## Journal Articles

Kramer S.J., Huang S., McClure C.D., Chaveste M.R., and Lurmann F. (2023) Projected smoke impacts from increased prescribed fire activity in California's high wildfire risk landscape *Atmospheric Environment*, doi: 10.1016/j.atmosenv.2023.119993, August 2. Available at https://www.sciencedirect.com/science/article/pii/S1352231023004193.

McClure C.D., Pavlovic N.R., Huang S., Chaveste M., and Wang N. (2023) Consistent, high-accuracy mapping of daily and sub-daily wildfire growth with satellite observations. *International Journal of Wildland Fire*, 32(4), doi: 10.1071/WF22048, April.

Lia L., Girguis M., Lurmann F., Pavlovic N., McClure C.D., Franklin M., Wu J., Oman L.D., Breton C., Gilliland F., and Habre R. (2020) Ensemble-based deep learning for estimating PM2.5 over California with multisource big data including wildfire smoke. *Environment International*, 145, doi: 10.1016/j.envint.2020.106143, December. Available at https://doi.org/10.1016/j.envint.2020.106143.

Chandra B.P., McClure C.D., Mulligan J., and Jaffe D.A. (2020) Optimization of a method for the detection of biomass-burning relevant VOCs in urban areas using thermal desorption gas chromatography mass spectrometry. *Atmosphere*, 11(3), 276, (STI-7266), March 11. Available at https://www.mdpi.com/2073-4433/11/3/276.

McClure C.D., Lim C.Y., Hagan D.H., Kroll J.H., and Cappa C.D. (2020) Biomass-burning-derived particles from a wide variety of fuels – Part 1: properties of primary particles. *Atmos. Chem. Phys.*, 20(3), 1531-1547, doi: 10.5194/acp-20-1531-2020. Available at https://www.atmos-chem-phys.net/20/1531/2020.

McClure C.D. and Jaffe D.A. (2018) Investigation of high ozone events due to wildfire smoke in an urban area. *Atmospheric Environment*, 194, 146-157, doi: 10.1016/j.atmosenv.2018.09.021, December. Available at https://doi.org/10.1016/j.atmosenv.2018.09.021.

McClure C.D. and Jaffe D.A. (2018) US partiulate matter air quality improves except in wildfire-prone areas. *Proceedings of the National Academy of Sciences*, 115(31), 7901-7906, doi: 10.1073/pnas.1804353115, July 16. Available at https://www.pnas.org/content/115/31/7901.short.

Zhang L., Jaffe D.A., Gao X., and McClure C.D. (2018) A quantification method for peroxyacetyl nitrate (PAN) using gas chromatography (GC) with a non-radioactive pulsed discharge detector (PDD). *Atmospheric Environment*, 179, 23-30, doi: 10/1016/j.atmosenv.2018.02.008, April. Available at https://doi.org/10.1016/j.atmosenv.2018.02.008.

Carlton A.G., Gouw J.d., Jimenez J.L., Ambrose J.L., Attwood A.R., Brown S., Baker K.R., Brock C., Cohen R.C., Edgerton S., Farkas C.M., Farmer D., Goldstein A.H., Gratz L., Guenther A., Hunt S., Jaeglé L., Jaffe D.A., Mak J., McClure C., Nenes A., Nguyen T.K., Pierce J.R., Sa S.d., Selin N.E., Shah V., Shaw S., Shepson P.B., Song S., Stutz J., Surratt J.D., Turpin B.J., Warneke C., Washenfelder R.A., Wennberg P.O., and Zhou X. (2018) Synthesis of the southeast atmosphere studies: investigating fundamental atmospheric chemistry questions. *Bulletin of the American Meteorological Society*, 99(3), 547-567, doi: 10.1175/BAMS-D-16-0048.1, March 1. Available at https://doi.org/10.1175/BAMS-D-16-0048.1.

McClure C.D., Jaffe D.A., and Gao H. (2016) Carbon dioxide in the free troposphere and boundary layer at the Mt. Bachelor Observatory. *Aerosol and Air Quality Research*, 16(3), 717-728, doi: 10.4209/aaqr.2015.05.0323, February 29. Available at https://doi.org/10.4209/aaqr.2015.05.0323.

McClure C.D., Jaffe D.A., and Edgerton E.S. (2014) Evaluation of the KCl Denuder Method for gaseous oxidized mercury using HgBr2 at an in-service AMNet site. *Environ. Sci. Technol.*, 48(19), 11,437-411,444, doi: 10.1020/es502545k, September 5. Available at https://pubs.acs.org/doi/abs/10.1021/es502545k.

Jaffe D.A., Lyman S., Amos H.M., Gustin M.S., Huang J., Selin N.E., Levin L., Schure A.t., Mason R.P., Talbot R., Rutter A., Finley B., Jaeglé L., Shah V., McClure C., Ambrose J., Gratz L., Lindberg S., Weiss-Penzias P., Sheu G.-R., Feddersen D., Horvat M., Dastoor A., Hynes A.J., Mao H., Sonke J.E., Slemr F., Fisher J.A., Ebinghaus R., Zhang Y., and Edwards G. (2014) Progress on understanding atmospheric mercury hampered by uncertain measurements. *Environ. Sci. Technol.*, 48(13), 7,204-207,206, doi: 10.1021/es5026432, June 18. Available at https://pubs.acs.org/doi/full/10.1021/es5026432.

## Meeting Presentations, Webinars, and Conference Proceedings

Kramer S.J., Huang S., Chaveste M.R., McClure C., and Lurmann F. (2023) Public Health Impact of Prescribed Fire (PHIRE) study – baseline and projected prescribed fire smoke exposures in California. Presented online as for the *AGU Atmospheric Science Section Early Career Committee for Science Seminar on Igniting Early Career Wildfire Studies, August 22,* by Sonoma Technology, Petaluma, CA. STI-7806.

Kramer S.J., Huang S., Chaveste M.R., McClure C.D., and Lurmann F.W. (2023) Public Health Impact of Prescribed Fire (PHIRE) study – baseline and projected prescribed fire smoke exposures in California. Presentation given at the *103rd AMS Annual Meeting, Denver, CO, January 11,* by Sonoma Technology, Petaluma, CA. STI-7806.

Pavlovic N., McClure C.D., Huang S., Chaveste M., and Wang N. (2022) Mapping hourly wildfire growth rate using fused geostationary and polar orbiting satellite observations. Presented at the *American Geophysical Union (AGU) Fall Meeting, Chicago, IL, December 12-16,* by Sonoma Technology, Petaluma, CA. STI-7773.

Huang S., Kramer S., Chaveste M., McClure C., and Lurmann F. (2022) Public Health Impact of Prescribed Fire (PHIRE) Study – baseline and projected prescribed fire smoke exposures in California. Presented at the *CAL FIRE Forest Health Research Program Grantee Webinar, November 10*, by Sonoma Technology. STI-7813.

Pavlovic N., Li L., Girguis M., Lurmann F., McClure C., Franklin M., Wu J., Oman L.D., Breton C., Gilliland F., Habre R., and Franklin M. (2022) Use of wildfire smoke indicators in health exposure research: high spatial resolution mapping of $PM_{2.5}$ in California. Poster presented at the *International Society of Environmental Epidemiology 34th Annual Conference, Athens, Greece, September 18-21,* by Sonoma Technology, Petaluma, CA, the University of Southern California, Los Angeles, CA, the University of California, Irvine, CA, the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center, Greenbelt, MD, and the University of Toronto, Toronto, Canada. STI-7789.

McClure C.D., Kramer S.J., and Hafner H.R. (2022) Two years of CAS Auto-GC PAMS monitoring: successes and challenges in software/hardware implementation, monitoring, and data QC. Presentation given at the *2022 National Ambient Air Monitoring Conference, Pittsburgh, PA, August 25,* by Sonoma Technology, Petaluma, CA. 7696.

Wang N., Gostic C., McClure C., Scarborough C., and Brown S. (2022) PAMS Dashboard: an R Shiny webapp for PAMS data visualization. Presentation given at the *2022 National Ambient Air Monitoring Conference, Pittsburgh, PA, August 22,* by Sonoma Technology, Petaluma, CA. STI-7705.

Huang S., McClure C., Pavlovic N., Chaveste M., and Wang N. (2022) Consistent, high accuracy mapping of daily and sub daily wildfire growth using satellite observations. Presented at the *California Utility Forecasters Meeting, June 29,* by Sonoma Technology, Petaluma, CA. STI-7744.

Huang S., Pavlovic N., McClure C., Chaveste M., and Wang N. (2022) Methodology for consistent daily and sub daily mapping of wildfire growth for 2003-2020 and beyond. Presentation given at the *Fire and Climate 2022 Conference, Pasadena, CA, May 26,* by Sonoma Technology, Petaluma, CA. STI-7730.

Thapa L., Saide P.E., Bortnik J., Berman M., da Silva A., Kondragunta S., Csiszar I., McClure C., Pavlovic N.R., Huang S., Ahmadov R., and Peterson D. (2021) Forecasting Western US Wildfire Emissions Using Machine Learning. Poster presented at the *American Geophysical Union Fall Meeting, December 15*.

Kramer S.J., Huang S., Chaveste M.R., McClure C.D., and Lurmann F.W. (2021) Public Health Impact of Prescribed Fire (PHIRE) Study - baseline and projected prescribed fire smoke exposures in California. Poster presented at the *AGU Fall Meeting, New Orleans, LA, December 13-17,* by Sonoma Technology, Inc., Petaluma, CA. STI-7572.

McClure C.D., Pavlovic N.R., Huang S., Chaveste M.R., and Wang N. (2021) Consistent, high-accuracy mapping of daily and sub-daily wildfire growth with satellite observations. Poster presented at the *AGU Fall Meeting, New Orleans, LA, December 13-17,* by Sonoma Technology, Inc., Petaluma, CA. STI-921020-7573.

Pavlovic N., McClure C., Huang S., Chaveste M., and Wang N. (2021) Methodology for consistent daily and sub-daily mapping of wildfire growth for 2003-2020 and beyond. Presented at the *Association for Fire Ecology 9th International Fire Ecology and Management Congress, Virtual, December 3,* by Sonoma Technology, Petaluma, CA. STI-7643.

Huang S., Kramer S., Chaveste M., McClure C., and Lurmann F. (2021) Public health impact of prescribed fire (PHIRE) study - baseline and projected prescribed fire smoke exposures in California. Presentation given at the *Community Modeling and Analysis System virtual conference, November 1-5,* by Sonoma Technology, Inc., Petaluma, CA. STI-7597.

Pavlovic N.R., Li L., Girguis M., Lurmann F., McClure C., Franklin M., Wu J., Oman L.D., Breton C., Gilliland F., and Habre R. (2021) Use of wildfire smoke indicators in health exposure research: high spatial resolution mapping of PM2.5 in California. Poster presented at the *International Society of Exposure Science Annual Meeting (ISES 2021), August 30-September 2,* by Sonoma Technology, Petaluma, CA. STI-7580.

McClure C., and Hafner H. (2021) Improving your VOC data; Understanding your VOC data: techniques; Understanding your VOC data: trends; Resources for monitoring, analyzing, and visualizing your data. Webinar presented for The Lake Michigan Air Directors Consortium (LADCO), presented on May 18-19 and June 1-2, by Sonoma Technology, Inc., Petaluma, CA. STI-921030-7532.

Pavlovic N., McClure C., Brown S., Lurmann F., McDonald-Buller E., Kimura Y., and Wiedinmyer C. (2020) Performance assessment of fire inventory from the National Center for Atmospheric Research (FINN v2.2) wildfire emissions estimates using satellite aerosol observations. Presentation given at the *3rd International Smoke Symposium, April 21*, by Sonoma Technology, Petaluma, CA. STI-7233.

McClure C.D., Pavlovic N., Brown S., Lurmann F., Kimura Y., McDonald-Buller E., and Wiedinmyer C. (2019) Evaluation of the Fire Inventory from the National Center for Atmospheric Research (FINNv2.2) wildfire emissions using satellite observations. Poster presented at the *2019 American Geophysical Union Fall Meeting, San Francisco, CA, December 9-13,* by Sonoma Technology, Inc., Petaluma, CA; the University of Texas at Austin, Austin, TX; and the University of Colorado, Boulder, CO. A23L-2960, STI-7152.

Boggarapu P.C., McClure C.D., Mulligan J., and Jaffe D. (2019) Analysis of ambient VOCs using thermal desorption gas chromatography to identify smoke influence in urban areas. Paper presented at the *American Geophysical Union Fall Meeting, San Francisco, CA, December 9-13*. Available at https://doi.org/10.1002/essoar.10501934.1.

McDonald-Buller E., Kimura Y., Wiedinmyer C., Joseph M., Pavlovic N., McClure C., Brown S., and Lurmann F. (2019) Development and evaluation of the FINNv.2.2 global model application and fire emissions estimates for the expanded Texas air quality modeling domain. Presented at the *Texas Air Quality Research Program Workshop, Austin, TX, August 22,* by the University of Texas at Austin, Austin, TX, the University of Colorado Boulder, Boulder, CO, and Sonoma Technology, Inc., Petaluma, CA. AQRP Project 18-022, STI-918062-7168.

Pavlovic N., McClure C., Brown S., Lurmann F., McDonald-Buller E., Kimura Y., and Wiedinmyer C. (2019) Performance assessment of fire inventory from the National Center for Atmospheric Research (FINN v2.2) wildfire emissions estimates using satellite aerosol observations. Presented at the *U.S. EPA International Emissions Inventory Conference, Dallas, Texas, August 2*, by Sonoma Technology, Inc., Petaluma, CA, the University of Texas at Austin, TX, and the University of Colorado at Boulder, CO. STI-7113.

Pavlovic N., Huang S., McClure C., and Mukherjee A. (2019) Modeling of smoke impacts on air quality using direct observation of hourly fire activity from geostationary satellites. Presentation given at the *Fire Behavior and Fuels Conference, Albuquerque, New Mexico, April 30,* by Sonoma Technology, Inc., Petaluma, CA. STI-7110.

## Formal Reports

Wang N., McClure C., and DeWinter J. (2023) Quality assurance project plan for the photochemical assessment monitoring stations (PAMS) required site network for speciated volatile organic compounds, carbonyls, and meteorological parameters including mixing layer height - revision 1. Prepared for the U.S. Environmental Protection Agency Office of Air Quality Planning Standards Air Quality Assessment Division, Research Triangle Park, NC by Sonoma Technology, Petaluma, CA, STI-7906, May.

Wang N., McClure C., and DeWinter J. (2023) Technical assistance document for sampling and analysis of ozone precursors for the photochemical assessment monitoring stations program - revision 3. Prepared for the U.S. Environmental Protection Agency Office of Air Quality Planning Standards Air Quality Assessment Division, Research Triangle Park, NC by Sonoma Technology, Petaluma, CA, STI-7907, May.

Brown S., McClure C., Gostic C., Miller D., Pavlovic N., Scarborough C., and Wang N. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: August 7, 2020. Final Report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV, by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, September.

Gostic C., Scarborough C., Pavlovic N., McClure C., Miller D., and Wang N. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: August 3, 2020. Final report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV, by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, September.

Gostic C., Scarborough C., Pavlovic N., McClure C., and Miller D. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: September 2, 2020. Final report prepared for Clark County Department of Environment and Sustainability Division of Air Quality, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, September.

Gostic C., Scarborough C., Pavlovic N., McClure C., and Miller D. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: September 26, 2020. Final report prepared for Clark County Department of Environment and Sustainability Division of Air Quality, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, September.

Gostic C., Scarborough C., Pavlovic N., McClure C., and Miller D. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: August 18-21, 2020. Final report prepared for Clark County Department of Environment and Sustainability Division of Air Quality, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, September.

McClure C., Wang N., Chaveste M., Pavlovic N., and Huang S. (2020) Remote sensing fire activity database with agency record integration for years 2003-2019. Technical memorandum prepared for Pacific Gas & Electric, San Francisco, CA by Sonoma Technology, Petaluma, CA, STI-920029-7286, September 15.

Brown S., McClure C., Gostic C., Kramer S., Miller D., Scarborough C., and Wang N. (2021) Exceptional Event Demonstration for Ozone Exceedances in Clark County, Nevada – May 9, 2020. Final report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV, by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, July.

McClure C., Wang N., Hafner H., McCarthy M., and Brown S. (2020) Volatile organic compound data validation. Technical memorandum prepared for the Hong Kong University of Science and Technology R and D Corporation by Sonoma Technology, Inc., Petaluma, CA, STI-919058-7392, June 30.

Gostic C., Scarborough C., McClure C., Miller D., Wang N., Kramer S., and Brown S. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada – May 28, 2020. Final report prepared for Clark County Department of Environment & Sustainability Division of Air Quality, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, June.

Gostic C., Scarborough C., McClure C., Miller D., Wang N., Kramer S., and Brown S. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada – May 6, 2020. Final report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, June.

Gostic C., Scarborough C., McClure C., Miller D., Pavlovic N., and Brown S. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada – June 22, 2020. Final report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, doi: STI-920053-7477, June.

Gostic C., Scarborough C., Pavlovic N., McClure C., Miller D., Ryder O., and Wang N. (2021) Exceptional event demonstration for ozone exceedances in Clark County, Nevada: June 26, 2020. Draft report prepared for the Clark County Department of Environment and Sustainability, Las Vegas, NV, by Sonoma Technology, Inc., Petaluma, CA, STI-920053-7477, June.

## Real-Time Web Applications

McCarthy M.C., Brown S.G., and McClure C.D. (2020) $NO_2$ data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/NO2_dashboard_dev/.

McCarthy M.C., Brown S.G., and McClure C.D. (2020) Ozone data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/ozone_dashboard_dev/.

McCarthy M.C., Brown S.G., and McClure C.D. (2020) CO data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/CO_Dashboard_dev/.

McCarthy M.C., Brown S.G., and McClure C.D. (2020) $SO_2$ data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/SO2_dashboard_dev/.

McCarthy M.C., Brown S.G., and McClure C.D. (2020) $NO_y$ data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/NOy_dashboard_dev/.

McCarthy M.C., Brown S.G., and McClure C.D. (2019) $PM_{2.5}$ data quality dashboard. Real-time web application prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA. Available at https://sti-r-shiny.shinyapps.io/QVA_Dashboard/.