References Cited

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- Ackerman, K.V., Mixon, D.M., Sundquist, E.T., Stallard, R.F., Schwarz, G.E., and Stewart, D.W., 2009, RESIS–II; An updated version of the original reservoir sedimentation survey information system (RESIS) database: U.S. Geological Survey Data Series 434, 22 p., database, accessed July 11, 2012, at http://pubs.usgs.gov/ds/ds434/.
- Agee, J.K., 1993, Fire ecology of Pacific Northwest forests: Washington, D.C., Island Press, 505 p.
- Agee, J.K., 2003, Historical range of variability in eastern Cascades forests, Washington, USA: Landscape Ecology, v. 18, no. 8, p. 725–740, doi:10.1023/B:LAND.0000014474.49803.f9.
- Agee, J.K., and Skinner, C.N., 2005, Basic principles of forest fuel reduction treatments: Forest Ecology and Management, v. 211, no. 1–2, p. 83–96, doi:10.1016/j.foreco.2005.01.034.
- Albini, F.A., Brown, J.K., Reinhardt, E.D., and Ottmar, R.D., 1995, Calibration of a large fuel burnout model: International Journal of Wildland Fire, v. 5, no. 3, p. 173–192, doi:10.1071/WF9950173.
- Albini, F.A., and Reinhardt, E.D., 1995, Model ignition and burning rate of large woody natural fuels: International Journal of Wildland Fire, v. 5, no. 2, p. 81–91, doi:10.1071/WF9950081.
- Albini, F.A., and Reinhardt, E.D., 1997, Improved calibration of a large fuel burnout model: International Journal of Wildland Fire, v. 7, no. 1, p. 21–28, doi:10.1071/WF9970021.
- Alcamo, Joseph, Leemans, Rik, and Kreileman, Eric, eds., 1998, Global change scenarios of the 21st century; Results from the IMAGE 2.1 model: [Tarrytown, N.Y.,] Pergamon, 296 p.
- Alexander, R.B., Smith, R.A., and Schwarz, G.E., 2000, Effect of stream channel size on the delivery of nitrogen to the Gulf of Mexico: Nature, v. 403, p. 758–761, doi:10.1038/35001562.
- Alexander, R.B., Smith, R.A., Schwarz, G.E., Boyer, E.W., Nolan, J.V., and Brakebill, J.W., 2008, Differences in phosphorus and nitrogen delivery to the Gulf of Mexico from the Mississippi River basin: Environmental Science and Technology, v. 42, no. 3, p. 822–830, doi:10.1021/es0716103.

- Alluvione, Francisco, Halvorson, A.D., and Del Grosso, S.J., 2009, Nitrogen, tillage, and crop rotation effects on carbon dioxide and methane fluxes from irrigated cropping systems: Journal of Environmental Quality, v. 38, no. 5, p. 2023–2033, doi:10.2134/jeq2008.0517.
- Amiotte-Suchet, P.A., and Probst, J.L., 1995, A global model for present-day atmospheric/soil CO₂ consumption by chemical erosion of continental rocks (GEM–CO₂): Tellus B: Chemical and Physical Meteorology, v. 47, p. 273–280, doi:10.1034/j.1600-0889.47.issue1.23.x
- Amiotte Suchet, Philippe, Probst, Jean-Luc, and Ludwig, Wolfgang, 2003, Worldwide distribution of continental rock lithology; Implications for the atmospheric/soil CO₂ uptake by continental weathering and alkalinity river transport to the oceans: Global Biogeochemical Cycles, v. 17, no. 2, 1038, 14 p., doi:10.1029/2002GB001891.
- Anderson, G.C., 1964, The seasonal and geographic distribution of primary productivity off the Washington and Oregon coasts: Limnology and Oceanography, v. 9, no. 3, p. 284–292. (Also available at http://wap.aslo.org/lo/toc/vol_9/issue_3/0284.pdf.)
- Andreae, M.O., and Merlet, P., 2001, Emission of trace gases and aerosols from biomass burning: Global Biogeochemical Cycles, v. 15, no. 4, p. 955–966, doi:10.1029/2000GB001382.
- Aplet, G.H., Laven, R.D., and Smith F.W., 1988, Patterns of community dynamics in Colorado Engelmann spruce subalpine fir forests: Ecology, v. 69, no. 2, p. 312–319.
- Armstrong, R.A., Lee, Cindy, Hedges, J.I., Honjo, Susumu, and Wakeham, S.G., 2002, A new, mechanistic model for organic carbon fluxes in the ocean based on the quantitative association of POC with ballast minerals: Deep Sea Research Part II: Topical Studies in Oceanography, v. 49, no. 1–3, p. 219–236, doi:10.1016/S0967-0645(01)00101-1.
- Armstrong, R.A., Peterson, M.L., Lee, Cindy, and Wakeham, S.G., 2009, Settling velocity spectra and the ballast ratio hypothesis: Deep Sea Research Part II: Topical Studies in Oceanography, v. 56, no. 18, p. 1470–1478, doi:10.1016/j. dsr2.2008.11.032.
- Asner, G.P., Archer, Steve, Hughes, R.F., Ansley, R.J., and Wessman, C.A., 2003, Net changes in regional woody vegetation cover and carbon storage in Texas Drylands, 1937–1999: Global Change Biology, v. 9, no. 3, p. 316–335, doi:10.1046/j.1365-2486.2003.00594.x.
- Aufdenkampe, A.K., Mayorga, Emilio, Raymond, P.A., Melack, J.M., Doney, S.C., Alin, S.R., Aalto, R.E., and Yoo, Kyungsoo, 2011, Riverine coupling of biogeochemical cycles between land, oceans, and atmosphere: Frontiers in Ecology and the Environment, v. 9, no. 1, p. 53–60, doi:10.1890/100014.

- Bachelet, Dominique, Neilson, R.P., Hickler, Thomas, Drapek, R.J., Lenihan, J.M., Sykes, M.T., Smith, Benjamin, Sitch, Stephen, and Thonicke, Kirsten, 2003, Simulating past and future dynamics of natural ecosystems in the United States: Global Biogeochemical Cycles, v. 17, no. 2, 1045, 21 p., doi:10.1029/2001GB001508.
- Bachelet, Dominique, Neilson, R.P., Lenihan, J.M., and Drapek, R.J., 2001, Climate change effects on vegetation distribution and carbon budget in the United States: Ecosystems, v. 4, no. 3, p. 164–185, doi:10.1007/s10021–001–0002-7.
- Bachelet, Dominique, Neilson, R.P., Lenihan, J.M., and Drapek, R.J., 2004, Regional differences in the carbon source-sink potential of natural vegetation in the U.S.A.: Environmental Management, v. 33, supplement 1, p. S23–S43, doi:10.1007/s00267-003-9115-4.
- Bailey, R.G., comp., 1995, Description of the ecoregions of the United States: U.S. Department of Agriculture, Forest Service, Miscellaneous Publication Number 1391, 77 p. (Also available at http://www.fs.fed.us/land/ecosysmgmt/.)
- Balshi, M.S., McGuire, A.D., Duffy, P., Flannigan, M., Kicklighter, D.W., and Melillo, J., 2009, Vulnerability of carbon storage in North American boreal forests to wildfires during the 21st century: Global Change Biology, v. 15, no. 6, p. 1491–1510, doi:10.1111/j.1365-2486.2009.01877.x.
- Balshi, M.S., McGuire, A.D., Duffy, Paul, Flannigan, Mike, Walsh, John, and Melillo, Jerry, 2009, Assessing the response of area burned to changing climate in western boreal North America using a Multivariate Adaptive Regression Splines (MARS) approach: Global Change Biology, v. 15, no. 3, p. 578–600, doi:10.1111/j.1365-2486.2008.01679.x.
- Barger, N.N., Archer, S.R., Campbell, J.L., Huang, Choying, Morton, J.A., and Knapp, A.K., 2011, Woody plant proliferation in North American drylands; A synthesis of impacts on ecosystem carbon balance: Journal of Geophysical Research—Biogeosciences, v. 116, 17 p., doi:10.1029/2010JG001506.
- Battin, T.J., Kaplan, L.A., Findlay, Stuart, Hopkinson, C.S., Marti, Eugenia, Packman, A.I., Newbold, J.D., and Sabater, Francesc, 2008, Biophysical controls on organic carbon fluxes in fluvial networks: Nature Geoscience, v. 1, p. 95–100, doi:10.1038/ngeo101.
- Benke, A.C., and Cushing, C.E., 2005, Rivers of North America: Burlington, Mass., Elsevier Academic Press, 1,144 p.

- Bergamaschi, B.A., Tsamakis, Elizabeth, Keil, R.G., Eglinton, T.I., Montlucon, D.B., and Hedges, J.I., 1997, The effect of grain size and surface area on organic matter, lignin and carbohydrate concentration, and molecular compositions in Peru Margin sediments: Geochimica et Cosmochimica Acta, v. 61, no. 6, p. 1247–1260, doi:10.1016/S0016-7037(96)00394-8.
- Berger, W.H., 1989, Global maps of ocean productivity, *in* Berger, W.H., Smetacek, V.S., and Wefer, Gerold, eds., Productivity of the ocean; present and past; Report of the Dahlem Workshop on Productivity of the Ocean, Present and Past, Berlin, 1988 April 24–29: New York, N.Y., John Wiley, p. 429–455.
- Beuter, J.H., Johnson, K.N., and Scheurman, H.L., 1976, Timber for Oregon's tomorrow; an analysis of reasonably possible occurrences: Oregon State University, School of Forestry, Forest Research Laboratory Research Bulletin 19, 111 p. (Also available at http://ir.library.oregonstate.edu/ xmlui/bitstream/handle/1957/9382/Tim_For_Ore_Tom.pdf.)
- Billen, Gilles, and Garnier, Josette, 2007, River basin nutrient delivery to the coastal sea; Assessing its potential to sustain new production of non-siliceous algae: Marine Chemistry, v. 106, no. 1–2, p. 148–160, doi:10.1016/j. marchem.2006.12.017.
- Birdsey, R.A., Plantinga, A.J., and Heath, L.S., 1993, Past and prospective carbon storage in United States forests: Forest Ecology and Management, v. 58, no. 1–2, p. 33–40, doi:10.1016/0378-1127(93)90129-B.
- Blair, N.E., Leithold, E.L., and Aller, R.C., 2004, From bedrock to burial; the evolution of particulate organic carbon across coupled watershed-continental margin systems: Marine Chemistry, v. 92, no. 1–4, p. 141–156, doi:10.1016/j.marchem.2004.06.023.
- Boyer, E.W., Howarth, R.W., Galloway, J.N., Dentener, F.J., Green, P.A., and Vörösmarty, C.J., 2006, Riverine nitrogen export from the continents to the coasts: Global Biogeochemical Cycles, v. 20, 9 p., doi:10.1029/2005GB002537.
- Bradley, B.A., Houghton, R.A., Mustard, J.F., and Hamburg, S.P., 2006, Invasive grass reduces aboveground carbon stocks in shrublands of the Western US: Global Change Biology, v. 12, no. 10, p. 1815–1822, doi:10.1111/j.1365-2486.2006.01232.x.
- Bradshaw, L.S., Deeming, J.E., Burgan, R.E., and Cohen, J.D., comps., 1983, The 1978 National Fire-Danger Rating System; technical documentation: Ogden, Utah, U.S. Forest Service Intermountain Forest and Range Experiment Station, General Technical Report GTR INT–169, 44 p. (Also available at http://www.treesearch.fs.fed.us/pubs/29615.)

- Brevik, E.C., and Homburg, J.A., 2004, A 5000 year record of carbon sequestration from a coastal lagoon and wetland complex, Southern California, USA: CATENA, v. 57, no. 3, p. 221–232, doi:10.1016/j.catena.2003.12.001.
- Bridgham, S.D., Megonigal, J.P., Keller, J.K., Bliss, N.B., and Trettin, C., 2006, The carbon balance of North American wetlands: Wetlands, v. 26, p. 889–916.
- Brooks, M.L., and Chambers, J.C., 2011, Resistance to invasion and resilience to fire in desert shrublands of North America: Rangeland Ecology & Management, v. 64, no. 5, p. 431–438, doi:10.2111/REM-D-09-00165.1.
- Brooks, M.L., D'Antonio, C.M., Richardson, D.M., Grace, J.B., Keeley, J.E., DiTomaso, J.M., Hobbs, R.J., Pellant, Mike, and Pyke, David, 2004, Effects of invasive alien plants on fire regimes: Bioscience, v. 54, no. 7, p. 677–688, doi:10.1641/0006-3568(2004)054[0677:EOIAPO]2.0.CO;2.
- Brown, Sandra, Pearson, Timothy, Dushku, Aaron, Kadyzewski, John, and Qi, Ye, 2004, Baseline greenhouse gas emissions for forest, range, and agricultural lands in California: California Energy Commission, Public Interest Energy Research Final Project Report 500–04–069F, 80 p., accessed July 11, 2012, at http://www.energy.ca.gov/pier/project_reports/500-04-069.html. [Prepared by Winrock International, Ecosystem Services Unit, Arlington, Va., under contract 100–98–001.]
- Brown, T.J., Hall, B.L., Mohrle, C.R., and Reinbold, H.J., 2002, Coarse assessment of Federal wildland fire occurrence data; Report for the National Wildfire Coordinating Group: Desert Research Institute Program for Climate, Ecosystem and Fire Applications (CEFA) Report 02–04, 31 p. (Also available at http://cefa.dri.edu/Publications/fireoccurrencereport.pdf.)
- Brown, T.J., Hall, B.L., and Westerling, A.L., 2004, The impact of twenty-first century climate change on wildland fire danger in the western United States; An applications perspective: Climatic Change, v. 62, no. 1–3, p. 365–388, doi:10.1023/B:CLIM.0000013680.07783.de.
- Burdige, D.J., 2005, Burial of terrestrial organic matter in marine sediments; A re-assessment: Global Biogeochemical Cycles, v. 19, 7 p., doi:10.1029/2004GB002368.
- Burgan, R.E., 1988, 1988 revisions to the 1978 National Fire-Danger Rating System: U.S. Forest Service, Southeastern Forest Experiment Station, Research Paper SE–273, 39 p. (Also available at http://www.treesearch.fs.fed.us/ pubs/593.)
- Butman, David, and Raymond, P.A., 2011, Significant efflux of carbon dioxide from streams and rivers in the United States: Nature Geoscience, v. 4, p. 839–842, doi:10.1038/ngeo1294.

- California Department of Forestry and Fire Protection, 2010, California's forests and rangelands; 2010 Assessment: Sacramento, Calif., California Department of Forestry and Fire Protection Web site accessed August 4, 2012, at http://frap.fire.ca.gov/assessment2010.html.
- California Environmental Protection Agency, Air Resources Board, 2009, Forest and rangelands methods, *excerpted as a separate document from* California's 1990–2004 greenhouse gas emissions inventory and 1990 emissions level: Sacramento, Calif., California Environmental Protection Agency, Air Resources Board, 21 p. (Available at http://www.arb.ca.gov/cc/inventory/doc/methods_v1/tsd_excerpt_forests.pdf.)
- Calkin, D.E., Thompson, M.P., Finney, M.A., and Hyde, K.D., 2011, A real-time risk assessment tool supporting wildland fire decisionmaking: Journal of Forestry, v. 109, no. 5, p. 274–280.
- Campbell, John, Donato, Dan, Azuma, David, and Law, Beverly, 2007, Pyrogenic carbon emission from a large wildfire in Oregon, United States: Journal of Geophysical Research, v. 112, 11 p., doi:10.1029/2007JG000451.
- Canadian Forest Service, 2012, Climate change scenario data: Canadian Forest Service database accessed May 31, 2012, at http://cfs.nrcan.gc.ca/projects/3/5.
- Cardille, J.A., Ventura, S.J., and Turner, M.G., 2001, Environmental and social factors influencing wildfires in the Upper Midwest, United States: Ecological Applications, v. 11, no. 1, p. 111–127.
- Cary, G.J., Flannigan, M.D., Keane, R.E., Bradstock, R.A., Davies, I.D., Lenihan, J.M., Li, Chao, Logan, K.A., and Parsons, R.A., 2009, Relative importance of fuel management, ignition management and weather for area burned; Evidence from five landscape-fire-succession models: International Journal of Wildland Fire, v. 18, no. 2, p. 147–156.
- Chapin, F.S., Woodwell, G.M., Randerson, J.T., Rastetter, E.B., Lovett, G.M., Baldocchi, D.D., Clark, D.A., Harmon, M.E., Schimel, D.S., Valentini, R., Wirth, C., Aber, J.D., Cole, J.J., Goulden, M.L., Harden, J.W., Heimann, M., Howarth, R.W., Matson, P.A., McGuire, A.D., Melillo, J.M., Mooney, H.A., Neff, J.C., Houghton, R.A., Pace, M.L., Ryan, M.G., Running, S.W., Sala, O.E., Schlesinger, W.H., and Schulze, E.-D., 2006, Reconciling carbon-cycle concepts, terminology, and methods: Ecosystems, v. 9, p. 1041–1050, doi:10.1007/s10021-005-0105-7.
- Chmura, G.L., Anisfeld, S.C., Cahoon, D.R., and Lynch, J.C., 2003, Global carbon sequestration in tidal, saline wetland soils: Global Biogeochemical Cycles, v. 17, no. 4, 12 p. (Available at http://www.agu.org/pubs/crossref/2003/2002GB001917.shtml.)

- Claggett, P.R., Jantz, C.A., Goetz, S.J., and Bisland, Carin, 2004, Assessing development pressure in the Chesapeake Bay watershed; An evaluation of two land-use change models: Environmental Monitoring and Assessment, v. 94, p. 129–146.
- Cleary, M.B., Pendall, Elise, and Ewers, B.E., 2010, Aboveground and belowground carbon pools after fire in mountain big sagebrush steppe: Rangeland Ecology & Management, v. 63, no. 2, p. 187–196.
- Cleland, D.T., Crow, T.R., Saunders, S.C., Dickmann, D.I., Maclean, A.L., Jordan, J.K., Watson, R.L., Sloan, A.M., and Brosofske, K.D., 2004, Characterizing historical and modern fire regimes in Michigan (USA); A landscape ecosystem approach: Landscape Ecology, v. 19, no. 3, p. 311–325.
- Cohen, W.B., Harmon, M.E., Wallin, D.O., and Fiorella, Maria, 1996, Two decades of carbon flux from forests of the Pacific Northwest: BioScience, v. 46, no. 11, p. 836–844. (Also available at http://www.jstor.org/stable/1312969.)
- Cohn, T.A., Caulder, D.L., Gilroy, E.J., Zynjuk, L.D., and Summers, R.M., 1992, The validity of a simple statistical model for estimating fluvial constituent loads; An empirical study involving nutrient loads entering Chesapeake Bay: Water Resources Research, v. 28, no. 9, p. 2353–2363.
- Cole, J.J., and Caraco, N.F., 1998, Atmospheric exchange of carbon dioxide in a low-wind oligotrophic lake measured by the addition of SF₆: Limnology and Oceanography, v. 43, no. 4, p. 647–656.
- Cole, J.J., and Caraco, N.F., Kling, G.W., and Kratz, T.K., 1994, Carbon dioxide supersaturation in the surface waters of lakes: Science, v. 265, p. 1568–1570.
- Cole, J.J., Prairie, Y.T., Caraco, N.F., McDowell, W.H., Tranvik, L.J., Striegl, R.G., Duarte, C.M., Kortelainen, P., Downing, J.A., Middelburg, J.J., and Melack, J., 2007, Plumbing the global carbon cycle; Integrating inland waters into the terrestrial carbon budget: Ecosystems, v. 10, no. 1, p. 172–185, doi:10.1007/s10021-006-9013-8.
- Collins, B.M., Stephens, S.L., Roller, G.B., and Battles, J.J., 2011, Simulating fire and forest dynamics for a landscape fuel treatment project in the Sierra Nevada: Forest Science, v. 57, no. 2, p. 77–88.
- Commission for Environmental Cooperation, 2006, Ecological regions of North America; Level I–II: Montreal, Quebec, Canada, Commission for Environmental Cooperation, scale 1:10,000,000. (Also available online at http://www.epa.gov/wed/pages/ecoregions/na eco.htm.)

- Conservation Technology Information Center, 2012, Crop residue management (CRM) survey data: Conservation Technology Information Center dataset, accessed May 31, 2012, at http://www.ctic.purdue.edu/CRM/crm_search.
- Cooper, C.F., 1960, Changes in vegetation, structure, and growth of southwestern pine forests since white settlement: Ecological Monographs, v. 30, no. 2, p. 129–164.
- Cotrim Da Cunha, Leticia, Buitenhuis, E.T., Le Quéré, Corrine, Giraud, Xavier, and Ludwig, Wolfgang, 2007, Potential impact of changes in river nutrient supply on global ocean biogeochemistry: Global Biogeochemical Cycles, v. 21, 15 p., doi:10.1029/2006GB002718.
- Crumpacker, D.W., 1984, Regional riparian research and a multi-university approach to the special problem of livestock grazing in the Rocky Mountains and Great Plains, *in* Warner, R.E., and Hendrix, K.M., eds., California riparian systems—ecology, conservation, and productive management: Berkeley, Calif., University of California Press, p. 413–422.
- Crutzen, P.J., and Andreae, M.O., 1990, Biomass burning in the tropics; Impact on atmospheric chemistry and biogeochemical cycles: Science, v. 250, no. 4988, p. 1669–1678.
- Daly, Christopher, Neilson, R.P., and Phillips, D.L., 1993, A statistical-topographic model for mapping climatological precipitation over mountainous terrain: Journal of Applied Meteorology, v. 33, p. 140–58. (Also available at http://www.prism.oregonstate.edu/pub/prism/docs/jappclim94-modeling_mountain_precip-daly.pdf.)
- Daly, C., Taylor, G.H., Gibson, W.P., Parzybok, T.W., Johnson, G.L., and Pasteris, P.A., 2000, High-quality spatial climate data sets for the United States and beyond: Transactions of the American Society of Agricultural and Biological Engineers, v. 43, no. 6, p. 1957–1962.
- Daniels, J.M., 2005, The rise and fall of the Pacific Northwest log export market: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, General Technical Report PNW–GTR–624, 88 p. (Also available at http://www.fs.fed.us/pnw/pubs/pnw gtr624.pdf.)
- D'Antonio, C.M., and Vitousek, P.M., 1992, Biological invasions by exotic grasses, the grass/fire cycle, and global change: Annual Review of Ecology and Systematics, v. 23, no. 1, p. 63–87.
- Dean, W.E., and, Gorham, E., 1998, Magnitude and significance of carbon burial in lakes, reservoirs, and peatlands: Geology, v. 26, p. 535–538.

- Deeming, J.E., Burgan, R.E., and Cohen, J.D., 1977, The national fire-danger rating system—1978: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station, General Technical Report INT–39, 66 p.
- Delworth, T.L., Broccoli, A.J., Rosati, Anthony, Stouffer, R.J., Balaji, V., Beesley, J.A., Cooke, W.F., Dixon, K.W., Dunne, John, Dunne, K.A., Durachta, J.W., Findell, K.L., Ginoux, Paul, Gnanadesikan, Anand, Gordon, C.T., Griffies, S.M., Gudgel, Rich, Harrison, M.J., Held, I.M., Hemler, R.S., Horowitz, L.W., Klein, S.A., Knutson, T.R., Kushner, P.J., Langenhorst, A.R., Lee, Hyun-Chul, Lin, Shian-Jiann, Lu, Jian, Malyshev, S.L., Milly, P.C.D., Ramaswamy, V., Russell, Joellen, Schwarzkopf, M.D., Shevliakova, Elena, Sirutis, J.J., Spelman, M.J., Stern, W.F., Winton, Michael, Wittenberg, A.T., Wyman, Bruce, Zeng, Fanrong, and Zhang, Rong, 2006, GFDL's CM2 Global Coupled Climate Models; Part I—Formulation and simulation characteristics: Journal of Climate, v. 19, no. 5, 643–674, doi:10.1175/ JCLI3629.1.
- Derner, J.D., and Schuman, G.E., 2007, Carbon sequestration and rangelands; A synthesis of land management and precipitation effects: Journal of Soil and Water Conservation, v. 62, no. 2, p. 77–85.
- Donnegan, Joseph, Campbell, Sally, and Azuma, Dave, eds., 2008, Oregon's forest resources, 2001–2005; five-year Forest Inventory and Analysis report: U.S. Forest Service, Pacific Northwest Research Station General Technical Report PNW–GTR–765. 186 p. (Also available at http://www.fs.fed.us/pnw/publications/gtr765/.)
- Downing, J.A., Duarte, C.M., and Gene, E.L., 2009, Abundance and size distribution of lakes, ponds and impoundments, *in* Likens, G.F., Encyclopedia of inland waters: Oxford, Academic Press, p. 469–478.
- Duan, Q.Y., Sorooshian, S., and Gupta, V., 1992, Effective and efficient global optimization for conceptual rainfall-runoff models: Water Resources Research, v. 28, no. 4, p. 1015–1031.
- Dunne, J.P., Sarmiento, J.L., and Gnanadesikan, Anand, 2007, A synthesis of global particle export from the surface ocean and cycling through the ocean interior and on the seafloor: Global Biogeochemical Cycles, v. 21, no. 4, 16 p., doi:10.1029/2006GB002907.
- Efron, Bradley, and Tibshirani, R.J., 1993, An introduction to the bootstrap: New York, Chapman & Hall, 456 p.
- Eidenshink, Jeff, Schwind, Brian, Brewer, Ken, Zhu, Zhi-Liang, Quayle, Brad, and Howard, Stephen, 2007, A project for monitoring trends in burn severity: Fire Ecology, v. 3, no. 1, p. 3–21, doi:10.4996/fireecology.0301003.

- Einola, E., Rantakari, M., Kankaala, P., Kortelainen, P., Ojala, A., Pajunen, H., Makela, S., and Arvola, L., 2011, Carbon pools and fluxes in a chain of five boreal lakes; A dry and wet year comparison: Journal of Geophysical Research—Biogeosciences, v. 116, 13 p.
- Falk, D.A., Miller, Carol, McKenzie, Donald, and Black, A.E., 2007, Cross-scale analysis of fire regimes: Ecosystems, v. 10, p. 810–823.
- Fellin, D.G., and Dewey, J.E., 1992, Western spruce budworm: U.S. Department of Agriculture, Forest Service, Forest Insect & Disease Leaflet 53, 10 p. (Also available at http://www.na.fs.fed.us/spfo/pubs/fidls/westbw/fidl-wbw.htm.)
- Finney, M.A., 2001, Design of regular landscape fuel treatment patterns for modifying fire growth and behavior: Forest Science, v. 47, no. 2, p. 219–228.
- Finney, M.A., 2002, Fire growth using minimum travel time methods: Canadian Journal of Forest Research, v. 32, no. 8, p. 1420–1424, doi:10.1139/x02-068.
- Finney, M.A., 2007, A computational method for optimising fuel treatment locations: International Journal of Wildland Fire, v. 16, no. 6, p. 702–711.
- Finney, M.A., McHugh, C.W., Grenfell, I.C., Riley, K.L., and Short, K.C., 2011, A simulation of probabilistic wildfire risk components for the continental United States: Stochastic Environmental Research and Risk Assessment, v. 25, no. 7, p. 973–1000.
- Finney, M.A., Seli, R.C., McHugh, C.W., Ager, A.A., Bahro, Bernhard, and Agee, J.K., 2007, Simulation of long-term landscape-level fuel treatment effects on large wildfires: International Journal of Wildland Fire, v. 16, no. 6, p. 712–727.
- Flannigan, M.D., Krawchuk, M.A., de Groot, W.J., Wotton, B.M., and Gowman, L.M., 2009, Implications of changing climate for global wildland fire: International Journal of Wildland Fire, v. 18, no. 5, p. 483–507.
- Flannigan, M.D., Logan, K.A., Amiro, B.D., Skinner, W.R., and Stocks, B.J., 2005, Future area burned in Canada: Climatic Change, v. 72, no. 1–2, p. 1–16.
- Flannigan, M.D., Stocks, B.J., and Wotton, B.M., 2000, Climate change and forest fires: Science of the Total Environment, v. 262, no. 3, p. 221–229.
- Flato, G.M., and Boer, G.J., 2001, Warming asymmetry in climate change simulations: Geophysical Research Letters, v. 28, no. 1, p. 195–198. (Also available at http://www.agu.org/journals/gl/v028/i001/2000GL012121/.)

- Flato, G.M., Boer, G.J., Lee, W.G., McFarlane, N.A., Ramsden, D., Reader, M.C., and Weaver, A.J., 2000, The Canadian Centre for Climate Modelling and Analysis Global Coupled Model and its climate: Climate Dynamics, v. 16, no. 6, p. 451–467, doi:10.1007/s003820050339.
- Fleischner, T.L., 1994, Ecological costs of livestock grazing in western North America: Conservation Biology, v. 8, no. 3, p. 629–644, doi:10.1046/j.1523-1739.1994.08030629.x.
- Follett, R.F., 2001, Soil management concepts and carbon sequestration in cropland soils: Soil and Tillage Research, v. 61, no. 1, p. 77–92.
- Follett, R.F., 2010, Symposium—Soil carbon sequestration and greenhouse gas mitigation: Soil Science Society of America Journal, v. 74, p. 345–346, doi:10.2136/sssaj2009.cseqghgsymp.intro.
- Fowler, H.J., Blenkinsop, S., and Tebaldi, C., 2007, Linking climate change modeling to impacts studies; Recent advances in downscaling techniques for hydrological modelling: International Journal of Climatology, v. 27, no. 12, p. 1547–1578.
- French, N.H.F., de Groot, W.J., Jenkins, L.K., Rogers, B.M., Alvarado, Ernesto, Amiro, Brian, de Jong, Bernardus, Goetz, Scott, Hoy, Elizabeth, Hyer, Edward, Keane, Robert, Law, B.E., McKenzie, Donald, McNulty, S.G., Ottmar, Roger, Perez-Salicrup, D.R., Randerson, James, Robertson, K.M., and Turetsky, Merritt, 2011, Model comparisons for estimating carbon emissions from North American wildland fire: Journal of Geophysical Research—Biogeosciences, v. 116, 21 p., doi:10.1029/2010JG001469.
- Fule, P.Z., 2008, Does it make sense to restore wildland fire in changing climate?: Restoration Ecology, v. 16, no. 4, p. 526–531.
- Fung, I.Y., Doney, S.C., Lindsay, Keith, and John, Jasmin, 2005, Evolution of carbon sinks in a changing climate: Proceedings of the National Academy of Sciences of the United States of America, v. 102, no. 32, p. 11,201–11,206, doi:10.1073/pnas.0504949102.
- Gedalof, Z., Peterson, D.L., and Mantua, N.J., 2005, Atmospheric, climatic, and ecological controls on extreme wildfire years in the northwestern United States: Ecological Applications, v. 15, no. 1, p. 154–174.
- Giglio, Louis, Descloitres, Jacques, Justice, C.O., and Kaufman, Y.J., 2003, An enhanced contextual fire detection algorithm for MODIS: Remote Sensing of Environment, v. 87, no. 2–3, p. 273–282, doi:10.1016/S0034-4257(03)00184-6.

- Giglio, L., Randerson, J.T., van der Werf, G.R., Kasibhatla, P.S., Collatz, G.J., Morton, D.C., and DeFries, R.S., 2010, Assessing variability and long-term trends in burned area by merging multiple satellite fire products: Biogeosciences, v. 7, no. 3, p. 1171–1186.
- Glassy, J.M., and Running, S.W., 1994, Validating diurnal climatology logic of the MT–CLIM model across a climatic gradient in Oregon: Ecological Applications, v. 4, no. 2, p. 248–257.
- Gleason, R.A., Tangen, B.A., Browne, B.A., and Euliss, N.H., Jr., 2009, Greenhouse gas flux from cropland and restored wetlands in the Prairie Pothole Region: Soil Biology and Biochemistry, v. 41, no. 12, p. 2501–2507, doi:10.1016/j. soilbio.2009.09.008.
- Glibert, P.M., 2010, Long-term changes in nutrient loading and stoichiometry and their relationships with changes in the food web and dominant pelagic fish species in the San Francisco Estuary, California: Reviews in Fisheries Science, v. 18, p. 211–232.
- Goetz, S.J., Bond-Lamberty, B., Law, B.E., Hicke, J.A., Huang, C., Houghton, R.A., McNulty, S., O'Halloran, T., Harmon, M., Meddens, A.J.H., Pfeifer, E.M., Mildrexler, D., and Kasischke, E.S., 2012, Observations and assessment of forest carbon dynamics following disturbance in North America: Journal of Geophysical Research—Biogeosciences, v. 117, doi:10.1029/2011JG001733.
- Goines, B., and Nechodom, M., 2009, National forest carbon inventory scenarios for the Pacific Southwest Region (California), Region 5 Climate Change Interdisciplinary Team: Albany, Calif., U.S. Department of Agriculture, Forest Service, Region 5 Climate Change Interdisciplinary Team report, 85 p.
- Gonzalez, Patrick, Neilson, R.P., Lenihan, J.M., and Drapek, R.J., 2010, Global patterns in the vulnerability of ecosystems to vegetation shifts due to climate change: Global Ecology and Biogeography, v. 19, no. 6, p. 755–768.
- Goolsby, D.A., Battaglin, W.A., Lawrence, G.B., Artz, R.S., Aulenbach, B.T., Hooper, R.P., Keeney, D.R., and Stensland, G.J., 1999, Flux and sources of nutrients in the Mississippi-Atchafalaya River Basin; Topic 3 report for the integrated assessment on hypoxia in the Gulf of Mexico: Washington, D.C., National Oceanic and Atmospheric Administration, National Ocean Service, Coastal Ocean Program, Decision Analysis Series No. 17, 150 p.
- Gordon, C., Cooper, C., Senior, C.A., Banks, H.T., Gregory, J.M., Johns, T.C., Mitchell, J.F.B., and Wood, R.A., 2000, The simulation of SST, sea ice extents and ocean heat transports in a version of the Hadley Centre coupled model without flux adjustments: Climate Dynamics, v. 16, no. 2–3, p. 147–168, doi:10.1007/s003820050010.

- Goward, S.N., Masek, J.G., Cohen, Warren, Moisen, Gretchen, Collatz, G.J., Healey, Sean, Houghton, R.A., Huang, Chengquan, Kennedy, Robert, Law, Beverly, Powell, Scott, Turner, David, and Wulder, M.A., 2008, Forest disturbance and North American carbon flux: Eos, Transactions American Geophysical Union, v. 89, no. 11, doi:10.1029/2008EO110001.
- Gross, M.G., and Nelson, J.L., 1966, Sediment movement on the continental shelf near Washington and Oregon: Science, v. 154, p. 879–885.
- Hair, J.F., Black, W.C., Babin, Barry, Anderson, R.E., and Tatham, R.L., 2005, Multivariate data analysis (6th ed.): Upper Saddle River, N.J., Prentice Hall, 928 p.
- Hales, Burke, Cai, W.-J., Mitchell, B.G., Sabine, C.L., and Schofield, Oscar, eds., 2008, North American Continental Margins; A Synthesis and Planning Workshop; Report of the North American Continental Margins Working Group for the U.S. Carbon Cycle Scientific Steering Group and Interagency Working Group: Washington, D.C., U.S. Carbon Cycle Science Program, 115 p.
- Hales, Burke, Karp-Boss, Lee, Perlin, Alexander, and Wheeler, P.A., 2006, Oxygen production and carbon sequestration in an upwelling coastal margin: Global Biogeochemical Cycles, v. 20, no. 3, 15 p., doi:10.1215/21573689-1572535.
- Hanley, J.A., and McNeil, B.J., 1982, The meaning and use of the area under a receiver operating characteristic (ROC) curve: Radiology, v. 143, no. 1, p. 29–36.
- Hansen, A.J., Neilson, R.P., Dale, V.H., Flather, C.H., Iverson,
 L.R., Currie, D.J., Shafer, Sarah, Cook, Rosamonde, and
 Bartlein, P.J., 2001, Global change in forests; Responses of species, communities, and biomes: Bioscience, v. 51, no. 9,
 p. 765–779.
- Harrill, J.R., and Prudic, D.E., 1998, Aquifer aystems in the Great Basin region of Nevada, Utah, and adjacent states—Summary Report: U.S. Geological Survey Professional Paper 1409–A, 75 p. (Also available at http://pubs.er.usgs.gov/publication/pp1409A#.)
- Harrison, J.A., Seitzinger, S.P., Bouwman, A.F., Caraco, N.F., Beusen, A.H.W., and Vörösmarty, C.J., 2005, Dissolved inorganic phosphorus export to the coastal zone; Results from a spatially explicit, global model: Global Biogeochemical Cycles, v. 19, no. 4, 15 p.
- Hartmann, J., 2009, Bicarbonate-fluxes and CO₂-consumption by chemical weathering on the Japanese Archipelago—Application of a multi-lithological model framework: Chemical Geology, v. 265, no. 3–4, p. 237–271.

- Hastie, Trevor, Tibshirani, Robert, and Friedman, Jerome, 2009, The elements of statistical learning; Data mining, inference, and prediction (2d ed.): New York, N.Y., Springer, 746 p.
- Hayes, D.J., Turner, D.P., Stinson, Graham, McGuire, A.D.,
 Wei, Yaxing, West, T.O., Heath, L.S., de Jong, Bernardus,
 McConkey, B.G., Birdsey, R.A., Kurz, W.A., Jacobson,
 A.R., Huntzinger, D.N., Pan, Yude, Post, W.M., and Cook,
 R.B., 2012, Reconciling estimates of the contemporary
 North American carbon balance among terrestrial biosphere
 models, atmospheric inversions, and a new approach for
 estimating net ecosystem exchange from inventory-based
 data: Global Change Biology, v. 18, no. 4, p. 1281–1289,
 doi:10.1111/j.1365-2486.2011.02627.x
- Heath, L.S., and Birdsey, R.A., 1993, Carbon trends of productive temperate forests of the conterminous United States: Water, Air, & Soil Pollution, v. 70, no. 1–4, p. 279–293, doi:10.1007/BF01105002.
- Heath, L.S., Smith, J.E., Woodall, C.W., Azuma, D.L., and Waddell, K.L., 2011, Carbon stocks on forestland of the United States with emphasis on USDA Forest Service ownership: Ecosphere, v. 2, no. 1, 21 p., doi:10.1890/ES10-00126.1.
- Hedges, J.I., and Keil, R.G., 1995, Sedimentary organic-matter preservation—An assessment and speculative synthesis: Marine Chemistry, v. 49, p. 81–115.
- Hedges, J.I., Keil, R.G., and Benner, R., 1997, What happens to terrestrial organic matter in the ocean?: Organic Geochemistry, v. 27, no. 5, p. 195–212.
- Hessl, A.E., 2011, Pathways for climate change effects on fire; Models, data, and uncertainties: Progress in Physical Geography, v. 35, no. 3, p. 393–407.
- Hicke, J.A., Jenkins, J.C., Ojima, D.S., and Ducey, Mark, 2007, Spatial patterns of forest characteristics in the western United States derived from inventories: Ecological Applications, v. 17, no. 8, p. 2387–2402, doi:10.1890/06-1951.1.
- Homer, Collin, Dewitz, Jon, Fry, Joyce, Coan, Michael, Hossain, Nazmul, Larson, Charles, Herold, Nate, McKerrow, Alexa, Van Driel, J.N., and Wickham, James, 2007, Completion of the 2001 National Land Cover Database for the conterminous United States: Photogrammetric Engineering and Remote Sensing, v. 73, no. 4, p. 337–341. (Also available at http://www.asprs.org/a/publications/pers/2007journal/april/highlight.pdf.)
- Horizon Systems Corporation, 2005, NHDPlus, version 2: Herndon, Va., Horizon Systems Corporation Web page accessed October 1, 2012, at http://www.horizon-systems.com/nhdplus/.

- Houghton, R.A., Hackler, J.L., and Lawrence, K.T., 1999, The U.S. carbon budget; Contributions from land-use change: Science, v. 285, no. 5427, p. 574–578, doi:10.1126/science.285.5427.574.
- Huang, Chengquan, Goward, S.N., Masek, J.G., Thomas, Nancy, Zhu, Zhiliang, and Vogelmann, J.E., 2010, An automated approach for reconstructing recent forest disturbance history using dense Landsat time series stacks: Remote Sensing of Environment, v. 114, no. 1, p. 183–198, doi:10.1016/j.rse.2009.08.17.
- Huang, Cho-ying, Asner, G.P., Barger, N.N., Neff, J.C., and Floyd, M.L., 2010, Regional aboveground live carbon losses due to drought-induced tree dieback in piñon-juniper ecosystems: Remote Sensing of Environment, v. 114, no. 7, p. 1471–1479, doi:10.1016/j.rse.2010.02.003.
- Hudiburg, Tara, Law, Beverly, Turner, D.P., Campbell, John, Donato, Dan, and Duane, Maureen, 2009, Carbon dynamics of Oregon and northern California forests and potential land-based carbon storage: Ecological Applications, v. 19, p. 163–180, doi:10.1890/07-2006.1.
- Hudiburg, T.W., Law, B.E., Wirth, Christian, and Luyssaert, Sebastiaan, 2011, Regional carbon dioxide implications of forest bioenergy production: Nature Climate Change, v. 1, no. 8, p. 419–423.
- Hunt, C.W., Salisbury, J.E., and Vandemark, D., 2011, Contribution of non-carbonate anions to total alkalinity and overestimation of *p*CO₂ in New England and New Brunswick rivers: Biogeosciences, v. 8, p. 3069–3076, doi:10.5194/bg-8-3069-2011.
- Huntzinger, D.N., Post, W.M., Wei ,Y., Michalak, A.M., West, T.O., Jacobson, A.R., Baker, I.T., Chen, J.M., Davis, K.J., Hayes, D.J., Hoffman, F.M., Jain, A.K., Liu, S., McGuire, A.D., Neilson, R.P., Potter, Chris, Poulter, B., Price, David, Raczka, B.M., Tian, H.Q., Thornton, P., Tomelleri, E., Viovy, N., Xiaos, J., Yuant, W., Zengu, N., Zhaov, M., and Cook, R., 2012, North American Carbon Project (NACP) regional interim synthesis; terrestrial biospheric model intercomparison: Ecological Modelling, v. 232, p. 144–157, 10.1016/j.ecolmodel.2012.02.004.
- Hurteau, M.D., and Brooks, M.L., 2011, Short- and long-term effects of fire on carbon in US dry temperate forest systems: Bioscience, v. 61, no. 2, p. 139–146.
- Hurtt, G.C., Pacala, S.W., Moorcroft, P.R., Caspersen, J.,
 Shevliakova, E., Houghton, R.A., and Moore, B., III, 2002,
 Projecting the future of the U.S. carbon sink: Proceedings of the National Academy of Sciences of the United States of America, v. 99, no. 3, doi:10.1073/pnas.012249999.

- Hutchinson, M.F., 2010, ANUSPLIN Version 4.0: Australian National University, Fenner School of Environment & Society. (Available at http://fennerschool.anu.edu.au/publications/software/anusplin.php.)
- IMAGE Team, 2001, The IMAGE 2.2 implementation of the SRES scenarios; a comprehensive analysis of emissions, climate change and impacts in the 21st century: Bilthoven, The Netherlands, National Institute of Public Health and the Environment, RIVM CD–ROM Publication 481508018.
- Intergovernmental Panel on Climate Change, 2007, Climate change 2007 [Fourth assessment report (AR4) of the IPCC]: Cambridge, United Kingdom, Cambridge University Press, The AR4 synthesis report and 3 v. (The physical science basis, by Working Group I; Impacts, adaptation, and vulnerability, by Working Group II; Mitigation of climate change, by Working Group III), accessed November 14, 2011, at http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm.
- Jackson, R.B., Jobbágy, E.G., Avissar, Roni, Roy, S.B., Barrett, D.J., Cook, C.W., Farley, K.A., le Maitre, D.C., McCarl, B.A., and Murray, B.C., 2005, Trading water for carbon with biological sequestration: Science, v. 310, no. 5756, p. 1944–1947.
- Johns, T.C., Carnell, R.E., Crossley, J.F., Gregory, J.M., Mitchell, J.F.B., Senior, C.A., Tett, S.F.B., and Wood, R.A., 1997, The second Hadley Center coupled ocean-atmosphere GCM; Model description, spinup and validation: Climate Dynamics, v. 13, no. 2, p. 103–134, doi:10.1007/s003820050155.
- Jolly, W.M., Nemani, Ramakrishna, and Running, S.W., 2005, A generalized, bioclimatic index to predict foliar phenology in response to climate: Global Change Biology, v. 11, no. 4, p. 619–632.
- Joyce, L.A., Price, D.T., McKenney, D.W., Siltanen, R.M., Papadopol, Pia, Lawrence, Kevin, and Coulson, D.P., 2011, High resolution interpolation of climate scenarios for the conterminous USA and Alaska derived from general circulation model simulations: Fort Collins, Colo., U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station General Technical Report RMRS–GTR– 263, 87 p.
- Kashian, D.M., Romme, W.H., Tinker, D., Turner, M.G., and Ryan, M.G., in press, Post-fire changes in forest carbon storage over a 300-year chronosequence of Pinus contortadominated forests: Ecological Monographs (pre-press version accessed November 14, 2012), doi:10.1890/11-1454.1.
- Kashian, D.M., Romme, W.H., Tinker, D.B., Turner, M.G., and Ryan, M.G., 2006, Carbon storage on landscapes with stand-replacing fires: BioScience, v. 56, no. 7, p. 598–606, doi:10.1641/0006-3568(2006)56[598:CSOLWS]2.0.CO;2.

- Keane, R.E., Cary, G.J., and Parsons, Russell, 2003, Using simulation to map fire regimes; An evaluation of approaches, strategies, and limitations: International Journal of Wildland Fire, v. 12, no. 3–4, p. 309–322.
- Keane, R.E., Ryan, K.C., Veblen, T.T., Allen, C.D., Logan, J.A., and Hawkes, Brad, 2002, Cascading effects of fire exclusion in Rocky Mountain ecosystems; A literature review: Fort Collins, Colo., U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station General Technical Report RMRS–GTR–91, 24 p.
- Keeley, J.E., 2006, Fire management impacts on invasive plants in the western United States: Conservation Biology, v. 20, no. 2, p. 375–384.
- Keeley, J.E., Fotheringham, C.J., and Morais, M., 1999, Reexamining fire suppression impacts on brushland fire regimes: Science, v. 284, no. 5421, p. 1829–1832.
- Kellndorfer, Josef, Walker, Wayne, Pierce, Leland, Dobson, Craig, Fites, Jo Ann, Hunsaker, Carolyn, Vona, John, and Clutter, Michael, 2004, Vegetation height estimation from Shuttle Radar Topography Mission and National Elevation Datasets: Remote Sensing of Environment, v. 93, no. 3, p. 339–358, doi:10.1016/j.rse.2004.07.017.
- Kendall, Carol, and McDonnell, J.J., 1998, Isotope tracers in catchment hydrology: Amsterdam, Elsevier, 870 p.
- Kessavalou, Anabayan, Mosier, A.R., Doran, J.W., Drijber, R.A., Lyon, D.J., and Heinemeyer, O., 1998, Fluxes of carbon dioxide, nitrous oxide, and methane in grass sod and winter wheat-fallow tillage management: Journal of Environmental Quality, v. 27, no. 5, p. 1094–1104.
- Kimball, J.S., Running, S.W., and Nemani, R., 1997, An improved method for estimating surface humidity from daily minimum temperature: Agricultural and Forest Meteorology, v. 85, no. 1–2, p. 87–98, doi:10.1016/S0168-1923(96)02366-0.
- Kling, G.W., Kipphut, G.W., and Miller, M.C., 1991, Arctic lakes and streams as gas conduits to the atmosphere— Implications for tundra carbon budgets: Science, v. 251, p. 298–301.
- Korontzi, Stefania, McCarty, Jessica, Loboda, Tatiana, Kumar, Suresh, and Justice, Chris, 2006, Global distribution of agricultural fires in croplands from 3 years of Moderate Resolution Imaging Spectroradiometer (MODIS) data: Global Biogeochemical Cycles, v. 20, no. 2, 15 p., doi:10.1029/2005GB002529.
- Kroodsma, D.A., and Field, C.B., 2006, Carbon sequestration in California agriculture, 1980–2000: Ecological Applications, v. 16, no. 5, p. 1975–1985, doi:10.1890/1051-0761(2006)016[1975:CSICA]2.0.CO;2.

- Kudela, R.M., Cochlan, W.P., Peterson, T.D., and Trick, C.G., 2006, Impacts on phytoplankton biomass and productivity in the Pacific Northwest during the warm ocean conditions of 2005: Geophysical Research Letters, v. 33, 6 p., doi:10.1029/2006GL026772.
- Lal, R., 2004, Carbon sequestration in dryland ecosystems: Environmental Management, v. 33, no. 4, p. 528–544.
- Lal, R., Kimble, J.M., Follett, R.F., and Cole, C.V., 1998, The potential of U.S. cropland to sequester carbon and mitigate the greenhouse effect: Boca Raton, Fla., CRC Press, 144 p.
- Larkin, N.K., O'Neill, S.M., Solomon, Robert, Raffuse, Sean, Strand, Tara, Sullivan, D.C., Krull, Candace, Rorig, Miriam, Peterson, Janice, and Ferguson, S.A., 2009, The BlueSky smoke modeling framework: International Journal of Wildland Fire, v. 18, no. 8, p. 906–920.
- Law, B.E., Turner, D., Campbell, J., Sun, O.J., Van Tuyl,
 S., Ritts, W.D., and Cohen, W.B., 2004, Disturbance and climate effects on carbon stocks and fluxes across Western Oregon USA: Global Change Biology, v. 10, no. 9,
 p. 1429–1444.
- Leavesley, G.H., Lichty, R.W., Troutman, B.M., and Saindon, L.G., 1983, Precipitation-runoff modeling system; user's manual: U.S. Geological Survey Water-Resources Investigations Report 83–4238, 207 p.
- Leithold, E.L., Perkey, D.W., Blair, N.E., and Creamer, T.N., 2005, Sedimentation and carbon burial on the northern California continental shelf; the signatures of land-use change: Continental Shelf Research, v. 25, no. 3, p. 349–371.
- Lenihan, J.M., Bachelet, Dominique, Neilson, R.P., and Drapek, Raymond, 2008, Simulated response of conterminous United States ecosystems to climate change at different levels of fire suppression, CO₂ emission rate, and growth response to CO₂: Global and Planetary Change, v. 64, no. 1–2, p. 16–25.
- Lentz, R.D., and Lehrsch, G.A., 2010, Nutrients in runoff from a furrow-irrigated field after incorporating inorganic fertilizer or manure: Journal of Environmental Quality, v. 39, no. 4, p. 1402–1415, doi:10.2134/jeq2009.0374.
- Leopold, L.B., and Maddock, Thomas, Jr., 1953, The hydraulic geometry of stream channels and some physiographic implications: U.S. Geological Survey Professional Paper 252, 57 p. (Also available at http://pubs.usgs.gov/pp/0252/report.pdf.)

- Lettenmaier, D.P., Major, D., Poff, L., and Running, S., 2008, Water resources, *in* The effects of climate change on agriculture, land resources, water resources, and biodiversity in the United States; a report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research: U.S. Climate Change Science Program Synthesis and Assessment Product 4.3, p. 121–150. (Also available at http://www.climatescience.gov/Library/sap/sap4-3/final-report/sap4-3-final-water.pdf.)
- Levy, P.E., Cannell, M.G.R., and Friend, A.D., 2004, Modelling the impact of future changes in climate, CO₂ concentration and land use on natural ecosystems and the terrestrial carbon sink: Global Environmental Change, v. 14, no. 1, p. 21–30, doi:10.1016/j.gloenvcha.2003.10.005.
- Liebig, M.A., Tanaka, D.L., and Gross, J.R., 2010, Fallow effects on soil carbon and greenhouse gas flux in central North Dakota: Soil Science Society of America Journal, v. 74, no. 2, p. 358–365, doi:10.2136/sssaj2008.0368.
- Litschert, S.E., Brown, T.C., and Theobald, D.M., 2012, Historic and future extent of wildfires in the Southern Rockies Ecoregion, USA: Forest Ecology and Management, v. 269, p. 124–133.
- Littell, J.S., McKenzie, Donald, Peterson, D.L., and Westerling, A.L., 2009, Climate and wildfire area burned in western U.S. ecoprovinces, 1916–2003: Ecological Applications, v. 19, no. 4, p. 1003–1021.
- Littell, J.S., Oneil, E.E., McKenzie, Donald, Hicke, J.A., Lutz, J.A., Norheim, R.A., and Elsner, M.M., 2010, Forest ecosystems, disturbance, and climatic change in Washington State, USA: Climatic Change, v. 102, no. 1–2, p. 129–158, doi:10.1007/s10584-010-9858-x.
- Liu, Jinxun, Vogelmann, J.E., Zhu, Zhiliang, Key, C.H.,
 Sleeter, B.M., Price, D.T., Chen, J.M., Cochrane, M.A.,
 Eidenshink, J.C., Howard, S.M., Bliss, N.B., Jiang, Hong,
 2011, Estimating California ecosystem carbon change using
 process model and land cover disturbance data: 1951–2000:
 Ecological Modelling, v. 222, p. 2333–2341.
- Liu, Shuguang, 2009, Quantifying the spatial details of carbon sequestration potential and performance, *in* McPherson, B.J., and Sundquist, E.T., eds., Carbon sequestration and its role in the global carbon cycle: American Geophysical Union Monograph 183, p. 117–128, doi:10.1029/2006GM000524.
- Liu, Shuguang, Bliss, Norman, Sundquist, Eric, and Huntington, T.G., 2003, Modeling carbon dynamics in vegetation and soil under the impact of soil erosion and deposition: Global Biogeochemical Cycles, v. 17, no. 2, p. 1074, doi:10.1029/2002GB002010.

- Liu, Shuguang, Bond-Lamberty, Ben, Hicke, J.A., Vargas, Rodrigo, Zhao, Shuqing, Chen, Jing, Edburg, S.L., Hu, Yueming, Liu, Jinxun, McGuire, A.D., Xiao, Jingfeng, Keane, Robert, Yuan, Wenping, Tang, Jianwu, Luo, Yiqi, Potter, Christopher, and Oeding, Jennifer, 2011, Simulating the impacts of disturbances on forest carbon cycling in North America; processes, data, models, and challenges: Journal of Geophysical Research, v. 116, G00K08, 22 p., doi:10.1029/2010JG001585.
- Liu, S., Kaire, M., Wood, E., Diallo, O., and Tieszen, L.L., 2004, Impacts of land use and climate change on carbon dynamics in south-central Senegal: Journal of Arid Environments, v. 59, p. 583.
- Liu, Shuguang, Liu, Jinxun, and Loveland, T.R., 2004, Spatial-temporal carbon sequestration under land use and land cover change, *in* Proceedings of the 12th International Conference on Geoinformatics—Geospatial Information Research; Bridging the Pacific and Atlantic: University of Gävle, Sweden, June 7–9, 2004: Gavle, Sweden, Gävle University Press, p. 525–532. (Also available at http://fromto.hig.se/~bjg/geoinformatics/files/p525.pdf).
- Liu, Shuguang, Loveland, T.R., and Kurtz, R.M., 2004, Contemporary carbon dynamics in terrestrial ecosystems in the southeastern plains of the United States: Environmental Management, v. 33, supplement 1, p. S442–S456, doi:10.1007/s00267-003-9152-z.
- Liu, Shuguang, Tan, Zhengxi, Chen, Mingshi, Liu, Jinxun, Wein, Anne, Li, Zhengpeng, Huang, Shengli, Oeding, Jennifer, Young, Claudia, Verma, S.B., Suyker, A.E., Faulkner, Stephen, and McCarty, G.W., 2012, The General Ensemble Biochemical Modeling System (GEMS) and its applications to agricultural systems in the United States, *in* Liebig, M.A., Franzluebbers, A.J., and Follett, R.F., eds., Managing agricultural greenhouse gases—Coordinated agricultural research through GRACEnet to address our changing climate: London, United Kingdom, Academic Press, p. 309–323.
- Liu, Y., 2004, Variability of wildland fire emissions across the contiguous United States: Atmospheric Environment, v. 38, no. 21, p. 3489–3499.
- Liu, Yongqiang, Stanturf, John, and Goodrick, Scott, 2010, Trends in global wildfire potential in a changing climate: Forest Ecology and Management, v. 259, no. 4, p. 685–697.
- Loveland, T.R., Sohl, T.L., Stehman, S.V., Gallant, A.L., Sayler, K.L., and Napton, D.E., 2002, A strategy for estimating the rates of recent United States land-cover changes: Photogrammetric Engineering and Remote Sensing, v. 68, p. 1091–1099.
- Lozovik, P.A., 2005, Contribution of organic acid anions to the alkalinity of natural humic water: Journal of Analytical Chemistry, v. 60, no. 11, p. 1000–1004.

- Lutes, D.C., Keane, R.E., and Caratti, J.F., 2009, A surface fuel classification for estimating fire effects: International Journal of Wildland Fire, v. 18, no. 7, p. 802–814.
- MacDonald, James, Ribaudo, Marc, Livingston, Michael, Beckman, Jayson, and Huang, Wen-yuan, 2009, Manure use for fertilizer and for energy; Report to Congress: USDA Economic Research Service Administrative Publication AP–037, 53 p. (Also available at http://www.ers.usda.gov/publications/ap-administrative-publication/ap-037.aspx.)
- Man, Gary, comp., 2010, Major forest insect and disease conditions in the United States—2009 update: U.S. Department of Agriculture, Forest Service, General Technical Report FS–952, 28 p. (Also available at http://www.fs.fed.us/foresthealth/publications/ConditionsReport_2009.pdf.)
- Maurer, E.P., Brekke, L., Pruitt, T., and Duffy, P.B., 2007, Fine-resolution climate projections enhance regional climate change impact studies: Eos, v. 88, no. 47, p. 504.
- Maurer, E.P., Wood, A.W., Adam, J.C., Lettenmaier, D.P., and Nijssen, B., 2002, A long-term hydrologically based dataset of land surface fluxes and states for the conterminous United States: Journal of Climate, v. 15, no. 22, p. 3237–3251, doi:10.1175/1520-0442(2002)015<3237:ALTHBD>2.0.CO;2.
- Mayorga, Emilio, Seitzinger, S.P., Harrison, J.A., Dumont, Egon, Beusen, A.H.W., Bouwman, A.F., Fekete, B.M., Kroeze, Carolien, and Van Drecht, Gerard, 2010, Global nutrient export from WaterSheds 2 (NEWS 2); Model development and implementation: Environmental Modelling & Software, v. 25, p. 837–853, doi:10.1016/j.envsoft.2010.01.007.
- McAvaney, B.J., Covey, C., Joussaume, S., Kattsov, V., Kitoh, A., Ogana, W., Pitman, A.J., Weaver, A.J., Wood, R.A., and Zhao, Z.-C., 2001, Model evaluation, chap. 8 *in* Houghton, J.T., Ding, Y., Griggs, D.J., Noguer, M., van der Linden, P.J., Dai, X., Maskell, K., and Johnson, C.A., eds., Climate Change 2001—The scientific basis, Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change: Cambridge, U.K., Cambridge University Press, 881 p. (Also available at http://www.grida.no/publications/other/ipcc%5Ftar/?src=/climate/ipcc_tar/wg1/index.htm.)
- McCauley, S., and Goetz, S.J., 2004, Mapping residential density patterns using multi-temporal Landsat data and a decision-tree classifier: International Journal of Remote Sensing, v. 25, no. 6, p. 1077–1094.
- McDonald, C.P., Rover, J.A., Stets, E.G., and Striegl, R.G., 2012, The regional abundance and size distribution of lakes and reservoirs in the United States and implications for estimates of global lake extent: Limnology and Oceanography, v. 57, no. 2, p. 597–606.

- McKenzie, D., Gedalof, Z., Peterson, D.L., and Mote, P., 2004, Climatic change, wildfire, and conservation: Conservation Biology, v. 18, no. 4, p. 890.
- McKinley, D.C., Ryan, M.G., Birdsey, R.A., Giardina, C.P., Harmon, M.E., Heath, L.S., Houghton, R.A., Jackson, R.B., Morrison, J.F., Murray, B.C., Pataki, D.E., and Skog, K.E., 2011, A synthesis of current knowledge on forests and carbon storage in the United States: Ecological Applications, v. 21, no. 6, p. 1902–1924.
- Meigs, G.W., Donato, D.C., Campbell, J.L., Martin, J.G., and Law, B.E., 2009, Forest fire impacts on carbon uptake, storage, and emission; The role of burn severity in the Eastern Cascades, Oregon: Ecosystems, v. 12, 22 p., doi:10.1007/s10021-009-9285-x.
- Melack, J.M., Dozier, Jeff, Goldman, C.R., Greenland, David, Milner, A.M., and Caiman, R.J., 1997, Effects of climate change on inland water of the Pacific Coastal Mountains and Western Great Basin of North America: Hydrological Processes, v. 11, no. 8, p. 971–992, doi:10.1002/(SICI)1099-1085(19970630)11:8%3C971::AID-HYP514%3E3.0.CO;2-Y.
- Melching, C.S., and Flores, H.E., 1999, Reaeration equations derived from U.S. Geological Survey database: Journal of Environmental Engineering, v. 125, no. 5, p. 407–414.
- Mendelsohn, Robert, and Dinar, Ariel, 2009, Land use and climate change interactions: Annual Review of Resource Economics, v. 1, p. 309–332.
- Mensing, Scott, Livingston, Stephanie, and Barker, Pat, 2006, Long-term fire history in Great Basin sagebrush reconstructed from macroscopic charcoal in spring sediments, Newark Valley, Nevada: Western North American Naturalist, v. 66, no. 1, p. 64–77, doi:10.3398/1527-0904(2006)66[64:LFHIGB]2.0.CO;2.
- Mesinger, Fedor, DiMego, Geoff, Kalnay, Eugenia, Mitchell, Kenneth, Shafran, P.C., Ebisuzaki, Wesley, Jović, Dušan, Woollen, Jack, Rogers, Eric, Berbery, E.H., Ek, M.B., Fan, Yun, Grumbine, Robert, Higgins, Wayne, Li, Hong, Lin, Ying, Manikin, Geoff, Parrish, David, and Shi, Wei, 2006, North American regional reanalysis: Bulletin of the American Meteorological Society, v. 87, no. 3, p. 343–360, doi:10.1175/BAMS-87-3-343.
- Metherell, A.K., Harding, L.A., Cole, C.V., and Parton, W.J., 1993, CENTURY soil organic matter model environment, technical documentation, Agroecosystem Version 4.0: U.S. Department of Agriculture, Agricultural Research Service, Great Plains System Research Unit Technical Report 4, available at http://www.nrel.colostate.edu/projects/century/MANUAL/html_manual/man96.html. (Accessed October 23, 2012.)

- Meybeck, Michel, 1982, Carbon, nitrogen, and phosphorous transport by world rivers: American Journal of Science, v. 282, p. 401–450.
- Michigan Tech Research Institute, 2012, Wildland Fire Emissions Information System: Michigan Tech Research Institute database, accessed August 3, 2012, at http://wfeis.mtri.org/.
- Michmerhuizen, C.M., Striegl, R.G., and McDonald, M.E., 1996, Potential methane emission from north-temperate lakes following ice melt: Limnology and Oceanography, v. 41, no. 5, p. 985–991.
- Miller, J.B., 2008, Carbon cycle; Sources, sinks and seasons: Nature, v. 451, p. 26–27, doi:10.1038/451026a.
- Millero, F.J., 1979, Thermodynamics of the carbonate system in seawater: Geochimica et Cosmochimica Acta, v. 43, p. 1651–1661, doi:10.1016/0016-7037(79)90184-4.
- Milliman, J.D., and Syvitski, J.P.M., 1992, Geomorphic tectonic control of sediment discharge to the ocean— The importance of small mountainous rivers: Journal of Geology, v. 100, p. 525–544.
- Mitchell, S.R., Harmon, M.E., and O'Connell, K.E.B., 2009, Forest fuel reduction alters fire severity and long-term carbon storage in three Pacific Northwest ecosystems: Ecological Applications, v. 19, no. 3, p. 643–655.
- Mixon, D.M., Kinner, D.A., Stallard, R.F., and Syvitski, J.P.M., 2008, Geolocation of man-made reservoirs across terrains of varying complexity using GIS: Computers & Geosciences, v. 34, no. 10, p. 1184–1197, doi:10.1016/j. cageo.2008.02.015.
- Moore, M.M., Huffman, D.W., Fule, P.Z., Covington, W.W., and Crouse, J.E., 2004, Comparison of historical and contemporary forest structure and composition on permanent plots in southwestern ponderosa pine forests: Forest Science, v. 50, no. 2, p. 162–176.
- Moosdorf, Nils, Hartmann, Jens, Lauerwald, Ronny, Hagedorn, Benjamin, and Kempe, Stephan, 2011, Atmospheric CO₂ consumption by chemical weathering in North America: Geochimica et Cosmochimica Acta, v. 75, no. 24, p. 7829–7854, doi:10.1016/j.gca.2011.10.007.
- Moritz, M.A., Moody, T.J., Krawchuk, M.A., Hughes, Mimi, and Hall, Alex, 2010, Spatial variation in extreme winds predicts large wildfire locations in chaparral ecosystems: Geophysical Research Letters, v. 37, no. 4, 5 p., doi:10.1029/2009GL041735.
- Mosier, A.R., Parton, W.J., Valentine, D.W., Ojima, D.S., Schime, D.S., and Heinemeyer, O., 1997, CH₄ and N₂O fluxes in the Colorado shortgrass steppe; 2. Long-term impact of land use change: Global Biogeochemical Cycles, v. 11, no. 1, p. 29–42, doi:10.1029/96GB03612.

- Mu, J.E., McCarl, B.A., and Wein, A.M., 2012, Adaptation to climate change; Changes in farmland use and stocking rate in the U.S.: Mitigation and Adaptation Strategies for Global Change, 18 p., doi:10.1007/s11027-012-9384-4.
- Mulholland, P.J., and Elwood, J.W., 1982, The role of lake and reservoir sediments as sinks in the perturbed global carbon cycle: Tellus, v. 34, no. 5, p. 490–499.
- Muller-Karger, F.E., Varela, Ramon, Thunell, Robert, Luerssen, Remy, Hu, Chuanmin, and Walsh, J.J., 2005, The importance of continental margins in the global carbon cycle: Geophysical Research Letters, v. 32, no. 1, p. 1–4, doi:10.1029/2004GL021346.
- Nakicenovic, Nebojsa, Alcamo, Joseph, Davis, Gerald, de Vries, Bert, Fenhann, Joergen, Gaffin, Stuart, Gregory, Kenneth, Grübler, Arnulf, Jung, T.Y., Kram, Tom, La Rovere, E.L., Michaelis, Laurie, Mori, Shunsuke, Morita, Tsuneyuki, Pepper, William, Pitcher, Hugh, Price, Lynn, Riahi, Keywan, Roehrl, Alexander, Rogner, H.-H., Sankovski, Alexei, Schlesinger, Michael, Shukla, Priyararshi, Smith, Steven, Swart, Robert, van Rooijen, Sascha, Victor, Nadejda, and Dadi, Zhou, 2000, Special report on emissions scenarios; A special report of Working Group III of the Intergovernmental Panel on Climate Change [IPCC]: Cambridge, United Kingdom, Cambridge University Press, 599 p., at http://www.grida.no/publications/other/ipcc%5Fsr/?src=/climate/ipcc/emission/index.htm. (Accessed November 15, 2011.)
- National Interagency Fire Center, 2012, National Interagency Fire Center: National Interagency Fire Center Web page accessed August 4, 2012, at http://www.nifc.gov/fireInfo/fireInfo statistics.html.
- Nelson, M.D., and Vissage, John, 2005, Mapping forest inventory and analysis forest land use—Timberland, reserved forest land, and other forest land, *in* McRoberts, R.E., Reams, G.A., Van Deusen, P.C., and McWilliams, W.H., eds., Proceedings of the seventh annual forestry and analysis symposium: U.S. Department of Agriculture, Forest Service General Technical Report WO–77, p. 185–191. (Also available at http://nrs.fs.fed.us/pubs/gtr/gtr wo077/gtr wo077 185.pdf.)
- North, M.P., and Hurteau, M.D., 2011, High-severity wildfire effects on carbon stocks and emissions in fuels treated and untreated forest: Forest Ecology and Management, v. 261, no. 6, p. 1115–1120, doi:10.1016/j.foreco.2010.12.039.
- Oak Ridge National Laboratory Distributed Active Archive Center, 2012, Global Fire Emissions Database: Oak Ridge National Laboratory Distributed Active Archive Center database accessed August 9, 2012, at http://daac.ornl.gov/VEGETATION/guides/global fire emissions v2.1.html.

- Ogle, S.M., Breidt, F.J., and Paustian, Keith, 2005, Agricultural management impacts on soil organic carbon storage under moist and dry climatic conditions of temperate and tropical regions: Biogeochemistry, v. 72, no. 1, p. 87–121 doi:10.1007/s10533-004-0360-2.
- Olander, L.P., Cooley, D.M., and Galik, C.S., 2012, The potential role for management of U.S. public lands in greenhouse gas mitigation and climate policy: Environmental Management, v. 49, no. 3, p. 523–533, doi:10.1007/s00267-011-9806-1.
- Oliver, B.G., Thurman, E.M., and Malcolm, R.L., 1983, The contribution of humic substances to the acidity of colored natural waters: Geochimica et Cosmochimica Acta, v. 47, no. 11, p. 2031–2035, doi:10.1016/0016-7037(83)90218-1.
- Omernik, J.M., and Bailey, R.G., 1997, Distinguishing between watersheds and ecoregions: Journal of the American Water Resources Association, v. 33, no. 5, p. 935–949, doi: 10.1111/j.1752-1688.1997.tb04115.x.
- Orme, A.R., ed., 2002, Physical geography of North America: Oxford, U.K., Oxford University Press, 551 p.
- Ottmar, R.D., Prichard, S.J., Vihnanek, R.E., and Sandberg, D.V., 2008, Modification and validation of fuel consumption models for shrub and forested lands in the Southwest, Pacific Northwest, Rockies, Midwest, Southeast and Alaska: U.S. Department of Agriculture, Forest Service, Fire and Environmental Applications Team, Pacific Northwest Research Station, Pacific Wildland Fire Sciences Laboratory, Final Report, JFSP Project 98–1–9–06, 97 p., available at http://www.firescience.gov/projects/98-1-9-06/project/98-1-9-06 final report.pdf.
- Ottmar, R.D., Sandberg, D.V., Riccardi, C.L., and Prichard, S.J., 2007, An overview of the Fuel Characteristic Classification System—Quantifying, classifying, and creating fuelbeds for resource planning: Canadian Journal of Forest Research, v. 37, no. 12, p. 2383–2393, doi:10.1139/X07-077.
- Pacala, S.W., Hurtt, G.C., Baker, D., Peylin, P., Houghton,
 R.A., Birdsey, R.A., Heath, L., Sundquist, E.T., Stallard,
 R.F., Ciais, P., Moorcroft, P., Caspersen, J.P., Shevliakova,
 E., Moore, B., Kohlmaier, G., Holland, E., Gloor, M.,
 Harmon, M.E., Fan, S.-M., Sarmiento, J.L., Goodale, C.L.,
 Schimel, D., and Field, C.B., 2001, Consistent land- and
 atmosphere-based U.S. carbon sink estimates: Science, v.
 292, no. 5525, p. 2316–2320, doi:10.1126/science.1057320.

- Pacala, S., Birdsey, R.A., Bridgham, S.D., Conant, R.T., Davis, K., Hales, B., Houghton, R.A., Jenkins, J.C., Johnston, M., Marland, G., and Paustian, K., 2007, The North American carbon budget past and present, *in* King, A.W., Dilling, Lisa, Zimmerman, G.P., Fairman, D.M., Houghton, R.A., Marland, Gregg, Rose, A.Z., and Wilbanks, T.J., eds., The First State of the Carbon Cycle Report (SOCCR); The North American carbon budget and implications for the global carbon cycle; A report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research: U.S Climate Change Science Program Synthesis and Assessment Product 2.2, p. 29–36. (Also available at http://www.climatescience.gov/Library/sap/sap2-2/final-report/sap2-2-final-chapter3.pdf.)
- Pan, Yude, Birdsey, R.A., Fang, Jingyun, Houghton, Richard, Kauppi, P.E., Kurz, W.A., Phillips, O.L., Shvidenko, Anatoly, Lewis, S.L., Canadell, J.G., Ciais, Philippe, Jackson, R.B., Pacala, S.W., McGuire, A.D., Piao, Shilong, Rautiainen, Aapo, Sitch, Stephen, and Hayes, Daniel, 2011, A large and persistent carbon sink in the world's forests: Science, v. 333, no. 6045, p. 988–993, doi:10.1126/science.1201609.
- Pan, Y., Chen, J.M., Birdsey, R., McCullough, K., He, L., and Deng, F., 2011, Age structure and disturbance legacy of North American forests: Biogeosciences, v. 8, no. 3, p. 715–732, doi:10.5194/bg-8-715-2011.
- Park, C.C., 1977, World-wide variations in hydraulic geometry exponents of stream channels; An analysis and some observations: Journal of Hydrology, v. 33, no. 1–2, p. 133–146.
- Parkhurst, D.L., and Appelo, C.A.J., 1999, User's guide to PHREEQC (Version 2); A computer program for speciation, batch-reaction, one-dimensional transport, and inverse geochemical calculations: U.S. Geological Survey Water-Resources Investigations Report 99–4259, 312 p.
- Parton, W.J., Ojima, D.S., and Schimel, D.S., 1994,Environmental change in grasslands; Assessment using models: Climate Change, v. 28, no. 1–2, p. 111.
- Parton, W.J., Schimel, D.S., Cole, C.V., and Ojima, D.S., 1987, Analysis of factors controlling soil organic matter levels in Great Plains grasslands: Soil Science Society of America Journal, v. 51, no. 5, p. 1173–1179, doi:10.2136/sssaj1987.03615995005100050015x.
- Parton, W.J., Scurlock, J.M.O., Ojima, D.S., Gilmanov, T.G., Scholes, R.J., Schimel, D.S., Kirchner, T., Menaut, J.-C., Seastedt, T., Garcia Moya, E., Kamnalrut, Apinan, and Kinyamario, J.I., 1993, Observations and modeling of biomass and soil organic matter dynamics for the grassland biome worldwide: Global Biogeochemical Cycles, v. 7, no. 4, p. 785–809, doi:10.1029/93GB02042.

- Pervez, M.S., and Brown, J.F., 2010, Mapping irrigated lands at 250-m scale by merging MODIS data and national agricultural statistics: Remote Sensing, v. 2, no. 10, p. 2388–2412, doi:10.3390/rs2102388.
- Peters, N.E., 1984, Evaluation of environmental factors affecting yields of major dissolved ions of streams in the United States: U.S. Geological Survey Water-Supply Paper 2228, p. 39.
- Pfeifer, E.M., Hicke, J.A., and Meddens, A.J.H., 2011, Observations and modeling of aboveground tree carbon stocks and fluxes following a bark beetle outbreak in the western United States: Global Change Biology, v. 17, no. 1, p. 339–350, doi:10.1111/j.1365-2486.2010.02226.x.
- Piao, Shilong, Fang, Jingyun, Ciais, Philippe, Peylin, Philippe, Huang, Yao, Sitch, Stephen, and Wang, Tao, 2009, The carbon balance of terrestrial ecosystems in China: Nature, v. 458, p. 1009–1013, doi:10.1038/nature07944.
- Pierce, D.W., Barnett, T.P., Santer, B.D., and Gleckler, P.J., 2009, Selecting global climate models for regional climate change studies: Proceedings of the National Academy of Science, v. 106, no. 21, p. 8441–8446. (Also available at http://www.pnas.org/content/106/21/8441.abstract; supporting information at www.pnas.org/cgi/content/full/0900094106/DCSupplemental.)
- Poffenbarger, H.J., Needelman, B.A., and Megonigal, J.P., 2011, Salinity influence on methane emissions from tidal marshes: Wetlands, v. 31, no. 5, p. 831–842, doi:10.1007/s13157-011-0197-0.
- Pontius, R.G., Jr., and Millones, Marco, 2012, Death to Kappa; Birth of quantity disagreement and allocation disagreement for accuracy assessment: International Journal of Remote Sensing, v. 32, no. 15, p. 4407–4429, doi:10.1080/0143116 1.2011.552923.
- Potter, Christopher, Klooster, Steven, Genovese, Vanessa, Hiatt, Cyrus, Boriah, Shyam, Kumar, Vipin, Mithal, Varun, and Garg, Ashish, 2012, Terrestrial ecosystem carbon fluxes predicted from MODIS satellite data and large-scale disturbance modeling: International Journal of Geosciences, v. 3, no. 3, p. 469–479, doi:10.4236/ijg.2012.33050.
- Potter, C.S., Randerson, J.T., Field, C.B., Matson, P.A., Vitousek, P.M., Mooney, H.A., and Klooster, S.A., 1993, Terrestrial ecosystem production—A process model based on global satellite and surface data: Global Biogeochemical Cycles, v. 7, no. 4, p. 811–841, doi:10.1029/93GB02725.
- Preisler, H.K., Brillinger, D.R., Burgan, R.E., and Benoit, J.W., 2004, Probability based models for estimation of wildfire risk: International Journal of Wildland Fire, v. 13, no. 2, p. 133–142.

- Preston, S.D., Alexander, R.B., and Wolock, D.M., 2011, SPARROW modeling to understand water-quality conditions in major regions of the United States—A featured collection introduction: Journal of the American Water Resources Association, v. 47, no. 5, p. 887–890, doi:10.1111/j.1752-1688.2011.00585.x.
- Price, C., and Rind, D., 1994, The impact of a 2×CO₂ climate on lightning-caused fires: Journal of Climate, v. 7, no. 10, p. 1484–1494.
- PRISM Climate Group, 2012, PRISM data: PRISM Climate Group dataset accessed October 23, 2012, at http://www.prism.oregonstate.edu/.
- Protected Areas Database of the United States (PAD–US)
 Partnership, 2009, A map for the future—Creating the
 next generation of protected area inventories in the United
 States: Protected Areas Database of the United States
 Partnership, 20 p., at http://www.protectedlands.net/images/
 PADUS_FinalJuly2009LowRes.pdf. (Accessed June 18,
 2010.)
- R Development Core Team, 2008, R—A language and environment for statistical computing: Vienna, Austria, R Foundation for Statistical Computing.
- Raffa, K.F., Aukema, B.H., Bentz, B.J., Carroll, A.L., Hicke, J.A., Turner, M.G., and Romme, W.H., 2008, Cross-scale drivers of natural disturbances prone to anthropogenic amplification—The dynamics of bark beetle eruptions: BioScience, v. 58, no. 6, p. 501–517, doi:10.1641/B580607.
- Randall, D.A., Wood, R.A., Bony, S., Colman, R., Fichefet, T., Fyfe, J., Kattsov, V., Pitman, A., Shukla, J., Srinivasan, J., Stouffer, R.J., Sumi, A., and Taylor, K.E., 2007, Chapter 8—Climate models and their evaluation, *in* Solomon, S., Qin, D., Manning, M., Chen, Z., Marquis, M., Averyt, K.B., Tignor, M., and Miller, H.L., eds., Climate change 2007—The physical science basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change: Cambridge, U.K., Cambridge University Press, 996 p. (Also available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm.)
- Raymond, P.A., and Oh, N.-H., 2007, An empirical study of climatic controls on riverine C export from three major U.S. watersheds: Global Biogeochemical Cycles, v. 21, 9 p., doi:10.1029/2006GB002783.
- Raymond, P.A., Zappa, C.J., Butman, David, Bott, T.L., Potter, Jody, Mulholland, Patrick, Laursen, A.E., McDowell, W.H., and Newbold, Denis, 2012, Scaling the gas transfer velocity and hydraulic geometry in streams and small rivers: Limnology and Oceanography—Fluids and Environments, v. 2, p. 41–53, doi:10.1215/21573689-1597669.

- Reinhardt, Elizabeth, and Holsinger, Lisa, 2010, Effects of fuel treatments on carbon-disturbance relationships in forests of the northern Rocky Mountains: Forest Ecology and Management, v. 259, no. 8, p. 1427–1435.
- Reinhardt, Elizabeth, and Keane, R.E., 2009, FOFEM: The First-Order Fire Effects Model Adapts to the 21st Century: Joint Science Program, Fire Science Brief, 6 p. (Also available at http://www.firescience.gov/projects/98-1-8-03/supdocs/98-1-8-03_fsbrief62-final.pdf.)
- Reinhardt, E.D., Keane, R.E., and Brown, J.K., 1997, First Order Fire Effect Model; FOFEM 4.0 user's guide: Ogden, Utah, U.S. Forest Service Intermountain Research Station General Technical Report INT–GTR–344, 65 p. (Also available at http://www.fs.fed.us/rm/pubs_int/int_gtr344. pdf.)
- Reinhardt, E.D., Keane, R.E., Calkin, D.E., and Cohen, J.D., 2008, Objectives and considerations for wildland fuel treatment in forested ecosystems of the interior western United States: Forest Ecology and Management, v. 256, no. 12, p. 1997–2006.
- Riera, J.L., Schindler, J.E., and Kratz, T.K., 1999, Seasonal dynamics of carbon dioxide and methane in two clear-water lakes and two bog lakes in northern Wisconsin, U.S.A.: Canadian Journal of Fisheries and Aquatic Sciences, v. 56, no. 2, p. 265–274.
- Robards, T.A., 2010, Current forest and woodland carbon storage and flux in California—An estimate for the 2010 Statewide Assessment: Sacramento, Calif., California Department of Forestry and Fire Protection, 11 p., at http://www.bof.fire.ca.gov/board_committees/policy_committee/current_projects/current_projects/carbon_white_paper_-_final.pdf. (Accessed October 23, 2012.)
- Roeckner, E., Baumi, G., Bonaventura, L., Brokopf, R., Esch, M., Giorgetta, M., Hagemann, S., Kirchner, I., Kornblueh, L., Manzini, E., Rhodin, A., Schlese, U., Schulzweida, U., and Tompkins, A., 2003, The atmospheric general circulation model ECHAM5; part I, Model description: Max Planck Institute for Meteorology Report 349, 127 p. (Also available at http://www.mpimet.mpg.de/fileadmin/publikationen/Reports/max_scirep_349.pdf.)
- Rogers, B.M., Neilson, R.P., Drapek, Ray, Lenihan, J.M., Wells, J.R., Bachelet, Dominique, and Law, B.E., 2011, Impacts of climate change on fire regimes and carbon stocks of the U.S. Pacific Northwest: Journal of Geophysical Research, v. 116, 13 p., doi:10.1029/2011jg001695.)
- Rollins, M.G., 2009, LANDFIRE; A nationally consistent vegetation, wildland fire, and fuel assessment: International Journal of Wildland Fire, v. 18, no. 3, p. 235–249, doi:10.1071/WF08088.

- Rollins, M.G., Swetnam, T.W., and Morgan, Penelope, 2001, Evaluating a century of fire patterns in two Rocky Mountain wilderness areas using digital fire atlases: Canadian Journal of Forest Research, v. 31, no. 12, p. 2107–2123, doi:10.1139/cjfr-31-12-2107.
- Roy, D.P., Lewis, P.E., and Justice, C.O., 2002, Burned area mapping using multi-temporal moderate spatial resolution data—A bi-directional reflectance model-based expectation approach: Remote Sensing of Environment, v. 83, no. 1–2, p. 263–286.
- Runkel, R.L., Crawford, C.G., and Cohn, T.A., 2004, Load Estimator (LOADEST); A FORTRAN program for estimating constituent loads in streams and rivers: U.S. Geological Survey Techniques and Methods, Book 4, Chapter A5, 69 p., accessed November 14, 2011, at http://pubs.usgs.gov/tm/2005/tm4A5/.
- Running, S.W., 2008, Ecosystem disturbance, carbon, and climate: Science, v. 321, no. 5889, p. 652–653, doi:10.1126/science.1159607.
- Russell, G.L., Miller, J.R., Rind, David, Ruedy, R.A., Schmidt, G.A., and Sheth, Sukeshi, 2000, Comparison of model and observed regional temperature changes during the past 40 years: Journal of Geophysical Research—Atmospheres, v. 105, no. D11, p. 14,891–14,898. (Also available at http://www.agu.org/journals/jd/v105/iD11/2000JD900156/.)
- Ruyle, George, and Ogden, Phil, 1993, What is an A.U.M.?, *in* Gum, Russell, Ruyle, George, and Rice, Richard, eds., Arizona Ranchers' Management Guide: Tucson, Ariz., Arizona Cooperative Extension, 4 p.
- Sainju, U.M., Jabro, J.D., and Stevens, W.B., 2008, Soil carbon dioxide emission and carbon content as affected by irrigation, tillage, cropping system, and nitrogen fertilization: Journal of Environmental Quality, v. 37, no. 1, p. 98–106, doi:10.2134/jeq2006.0392.
- Sarmiento, J.L., and Gruber, Nicolas, 2002, Sinks for anthropogenic carbon: Physics Today, v. 55, no. 8, p. 30–36, doi:10.1063/1.1510279.
- Schlesinger, W.H., and Melack, J.M., 1981, Transport of organic carbon in the world's rivers: Tellus, v. 33, no. 2, p. 172–187, doi:10.1111/j.2153-3490.1981.tb01742.x.
- Schmidt, G.L., Liu, Shuguang, and Oeding, Jennifer, 2011, Derived crop management data for the LandCarbon Project: U.S. Geological Survey Open-File Report 2011–1303, 15 p., available only at http://pubs.usgs.gov/of/2011/1303/.
- Schoennagel, Tania, Veblen, T.T., and Romme, W.H., 2004, The interaction of fire, fuels, and climate across rocky mountain forests: Bioscience, v. 54, no. 7, p. 661–676.

- Schuman, G.E., Ingram, L.J., Stahl, P.D., Derner, J.D., Vance, G.F., and Morgan, J.A, 2009, Influence of management on soil organic carbon dynamics in northern mixed-grass rangeland, *in* Lal, Rattan, and Follett, R.F., eds., Soil carbon sequestration and the greenhouse effect: Madison, Wis., Soil Science Society of America Special Publication 57, p. 169–180.
- Schwalm, C.R., Williams, C.A., Schaefer, Kevin, Anderson, Ryan, Arain, M.A., Baker, Ian, Barr, Alan, Black, T.A., Chen, Guangsheng, Chen, J.M., Ciais, Philippe, Davis, K.J., Desai, Ankur, Dietze, Michael, Dragoni, Danilo, Fischer, M.L., Flanagan, L.B., Grant, Robert, Gu, Lianhong, Hollinger, David, Izaurralde, R.C., Kucharik, Chris, Lafleur, Peter, Law, B.E., Li, Longhui, Li, Zhengpeng, Liu, Shuguang, Lokupitiya, Erandathie, Luo, Yiqi, Ma, Siyan, Margolis, Hank, Matamala, Roser, McCaughey, Harry, Monson, R.K., Oechel, W.C., Peng, Changhui, Poulter, Benjamin, Price, D.T., Riciutto, D.M., Riley, William, Sahoo, A.K., Sprintsin, Michael, Sun, Jianfeng, Tian, Hanqin, Tonitto, Christina, Verbeeck, Hans, Verma, Shashi, 2010, A model-data intercomparison of CO₂ exchange across North America; Results from the North American Carbon Program site synthesis: Journal of Geophysical Research, v. 115, 22 p., doi:10.1029/2009JG001229.
- Schwarz, G.E., 2008, A preliminary SPARROW model of suspended sediment for the conterminous United States: U.S. Geological Survey Open-File Report 2008–1205, 12 p., available only online at http://pubs.usgs.gov/of/2008/1205/ofr2008-1205.pdf.
- Schwarz, G.E., Hoos, A.B., Alexander, R.B., and Smith, R.A., 2006, The SPARROW surface water-quality model—Theory, application, and user documentation: U.S. Geological Survey Techniques and Methods Report 6–A3, available only at http://pubs.usgs.gov/tm/2006/tm6b3/.
- Scott, R.L., Hamerlynck, E.P., Jenerette, G.D., Moran, M.S., and Barron-Gafford, G.A., 2010, Carbon dioxide exchange in a semidesert grassland through drought-induced vegetation change: Journal of Geophysical Research, v. 115, 12 p., doi:10.1029/2010JG001348.
- Seiler, Wolfgang, and Crutzen, P.J., 1980, Estimates of gross and net fluxes of carbon between the biosphere and the atmosphere from biomass burning: Climatic Change, v. 2, no. 3, p. 207–247.
- Shih, J.-S., Alexander, R.B., Smith, R.A., Boyer, E.W., Schwarz, G.E., and Chung, Susie, 2010, An initial SPARROW model of land use and in-stream controls on total organic carbon in streams of the conterminous United States: U.S. Geological Survey Open-File Report 2010–1276, 22 p., available only at http://pubs.usgs.gov/of/2010/1276.

- Sibold, J.S., Veblen, T.T., and González, M.E., 2006, Spatial and temporal variation in historic fire regimes in subalpine forests across the Colorado Front Range in Rocky Mountain National Park, Colorado, USA: Journal of Biogeography, v. 33, no. 4, p. 631–647.
- Sitch, Stephen, Brovkin, Victor, von Bloh, Werner, van Vuuren, Detlef, Eickhout, Bas, and Ganopolski, Andrey, 2005, Impacts of future land cover changes on atmospheric CO₂ and climate: Global Biogeochemical Cycles, v. 19, 15 p., doi:10.1029/2004GB002311.
- Sleeter, B.M., Sohl, T.L., Bouchard, M.A., Reker, R.R., Soulard, C.E., Acevedo, William, Griffith, G.E., Sleeter, R.R., Auch, R.F., Sayler, K.L., Prisley, Stephen, and Zhu, Zhiliang, 2012, Scenarios of land use and land cover change in the conterminous United States; Utilizing the Special Report on Emission Scenarios at ecoregional scales: Global Environmental Change, v. 22, no. 4, p. 896–914, doi:10.1016/j.gloenvcha.2012.03.008.
- Sleeter, B.M., Soulard, C.E., Wilson, T.S., and Sorenson, D.G., 2012, Land-cover trends in the Western United States—1973 to 2000, *in* Sleeter, B.M., Wilson, T.S., and Acevedo, W., eds., Status and trends of land change in the Western United States—1973 to 2000: U.S. Geological Survey Professional Paper 1794–A, p. 3–29.
- Sleeter, B.M., Wilson, T.S., and Acevedo, W., eds., 2012, Status and trends of land change in the Western United States—1973 to 2000: U.S. Geological Survey Professional Paper 1794—A, 324 p.
- Sleeter, B.M., Wilson, T.S., Soulard, C.E., and Liu, Jinxun, 2011, Estimation of late twentieth century landscape change in California: Environmental Monitoring and Assessment, v. 173, no. 1, p. 251–266, doi:10.1007/s10661-010-1385-8.
- Smith, J.E., and Heath, L.S., 2008, Carbon stocks and stock changes in U.S. forests; and Appendix C, *in* U.S. Agriculture and Forestry Greenhouse Gas Inventory; 1990–2005: Washington, D.C., U.S. Department of Agriculture, Office of the Chief Economist, Technical Bulletin 1921, p. 65–80, p. C-1–C-7.
- Smith, R.A., Schwarz, G.E., and Alexander, R.B., 1997, Regional interpretation of water-quality monitoring data: Water Resources Research, v. 33, no. 12, p. 2781–2798.
- Smith, W.B., and Darr, David, 2004, U.S. forest resource facts and historical trends: U.S. Department of Agriculture, Forest Service FS–801, 37 p. (Also available at http://www.fia.fs.fed.us/library/briefings-summaries-overviews/docs/2002 ForestStats %20FS801.pdf.)
- Smithwick, E.A.H., Harmon, M.E., Remillard, S.M., Acker, S.A., Franklin, J.F., 2002, Potential upper bounds of carbon stores in forests of the Pacific Northwest: Ecological Applications, v. 12, no. 5, p. 1303–1317.

- Smithwick, E.A.H., Ryan, M.G., Kashian, D.M., Romme, W.H., Tinker, D.B., and Turner, M.G., 2009, Modeling the effects of fire and climate change on carbon and nitrogen storage in lodgepole pine (*Pinus contorta*) stands: Global Change Biology, v. 15, no. 3, p. 535–548.
- Soetaert, Karline, and Petzoldt, Thomas, 2010, Inverse modelling, sensitivity and Monte Carlo analysis in R using package FME: Journal of Statistical Software, v. 33, no. 3, 28 p.
- Sohl, Terry, and Sayler, Kristi, 2008, Using the FORE-SCE model to project land-cover change in the southeastern United States: Ecological Modelling, v. 219, nos. 1–2, p. 49–65, doi:10.1016/j.ecolmodel.2008.08.003.
- Sohl, T.L., Sleeter, B.M., Zhu, Zhiliang, Sayler, K.L., Bennett, Stacie, Bouchard, Michelle, Reker, Ryan, Hawbaker, Todd, Wein, Anne, Liu, Shuguang, Kanengieter, Ronald, and Acevedo, William, 2012, A land-use and land-cover modeling strategy for the assessment of carbon stocks and fluxes: Applied Geography, v. 34, p. 111–124, doi:10.1016/j. apgeog.2011.10.019.
- Sohl, T.L., Sleeter, B.M., Sayler, K.L., Bouchard, M.A., Reker, R.R., Bennett, S.L., Sleeter, R.L., Kanengieter, R.L., and Zhu, Zhiliang, 2012, Spatially explicit land-use and land-cover scenarios for the Great Plains of the United States: Agriculture, Ecosystems & Environment, v. 153, p. 1–15, doi:10.1016/j.agee.2012.02.019.
- Spracklen, D.V., Mickley, L.J., Logan, J.A., Hudman, R.C., Yevich, R., Flannigan, M.D., and Westerling, A.L., 2009, Impacts of climate change from 2000 to 2050 on wildfire activity and carbonaceous aerosol concentrations in the western United States: Journal of Geophysical Research—Atmospheres, v. 114, 17 p., doi:10.1029/2008JD010966.
- St. Louis, V.L., Kelly, C.A., Duchemin, E., Rudd, J.W.M., and Rosenberg, D.M., 2000, Reservoir surfaces as sources of greenhouse gases to the atmosphere; A global estimate: BioScience, v. 50, no. 9, p. 766–774.
- Stehman, S.V., Wickham, J.D., Smith, J.H., and Yang, L., 2003, Thematic accuracy of the 1992 national land-cover data for the eastern United States—Statistical methodology and regional results: Remote Sensing of Environment, v. 86, no. 4, p. 500–516, doi:10.1016/S0034-4257(03)00128-7.
- Stephens, S.L., 1998, Evaluation of the effects of silvicultural and fuels treatments on potential fire behaviour in Sierra Nevada mixed-conifer forests: Forest Ecology and Management, v. 105, no. 1–3, p. 21, doi:10.1016/S0378-1127(97)00293-4.

- Stephens, S.L., Moghaddas, J.J., Hartsough, B.R., Moghaddas, E.E.Y., and Clinton, N.E., 2009, Fuel treatment effects on stand-level carbon pools, treatment-related emissions, and fire risk in a Sierra Nevada mixed-conifer forest: Canadian Journal of Forest Research, v. 39, no. 8, p. 1538–1547, doi:10.1139/X09-081.
- Stephens, S.L., and Ruth, L.W., 2005, Federal forest-fire policy in the United States: Ecological Applications, v. 15, no. 2, p. 532–542.
- Sternberg, R.W., 1986, Transport and accumulation of riverderived sediment on the Washington continental shelf, USA: Journal of the Geological Society, v. 143, no. 6, p. 945–956.
- Stets, E.G., and Striegl, R.G., 2012, Carbon export by rivers draining the conterminous United States: Inland Waters, v. 2, no. 4, p. 177–184, doi:10.5268/IW-2.4.510.
- Stets, E.G., Striegl, R.G., Aiken, G.R., Rosenberry, D.O., and Winter, T.C., 2009, Hydrologic support of carbon dioxide flux revealed by whole-lake carbon budgets: Journal of Geophysical Research, v. 114, p. 1–14, doi:10.1029/2008JG000783.
- Stewart, I.T., Cayan, D.R., and Dettinger, M.D., 2004, Changes in snowmelt runoff timing in western North America under a 'business as usual' climate change scenario: Climatic Change, v. 62, p. 217–232.
- Stocks, B.J., Mason, J.A., Todd, J.B., Bosch, E.M., Wotton, B.M., Amiro, B.D., Flannigan, M.D., Hirsch, K.G., Logan, K.A., Martell, D.L., and Skinner, W.R., 2002, Large forest fires in Canada, 1959–1997: Journal of Geophysical Research–Atmospheres, v. 108, 12 p., doi:10.1029/2001JD000484.
- Strahler, A.N., 1952, Dynamic basis of geomorphology: Geological Society of America Bulletin, v. 63, no. 9, p. 923–938.
- Strauss, D., Bednar, L., and Mees, R., 1989, Do one percent of forest fires cause ninety-nine percent of the damage?: Forest Science, v. 35, no. 2, p. 319–328.
- Strengers, Bart, Leemans, Rik, Eickhout, Bas, de Vries, Bert, and Bouwman, Lex, 2004, The land-use projections and resulting emissions in the IPCC SRES scenarios as simulated by the IMAGE 2.2 model: GeoJournal, v. 61, no. 4, p. 381–393, doi:10.1007/s10708-004-5054-8.
- Striegl, R.G., Dornblaser, M.M., Aiken, G.R., Wickland, K.P., and Raymond, P.A., 2007, Carbon export and cycling by the Yukon, Tanana, and Porcupine Rivers, Alaska, 2001–2005: Water Resources Research, v. 43, no. 2, W02411, 9 p., doi:10.1029/2006WR005201.

- Striegl, R.G., Dornblaser, M.M., McDonald, C.P., Rover, J., and Stets, E.G., in press, Carbon dioxide and methane emissions from the Yukon River system: Global Biogeochemical Cycles (prepress article accessed October 16, 2012), doi:10.1029/2012GB004306.
- Striegl, R.G., and Michmerhuizen, C.M., 1998, Hydrologic influence on methane and carbon dioxide dynamics at two north-central Minnesota lakes: Limnology and Oceanography, v. 43, no. 7, p. 1519–1529.
- Sundquist, E.T., Ackerman, K.V., Bliss, N.B., Kellndorfer, J.M., Reeves, M.C., and Rollins, M.G., 2009, Rapid assessment of U.S. forest and soil organic carbon storage and forest biomass carbon sequestration capacity: U.S. Geological Survey Open-File Report 2009–1283, 15 p., available only at http://pubs.usgs.gov/of/2009/1283/.
- Swetnam, T., and Betancourt, J.L., 1990, Fire-southern oscillation relations in the southwestern United States: Science, v. 249, no. 4972, p. 1017–1020.
- Syphard, A.D., Radeloff, V.C., Keeley, J.E., Hawbaker, T.J., Clayton, M.K., Stewart, S.I., and Hammer, R.B., 2007, Human influence on California fire regimes: Ecological Applications, v. 17, no. 5, p. 1388–1402.
- Syvitski, J.P., Vörösmarty, C.J., Kettner, A.J., and Green, P., 2005, Impact of humans on the flux of terrestrial sediment to the global coastal ocean: Science, v. 308, p. 376–380.
- Syvitski, J.P.M., 2011, Global sediment fluxes to the Earth's coastal ocean: Applied Geochemistry: v. 26, p. S373–S374, doi:10.1016/j.apgeochem.2011.03.064.
- Tang, J., Bolstad, P.V., and Martin, J.G., 2009, Soil carbon fluxes and stocks in a Great Lakes forest chronosequence: Global Change Biology, v. 15, no. 1, p. 145–155, doi:10.1111/j.1365-2486.2008.01741.x.
- Tishchenko, P.Y., Wallmann, K., Vasilevskaya, N.A., Volkova, T.I., Zvalinskii, V.I., Khodorenko, N.D., and Shkirnikova, E.M., 2006, The contribution of organic matter to the alkaline reserve of natural waters: Oceanology, v. 46, p. 192–199, doi:10.1134/S0001437006020068.
- Tranvik, L.J., Downing, J.A., Cotner, J.B., Loiselle, S.A., Striegl, R.G., Ballatore, T.J., Dillon, Peter, Finlay, Kerri, Fortino, Kenneth, Knoll, L.B., Kortelainen, P.L., Kutser, Tiit, Larsen, Soren, Laurion, Isabelle, Leech, D.M., McCallister, S.L., McKnight, D.M., Melack, J.M., Overholt, Erin, Porter, J.A., Prairie, Yves, Renwick, W.H., Roland, Fabio, Sherman, B.S., Schindler, D.W., Sobek, Sebastian, Tremblay, Alain, Vanni, M.J., Verschoor, A.M., von Wachenfeldt, Eddie, and Weyhenmeyer, G.A., 2009, Lakes and reservoirs as regulators of carbon cycling and climate: Limnology and Oceanography, v. 54, no. 6, part 2, p. 2298–2314. (Also available at http://www.aslo.org/lo/toc/vol_54/issue_6_part_2/2298.pdf.)

- Tulbure, M.G., Wimberly, M.C., Roy, D.P., and Henebry, G.M., 2011, Spatial and temporal heterogeneity of agricultural fires in the central United States in relation to land cover and land use: Landscape Ecology, v. 26, no. 2, p. 211–224, doi:10.1007/s10980-010-9548-0.
- Turner, D.P., Göckede, M., Law, B.E., Ritts, W.D., Cohen, W.B., Yang, Z., Hudiburg, T., Kennedy, R., and Duane, M., 2011, Multiple constraint analysis of regional land-surface carbon flux: Tellus B, v. 63, no. 2, p. 207–221, doi:10.1111/j.1600-0889.2011.00525.x.
- Turner, D.P., Ritts, W.D., Yang, Zhiqiang, Kennedy, R.E., Cohen, W.B., Duane, M.V., Thornton, P.E., and Law, B.E., 2011, Decadal trends in net ecosystem production and net ecosystem carbon balance for a regional socioecological system: Forest Ecology and Management, v. 262, no. 7, p. 1318–1325, doi:10.1016/j.foreco.2011.06.034.
- Turner, M.G., Baker, W.L., Peterson, C.J., and Peet, R.K., 1998, Factors influencing succession; Lessons from large, infrequent natural disturbances: Ecosystems, v. 1, no. 6, p. 511.
- U.S. Army Corps of Engineers, 2012, National Inventory of Dams: U.S. Army Corps of Engineers Web site accessed June 22, 2012, at http://geo.usace.army.mil/pgis/f?p=397:12.
- U.S. Census Bureau, 2012, TIGER, TIGER/Line and TIGER-related products: U.S. Census Bureau Web page accessed August 5, 2012, at http://www.census.gov/geo/www/tiger/.
- U.S. Climate Change Science Program, 2007, The first state of the carbon cycle report (SOCCR)—The North American carbon budget and implications for the global carbon cycle (King, A.W., Dilling, Lisa, Zimmerman, G.P., Fairman, D.M., Houghton, R.A., Marland, Gregg, Rose, A.Z., and Wilbanks, T.J., eds.): National Oceanic and Atmospheric Administration, National Climatic Data Center, 242 p., accessed October 23, 2012, at http://www.climatescience.gov/Library/sap/sap2-2/final-report/default.htm
- U.S. Congress, 2007, Energy Independence and Security Act of 2007—Public Law 110–140: U.S. Congress, 311 p., available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ140.110.pdf.
- U.S. Department of Agriculture, 2008, U.S. agriculture and forestry greenhouse gas inventory; 1990–2005: U.S. Department of Agriculture, Office of the Chief Economist, Technical Bulletin 1921, 161 p., at http://www.usda.gov/oce/climate_change/AFGGInventory1990_2005.htm

- U.S. Department of Agriculture, 2011, USDA agriculture and forestry greenhouse gas inventory; 1990–2008: U.S.
 Department of Agriculture, Office of the Chief Economist, Climate Change Program Office Technical Bulletin 1930, 162 p. (Also available at http://www.usda.gov/oce/climate_change/AFGGInventory1990_2008.htm.)
- U.S. Department of Agriculture, Economic Research Service, 2011a, ARMS farm financial and crop production practices; tailored reports: U.S. Department of Agriculture, Economic Research Service database, accessed August 16, 2011, at http://www.ers.usda.gov/Data/ARMS/app.
- U.S. Department of Agriculture, Economic Research Service, 2011b, Fertilizer use and price: U.S. Department of Agriculture, Economic Research Service database, accessed August 16, 2011, at http://www.ers.usda.gov/Data/ FertilizerUse.
- U.S. Department of Agriculture, Forest Service, 2011, Timber products output studies: U.S. Department of Agriculture, Forest Service Web page accessed August 29, 2012, at http://www.fia.fs.fed.us/program-features/tpo.
- U.S. Department of Agriculture, Forest Service, 2012a, Carbon inventory assessment: U.S. Department of Agriculture, Forest Service Web page accessed September 25, 2012, at http://www.fs.usda.gov/detail/r5/lan dmanagement/?cid=stelprdb5289572.
- U.S. Department of Agriculture, Forest Service, 2012b, Forest inventory and analysis national program: U.S. Department of Agriculture, Forest Service Web site accessed November 25, 2012, at http://www.fia.fs.fed.us/tools-data.
- U.S. Department of Agriculture, Forest Service, 2012c, FS Geodata Clearinghouse—Forest biomass across the lower 48 States and Alaska data: Department of Agriculture, Forest Service database accessed September 5, 2012, at http://fsgeodata.fs.fed.us/rastergateway/biomass/.
- U.S. Department of Agriculture, Forest Service, 2012d, Fuels Characterization Classification System: U.S. Department of Agriculture, Forest Service Web site accessed August 12, 2012, at http://www.fs.fed.us/pnw/fera/fccs/applications. shtml.
- U.S. Department of Agriculture, National Agricultural Statistics Service, 2011, Quick Stats: U.S. Department of Agriculture, National Agricultural Statistics Service database, accessed September 5, 2012, at http://www.nass.usda.gov/Quick Stats/.
- U.S. Department of Agriculture, Natural Resources
 Conservation Service, 2009, Soil Survey Geographic
 (SSURGO) Database: U.S. Department of Agriculture,
 Natural Resources Conservations Service database accessed
 August 14, 2012, at http://soildatamart.nrcs.usda.gov/.

- U.S. Department of Agriculture, Natural Resources
 Conservation Service, 2012, Watershed Boundary Dataset:
 U.S. Department of Agriculture, Natural Resources
 Conservation Service Web site accessed October 3, 2012, at http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/water/watersheds/dataset.
- U.S. Department of Agriculture and U.S. Department of the Interior, 1994, Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl: Portland, Ore., U.S. Bureau of Land Management, 78 p. (Also available at http://www.blm.gov/or/plans/nwfpnepa/ FSEIS-1994/newroda.pdf.)
- U.S. Department of the Interior, 2012, Federal Wildland Fire Occurrence Data: U.S. Department of the Interior database accessed August 12, 2012, at http://wildfire.cr.usgs.gov/firehistory/data.html.
- U.S. Environmental Protection Agency, 1999, Level III ecoregions of the continental United States: Corvallis, Ore.,
 U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, scale 1:7,500,000.
- U.S. Environmental Protection Agency, 2003, International analysis of methane and nitrous oxide abatement opportunities; Report to Energy Modeling Forum, Working Group 21: Washington, D.C., U.S. Environmental Protection Agency, 9 p., available at http://www.epa.gov/methane/pdfs/methodologych4.pdf. (Accessed September 25, 2012.)
- U.S. Environmental Protection Agency, 2009, National lakes assessment—A collaborative survey of the nation's lakes: Washington, D.C., U.S. Environmental Protection Agency, Office of Water and Office of Research and Development, EPA 841–R–09–001, 103 p., available at http://www.epa.gov/owow/LAKES/lakessurvey/pdf/nla_report_low_res.pdf. (Accessed October 23, 2012.)
- U.S. Environmental Protection Agency, 2012, Inventory of U.S. greenhouse gas emissions and sinks; 1990–2010: Washington, D.C., U.S. Environmental Protection Agency, Office of Atmospheric Programs, Report EPA 430–R–12–001, 481 p., accessed October 23, 2012, at http://epa.gov/climatechange/emissions/usinventoryreport.html.
- U.S. Geological Survey, 2010, Moderate Resolution Imaging Spectroradiometer (MODIS) Irrigated Agriculture Dataset for the United States (MIrAD-US): U.S. Geological Survey Web page accessed August 4, 2012, at http://earlywarning.usgs.gov/USirrigation/.
- U.S. Geological Survey, 2012a, Land cover trends data: U.S. Geological Survey, Land Cover Trends, dataset accessed May 31, 2012, at http://landcovertrends.usgs.gov.

- U.S. Geological Survey, 2012b, National Elevation Dataset: U.S. Geological Survey database accessed August 5, 2012, at http://ned.usgs.gov/.
- U.S. Geological Survey, 2012c, National Hydrography Dataset: U.S. Geological Survey database accessed August 6, 2012, at http://nhd.usgs.gov/.
- U.S. Geological Survey, 2012d, National Water Information Service: U.S. Geological Survey Web site accessed October 1, 2012, at http://waterdata.usgs.gov/nwis.
- United Nations Framework Convention on Climate Change, 1997, Kyoto Protocol to United Nations Framework Convention on Climate Change: Bonn, Germany, United Nations Framework Convention on Climate Change, 21 p. (Also available at http://unfccc.int/key_documents/kyoto_protocol/items/6445.php.)
- Van Auken, O.W., 2000, Shrub invasions of North American semiarid grasslands: Annual Review of Ecology and Systematics, v. 31, p. 197–215, doi:10.1146/annurev. ecolsys.31.1.197.
- van Heuven, S., Pierrot, D., Lewis, E., and Wallace, D.W.R., 2009, MATLAB program developed for CO₂ system calculations: Oak Ridge, Tenn., U.S. Department of Energy, Oak Ridge National Laboratory, Carbon Dioxide Information Analysis Center, ORNL/CDIAC-105b.
- van Vuuren, D.P., Lucas, P.L., and Hilderink, Henk, 2007, Downscaling drivers of global environmental change scenarios; Enabling use of the IPCC–SRES scenarios at the national and grid level: Global Environmental Change, v. 17, no. 1, p. 114–130, doi:doi.org/10.1016/j. gloenvcha.2006.04.004.
- van Vuuren, D.P., Smith, S.J., and Riahi, Keywan, 2010, Downscaling socioeconomic and emissions scenarios for global environmental change research; a review: Climate Change, v. 1, no. 3, p. 393–404.
- van der Werf, G.R., Randerson, J.T., Giglio, L., Collatz, G.J., Mu, M., Kasibhatla, P.S., Morton, D.C., DeFries, R.S., Jin, Y., and van Leeuwen, T.T., 2010, Global fire emissions and the contribution of deforestation, savanna, forest, agricultural, and peat fires (1997–2009): Atmospheric Chemistry and Physics, v. 10, no. 23, p. 11,707–11,735, doi:10.5194/acp-10-11707-2010.
- Vano, J.A., Scott, M.J., Voisin, Nathalie, Stöckle, C.O., Hamlet, A.F., Mickelson, K.E.B., Elsner, M.M., and Lettenmaier, D.P., 2010, Climate change impacts on water management and irrigated agriculture in the Yakima River Basin, Washington, USA: Climatic Change, v. 102, no. 1–2, p. 287–317, doi:10.1007/s10584-010-9856-z.

- Vogelmann, J.E., Howard, S.M., Yang, Limin, Larson, C.R., Wylie, B.K., and Van Driel, Nick, 2001, Completion of the 1990s National Land Cover Data Set for the conterminous United States: Photogrammetric Engineering and Remote Sensing, v. 67, no. 6, p. 650–652. (Also available at http://www.asprs.org/PE-RS-Journals-Past-Issues/PE-RS-Journals/PE-RS-Journals-2001/PE-RS-Journals-2001.html.)
- Wagner, F.H., 1978, Livestock grazing and the livestock industry, *in* Brokaw, H.P., ed., Wildlife and America: Washington, D.C., Council on Environmental Quality, p. 121–145.
- Warren, D.D., 1999, Production, prices, employment, and trade in Northwest forest industries, fourth quarter 1997: Portland, Ore., U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Resource Bulletin RB–230 99–080, 130 p.
- Washington, W.M., Weatherly, J.W., Meehl, G.A., Semtner, A.J., Jr., Bettge, T.W., Craig, A.P., Strand, W.G., Jr., Arblaster, J., Wayland, V.B., James, R., and Zhang, Y., 2000, Parallel climate model (PCM) control and transient simulations: Climate Dynamics, v. 16, no. 10–11, p. 755–774, doi:10.1007/s003820000079.
- Watson, R.T., Noble, I.R., Bolin, Bert, Ravindranath, N.H., Verardo, D.J., and Dokken, D.J., eds., 2000, Land use, land-use change and forestry: Cambridge, UK, Cambridge University Press, A Special Report of the Intergovernmental Panel on Climate Change, 375 p. (Also available at http://www.ipcc.ch/ipccreports/sres/land_use/index.php?idp=0.)
- Westerling, A.L., and Bryant, B.P., 2008, Climate change and wildfire in California: Climate Change, v. 87, suppl. 1, p. S231–S249, doi:10.1007/s10584-007-9363-z.
- Westerling, A.L., Hidalgo, H.G., Cayan, D.R., and Swetnam, T.W., 2006, Warming and earlier spring increase western U.S. forest wildfire activity: Science, v. 313, no. 5789, p. 940–943, doi:10.1126/science.1128834.
- Westerling, A.L., Turner, M.G., Smithwick, E.A.H., Romme, W.H., and Ryan. M.G., 2011, Continued warming could transform Greater Yellowstone fire regimes by mid-21st century: Proceedings of the National Academy of Sciences, v. 108, no. 32, p. 13,165–13,170, doi:10.1073/pnas.1110199108.
- Wheatcroft, R.A., Goni, M.A., Hatten, J.A., Pasternack, G.B., and Warrick, J.A., 2010, The role of effective discharge in the ocean delivery of particulate organic carbon by small, mountainous river systems: Limnology and Oceanography, v. 55, no. 1, p. 161–171.

- Wickham, J.D., Stehman, S.V., Smith, J.H., and Yang, L., 2004, Thematic accuracy of the 1992 National Land-Cover Data for the western United States: Remote Sensing of Environment, v. 91, no. 3–4, p. 452–468.
- Wickland, K.P., Striegl, R.G., Mast, M.A., and Clow, D.W., 2001, Carbon gas exchange at a southern Rocky Mountain wetland, 1996–1998: Global Biogeochemical Cycles, v. 15, no. 2, p. 321–335.
- Wiedinmyer, Christine, and Hurteau, M.D., 2010, Prescribed fire as a means of reducing forest carbon emissions in the western United States: Environmental Science and Technology, v. 44, no. 6, p. 1926–1932, doi:10.1021/es902455e.
- Wiedinmyer, Christine, and Neff, J.C., 2007, Estimates of CO₂ from fires in the United States; Implications for carbon management: Carbon Balance and Management, v. 2, 12 p., doi:10.1186/1750-0680-2-10.
- Williams, C.A., Collatz, G.J., Masek, Jeffrey, and Goward, S.N., 2012, Carbon consequences of forest disturbance and recovery across the conterminous United States: Global Biogeochemical Cycles, v. 26, 13 p., doi:10.1029/2010gb003947.
- Wood, A.W., Maurer, E.P., Kumar, A., and Lettenmaier, D.P., 2002, Long-range experimental hydrologic forecasting for the eastern United States: Journal of Geophysical Research—Atmospheres, v. 107, 15 p., doi:10.1029/2001JD000659.
- Wu, L.S., Wood, Yvonne, Jiang, P.P., Li, L.Q., Pan, G.X., Lu, J.H., Chang, A.C., and Enloe, H.A., 2008, Carbon sequestration and dynamics of two irrigated agricultural soils in California: Soil Science Society of America Journal, v. 72, no. 3, p. 808–814, doi:10.2136/sssaj2007.0074.
- Wu, Yiping, and Liu, Shuguang, 2012, Automating calibration, sensitivity and uncertainty analysis of complex models using the R package Flexible Modeling Environment (FME); SWAT as an example: Environmental Modelling & Software, v. 31, p. 99–109, doi:10.1016/j. envsoft.2011.11.013.
- Xian, G., Homer, C., and Fry, J., 2009, Updating the 2001 National Land Cover Database land cover classification to 2006 by using Landsat imagery change detection methods: Remote Sensing of Environment, v. 113, no. 6, p. 1133–1147.

- Xiao, Jingfeng, Zhuang, Qianlai, Law B.E., Baldocchi, D.D., Chen, Jiquan, Richardson, A.D., Melillo, J.M., Davis, K.J., Hollinger, D.Y., Wharton, Sonia, Oren, Ram, Noormets, Asko, Fischer, M.L., Verma, S.B., Cook, D.R., Sun, Ge, McNulty, Steve, Wofsy, S.C., Bolstad, P.V., Burns, S.P., Curtis, P.S., Drake, B.G., Falk, Matthias, Foster, D.R., Gu, Lianhong, Hadley, J.L., Katul, G.G., Litvak, Marcy, Ma, Siyan, Martin, T.A., Matamala, Roser, Meyers, T.P., Monson, R.K., Munger, J.W., Oechel, W.C., Paw U, K.T., Schmid, H.P., Scott, R.L., Starr, Gregory, Suyker, A.E., and Torn, M.S., 2011, Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations: Agricultural and Forest Meteorology, v. 151, no. 1 p. 60–69, doi:10.1016/j.agrformet.2010.09.002.
- Zhao, Maosheng, Heinsch, F.A., Nemani, R.R., and Running, S.W., 2005, Improvements of the MODIS terrestrial gross and net primary production global data set: Remote Sensing of Environment, v. 95, no. 2, p. 164–176, doi:10.1016/j. rse.2004.12.011.
- Zhu, Zhiliang, ed., Bergamaschi, Brian, Bernknopf, Richard, Clow, David, Dye, Dennis, Faulkner, Stephen, Forney, William, Gleason, Robert, Hawbaker, Todd, Liu, Jinxun, Liu, Shuguang, Prisley, Stephen, Reed, Bradley, Reeves, Matthew, Rollins, Matthew, Sleeter, Benjamin, Sohl, Terry, Stackpoole, Sarah, Stehman, Stephen, Striegl, Robert, Wein, Anne, and Zhu, Zhiliang, 2010, A method for assessing carbon stocks, carbon sequestration, and greenhouse-gas fluxes in ecosystems of the United States under present conditions and future scenarios: U.S. Geological Survey Scientific Investigations Report 2010–5233, 188 p. (Also available at http://pubs.usgs.gov/sir/2010/5233/.) (Supersedes U.S. Geological Survey Open-File Report 2010–1144.)
- Zhu, Zhiliang, ed., Bouchard, Michelle, Butman, David, Hawbaker, Todd, Li, Zhengpeng, Liu, Jinxun, Liu, Shuguang, McDonald, Cory, Reker, Ryan, Sayler, Kristi, Sleeter, Benjamin, Sohl, Terry, Stackpoole, Sarah, Wein, Anne, and Zhu, Zhiliang, 2011, Baseline and projected future carbon storage and greenhouse-gas fluxes in the Great Plains region of the United States: U.S. Geological Survey Professional Paper 1787, 28 p. (Also available at http://pubs.usgs.gov/pp/1787/.)