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- 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.
- Minor H.A., Lurmann F.W., and Penfold B.M. (2017) Improving the accuracy and usability of residential histories for exposure assessment. Poster at the *Annual Meeting of the International Society of Exposure Science, Research Triangle Park, NC, October 15-19,* by Sonoma Technology, Inc., Petaluma, CA. STI-6729.

- Dumas J., Penfold B., Healy A., MacDonald C., and Dye T. (2016) eSIMS: Electronic Site Information Management System. Webinar, March 17, presented by Sonoma Technology, Inc., Petaluma, CA. STI-6473.
- McCarthy M., Ekstrand A., Huang S., and Penfold B. (2015) Oil Sands ambient air monitoring network evaluation: analysis results. Webinar presented to Alberta Environment and Sustainable Resource Development, Edmonton, AB, Canada, April 16, by Sonoma Technology, Inc., Petaluma, CA. STI-914049-6241.
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- Hafner H.R. and Penfold B.M. (2016) Technique for relocating an air quality monitoring site. Presented at the AWMA *Air Quality Measurement Methods and Technology Conference, Chapel Hill, NC, March 15-17.* STI-6468.
- McCarthy M., Ekstrand A., O'Brien T., and Penfold B. (2015) Calgary Region Airshed Zone network evaluation. Webinar presented to the Calgary Region Airshed Zone, Edmonton, AB, March 11, by Sonoma Technology, Inc., Petaluma, CA. STI-915007-6214.
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- Hafner H., Penfold B., and McCarthy M. (2014) Monitoring network assessments: best practices and analysis insights. Webinar presented online, September 30, by Sonoma Technology, Inc., Petaluma, CA. STI-6077.
- Hafner H.R., Penfold B.M., and McCarthy M.C. (2014) Monitoring network assessments: best practices and lessons learned. Presented at the *National Ambient Air Monitoring Conference, Atlanta, GA, August 11-14.* STI-5967.
- McCarthy M., Penfold B., Lorentz K., O'Brien T., and Ekstrand A. (2014) Florida network assessment results webinar. Presented to the Florida Department of Environmental Protection, June 5, by Sonoma Technology, Inc., Petaluma, CA. STI-914024-5988.
- McCarthy M., Penfold B., Lorentz K.A., and Ekstrand A. (2014) Florida network assessment: conceptual model webinar. Presented to the Florida Department of Environmental Protection, May 8, by Sonoma Technology, Inc., Petaluma, CA. STI-914024-5966.

- McCarthy M., Penfold B., Ekstrand A., and O'Brien T. (2014) Alberta's North Saskatchewan region analysis results. Webinar presented to Alberta Environment and Sustainable Resources Development, Edmonton, AB, March 3, by Sonoma Technology, Inc., Petaluma, CA. STI-914001-5922.
- McCarthy M., Penfold B., Ekstrand A., and O'Brien T. (2014) Alberta's North Saskatchewan region conceptual model webinar. Webinar presented to Alberta Environment and Sustainable Resources Development, Edmonton, AB, January 30, by Sonoma Technology, Inc., Petaluma, CA. STI-914001-5899.
- Penfold B., Ekstrand A., Lorentz K., and McCarthy M. (2013) Fort Air Partnership: Scotford 2 ambient air monitoring station relocation scenario output. Webinar presented to the Fort Air Partnership Technical Working Group by Sonoma Technology, Inc., STI-913048-5764, November 21.
- McCarthy M., Penfold B., and Ekstrand A. (2013) Alberta's South Saskatchewan region analysis results webinar. Presented to the Alberta Environment and Sustainable Resources Department, Edmonton, Alberta, November 4, by Sonoma Technology, Inc., Petaluma, CA. STI-913051-5821.
- McCarthy M. and Penfold B. (2013) PAZA network evaluation overview. Presented to the Peace Airshed Zone Association Board of Directors, Grande Prairie, Alberta, Canada, October 2, by Sonoma Technology, Inc., Petaluma, CA. STI-913032-5778.
- McCarthy M., Penfold B., Ekstrand A., and Lorentz K. (2013) Alberta's South Saskatchewan Region conceptual model webinar. Presented to Alberta Environment and Sustainable Resources Development, September 22, by Sonoma Technology, Inc., Petaluma, CA. STI-913051-5752.
- McCarthy M., Penfold B., Ekstrand A., and O'Brien T. (2013) PAZA network analysis webinar. Presented to the Peace Airshed Zone Association Technical Working Group, Grande Prairie, Alberta, Canada, August 7, by Sonoma Technology, Inc., Petaluma, CA. STI-913032-5737.
- Penfold B., Hafner H., and Minor H. (2013) Project status update. Presented to the Arizona-Sonora Border Air Monitoring Network Project Team, Arizona Department of Environmental Quality, Tucson, AZ, June, by Sonoma Technology, Inc., Petaluma, CA. (STI-910440-5688).
- McCarthy M., Ekstrand A., and Penfold B. (2013) PAZA conceptual model webinar. Presented to the Peace Airshed Zone Association Technical Working Group, Grande Prairie, Alberta, Canada, June 12, by Sonoma Technology, Inc., Petaluma, CA. (STI-913032-5682).
- McCarthy M.C., Ekstrand A., Minor H., and Penfold B. (2013) Stakeholder webinar. Presented to Alberta Environment and Sustainable Resources Development, Edmonton, Alberta, Canada, March 22, by Sonoma Technology, Inc., Petaluma, CA. (STI-913014-5616).
- McCarthy M., Ekstrand A., and Penfold B. (2013) Analysis results. Presented to Alberta Environment and Sustainable Resources Development, Edmonton, Alberta, Canada, February 8, by Sonoma Technology, Inc., Petaluma, CA. (STI-912055-5591).
- Penfold B.M. and DeWinter J.L. (2012) Using GIS to assess air quality monitoring networks. Poster presented at the AAG Annual Meeting, New York, February 24-28, by Sonoma Technology, Petaluma, CA (STI-4240).

- McCarthy M.C. and Penfold B.M. (2012) Fort Air Partnership network assessment evaluation. Webinar presented to the Fort Air Partnership Stakeholder Session, Fort Saskatchewan, Alberta, Canada, February 14, by Sonoma Technology, Inc., Petaluma, CA (STI-911052-4352).
- McCarthy M.C., Penfold B.M., Jumbam L.K., O'Brien T.E., and Minor H.A. (2011) Fort Air Partnership network assessment results. Webinar presented to the Fort Air Partnership Technical Working Group, Fort Saskatchewan, Alberta, Canada, November 23, by Sonoma Technology, Inc., Petaluma, CA (STI-911052-4283).
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- Penfold B.M. (2009) Using GIS in Air Quality Research. Presented at *Sonoma County GIS Day, Santa Rosa, CA, Nov. 18* (STI-3760).
- Hafner H.R., Funk T.H., and Penfold B.M. (2009) Monitoring network assessments: lessons learned.
 Presented at the *National Air Quality Conference, Dallas, TX, March 2-5*, by Sonoma Technology, Inc.,
 Petaluma, CA (STI-3547). Also presented at the *EPA Region 5 State/Local/Tribal Contacts Meeting, Chicago, IL, April 21* (STI-3620).
- Reid S.B., Chinkin L.R., Penfold B.M., and Gilliland E.K. (2007) Emissions inventory validation and improvement: a Central California case study. Paper presented at the U.S. Environmental Protection Agency's 16th Annual Emission Inventory Conference, Raleigh, NC, May 14-17, by Sonoma Technology, Inc., Petaluma, CA (STI-3109).
- Reid S.B., Sullivan D.C., Penfold B.M., Raffuse S.M., and Funk T.H. (2007) Activity trends for key emission sources in California's San Joaquin Valley, 1970-2030. Paper presented at the U.S. Environmental Protection Agency's 16th Annual International Emission Inventory Conference, Raleigh, NC, May 14-17, by Sonoma Technology, Inc., Petaluma, CA (STI-3121).
- Hafner H. and Penfold B.M. (2006) An introduction to monitoring network assessment. Presented at the *National Air Monitoring Conference, Las Vegas, NV, November 6-9*, by Sonoma Technology, Inc., Petaluma, CA (STI-3062).
- Penfold B.M., Hafner H., and Raffuse S. (2006) Analytical techniques used for regional-scale network assessments. Presented at the *National Air Monitoring Conference, Las Vegas, NV, November 6-9,* by Sonoma Technology, Inc., Petaluma, CA (STI-3061).
- Wheeler N.J., Craig K.J., and Penfold B.M. (2006) Generating shapefiles from CMAQ, SMOKE, and CAMX files. Poster presentation at the *Community Modeling and Analysis System (CMAS) Conference, Chapel Hill, NC, October 16-18*, Sonoma Technology, Inc., Petaluma, CA (STI-3008).
- Hafner H.R., Penfold B.M., and Brown S.G. (2005) Using GIS tools to select suitable DPM monitoring locations: Phoenix, Arizona. Presented at the 2005 Air Toxics Summit, Seeking Solutions for our Rural and Urban Communities, Portland, OR, October 18-19, by Sonoma Technology, Inc., Petaluma, CA (STI-904234-2755).
- Brown S.G., Penfold B.M., and Hafner H.R. (2005) Selecting monitoring locations using GIS-based spatial analysis techniques. Presented at *Air & Waste Management Association Environmental Data Analysis:*

Assessing Health and Environmental Impacts, Oak Brook, IL, October 4, by Sonoma Technology, Inc., Petaluma, CA (STI-2711).

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- Funk T.H., Penfold B.M., Raffuse S.M., and Stiefer, P.S. (2004) Using GIS technology for emission inventory development and improvement (case studies). Presented at WESTAR GIS & Emission Inventory Development Workshop, Snowbird, UT, September 30 to October 1, 2004 (STI-904490-2614).
- Hafner H.R., Brown S.G., Penfold B.M., and Funk T.H. (2004) Use of GIS tool to investigate suitable diesel emissions monitoring locations in Detroit, Michigan. Paper No. 35 presented at the *Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2444).
- Penfold B.M., Funk T.H., and Hafner H.R. (2003) Exploring the use of suitability modeling to locate air toxics monitors in Massachusetts. Paper and presentation prepared for the *ESRI International User Conference 2003, San Diego, CA, July 7-11* (STI-2388).
- Funk T.H., Dye T.S., Chan A.C., Anderson C.B., and Penfold B.M. (2003) Mapping PM_{2.5} methods and uncertainties. Presented at the U.S. EPA National Air Quality Conference, San Antonio, TX, February 2-5 (STI-902090-2324).
- Hafner H.R., Brown S.G., Penfold B.M., and Funk T.H. (2003) Suitability analysis for monitoring diesel particulate matter in the Detroit area. Presented at the *National Workshop on Air Toxics Monitoring*, *Chicago, IL, May 13-14* (STI-902530-2372).
- Hafner H.R., Funk T.H., Penfold B.M., and Anderson D. (2002) Assessment of the toxics monitoring network in Phoenix, Arizona. Presented at the *Symposium on Air Quality Measurements, Methods, and Technology, San Francisco, CA, November 13* (STI-901483-2232).

Formal Reports

- Scarborough C. and Penfold B. (2023) Sixtieth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School Quarterly report prepared for the Planning Department at the City of Los Angeles, Los Angeles, CA by Sonoma Technology, Petaluma, CA, STI-922030-7845, January 13.
- Scarborough C., Wang N., Penfold B., Hafner H., and Smith K. (2022) Fourteenth annual report of ambient air quality monitoring at sunshine canyon landfill and Van Gogh Elementary School: a fourteen–year summary, November 22, 2007–November 21, 2021. Annual report prepared for Planning Department, City of Los Angeles, Los Angeles, CA, by Sonoma Technology, Petaluma, CA, STI-915026-7760, July 30.

- Lavezzo T. and Penfold B. (2022) Cloverdale fire protection district community wildfire protection plan. CWPP prepared for Cloverdale Fire Protection District, CA by Sonoma Technology, Inc., Petaluma, CA, July.
- Scarborough C., Wang N., and Penfold B. (2022) Fifty-sixth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School Quarterly report prepared for Planning Department, Los Angeles, CA by Sonoma Technology, Petaluma, CA, STI-915026-7652, January.
- Scarborough C., Wang N., and Penfold B. (2022) Fifty-fifth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School. Quarterly report prepared for Planning Department, Los Angeles, CA by Sonoma Technology, Petaluma, CA, STI-915026-7651, January.
- Penfold B. and Lavezzo T. (2021) Upper-air wind profiler pilot study results. Technical memo prepared for the California Energy Commission, Sacramento, CA by Sonoma Technology, Inc., Petaluma, CA, 919039-7522-TM.
- Penfold B., Wang N., and Gostic C. (2021) Network evaluation of the Strathcona Industrial Association. Final report prepared for the Strathcona Industrial Association, Edmonton, Alberta, Canada by Sonoma Technology Inc., Petaluma, CA, STI-921046-7631-FR, December.
- Scarborough C., Wang N., Penfold B., Hafner H., and Smith K. (2021) Thirteenth annual report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: a thirteen-year summary November 22, 2007–November 21, 2020. Annual report prepared for Planning Department, City of Los Angeles and Los Angeles County Department of Regional Planning, Los Angeles, California by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7564-FR.
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- Penfold B. and Wang N. (2020) Fifty-first quarterly report of ambient air quality monitoring at sunshine canyon landfill and Van Gogh Elementary School: June 1, 2020-August 31, 2020. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7481, December 9.
- Wang N., Penfold B., Hafner H.R., and Smith K. (2020) Twelfth annual report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: a twelve-year summary (November 22, 2007–November 21, 2019). Final report prepared for the Los Angeles City Planning Department and the Los Angeles County Department of Regional Planning by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7404-AR, July 17.

- Wang N. and Penfold B. (2020) Forty-ninth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: December 1, 2019–February 26, 2020. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7289, May 7.
- Dunn M. and Penfold B. (2020) Forty-eighth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: September 1, 2019-November 30, 2019. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7246, January 21.
- O'Brien T. and Penfold B. (2019) Forty-seventh quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: June 1, 2019 – August 31, 2019. Quarterly report prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7184-IR, October 15.
- O'Brien T. and Penfold B. (2019) Forty-sixth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: March 1, 2019 – May 31, 2019. Quarterly report prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7159-QR, August 2.
- Penfold B., Hafner H.R., O'Brien T., and Smith K. (2019) Eleventh annual report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: an eleven-year summary (November 22, 2007–November 21, 2018). Prepared for the Planning Department, City of Los Angeles, CA, and the Los Angeles County Department of Regional Planning by Sonoma Technology, Inc., Petaluma, CA, STI-915025-7149-AR, July 22.
- O'Brien T. and Penfold B. (2019) Forty-fifth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: December 1, 2018 – February 28, 2019. Quarterly report prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915026-7106, April 18.
- O'Brien T. and Penfold B. (2019) Forty-fourth quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: September 1, 2018–November 30, 2018. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915025-7076-QR, February.
- O'Brien T. and Penfold B. (2018) Forty-third quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: June 1, 2018–August 31, 2018. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915025-7027-QR, November 21.
- Hafner H.R., Stanton L.G., Penfold B.M., and Smith K.M. (2018) Air quality monitoring plan for Humphreys Compressor Station (Barnesville, Ohio). Prepared for MarkWest, Cadiz, OH, by Sonoma Technology, Inc., Petaluma, CA, STI-918030-7011, October.

- Penfold B.M. and Brown S.G. (2018) Standard operating procedure for Teledyne Model 640x real-time continuous PM monitor. By Sonoma Technology, Inc., Petaluma, CA, 915415-7129-SOP, September 14.
- O'Brien T. and Penfold B. (2018) Forty-second quarterly report of ambient air quality monitoring at Sunshine Canyon Landfill and Van Gogh Elementary School: March 1, 2018–May 31, 2018. Prepared for the Planning Department, City of Los Angeles, and Los Angeles County Department of Regional Planning, Los Angeles, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915025-6968-QR, August 6.
- Penfold B.M. and Brown S.G. (2018) Standard operating procedure for Teledyne Model 640 real-time continuous PM monitor. By Sonoma Technology, Inc., Petaluma, CA, STI-915415-7128-SOP, July.
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- Pavlovic N., Penfold B., Zahn P., Craig K., Huang S., O'Brien T., and Brown S. (2018) Tier 1 and 2 smoke exceptional event analyses for Louisiana, September 14, 2017. Final report prepared for the Louisiana Department of Environmental Quality, Baton Rouge, LA, by Sonoma Technology, Inc., Petaluma, CA, STI-918003-6876, February 20.
- Seagram A., Brown S., Huang S., Penfold B., and Eisinger D. (2018) National near-road data assessment: report No. 3 with 2016 data. Final report prepared for the Washington State Department of Transportation, Olympia, WA, by Sonoma Technology, Inc., Petaluma, CA, STI-914203-6821, February 15.
- Hafner H.R. and Penfold B.M. (2018) PAMS data validation and analysis training material. Workbook prepared for the U.S. Environmental Protection Agency by Sonoma Technology, Inc., STI-915308-6834, January 4.
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- Lavezzo T., Penfold B., Craig K., Hafner H., and Brown S. (2016) Delaware trajectory assessment. Technical memorandum prepared for the Delaware Department of Natural Resources and Environmental Control, Division of Air Quality, STI-916030-6585-TM, October.
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- Lavezzo T.L., Huang S., Pavlovic N.R., Hafner H.R., and Penfold B.M. (2016) Marin County Community Wildfire Protection Plan. Prepared for FIRESafe MARIN, San Anselmo, CA, by Sonoma Technology, Inc., Petaluma, CA, 915038-6398, August. Available at drive.google.com/file/d/0Bx15pyv0JoJZWXE2WXIwMWtENUE/view.
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- Penfold B., McCarthy M., Du Y., and O'Brien T. (2015) Wyoming statewide air monitoring network assessment. Technical memorandum prepared for the Wyoming Department of Environmental Quality by Sonoma Technology, Inc., Petaluma, CA, STI-915008-6323-TM, July 24.
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