petaluma, CA. STI-922102-7849.

Craig, K.J., Erdakos G.B., Choi, Y., Yoon, A., and Lee, J. (2019) Project-level air quality modeling: two-day hands-on training. Training course presented to the California Department of Transportation by Sonoma Technology, Inc., Petaluma, CA, STI-917106-7396, August 20-21.

Craig K. and Erdakos G. (2018) Air quality modeling process. Presented to the City of Albuquerque Air Quality Program, Albuquerque, NM, October 18, by Sonoma Technology, Inc. STI-918015-7000.

Reid S. and Craig K. (2017) Introduction to air quality modeling tools: a two-day hands-on workshop for project analysts. Training course presented to the California Department of Transportation, Los Angeles, CA, January 31-February 1, by Sonoma Technology, Inc., Petaluma, CA, STI-914103-6658.

Reid S.B., Bai S., Erdakos G.B., and Craig K.J. (2016) Introduction to air quality modeling tools: a two-day hands-on workshop for project analysts. Training course presented to the California Department of Transportation, Los Angeles, CA, January 26-27, by Sonoma Technology, Inc., Petaluma, CA, STI-914103-6424.

Craig K.J. and Reid S.B. (2015) Introduction to air quality modeling tools: two-day hands-on workshop. Training course presented to the California Department of Transportation, Sacramento, CA, November 3-4, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6383.

Bai S., Craig K.J., and Reid S.B. (2015) Transportation project hot-spot assessment for particulate matter (PM): two-day hands-on workshop. Training course presented to the California Department of Transportation, Petaluma, CA, June 9-10, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6288.

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Bai S., Craig K., and Reid S. (2014) Transportation project hot-spot assessment for particulate matter: two-day hands-on workshop. Presented to the California Department of Transportation, Los Angeles, CA, September 17-18, by Sonoma Technology, Inc., Petaluma, CA. STI-914103-6063.

## Thesis

Craig K.J. (2002) MM5 simulations of urban induced convective precipitation over Atlanta, GA. M.S. Thesis, Department of Meteorology, San Jose State University, San Jose, CA. Available at [http://scholarworks.sjsu.edu/etd\\_theses/2266/](http://scholarworks.sjsu.edu/etd_theses/2266/).