

Journal Articles

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_{2.5} 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>.

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).

Meeting Presentations, Webinars, and Conference Proceedings

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.

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., Baringer L., Chang C., Bai S., Landsberg K., and Eisinger D. (2019) Near-road PM_{2.5}, 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.

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.

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.

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.

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.

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.

Brown S., Seagram A., Baringer L., and Eisinger D. (2016) TPF TO 2 phase III: Site selection for case studies and model evaluations. Webinar presented to the Transportation Pooled Fund participants, October 24, by Sonoma Technology, Inc., Petaluma, CA. STI-914202-6600.

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.

Formal Reports

Baringer L.M, Craig K.J. (2020) Case study on preparing meteorological data for use in PM hot-spot analyses. Technical memorandum prepared for the California Department of Transportation, CTAQ-TM-19-368.06.04, STI-7099, July 23.

- 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.
- 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_{2.5} 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.
- Craig K.J., Erdakos G.B., Chang S.Y., Baringer L., Brown S., and Lavezzo T. (2019) Air quality modeling of 2017 ozone episodes in the City of Albuquerque. Final report prepared for the Environmental Health Department, City of Albuquerque, NM, by Sonoma Technology, Inc., Petaluma, CA, STI-918015-7010, June.
- 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.
- Craig K., Erdakos G., and Baringer L. (2018) CAMx source apportionment modeling 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-918015-6973-TM, August 24.
- 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.
- Bai S., Craig K., Reid S., Eisinger D., Farstad E., Erdakos G., Du Y., and Baringer L. (2017) Quantitative particulate matter hot-spot analysis best practices guidebook. Report prepared for the California Department of Transportation, Sacramento, CA by Sonoma Technology, Inc., Petaluma, CA, CTAQ-RT-17-317.02.6, STI-914112-6704-FR, June.
- Bai S., Craig K., Reid S., Eisinger D., Farstad E., Erdakos G., Du Y., and Baringer L. (2017) Streamlining air dispersion modeling to support quantitative particulate matter hot-spot analysis. Final report prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, CTAQ-RT-17-317.12.29; STI-914112-6707-FR, June. Available at <http://www.dot.ca.gov/env/air/docs/dispersion-modeling-support-pm-hot-spot-analysis.pdf>.
- Bai S., Du Y., Baringer L., Chang C., Seagram A., and Eisinger D. (2017) Greenhouse gas analysis for transportation projects. Report prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc. Petaluma, CA, CTAQ-RT-17-317.13.1, STI-914113-6761-FR, June.

- Erdakos G., Bai S., Baringer L., Craig K., and Eisinger D. (2017) Modeling depressed roadways in AERMOD View using the AERMOD OPENPIT source type. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, CTAQ-TM-17-317.12.27, STI-914112-6640-TM, May 16.
- Graham A., McCarthy M., Baringer L., Pavlovic N., Brown S., and Eisinger D. (2016) Effects of roadside barriers on near-road pollutant concentrations. Final report prepared for the Washington State Department of Transportation, Olympia, WA, by Sonoma Technology, Inc., Petaluma CA, STI-914205-6495, December.
- Baringer, L., A. Seagram, and S. Reid. 2016. Updated data for developing toxic air contaminant emissions inventories. Technical memorandum prepared for the Bay Area Air Quality Management District, San Francisco, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-916035-6576-TM, September 13.
- Bai S. and Baringer L. (2016) Assessment of road dust calculation in particulate matter emissions modeling. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, STI-914112-6441-TM, April 28.
- Reid S.B., Bai S., Eisinger D.S., Erdakos G.B., Du Y., and Baringer L. (2016) Scoping study to identify potential project types and situations that will not create PM hot spots. Final report prepared for the Washington State Department of Transportation, Seattle, WA, by Sonoma Technology, Inc., Petaluma, CA, STI-914202-6259-FR, February.
- Zahn P., Erdakos G., Baringer L., Craig K., Hylton M., and MacDonald C. (2016) Assessment of the prescribed burn rules for the Mojave Desert Air Quality Management District. Technical memorandum prepared for the Mojave Desert Air Quality Management District, Victorville, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915028-6456-TM, February.
- Erdakos G., Craig K., Baringer L., Reid S., Bai S., and Eisinger D. (2016) Illustration of roadway source setup in AERMOD view for PM hot-spot analyses. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, STI-914112-6453-TM, February 12.
- Reid S.B. and Baringer L.M. (2015) Review of total organic gas (TOG) speciation data. Technical memorandum prepared for Saffet Tanrikulu and Cuong Tran, Bay Area Air Quality Management District, San Francisco, CA, STI-915061-6405-TM, November.
- Craig K., Baringer L., Reid S., Bai S., and Eisinger D. (2015) Future-year background PM concentrations. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, CTAQ-TM-15-317.12.1, October 30.
- Bai S., Craig K., Graham A., Reid S., Eisinger D., Farstad E., Erdakos G., Du Y., and Baringer L. (2015) Quantitative particulate matter hot-spot analysis best practices guidebook. Prepared for the California Department of Transportation, Sacramento, CA, CTAQ-RT-15-317.02.3, September 30.
- Graham A., Baringer L., Bai S., and Eisinger D. (2015) Caltrans district scan to identify CEQA analysis support needs. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-914101-6318-TM, July 10.

Bai S., Graham A., Reid S., Craig K., Du Y., Erdakos G., Baringer L., and Eisinger D. (2015) Potential transportation project design concepts and features to reduce PM impacts. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-914102-6284-TM, May.

Bai S., Reid S., Baringer L., and Eisinger D. (2015) Using EMFAC2014 for project-level emissions assessment. Technical memorandum prepared for the California Department of Transportation, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-914104-6230-TM, March 31.