

MARK C. GREEN

Research Professor

Division of Atmospheric Sciences, Desert Research Institute

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Education

Ph.D., Atmospheric Science, University of California at Davis, September 1990.

Master of Science, Meteorology, University of Utah, June 1980.

Bachelor of Science, Atmospheric and Oceanic Sciences, University of Michigan, August 1977.

Experience

Dr. Mark Green has over 25 years experience in the fields of air pollution and meteorology. Dr. Green holds the positions of Research Professor in DRI's Division of Atmospheric Sciences. His research has concentrated on determining the causes of haze in both remote and urban areas and in characterization and source attribution of atmospheric aerosols. He was (is) DRI's Principal Investigator for numerous current and past visibility related studies, including the Las Vegas Valley upper air measurement study, Project MOHAVE and BRAVO regional visibility studies, the Columbia River Gorge Air Quality and Visibility Study, the Las Vegas Valley Visibility and PM_{2.5} Study, the CENRAP Scoping Study, the CENRAP monitoring umbrella contract, the Las Vegas Valley Carbon Source Apportionment Study, and the Western Regional Air Partnership Causes of Haze Study. Dr. Green served as a member of the Meteorology Subcommittee, Grand Canyon Visibility Transport Commission (GCVTC), providing substantial portions of the subcommittees' analyses and reports and is currently a member of the Western Regional Air Partnership's Modeling Forum. He has also contributed to EPA guidance documents for PM_{2.5} monitoring. As a result of his leadership on these projects, Dr. Green is a nationally recognized expert in visibility assessment.

Research Professor (2003- present), Assistant Research Professor (1990-1997) and Associate Research Professor (1997- 2003), Division of Atmospheric Sciences, Desert Research Institute, Las Vegas and Reno, NV.

Obtain funding for and conduct scientific research on air quality and meteorology issues. Hire and supervise scientific personnel as required to meet program objectives. Fifteen years as DRI's senior air quality person in southern Nevada. Prepared study plans and technical management, data analysis, and reporting for the Project MOHAVE and BRAVO regional visibility studies. Prepared study plan for Columbia River Gorge Air Quality Study. Principal investigator for numerous studies, including the Columbia River Gorge Air Quality Study, Las Vegas Valley Visibility and PM_{2.5} Study, the Las Vegas Valley Carbon Source Apportionment Study, CENRAP Scoping Study, CENRAP monitoring umbrella contract, WRAP/CENRAP Causes of Haze Study, Radio-Frequency Chaff Study. Served as member of the Meteorology Subcommittee, Grand Canyon Visibility Transport Commission (GCVTC), providing substantial portions of the subcommittees' analyses and reports. Contributor to many additional air quality studies involving PM₁₀, PM_{2.5}, visibility, ozone,

and carbon monoxide. Quality assurance for Project MOHAVE, GCVTC, Southern California Ozone Study, and European Tracer Experiment (ETEX). Contributor to USEPA guidance documents for PM_{2.5}.

Physical Scientist, Center for Satellite Applications and Research (STAR), NOAA/NESDIS, Camp Springs Maryland, July 2007-June 2009. Intermittent Intergovernmental Personal Act (IPA) assignment. Conduct research on the use of satellite data for air quality monitoring and forecasting.

Director, Cooperative Institute for Atmospheric Sciences and Terrestrial Applications (CIASTA). April 1, 2003 – June 2006. Direct a joint research institute between the National Oceanic and Atmospheric Administration (NOAA) and the University and Community College System of Nevada. Develop and maintain relationships with federal agencies, in particular NOAA. Facilitate the establishment of joint research projects between NOAA and UCCSN and other universities in the intermountain west. Build interdisciplinary science teams to address CIASTA goals. Improve effectiveness of graduate-level education in the Intermountain West by including students in joint research projects. Provide overall management of CIASTA.

Graduate Faculty, University of Nevada-Reno, 1995- present. Taught Atmospheric Science 413/613 Synoptic and Dynamic Meteorology in 1995, Atmospheric Science 117 Spring 2007 and scheduled for Spring 2008. Currently serving as major professor for 1 PhD student in Atmospheric Science program. Contributor to Atmospheric Science program by serving on qualifying exam committee and attending planning meetings.

Visiting Professor, University of Nevada- Las Vegas, 2005- present. Taught Geography 390- Meteorology and Climatology spring semester 2005-2007.

Visiting Professor Nevada State College at Henderson 2002-2005. Taught Environment 100- Humans and the Environment two semesters and Geology 117- Meteorology and Climatology five semesters.

Research Assistant, University of California at Davis, September 1985- September 1990. Conducted research on transport of visibility reducing pollutants in southern California. Developed a climatological classification procedure for wind field patterns.

Air Quality Specialist, U.S. Department of the Interior, Bureau of Land Management, February 1978 - August 1985. Member of interdisciplinary environmental assessment team. Responsible for preparing climate and air quality sections of environmental impacts statements. Prepared and administered contracts for air quality studies. Performed emission inventories and dispersion modeling. Coordinated Bureau air quality studies with other Federal and state agencies.

Publications- (Journals)

Green M., and Xu, J., 2007. Transport of atmospheric aerosol by gap winds in the Columbia River Gorge, *Journal of Climate and Applied Meteorology*, in press. .

- Green, M., and Xu, J. Causes of Haze in the Columbia River Gorge. , 2007. *J. of Air & Waste Mgmt. Assoc.* **57**, 947-958.
- Kavouras, I. G., V. Etyemezian, J. Xu, D. W DuBois, M. Green, and M. Pitchford (2007), Assessment of the local windblown component of dust in the western United States, *J. Geophys. Res.*, 112, D08211, doi:10.1029/2006JD007832
- Xu, J., D. DuBois, M. Pitchford, M. Green, V. Etyemezian, Attribution of Sulfate Aerosols in Federal Class I Areas of the Western United States Based on Trajectory Regression Analysis, *Atmospheric Environment*, **40**, 3433-3447, 2006.
- Green, M., Farber, R., Lien, N., Gebhart, K., Molenaar, J., Iyer, H., Eatough, D. (2005). The effects of scrubber installation at the Navajo Generating Station on Particulate Sulfur and Visibility Levels in the Grand Canyon. *J. of Air & Waste Mgmt. Asso.*, 55:1675-1682.
- Chow, J., Watson, J., Kuhns, H., Etyemezian, V., Lowenthal, D., Crow, D., Kohl, S., Englebrecht, J., Green, M. Source profiles for industrial, mobile, and area sources in the Big Bend Regional Aerosol and Visibility (BRAVO). *Chemosphere*, January 2004.
- Green, M., Kuhns, H., Pitchford, M., Dietz, R., Ashbaugh, L., and Watson, T., 2003. Application of the Tracer-Aerosol Gradient Interpretive Technique (TAGIT) to sulfur attribution for the Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study. *J. of Air & Waste Mgmt. Asso.*, 53:586-595..
- Etyemezian, V., Kuhns, H., Gillies, J., Green, M., Pitchford, M., and Watson, J. 2003. Vehicle based road dust emissions measurement (I): methods and calibration. *Atmospheric Environment*, 37, 4559-4571.
- Kuhns, H., Etyemezian, V., Green, M., Hendrickson, K., McGown, M., Barton, K., and Pitchford, M., 2002. Vehicle based road dust emissions measurement (II): Effects of precipitation, wintertime road sanding, and street sweepers on PM10 fugitive dust emissions from paved and unpaved roads. *Atmospheric Environment*, 37, 4573-4582.
- Kuhns, H., Bohdan, V., Chow, C., Etyemezian, V., Green, M., Herlocker, D., Kohl, S., McGown, M., Ramsdell, J., Stockwell, W., Toole, M., and Watson, J., 2002. The Treasure Valley Secondary Aerosol Study I: Measurements and Equilibrium Modeling of Inorganic Secondary Aerosols and Precursors in Southwestern Idaho. *Atmospheric Environment* 37 (4), 511-524.
- Stockwell, W.R., Kuhns, H., Etyemezian, V., Green, M.C., Chow, J.C., and Watson, J.G., 2002. The Treasure Valley Secondary Aerosol Study II: Modeling of the Formation of Inorganic Secondary Aerosols and Precursors for Southwestern Idaho. *Atmospheric Environment* 37 (4), 525-534.
- Kuhns, H., V. Etyemezian, D. Landwehr, C. MacDougall, M. Pitchford, and M. Green, 2001. Testing re-entrained aerosol kinetic emissions from roads (TRAKER): a new approach to infer silt loadings on roadways. *Atmos. Environ.*, **35**, 2815-2825.
- Eatough, D.J., Green, M., Moran, W., and Farber, R. (2001). Potential particulate impacts at the Grand Canyon from northwestern Mexico. *Sci. Total Environ.* **276**, 69-82.
- Green, M.C., P. Pai, L. Ashbaugh, and R.J. Farber, 2000: Evaluation of Wind Fields used in the Grand Canyon Visibility Transport Commission Analyses. *J. of Air & Waste Mgmt. Asso.*, **50**, 809-817.
- Green, M.C. and I. Tombach, 2000: Use of Project MOHAVE Perfluorocarbon tracer data to evaluate source and receptor models. *J. of Air & Waste Mgmt. Asso.*, **50**, 717-723.
- Pitchford, M., M. Green, H. Kuhns, and R. Farber, 2000: Characterization of regional transport and

- dispersion using Project MOHAVE Tracer Data. *J. of Air & Waste Mgmt. Asso.*, **50**, 733-745.
- Chow, J.C., J.G. Watson, M.C. Green, D.H. Lowenthal, G. Torres, and B. Bates (2000). Cross-Border Transport and Spatial Variability of Suspended Particles in Mexicali and California's Imperial Valley. *Atmos. Environ.*, **34**(11):1833-1843.
- Green, M.C., 1999: The Project MOHAVE Tracer Study: Study design, data quality, and overview of results. *Atmos. Environ.*, **33**, 1955-1968.
- Kuhns, H., Green, M., Pitchford, M., Vasconcelos, L., White, W., and Mirabella, V., 1999: Attribution of particulate sulfur in the Grand Canyon to a specific point source using tracer-aerosol gradient interpretive technique (TAGIT), *J. of Air & Waste Mgmt. Asso.*, **49**, 906-915.
- Chow, J.C., Watson, J.G., Green, M.C., Lowenthal, D.H., DuBois, D.W., Kohl, S.D., Egami, R.T., Gillies, J., Rogers, C.F., and Frazier, C.A., 1999: Middle- and neighborhood-scale variations of PM₁₀ source contributions in Las Vegas, Nevada. *J. of Air & Waste Mgmt. Asso.*, **49**, 641-654.
- White, W.H., Farber, R. J., Green, M.C., Macias, E.S., Mirabella, V.A., Pitchford, M.L., and Vasconcelos, L.A., 1999 Tracking regional background in a haze attribution experiment, *J. of Air & Waste Mgmt. Asso.*, **49**, 599-602.
- Watson, J.G., Chow, J.C., Frazier, C.A., Hinsvark, B.A., Green, M.C. (1998) Ambient air quality at Barton Flats and other California forests. In *A Case History of Oxidant Air Pollution Impacts on Conifer Forests in Southern California*, Miller, P., Ed. Springer Verlag.
- Green, M.C., and K.A. Gebhart, 1997: Clean Air Corridors: A Geographic and Meteorologic Characterization. *J. of Air & Waste Mgmt. Asso.*, **47**, March 1997.
- Pitchford, M. and M. Green, 1997: Analyses of aerosol size distributions for a forty-day period in summer, 1992 at Meadview, Arizona. *J. of Air & Waste Mgmt. Asso.*, **47**, 136-146.
- Farber, R.J., T.E. Hoffer, M.C. Green, and P.A. Walsh, 1997: Summer transport patterns affecting the summer Mohave Power Project emissions. *J. of Air & Waste Mgmt. Asso.*, **47**, March 1997.
- Green, M.C., M.L. Pitchford, and L. Ashbaugh, 1996: Identification of Candidate Clean Air Corridors for the Colorado Plateau. *J. of Air & Waste Mgmt. Asso.*, **46**, 441-449.
- Green, M.C., R.G. Flocchini, and L.O. Myrup, 1993: Use of temporal principal components analysis to determine seasonal periods. *J. Appl. Meteor.*, **32**, 986-995.
- Green, M.C., R.G. Flocchini and L.O. Myrup, 1992: The relationship of the extinction coefficient distribution to wind field patterns in southern California. *Atmos. Environ.*, **26A**, 827-840.
- Green, M.C., L.O. Myrup and R.G. Flocchini, 1992: A method for classification of wind field patterns and its application to southern California. *Int. J. Climatol.*, **12**, 111-136.

Conference Proceedings

- Green, M. Regional Haze Modeling. Emerging Issues for Air Quality Modeling in Canada. Air & Waste Management Association. Calgary, Alberta, Canada, October 3-5, 2006.
- Green, M., Xu, J., Nikolich, G., Adhikrai, N., (2006). Causes of Haze in the Columbia River Gorge. 99th annual meeting of the Air & Waste Management Association. New Orleans, LA.
- M.-C. Oliver Chang, Mark Green, Hampden Kuhns, Nicholas Nussbaum, George Nikolic, L-W. Antony Chen, Judith C. Chow and John G. Watson, Las Vegas Carbon Source Apportionment Study.

Presented at the CRC Mobile Source Air Toxic Workshop, Scottsdale, AZ, Nov. 30th – Dec. 2nd, 2004

- Etyemezian, V., Xu, J., Dubois, D., Green, M., Alter, L., Pitchford, M. 2004. Assessment of the major causes of dust-resultant haze in the western United States. Proceedings, Regional and Global Perspectives on Haze: Causes, Consequences and Controversies, Asheville, North Carolina, October 25-29, 2004. Air & Waste Management Association. ISBN 0-923904-72-5.
- Xu, J., Dubois, D., Green, M., Freeman, D., Etyemezian, V., Pitchford, M., 2004. Causes of Haze Assessment for WRAP Class I areas – preliminary conceptual model development. Proceedings, Regional and Global Perspectives on Haze: Causes, Consequences and Controversies, Asheville, North Carolina, October 25-29, 2004. Air & Waste Management Association. ISBN 0-923904-72-5.
- Farber, R., Lien, N., Green, M., Eatough, D., Gebhart, K., Molenaar, J., Iyer, H. Assessing changes in Grand Canyon haze when a regional point source reduces emissions. Proceedings, Regional and Global Perspectives on Haze: Causes, Consequences and Controversies, Asheville, North Carolina, October 25-29, 2004. Air & Waste Management Association. ISBN 0-923904-72-5.
- Dubois, D., Green, M., Xu, J., Freeman, D., Etyemezian, V., Pitchford, M. 2004. The Causes of Haze Assessment: an overview. Proceedings, Regional and Global Perspectives on Haze: Causes, Consequences and Controversies, Asheville, North Carolina, October 25-29, 2004. Air & Waste Management Association. ISBN 0-923904-72-5.
- Green, M., Dubois, D., Xu, J., Pitchford, M. 2004. Westward transport of sulfate rich haze from the eastern United States. Proceedings, Regional and Global Perspectives on Haze: Causes, Consequences and Controversies, Asheville, North Carolina, October 25-29, 2004. Air & Waste Management Association. ISBN 0-923904-72-5.
- Green, M., Gebhart, K., Schichtel, B., Barna, M. An Overview of Methods Used for Particulate Sulfur Source Attribution for the Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study and Some Preliminary (Unreconciled) Results, Paper 69833. Annual AWMA Conference, San Diego, CA.
- Green, M., Arnott, P., Walker, J., Etyemezian, V. 2003. Comparison of NIOSH and IMPROVE methods for elemental carbon aerosol measurements with a photoacoustic method in a wintertime, urban, desert environment. European Aerosol Conference Proceedings.
- Arnott, W.P., Green, M., Walker, J., Moosmuller, Etyemezian, V. Photoacoustic insight on the roles of soot and NO₂ in light absorption at Las Vegas, NV USA. 2003 European Aerosol Conference Proceedings.
- Green, M., Pitchford, M., Tombach, I., (2003): A Summary of findings from the Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study. A&WMA 96th Annual Conference, June 2003.
- Ashbaugh, L., Eldred, R., Green, M., (2001): Temporal and spatial characteristics of atmospheric aerosols in Texas during the Big Bend Regional Aerosol and Visibility study (BRAVO). *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.
- Green, M., Hecobian, A., Etyemezian, V., Kuhns, H., Chow, J., Watson, J., Ransel, D., Cates, W., Durosinmi, (2001): Chemical composition of haze in the Las Vegas Valley. *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.

- Hecobian, A., Green, M., Etyemezian, V., Kuhns, H., Chow, J., Watson, J., Ransel, D., Cates, W., Durosinmi, (2001): Spatial and Temporal patterns of light scattering and light absorption in Las Vegas, Nevada. *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.
- Kuhns, H., Green, M., Etyemezian, V., Watson, J., Pitchford, M., (2001): Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study Emissions Inventory. *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.
- Pitchford, M., Green, M., Dietz, R., Watson, T., (2001): Perfluorocarbon Tracers Used to Study Transport and Dispersion during the BRAVO Study. *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.
- White, W.H., Dietz, R.N., Green, M.C., Pitchford, M.L., Watson, T.B., (2001): Preliminary Analysis of Perfluorocarbon Tracer Measurements in the Big Bend Regional Aerosol and Visibility Observational (BRAVO) Study *Proc. Conference on Regional Haze and Global Radiation Balance*, AWMA and AGU, Bend, Oregon, October 2001.
- Stockwell, W.R.; Kuhns, H.; Etyemezian, V.; Green, M.C.; Chow, J.C.; Watson, J.G.; Robinson, N.F. (2001): Modeling of Ozone, Nitrogen Oxides, and Particles in the American Northwest. Presented at the 94th Annual Meeting, Orlando, FL, 24-28 June 2001. Air & Waste Management Assoc., Pittsburgh, PA.
- Green, M., Pitchford M., (2000): An Overview of the Big Bend Regional Aerosol and Visibility Observational Study. AWMA 93rd annual conference, June 2000, Salt Lake City, Utah.
- Green, M.C., (1998): Evaluation of atmospheric transport and dispersion models in highly complex terrain using perfluorocarbon tracer data. In *Air Pollution Modeling and its Application XII*, Proceedings of the 22nd NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Application, June 1997, Clermont-Ferrand, France, S.E. Gryning and N. Chaumerliac, ed. Plenum Press, New York, pp 635-642. ISBN 0-306-45821-7.
- Green, M. C., (1997). The Project MOHAVE Perfluorocarbon Tracer Study. *Proc. of the ETEX Symposium on Long-Range Atmospheric Transport, Model Verification and Emergency Response*. May 1997, Vienna, Austria. Office for Official Publications of the European Communities., pp. 47-50. ISBN 92-828-0669-3.
- Green, M.C., Tombach, (1997): Use of Project MOHAVE Perfluorocarbon tracer data for source attribution analysis. *Proc. Conference on Visual Air Quality, Aerosols, and Global Radiation Balance*, Bartlett, New Hampshire, September 1997, AWMA and AGU, pp. 166-180.
- Green, M.C., Pai, P., Ashbaugh, L., and Farber, R., (1997): Evaluation of Wind Fields used in the Grand Canyon Visibility Transport Commission Analyses. *Proc. Conference on Visual Air Quality, Aerosols, and Global Radiation Balance*, Bartlett, New Hampshire, September 1997, AWMA and AGU, pp 213-223.
- Pitchford, M., Green, M., Kuhns, H., Farber, R., (1997): Characterization of regional transport and dispersion using Project MOHAVE tracer data. *Proc. Conference on Visual Air Quality, Aerosols, and Global Radiation Balance*, Bartlett, New Hampshire, September 1997, AWMA and AGU pp. 181-200.
- Green, M.C., (1994): Project MOHAVE Aerosol Data Quality. Paper #94-TA24.01 Air & Waste Management Association 87th annual meeting, Cincinnati, Ohio, June 19-24, 1994.
- Green, M.C., Gebhart, K.A., (1994): Clean Air Corridors: A Geographic and Meteorologic Characterization. Proceedings of the International Specialty Conference Aerosols and Atmospheric Optics: Radiative Balance and Visual Air Quality Snowbird, Utah, October 1994. Air & Waste Management Association, Pittsburgh, PA.

- Cahill, C.F., R.E. Keislar, D.R. Lawson, D.E. Schorran, P.A. Walsh, and M.C. Green, (1994): Methylchloroform transport to the Colorado Plateau: Implications for visibility degradation. Proceedings of the International Specialty Conference Aerosols and Atmospheric Optics: Radiative Balance and Visual Air Quality Snowbird, Utah, October 1994. Air & Waste Management Association, Pittsburgh, PA.
- Farber, R.J., Hoffer, T.E., Green, M.C., Walsh, P.A., (1994): Summer transport patterns affecting the summer Mohave Power Project emissions. Proceedings of the International Specialty Conference Aerosols and Atmospheric Optics: Radiative Balance and Visual Air Quality, Snowbird, Utah, October 1994. Air & Waste Management Association, Pittsburgh, PA.
- Pitchford, M., Green, M., (1994): Analyses of aerosol size distributions for a forty-day period in summer, 1992 at Meadview, Arizona. Proceedings of the International Specialty Conference Aerosols and Atmospheric Optics: Radiative Balance and Visual Air Quality, Snowbird, Utah, October 1994. Air & Waste Management Association, Pittsburgh, PA.

Book Contributions

- Watson, J.G., Chow, J.C., Frazier, C.A., Hinsvark, B.A., Green, M.C. (1998) Ambient air quality at Barton Flats and other California forests. In *A Case History of Oxidant Air Pollution Impacts on Conifer Forests in Southern California*, Miller, P., Ed. Springer Verlag.

Technical Reports (since 1998)

- Green, M., Xu, J., Nikolich, G., Adhikrai, N. (2006). Causes of Haze in the Columbia River Gorge, Final Report. Prepared for the Southwest Clean Air Agency, Vancouver, WA.
- Green, M., Xu, J., Nikolich, G., Adhikrai, N. (2006). Columbia River Gorge Haze Gradient Study, Final Report. Prepared for the Southwest Clean Air Agency, Vancouver, WA.
- Green, M., DuBois, D., Xu, J., Nikolich, G. (2006). Summary of DRI Upper Air Measurements during the Clark County Regional Ozone and Precursor Study (CCROPS). Prepared for Clark County Department of Air Quality Management.
- Chow, J.C., Chang, O., Green, M., Nikolich, G., Trimble, D., Kohl, S., Watson, J. (2005). Monitoring and Analysis of PM_{2.5} and PM₁₀ in Apex, NV. Prepared for Clark County Department of Air Quality Management (December 2005).
- Green, M., Chang, M.C., Chow, J., Kuhns, H., Etyemezian, V., Chen, L.W., Nussbaum, N., Nikolic, D., Arnott, P., Kumar, S., Etyemezian, V., 2004. Las Vegas Carbon Source Apportionment Study, Final Report. Prepared for Clark County Dept. of Air Quality Management and Environmental Protection, December 28, 2004.
- Pitchford, M., Tombach, I., Barna, M., Gebhart, K., Green, M., Knipping, E., Kumar, N., Malm, W., Pun, B., Schichtel, B., Seigneur, C., 2004. Big Bend Regional Aerosol and Visibility Observational Study. Final Report, September 2004.
<http://vista.cira.colostate.edu/improve/>.
- Green, M., Chow, J., Hecobian, A., Etyemezian, V., Kuhns, H., and Watson, W., 2002. The Las Vegas Valley Visibility and PM_{2.5} Study: Final Report. Prepared for Clark County Department of Air Quality Management.

- Green, M., Watson, J., Kuhns, H., Morris, R., Pollack, A., Fields, P., and Wolf, M., 2002. A Scoping Study for Haze in the CENRAP Region: Final Report. Prepared for the Central Regional Air Planning Association.
- Arnott, W.P., Freeman, D.L., Gillies, J.A., Green, M.C., Huggins, A.W., and Kingsmill, D.E. 2002. The Fate and Distribution of Radio-Frequency Chaff. Draft Report. January 14, 2002. Prepared by Division of Atmospheric Sciences, Desert Research Institute for Dr. Barry. J. Spargo, Naval Research Laboratory, Washington, D.C.
- Etyemezian, V., Kuhns, H., Gillies, J., Green, M., Chow, J., Kohl, S., and Watson, J., 2002. The Treasure Valley Road Dust Study: Final Report.
- Green, M.C., M.L Pitchford, R.E. Morris, and K. Norville, 2001: Columbia River Gorge Visibility and Air Quality Study: Existing Knowledge and Additional Recommended Scientific Assessment to Consider. Available at: <http://www.gorgeair.org/images/CRGVAQS.pdf>
- Watson, J.G., A. Ali, J.C. Chow, V. Etyemezian, M.C. Green, R. Keislar, D. Koracin, H. Kuhns, H. Moosmüller, and W. Stockwell (2001). Southern Nevada Air Quality Study Interim Report. Prepared for U.S. Federal Transit Administration, Washington, DC, by Desert Research Institute, Reno, NV. January 2001.
- Green, M., Kuhns, H.D., and Etyemezian, V. (2000). Final Program Plan for the Big Bend Regional Aerosol and Visibility Observational Study (BRAVO). Desert Research Institute, Las Vegas, NV.
- Kuhns, H.; V. Etyemezian; W. Stockwell; S. Kohl; M. Green, J. Watson; and J. Chow (2000) Treasure Valley Secondary Aerosol Study: Final Report. Prepared for Idaho Division of Environmental Quality. 11/15/00.
- Pitchford, M.L., Green, M.C., Kuhns, H.D., Malm, W.C., Scruggs, M., Farber, R.J., Mirabella, V.A., White, W.H., McDade, C., Watson, J.G., Koracin, D., Hoffer, T.E., Lowenthal, D.H., Vimont, J.C., Gebhart, D.H., et al. (1999). Project MOHAVE Final Report. U.S. Environmental Protection Agency, Region IV, San Francisco, CA.
- Kuhns, H.; G. Wilson; M. Green; and D. Shafer (1999) Sunrise Landfill Gas Emissions and Energy Production Potential. Prepared for Nevada Operations Office of the U.S. Department of Energy. September, 1999.
- Green, M.C., Sagebiel, J., and Kuhns, H. (1998). Quality Assurance Evaluation of the ETEX Perfluorocarbon Tracer Data. Final Report. Prepared for Commission of the European Communities, Joint Research Centre, Environment Institute, I-21020- Ispra, Italy, February 1998.
- Kuhns, H., Green, M., and Watson, J. (1998). Analyzing Speciated Ambient PM₁₀ Concentrations and Emissions in Ada and Canyon Counties, Idaho. Prepared for Idaho Division of Environmental Quality, Boise Idaho.
- Watson, J.G., Chow, J.C., DuBois, D.W., Green, M.C., Frank, N.H., and Pitchford, M.L. (1998). Guidance for network design and optimal site exposure for PM_{2.5} and PM₁₀. Prepared for U.S. EPA, OAQPS, Research Triangle Park, NC, by Desert Research Institute, Reno, NV.
- Watson, J.G., Chow, J.C., Moosmüller, H., Green, M.C., Frank, N.H., and Pitchford, M.L. (1998). Guidance for using continuous monitors in PM_{2.5} monitoring networks. Report No. EPA-454/R-98-012. Prepared for U.S. EPA, OAQPS, Research Triangle Park, NC, by Desert Research Institute, Reno, NV.

Grants and Contracts (since 1999) as Principal Investigator

Over \$5.5 million in funding obtained as Principal Investigator since 1999, including:

- US Fish & Wildlife Service Causes of Haze Study \$117,000
- Las Vegas Valley Upper Air Measurements (Clark County/State of Nevada) \$940,033
- BRAVO Study (EPA/NOAA) \$922,900
- WRAP Causes of Haze (EPA/Western Governors Association) \$1,020,000
- Columbia River Gorge Haze Gradient Study (State of Washington) - \$72,981
- Columbia River Gorge Causes of Haze Study (SWCAA)- \$132,562
- Columbia River Gorge Study Plan (US Forest Service) - \$24,864
- CENRAP (Central States Regional Air Partnership) Scoping Study- \$65,194
- CENRAP monitoring-\$174,885
- CENRAP Causes of Haze Study (CENRAP/EPA) - \$175,000
- Las Vegas Carbon Source Apportionment Study (Clark County/State of Nevada)- \$315,000
- Las Vegas Valley PM2.5 Study (Clark County/State of Nevada) \$140,000
- Las Vegas Valley Visibility Study (Clark County/State of Nevada) \$262,085)
- The Fate and Distribution of Radio-Frequency Chaff (Dept. of Defense- Naval Research Laboratory) - \$330,819
- Las Vegas Valley- Environmental Monitoring for Public Access and Community Tracking (EMPACT) (EPA) - \$9,671

Committees and Offices

Chair Visibility Committee (AB-6) Air & Waste Management Asso. 2003-2006

Vice-Chair Visibility Committee (AB-6) Air & Waste Management Asso. 2000- 2003.

Grand Canyon Visibility Transport Commission, Meteorology Subcommittee 1993-1996

Session Chair, International Specialty Conference Aerosols and Atmospheric Optics: Radiative Balance and Visual Air Quality, Snowbird, Utah, October 1994.

Session Chair and Member of General Conference Committee, Regional Haze and Global Radiation Balance, Bend, OR, October 2001.

Session Chair and Member of General Conference Committee, Regional and Global Perspectives on Haze: Causes, Consequences, and Controversies, Asheville, NC, October 2004.

Technical co-chair and Member of General Conference Committee, AAAR/AWMA Visibility Specialty Conference, Moab, UT, April 2008.

Reviewer- Journal Of Applied Meteorology, Environmental Science & Technology, Journal of Air and Waste Management Association, Atmospheric Environment

Professional Organizations

American Meteorological Society

Air & Waste Management Association