

## 2020 NADP Reference Listing

Includes 217 publications that used NADP data, made comparisons to NADP data, or resulted from NRSP-3 activities in 2020. A publically available listing of all citations using NADP data is accessible at: <http://nadp.slh.wisc.edu/lib/bibliography.aspx>.

1. Abbaspour, A., and Tanyu, B., 2020. Effects of field stockpiling on leaching calcareous constituents from recycled concrete aggregate to be used as unbound base course/subbase material. *Journal of Innovative Transportation* 1(2): 1203.
2. Ahmadi, G. M., 2020. Acid Rain, Causes, Effects, and Control Strategies. *International Journal of All Research Writings* 1 (11): 219-225.
3. Alnsour, N. I., 2020. Bi-Directional Exchange of Ammonia from Soils in Row Crop Agro-Ecosystems. Doctoral Dissertation, Soil Science North Carolina State University.
4. Alpine Geophysics, L. L. C., 2020. Air Quality Modeling Technical Support Document for 12km Modeling of EPA 2028fh Base Case. Project Numbers: TS-554/TS-555.
5. Al-Thani, H., and Lee, J., 2020. An R Package for generating covariance matrices for maximum-entropy sampling from precipitation chemistry data. In *SN Operations Research Forum* Vol. 1, No. 3, pp. 1-21. Springer International Publishing.
6. Ator, S. W., Blomquist, J. D., Webber, J. S., and Chanut, J. G., 2020. Factors driving nutrient trends in streams of the Chesapeake Bay watershed. *Journal of Environmental Quality* 49(4): 812-834.
7. Aulenbach, B. T., 2020. Effects of climate-related variability in storage on streamwater solute concentrations and fluxes in a small forested watershed in the Southeastern United States. *Hydrological Processes* 34(2): 189-208.
8. Baldassini, P., and Paruelo, J. M., 2020. Deforestation and current management practices reduce soil organic carbon in the semi-arid Chaco, Argentina. *Agricultural Systems* 178: 102749.
9. Belovsky, G. E., and Slade, J. B., 2020. Climate change and primary production: Forty years in a bunchgrass prairie. *Plos One* 15(12): e0243496.

10. Berkelhammer, M., Still, C. J., Ritter, F., Winnick, M., Anderson, L., Carroll, R., ... and Williams, K. H., 2020. Persistence and plasticity in conifer water-use strategies. *Journal of Geophysical Research: Biogeosciences* 125(2): e2018JG004845.
11. Bishop, K., Shanley, J. B., Riscassi, A., de Wit, H. A., Eklöf, K., Meng, B., ... and Zhu, W., 2020. Recent advances in understanding and measurement of mercury in the environment: Terrestrial Hg cycling. *Science of The Total Environment* 721: 137647.
12. Brahney, J., Hallerud, M., Heim, E., Hahnenberger, M., and Sukumaran, S., 2020. Plastic rain in protected areas of the United States. *Science* 368(6496): 1257–1260. <https://doi.org/10.1126/science.aaz5819>.
13. Brahney, J., Wetherbee, G., Sexstone, G. A., Youngbull, C., Strong, P., and Heindel, R. C., 2020. A new sampler for the collection and retrieval of dry dust deposition. *Aeolian Research* 45: 100600.
14. Brasso, R., Rittenhouse, K. A., and Winder, V. L., 2020. Do songbirds in wetlands show higher mercury bioaccumulation relative to conspecifics in non-wetland habitats? *Ecotoxicology* 29:1183–1194. <https://doi.org/10.1007/s10646-020-02160-0>.
15. Brookshire, E. J., Stoy, P. C., Currey, B., and Finney, B., 2020. The greening of the Northern Great Plains and its biogeochemical precursors. *Global Change Biology* 26(10): 5404-5413.
16. Bunbury, J., Fisher, R. G., and Blumenstein, T., 2020. Anthropogenic and climate change impacts on lake-water chemistry over the past 20 years, Upper Midwest, United States. *Physical Geography* 41(5): 433-450.
17. Burpee, B., 2020. Assessing the Factors That Alter Ecological Responses of Cold, Oligotrophic Lakes to Nutrient Subsidies. Doctoral Dissertation, Department of Ecology and Environmental Science, University of Maine.
18. Byrnes, D. K., Van Meter, K. J., and Basu, N. B., 2020. Long-Term Shifts in US Nitrogen Sources and Sinks Revealed by the New TREND-Nitrogen Data Set (1930–2017). *Global Biogeochemical Cycles* 34(9): e2020GB006626.
19. Cannon, C. F., 2020. Long-term Effects of Vegetation Management on Plant and Soil Derived Nutrient Budgets for Plantations of Four Western Conifer Species. Master's Thesis, Sustainable Forest Management, Oregon State University.

20. Cao, F., 2020. Interdisciplinary approach for the hydrogeological characterization of the Chalk aquifer: application on perchlorate transfer in the Champagne Chalk. Doctoral Dissertation, Environmental Geochemistry Université de Reims Champagne-Ardenne (URCA).
21. Cao, H., Henze, D. K., Shephard, M. W., Dammers, E., Cady-Pereira, K., Alvarado, M., ... and Danielson, C. G., 2020. Inverse modeling of NH<sub>3</sub> sources using CrIS remote sensing measurements. *Environmental Research Letters* 15(10): 104082.
22. Cao, P., Lu, C., Zhang, J., and Khadilkar, A., 2020. Northwestward cropland expansion and growing urea-based fertilizer use enhanced NH<sub>3</sub> emission loss in the contiguous United States. *Atmospheric Chemistry and Physics* 20(20): 11907-11922.
23. Carrera, J.E., 2020. Nitrogen fertilization decouples roots and microbes in temperate forests: impacts on soil carbon and nitrogen cycling. Doctoral Dissertation, Biology Department. University of West Virginia.
24. Cecchetti, A. R., Sytsma, A., Stiegler, A. N., Dawson, T. E., and Sedlak, D. L., 2020. Use of stable nitrogen isotopes to track plant uptake of nitrogen in a nature-based treatment system. *Water Research X* 9: 100070.
25. Chellman, N., Csank, A., Gustin, M. S., Arienzo, M. M., Estrada, M. V., and McConnell, J. R., 2020. Comparison of co-located ice-core and tree-ring mercury records indicates potential radial translocation of mercury in whitebark pine. *Science of The Total Environment* 743: 140695.
26. Cheng, F. Y., Van Meter, K. J., Byrnes, D. K., and Basu, N. B., 2020. Maximizing US nitrate removal through wetland protection and restoration. *Nature* 588: 24-31.
27. Chen, Y., Shen, H., Shih, J.S., Russell, A.G., Shao, S., Hu, Y., Odman, M.T., Nenes, A., Pavur, G.K., Zou, Y. and Chen, Z., 2020. Greater contribution from agricultural sources to future reactive nitrogen deposition in the United States. *Earth's Future* 8(11): 2019EF001453.
28. Cheng, I., Zhang, L., Mao, H., Ye, Z., and Keenan, R., 2020. Atmospheric Chemistry of Gaseous Oxidized Mercury at a Coastal Site in Atlantic Canada. *Journal of the Atmospheric Sciences* 77(3): 1137-1149.
29. Chester, J., 2020. Initial Channel Adjustment Following Road-Stream Crossing Restoration: Enabling Adaptive Management through Post-Restoration Monitoring in Stone Valley Forest, Pennsylvania. Master's Thesis, Forest Resources, The Pennsylvania State University.

30. Christensen, H. V., 2020. Soil gas dynamics and carbon cycling in the vadose zone of a large, regulated river near Austin, Texas. Master's Thesis, Geological Sciences, University of Texas Austin.
31. Clark, A., 2020. Use of Sulfur in Soybean Fields and its Association with Soil Types. Master's Thesis, Agronomy Department, Iowa State University.
32. Compton, J. E., Goodwin, K. E., Sobota, D. J., and Lin, J., 2020. Seasonal disconnect between streamflow and retention shapes riverine nitrogen export in the Willamette River Basin, Oregon. *Ecosystems* 23(1): 1-17.
33. Corral, A. F., Dadashazar, H., Stahl, C., Edwards, E. L., Zuidema, P., and Sorooshian, A., 2020. Source Apportionment of Aerosol at a Coastal Site and Relationships with Precipitation Chemistry: A Case Study over the Southeast United States. *Atmosphere* 11(11): 1212.
34. Cossa, D., Knoery, J., Boye, M., Maruszczak, N., Thomas, B., Courau, P., and Sprovieri, F., 2020. Oceanic mercury concentrations on both sides of the Strait of Gibraltar decreased between 1989 and 2012. *Anthropocene* 29: 100230.
35. Costa, D., Sexstone, G. A., Pomeroy, J. W., Campbell, D. H., Clow, D. W., and Mast, A., 2020. Preferential elution of ionic solutes in melting snowpacks: Improving process understanding through field observations and modeling in the Rocky Mountains. *Science of the Total Environment* 710: 136273.
36. Coughlin, J. G., Elliott, E. M., Rose, L. A., Pekney, N. J., and Reeder, M., 2020. Quantifying atmospheric reactive nitrogen concentrations, dry deposition, and isotope dynamics surrounding a Marcellus Shale well pad. *Atmospheric Environment* 223: 117196.
37. Crawford, J. T., Hinckley, E. L. S., and Neff, J. C., 2020. Long-Term Trends in Acid Precipitation and Watershed Elemental Export from an Alpine Catchment of the Colorado Rocky Mountains, USA. *Journal of Geophysical Research: Biogeosciences* 125(11): e2020JG005683.
38. Crim, P. M., 2020. Nutrient Cycling-Tree Species Relationships in Appalachian Forests. Doctoral Dissertation, Biology Department, West Virginia University.
39. Crim, P. M., and Cumming, J. R., 2020. Extracellular Soil Enzyme Activities in High-Elevation Mixed Red Spruce Forests in Central Appalachia, USA. *Forests* 11(4): 468.

40. Cristol, D. A., and Evers, D. C., 2020. The impact of mercury on North American songbirds: effects, trends, and predictive factors. *Ecotoxicology* 29(8): 1107-1116.
41. Crumpton, W. G., Stenback, G. A., Fisher, S. W., Stenback, J. Z., and Green, D. I., 2020. Water quality performance of wetlands receiving nonpoint-source nitrogen loads: Nitrate and total nitrogen removal efficiency and controlling factors. *Journal of Environmental Quality* 49: 735–744.
42. Czarnecki, J. I., 2020. Influence of Season and Storm Trajectory on Rainwater Nitrogen Composition. Master's Thesis, Marine Sciences, University of Delaware.
43. Dadashazar, H., 2020. Characterization of Particle Interactions with Clouds and Precipitation Using Diverse Datasets. Doctoral Dissertation, Department of Chemical and Environmental Engineering, The University of Arizona.
44. Dattamudi, S., Kalita, P. K., Chanda, S., Alquwaizany, A. S., and Sidhu, B. S., 2020. Agricultural Nitrogen Budget for a Long-Term Row Crop Production System in the Midwest USA. *Agronomy* 10(11): 1622.
45. Decina, S. M., Hutyra, L. R., and Templer, P. H., 2020. Hotspots of nitrogen deposition in the world's urban areas: a global data synthesis. *Frontiers in Ecology and the Environment* 18(2): 92-100.
46. Dukes, C. J., 2020. Long-term Effects of Prescribed Fire and Fire Surrogate Treatments on Southern Appalachian Mountain Forest Soil Chemistry. Master's Thesis, Forestry Department, Virginia Polytechnic Institute and State University.
47. Edgerton, E. S., Hsu, Y. M., White, E. M., Fenn, M. E., and Landis, M. S., 2020. Ambient concentrations and total deposition of inorganic sulfur, inorganic nitrogen and base cations in the Athabasca Oil Sands Region. *Science of The Total Environment* 706: 134864.
48. Evers, D. C., Sauer, A. K., Burns, D. A., Fisher, N. S., Bertok, D. C., Adams, E. M., ... and Driscoll, C. T., 2020. A synthesis of patterns of environmental mercury inputs, exposure and effects in New York State. *Ecotoxicology* 29(10): 1565-1589.
49. Faust, D. R., Liebig, M. A., Toledo, D., Archer, D. W., Kronberg, S. L., Hendrickson, J. R., ... and Kumar, S., 2020. Water quality of an integrated crop–livestock system in the northern Great Plains. *Agrosystems, Geosciences and Environment* 3(1): e20129.

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51. Fenn, M. E., Preisler, H. K., Fried, J. S., Bytnerowicz, A., Schilling, S. L., Jovan, S., and Kuegler, O., 2020. Evaluating the effects of nitrogen and sulfur deposition and ozone on tree growth and mortality in California using a spatially comprehensive forest inventory. *Forest Ecology and Management* 465: 118084.
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53. Flocke, F., Pfister, G., Crawford, J. H., Pickering, K. E., Pierce, G., Bon, D., and Reddy, P., 2020. Air quality in the northern Colorado front range metro area: The front range air pollution and photochemistry Experiment (FRAPPÉ). *Journal of Geophysical Research: Atmospheres* 125(2): e2019JD031197.
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56. Gadoth-Goodman, D., and Rothstein, D. E., 2020. Alternative Silvicultural Approaches to Managing Jack Pine Plantations for Endangered Species Habitat and Forest Products. *Forest Science* 66(2): 210-220.
57. Gallagher, M. K., and Campbell, D. R., 2020. Pollinator visitation rate and effectiveness vary with flowering phenology. *American Journal of Botany* 107(3): 445-455.
58. Garcia, W. D. O., 2020. Assessment of enhanced silicate rock weathering feasibility as a soil ameliorant and its influence on other terrestrial negative emission technologies. Doctoral Dissertation, University of Hamburg.

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60. Goodwillie, C., McCoy, M. W., and Peralta, A. L., 2020. Long-term nutrient enrichment, mowing, and ditch drainage interact in the dynamics of a wetland plant community. *Ecosphere* 11(10): e03252.
61. Grant, R. H., Boehm, M. T., and Hagevoort, G. R., 2020. Ammonia Emissions from a Western Open-Lot Dairy. *Atmosphere* 11(9): 913.
62. Green Mountain National Forest, 2020. Wilderness Stewardship Performance Wilderness Air Quality Value Monitoring Plan. US Forest Service.
63. Grennfelt, P., Engleryd, A., Forsius, M., Hov, Ø., Rodhe, H., and Cowling, E., 2020. Acid rain and air pollution: 50 years of progress in environmental science and policy. *Ambio* 49(4): 849-864.
64. Griggs, T., Liu, L., Talbot, R. W., Torres, A., and Lan, X., 2020. Comparison of Atmospheric Mercury Speciation at a Coastal and an Urban Site in Southeastern Texas, USA. *Atmosphere* 11(1): 73.
65. Hagen, S. C., Delgado, G., Ingraham, P., Cooke, I., Emery, R., P Fisk, J., ... and Gustafson, D., 2020. Mapping Conservation Management Practices and Outcomes in the Corn Belt Using the Operational Tillage Information System (OpTIS) and the Denitrification–Decomposition (DNDC) Model. *Land* 9(11): 408.
66. Hamlin, Q. F., 2020. Quantifying the “Nutrient Landscape” in the Great Lakes Region: Mapping and Analyzing Nutrient Sources and Groundwater Nitrate. Master’s Thesis, Department of Environmental Geosciences, Michigan State University.
67. Hamlin, Q. F., Kendall, A. D., Martin, S. L., Whitenack, H. D., Roush, J. A., Hannah, B. A., and Hyndman, D. W., 2020. Quantifying Landscape Nutrient Inputs With Spatially Explicit Nutrient Source Estimate Maps. *Journal of Geophysical Research: Biogeosciences* 125(2): e2019JG005134.
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69. Harris, R. C., Hutchinson, D., Pollman, C. D., and Beals, D., 2020. Simulating Mercury Cycling in the Florida Everglades: A Case Study. In *Mercury and the Everglades. A Synthesis and Model for Complex Ecosystem Restoration* (pp. 73-92). Springer, Cham.
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82. Jackson, R. D., 2020. Soil nitrate leaching under grazed cool-season grass pastures of the North Central US. *Journal of the Science of Food and Agriculture* 100(15): 5307-5312.
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85. Jimmie, J. A., 2020. Modeling Hydrologic Impacts of Tribal Water Rights Quantification and Settlement on the Flathead Indian Irrigation Project. Master's Thesis, Department of Forestry, The University of Montana.
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