6 REFERENCES

ACHP (Advisory Council on Historic Preservation), 2004, *Protection of Historic Properties* (*Incorporating Amendments Effective August 5, 2004*), 36 CFR Part 800. Available at http://www.achp.gov/regs-rev04.pdf. Accessed Sept. 2, 2016.

Ackerman, M.W., 2008, 2006 Native Fish Monitoring Activities in the Colorado River, Grand Canyon, Annual Report, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Ackerman, M.W., D. Ward, T. Hunt, S. Rogers, D.R. Van Haverbeke, and A. Morgan, 2006, 2006 Grand Canyon Long-term Fish Monitoring, Colorado River, Diamond Creek to Lake Mead, 2006 Trip Report, prepared for U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

ADEQ (Arizona Department of Environmental Quality), 2006a, *Recommendations to Address Colorado River Water Quality*, Water Quality Division, Clean Colorado River Alliance, Jan.

ADEQ, 2006b, *Final Arizona Greenhouse Gas Inventory and Reference Case Projections 1990–2020*, March. Available at http://www.azclimatechange.gov/download/O40F9293.pdf. Accessed Oct. 29, 2013.

Albrecht, B., R. Kegerries, J.M. Barkstedt, W.H. Brandenburg, A.L. Barkalow, S.P. Platania, M. McKinstry, B. Healy, J. Stolberg, and Z. Shattuck, 2014, *Razorback Sucker Xyrauchen texanus Research and Monitoring in the Colorado River Inflow Area of Lake Mead and the Lower Grand Canyon, Arizona and Nevada*, final report prepared by BIO-WEST, Inc., for U.S. Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah.

Alpine, A.E. (ed.), 2010, *Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona*, Scientific Investigation Report 2010-5025, U.S. Geological Survey.

Alvarez, L.V., and M.W. Schmeeckle, 2013, "Erosion of River Sandbars by Diurnal Stage Fluctuations in the Colorado River in the Marble and Grand Canyons: Full-Scale Laboratory Experiments," *River Research and Applications* 29(7):839–854. DOI:10.1002/rra.2576.

AMEC Americas Limited, 2005, *Mackenzie Gas Project Effects of Noise on Wildlife*, prepared for Imperial Oil Resources Ventures Limited, July. Available at http://ulpeis.anl.gov/documents/ dpeis/references/pdfs/AMEC Americas 2005.pdf. Accessed April 1, 2015.

Andersen, M.E., 2009, *Status and Trends of the Grand Canyon Population of the Humpback Chub*, U.S. Geological Survey Fact Sheet 2009-3035. Available at http://pubs.usgs.gov/fs/2009/3035. Accessed Jan. 21, 2015.

Andersen, M.E., M.W. Ackerman, K.D. Hilwig, A.E. Fuller, and P.D. Alley, 2010, "Evidence of Young Humpback Chub Overwintering in the Mainstem Colorado River, Marble Canyon, Arizona, USA," *The Open Fish Science Journal* 3:42–50.

Anderson, C.R., and S.A. Wright, 2007, "Development and Application of a Water Temperature Model for the Colorado River Ecosystem below Glen Canyon Dam, Arizona," pp. 13–26 in *The American Institute of Hydrology and Technology, 2007 Annual Meeting and International Conference—Integrated Watershed Management—Partnerships in Science, Technology and Planning*, T. Hromadka (ed.), Reno, Nev., April 22–25.

Anderson, K.C., 2006, *Geoarchaeological Investigations of 53 Sites between Glen Canyon Dam and Paria Riffle*, Navajo Nation Archaeology Department Report No. 05-229, U.S. Bureau of Reclamation.

Anderson, L.S., and G.A. Ruffner, 1987, *Effects of the Post-Glen Canyon Dam Flow Regime on the Old High Water Line Plant Community along the Colorado River in Grand Canyon*, Terrestrial Biology of the Glen Canyon Environmental Studies, NTIS PB88-183504, Glen Canyon Environmental Studies, Flagstaff, Ariz.

Anderson, B.W., 2012, "Four Decades of Research on the Lower Colorado River," *Bulletin of the Revegetation and Wildlife Management Center* 5(1):1–145.

Anderson, M., 2012, "Characteristics of Lees Ferry Fishery," personal communication from Anderson (Arizona Game and Fish Department) to J. May (Argonne National Laboratory), Sept. 27.

Andrews, E.D., 1991, "Sediment Transport in the Colorado River Basin," pp. 43–60 in *Colorado River Ecology and Dam Management*, proceedings of a symposium, May 24–25, 1990, Santa Fe, N.Mex., N.R. Council (ed.), National Academy Press, Washington, D.C.

Angradi, T.R., 1994, "Trophic Linkages in the Lower Colorado River – Multiple Stable Isotope Evidence," *Journal of the North American Benthological Society* 13(4):479–495.

Angradi, T.R., and D.M. Kubly, 1993, "Effects of Atmospheric Exposure on Chlorophyll *a*, Biomass and Productivity of the Epilithon of a Tailwater River," *Regulated Rivers Research & Management* 8:345–358.

Angradi, T.R., and D.M. Kubly, 1994, "Concentration and Transport of Particulate Organic Matter below Glen Canyon Dam on the Colorado River, Arizona," *Journal of the Arizona-Nevada Academy of Science* 28(1/2):12–22.

Angradi, T.R., R.W. Clarkson, D.A. Kubly, and S.A. Morgensen, 1992, *Glen Canyon Dam and the Colorado River: Responses of the Aquatic Biota to Dam Operations*, Glen Canyon Environmental Studies Report, Arizona Game and Fish Department, Phoenix, Ariz.

ARB (Air Resources Board), 2014, *California Greenhouse Gas Emission Inventory: 2000–2012 (2014 Edition)*, California Environmental Protection Agency, May. Available at http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf.

Argonne (Argonne National Laboratory), 2012, *Summary of Public Scoping Comments on the Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement*, prepared for Bureau of Reclamation and National Park Service by Environmental Science Division, Argonne National Laboratory, March.

Arizona Council of Trout Unlimited, Inc., 2015, *Lees Ferry Recreational Trout Fishery Management Recommendations: The Voice of Lees Ferry Recreational Anglers, Guides, and Businesses*, in coordination with Theodore Roosevelt Conservation Partnership, the International Federation of Fly Fishers, Northern Arizona Fly Casters, Arizona Fly Casters, Desert Fly Casters, Anglers United, the Arizona Sportsmen for Wildlife Conservation, and Marble Canyon guides and businesses, August. Available at http://www.trcp.org/images/uploads/wygwam/ Lees_Ferry_Recommedations_-final-_8-2015.pdf, Accessed Nov. 5, 2015.

Arizona Department of Administration, 2013, "Population Projections," Office of Employment and Population Statistics. Available at http://www.workforce.az.gov/population-projections.aspx. Accessed Jan. 13, 2015.

ARS (Air Resource Specialists, Inc.), 2013, *Western Regional Air Partnership, Regional Haze Rule, Reasonable Progress Summary Report*, prepared by ARS, Fort Collins, Colo., for Western Governors' Association, Denver, Colo., June 28. Available at http://www.wrapair2.org/RHRPR.aspx. Accessed Feb. 20, 2014.

Austin, D., I. Bulletts, B. Drye, M. Wall, D. Kennedy, and A. Phillips, III, 1999, *Southern Paiute Consortium Colorado River Corridor Monitoring and Education Program Summary Report*, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Austin, D., A. Phillips, III, D. Seibert, and K. Bulletts, 2007, *Southern Paiute Participation in the Glen Canyon Adaptive Management Program, A Ten Year Review*, prepared by Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for Bureau of Reclamation, Salt Lake City, Utah, Jan. 29.

Ayers, A.D. and T. McKinney, 1996, *Effects of Glen Canyon Dam Operations on Gammarus lacustris in the Glen Canyon Dam Tailwater*, Arizona Game and Fish Department, Phoenix, Ariz., Feb.

Ayers, A.D., T. McKinney, and R.S. Rogers, 1998, "*Gammarus lacustris* Sars (Crustacea: Amphipoda) in the Tailwater of a Regulated River," *Journal of the Arizona-Nevada Academy of Science* 31(2):83–96.

AZGFD (Arizona Game and Fish Department), 1996, *The Ecology of Grand Canyon Backwaters*, Cooperative Agreement Report (9-FC-40-07940) to Glen Canyon Environmental Studies, Flagstaff, Ariz.

AZGFD, 2001a, "*Gila cypha*. Humpback Chub," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2001b, "*Catostomus latipinnis*. Flannelmouth Sucker," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2001c, "*Oxyloma haydeni kanabensis* Kanab Ambersnail," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/ Oxylhaka.fo_004.pdf. Accessed June 30, 2016.

AZGFD, 2002a, "*Xyrauchen texanus*. Razorback Sucker," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2002b, "*Catostomus discobolus yarrowi*. Zuni bluehead Sucker," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2002c, "*Rhinichthys osculus*. Speckled Dace," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2002d, "*Aquila chrysaetos* Golden Eagle," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Aquichry.d_002.pdf. Accessed June 30, 2016.

AZGFD, 2002e, "*Empidonax traillii extimus* Southwestern Willow Flycatcher," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/ Empitrex.d_004.pdf. Accessed June 30, 2016.

AZGFD, 2002f, "*Pandion haliaetus* Osprey," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Panhali.d_001.pdf. Accessed June 30, 2016.

AZGFD, 2002g, "*Falco peregrinus anatum* American Peregrine Falcon," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/ Falcpean.fi_006.pdf. Accessed June 30, 2016. AZGFD, 2002h, "*Lithobates pipiens* Northern Leopard Frog," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Lithpipi.fi.pdf. Accessed June 30, 2016.

AZGFD, 2003a, "*Catostomus discobolus*. Bluehead Sucker," Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz.

AZGFD, 2003b, "*Euderma maculatum* Spotted bat," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Eudemacu.fi_003.pdf. Accessed June 30, 2016.

AZGFD, 2006a, Arizona Statewide Conservation Agreement for Roundtail Chub (Gila robusta), Headwater Chub (Gila nigra), Flannelmouth Sucker (Catostomus latipinnis), Little Colorado River Sucker (Catostomus spp.), Bluehead Sucker (Catostomus discobolus), and Zuni Bluehead Sucker (Catostomus discobolus yarrow), Wildlife Management Division, Nongame Branch, Native Fish Program, Phoenix, Ariz.

AZGFD, 2006b, "*Rallus longirostris yumanensis* Yuma Clapper Rail," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/ Rallloyu.fi_001.pdf. Accessed June 30, 2016.

AZGFD, 2008, "*Gymnogyps californianus* California Condor," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Gymncali.f_002.pdf. Accessed June 30, 2016.

AZGFD, 2011a, "*Haliaeetus leucocephalus* Bald Eagle," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at http://www.azgfd.gov/w_c/edits/documents/Halileuc.fi_000.pdf. Accessed June 30, 2016.

AZGFD, 2011b, "*Coccyzus americanus* Yellow-billed Cuckoo," unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Ariz. Available at Coccamer.fi_000.pdf. Accessed June 30, 2016.

AZGFD, 2012, *Arizona's State Wildlife Action Plan: 2012-2022*, Arizona Game and Fish Department, Phoenix, Ariz., May 16.

AZGFD, 2013, "Heritage Data Management System, Plant Abstracts," unpublished abstracts compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, Arizona. Available at http://www.azgfd.gov/w_c/edits/hdms_abstracts.shtml. Accessed April 14, 2014.

Bailie, A., M. Lazarus, T. Peterson, K. Hausker, P. Kuch, E. Williams, and S. Roe, 2006, *Appendix D: New Mexico Greenhouse Gas Inventory and Reference Case Projections,* 1990–2020, prepared for the New Mexico Environmental Department by the Center for Climate Strategies, Nov. Available at http://www.nmenv.state.nm.us/cc/documents/CCAGFinalReport-AppendixD-EmissionsInventory.pdf. Accessed Oct. 29, 2013.

Bailie, A., S. Roe, H. Lindquist, and A. Jamison, 2007, *Montana Greenhouse Gas Inventory and Reference Case Projections 1990–2020*, Center for Climate Strategies, Sept. Available at http://deq.mt.gov/ClimateChange/Data/pdfs/GreenhouseGasInventory.pdf.

Bailie, A., R. Strait, S. Roe, A. Jamison, and H. Lindquist, 2007, *Wyoming Greenhouse Gas Inventory and Reference Case Projections 1990–2020*, prepared for the Wyoming Department of Environmental Quality by the Center for Climate Strategies. Available at http://www.wrapair.org/ClimateChange/WY_GHG_I&F_Report_WRAP_08-20-07.pdf. Accessed Oct. 29, 2013.

Baker, T., 2013, *Contributions to the Glen Canyon National Recreation Area Cultural Resources Metric*, National Park Service, Dec. 6.

Balsom, J., 2014, personal communication from Balsom (Deputy Chief, Science and Resource Management, Grand Canyon National Park) to J. Abplanalp (Argonne National Laboratory), Dec. 16.

Bastow, J.L., J.L. Sabo, J.C. Finlay, and M.E. Power, 2002, "A Basal Aquatic-Terrestrial Trophic Link in Rivers: Algal Subsidies via Shore-Dwelling Grasshoppers," *Oecologia* 131:261–268.

Bateman, H.L., P.L. Nagler, and E.P. Glenn, 2013, "Plot- and Landscape-level Changes in Climate and Vegetation Following Defoliation of Exotic Saltcedar (*Tamarix* sp.) from the Biocontrol Agent *Diorhabda carinulata* along a Stream in the Mojave Desert (USA)," *Journal of Arid Environments* 89:16–20.

Bauer, B.O., and J.C. Schmidt, 1993, "Waves and Sandbar Erosion in the Grand Canyon: Applying Coastal Theory to a Fluvial System," *Annals of the Association of American Geographers* 83:475–497.

Baxter, C.V., K.D. Fausch, and W.C. Saunders, 2005, "Tangled Webs: Reciprocal Flows of Invertebrate Prey Link Streams and Riparian Zones," *Freshwater Biology* 50:201–220.

Beckwith, D., 2011, "Colorado River Water Uses: 21st Century Solutions for the Colorado River Basin's Unbalanced Uses," *The Water Report* 93:14.

Behn, K.E., T.A. Kennedy, and R.O. Hall, Jr., 2010, *Basal Resources in Backwaters of the Colorado River below Glen Canyon Dam—Effects of Discharge Regimes and Comparison with Mainstem Depositional Environments*, U.S. Geological Survey Open-File Report 2010-1075. Available at http://pubs.usgs.gov/of/2010/1075. Accessed Jan. 21, 2015.

Belknap, B., and L. Belknap-Evans, 2012, *Belknap's Waterproof Grand Canyon River Guide*, Westwater Books, Evergreen, Colo.

Belnap, J., R.L. Reynolds, M.C. Reheis, S.L. Phillips, F.E. Urban, and H.L. Goldstein, 2009, "Sediment Losses and Gains across a Gradient of Livestock Grazing and Plant Invasion in a Cool, Semi-arid Grassland, Colorado Plateau, USA," *Aeolian Research* 1:27–43.

Belote, R.T., L.J. Makarick, M.J. C. Kearsley, and C. L. Lauver, 2010, "Tamarisk Removal in Grand Canyon National Park: Changing the Native-Non-native Relationship as a Restoration Goal," *Ecological Restoration* 28(4):449–459.

Bendt, R.H, 1957, "Status of Bighorn Sheep in Grand Canyon National Park and Monument," *Desert Bighorn Council Transactions* 1:16–19.

Benenati, E.P., J.P. Shannon, D.W. Blinn, K.P. Wilson, and S.J. Hueftle, 2000, "Reservoir-River Linkages: Lake Powell and the Colorado River, Arizona," *Journal of the North American Benthological Society* 19:742–755.

Benenati, E.P., J.P. Shannon, J.S. Hagan, and D.W. Bean, 2001, "Drifting Fine Particulate Organic Matter below Glen Canyon Dam in the Colorado River," *Arizona Journal of Freshwater Ecology* 16(2):235-248.

Benenati, E.P., J.P. Shannon, G.A. Haden, K. Straka, and D.W. Blinn, 2002, *Monitoring and Research: The Aquatic Food Base in the Colorado River, Arizona during 1991–2001*, final report, Merriam-Powell Center for Environmental Research, Department of Biological Sciences, Northern Arizona University, Flagstaff, Ariz., Sept. 30.

Benenati, P.L, J.P. Shannon, and D.W. Blinn, 1998, "Desiccation and Recolonization of Phytobenthos in a Regulated Desert River: Colorado River at Lees Ferry, Arizona, USA," *Regulated Rivers: Research & Management* 14:519–532.

Benson, A.J., M.M. Richerson, E. Maynard, J. Larson, and A. Fusaro, 2013, "*Dreissena rostriformis bugensis*," USGS Nonindigenous Aquatic Species Database, Gainesville, Fla. Available at http://nas.er.usgs.gov/queries/factsheet.aspx?speciesid=95. Accessed April 12, 2013.

Berry, C.R., Jr., G.J. Babey, and T. Shrader, 1991, "Effect of *Lernaea cyprinacea* (Crustacea: Copepoda) on Stocked Rainbow Trout (*Oncorhynchus mykiss*)," *Journal of Wildlife Diseases* 27(2):206–213.

Beyers, D.W., C. Sodergren, J.M. Bundy, and K.R. Bestgen, 2001, *Habitat Use and Movement of Bluehead Sucker, Flannelmouth Sucker, and Roundtail Chub in the Colorado River*, Contribution 121, Larval Fish Laboratory, Department of Fishery and Wildlife Biology, Colorado State University, Fort Collins, Colo.

Bezzerides, N., and K. Bestgen, 2002, *Status Review of Roundtail Chub* Gila robusta, *Flannelmouth Sucker* Catostomus latipinnis, *and Bluehead Sucker* Catostomus discobolus *in the Colorado River Basin*, final report, Larval Fish Lab Contribution 118, Colorado State University, Ft. Collins, Colo.

Bills, D.J., F.D. Tillman, D.W. Anning, R.C. Antweiler, and T.F. Kraemer, 2010, "Historical and 2009 Water Chemistry of Wells, Perennial and Intermittent Streams, and Springs in Northern Arizona," Chapter C in *Hydrological, Geological, and Biological Characterization of Breccia Pipe Uranium Deposits in Northern Arizona*, A.E. Alpine (ed.), Scientific Investigations Report 2010-5025, U.S. Geological Survey.

Bishop, R.C., K.J. Boyle, M.P. Welsh, R.M. Baumgartner, and P.R. Rathbun, 1987, *Glen Canyon Dam Releases and Downstream Recreation: An Analysis of User Preferences and Economic Values*, Glen Canyon Environmental Studies, Flagstaff, Ariz., Jan.

Blaise, J., 2012, personal communication from Blaise (Glen Canyon National Recreation Area, National Park Service) to J. May (Argonne National Laboratory), Sept. 18.

Blaise, J., 2014, personal communication from Blaise (Glen Canyon National Recreation Area, National Park Service) to J. May (Argonne National Laboratory), Feb. 24.

Bleich, V.C., J.D. Wehausen, and S.A. Holl, 1990, "Desert-Dwelling Mountain Sheep: Conservation Implications of a Naturally Fragmented Distribution," *Conservation Biology* 4:383–390.

Blinn, D.W., and G.A. Cole, 1991, "Algal and Invertebrate Biota in the Colorado River: Comparison of Pre- and Post-Dam Conditions," pp. 85–104 in *Colorado River Ecology and Dam Management*, prepublication copy, proceedings of a symposium, May 24–25, 1990, Santa Fe, N.Mex., National Academy Press, Washington, D.C.

Blinn, D.W., and D.E. Ruiter, 2009, "Caddisfly (Trichoptera) Assemblages along Major River Drainages in Arizona," *Western North American Naturalist* 69(3):299–308.

Blinn, D.W., C. Runck, D.A. Clark, and J.N. Rinne, 1993, "Effects of Rainbow Trout Predation on Little Colorado Spinedace," *Transactions of the American Fisheries Society* 122:139–143.

Blinn, D.W., J.P. Shannon, L.E. Stevens, and J.P. Carder, 1995, "Consequences of Fluctuating Discharge for Lotic Communities," *Journal of the North American Benthological Society* 14(2):233–248.

Blinn, D.W., J.P. Shannon, P.L. Benenati, and K.P. Wilson, 1998, "Algal Ecology in Tailwater Stream Communities: The Colorado River below Glen Canyon Dam, Arizona," *Journal of Phycology* 34:734–740.

Blinn, D.W., J.P. Shannon, K.P. Wilson, C. O'Brien, and P.L. Benenati, 1999, "Response of Benthos and Organic Drift to a Controlled Flood," pp. 259–272 in *The Controlled Flood in Grand Canyon*, Geophysical Monograph 110.

Blinn, D.W., L.E. Stevens, and J.P. Shannon, 1992, *The Effects of Glen Canyon Dam on the Aquatic Food Base in the Colorado River Corridor in Grand Canyon, Arizona*, Glen Canyon Environmental Study-II-02.

Blinn, D.W., R. Truitt, and A. Pickart, 1989, "Response of Epiphytic Diatom Communities from the Tailwaters of Glen Canyon Dam, Arizona, to Elevated Water Temperature," *Regulated Rivers: Research & Management* 4:91–96.

BLM (Bureau of Land Management), 2011, Northern Arizona Proposed Withdrawal Final Environmental Impact Statement, BLM/AZ/PL-11/002, Arizona Strip District Office, St. George, Utah, Oct.

Block, D., and M.H. Redsteer, 2011, *A Dryland River Transformed—the Little Colorado, 1936–2010*, U.S. Geological Survey Fact Sheet 2011–3099, November. Available at http://pubs.usgs.gov/fs/2011/3099/. Accessed Feb. 19, 2015.

Bodensteiner, L.R., and W.M. Lewis, 1992, "Role of Temperature, Dissolved Oxygen, and Backwaters in the Winter Survival of Freshwater Drum (*Aplodinotus grunniens*) in the Mississippi River," *Canadian Journal of Fisheries and Aquatic Sciences* 49:173–184.

Bowden, T.S., 2008, "Mexican Spotted Owl Reproduction, Home Range, and Habitat Associations in Grand Canyon National Park", M.S. thesis, Montana State University, Bozeman, Mont.

Bowers, B.E., R.H. Webb, and E.A. Pierson, 1997, "Succession of Desert Plants on Debris Flow Terraces, Grand Canyon, Arizona, U.S.A.," *Journal of Arid Environments* 36:67–86.

Brattstrom, B.H., and M.C. Bondello, 1983, "Effects of Off-Road Vehicle Noise on Desert Vertebrates," pp. 167–206 in *Environmental Effects of Off-Road Vehicles, Impacts and Management in Arid Region*, R.H. Webb and H.G. Wilshire (eds.), Springer-Verlag, New York, N.Y.

Brekke, L.D., J.E. Kiang, J.R. Olsen, R.S. Pulwarty, D.A. Raff, D.P. Turnipseed, R.S. Webb, and K.D. White, 2009, *Climate Change and Water Resources Management: A Federal Perspective*, Circular 1331, U.S. Geological Survey. Available at http://pubs.usgs.gov/circ/1331/Circ1331.pdf. Accessed Feb. 24, 2015.

Brian, N.J., 2000, *A Field Guide to the Special Status Plants of Grand Canyon National Park*, Science Center, Grand Canyon National Park, Grand Canyon, Ariz. Available at http://www.nps.gov/grca/naturescience/plants.htm. Accessed Jan. 15, 2015.

Brown, B.T., and R.R. Johnson, 1985, *Glen Canyon Dam, Fluctuating Water Levels, and Riparian Breeding Birds: The Need for Management Compromise on the Colorado River in Grand Canyon*, North American Riparian Conference, Tucson, Ariz. April 16–19, 1985.

Brown, B.T., and R.R. Johnson, 1988, "The Effects of Fluctuating Flows on Breeding Birds," in *Glen Canyon Environmental Studies Executive Summaries of Technical Reports*, Bureau of Reclamation, Salt Lake City, Utah.

Brown, B.T., and L.E. Stevens, 1997, "Winter Bald Eagle Distribution Is Inversely Correlated with Human Activity along the Colorado River, Arizona," *Journal of Raptor Research* 31(1):7–10.

Brown, B.T., S.W. Carothers, and R.R. Johnson, 1983, "Breeding Range Expansion of Bell's Vireo in Grand Canyon, Arizona," *Condor* 85:499–500.

Brown, B.T., R. Mesta, L.E. Stevens, and J. Weisheit, 1989, "Changes in Winter Distribution of Bald Eagles along the Colorado River in Grand Canyon, Arizona," *Journal of Raptor Research* 23:110–113.

Brown, B.T., L.E. Stevens, and T.A. Yates, 1998, "Influences of Fluctuating River Flows on Bald Eagle Foraging Behavior," *The Condor* 100:745–748.

Brown, G.M. (ed.), 1991, Archaeological Data Recovery at San Juan Coal Company's LaPlata Mine, San Juan County, New Mexico, Technical Report No. 355, Mariah Associates, Inc., Albuquerque, N.Mex.

Brugge, D.M., 1983, "Navajo Prehistory and History to 1850," in *Handbook of North American Indians*, 10:489–501, W.C. Sturtevant (ed.), Smithsonian Institution, Washington, D.C.

Budhu, M., and R. Gobin, 1994, "Instability of Sandbars in Grand Canyon," *Journal of Hydraulic Engineering* 120(8):919–933.

Bulletts, C., S. Martineau, G. Stanfield, A. Phillips, III, K. Bulletts, and D. Austin, 2010, 2010 Southern Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Bulletts, C., M. Osife, I. Bulletts, A. Phillips, III, C. Cannon, K. Bulletts, and D. Austin, 2011, 2011 Southern Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Bulletts, C., M. Osife, S. Anderson, A.M. Phillips, III, C. Cannon, K. Bulletts, and D. Austin, 2012, 2012 Southern Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Oct.

Bulletts, I., C. Bulletts, D. Austin, and A. Phillips, III, 2008, 2008 Southern Paiute Consortium Colorado River Corridor Resource Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Sept.

Bulletts, I., T. Snow, E. Posvar, R. Snow, J. Bow, E. Dean, A. Phillips, III, and D. Austin, 2003, 2003 Southern Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Dec.

Bulletts, I., T. Snow, E. Posvar, K. Rogers, J. Piekielek, M. Rogers, M. Snow, A. Phillips, III,
D. Austin, L. Benson, P. Bushhead, S. Cisneros, J. Gaines, T. O'Neil Pikyavit, and M. Stanfield,
2004, 2004 Southern Paiute Consortium Colorado River Corridor Resources Evaluation
Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring,
Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson,
Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Bulow, F.J., J.R. Winningham, and R.C. Hooper, 1979, "Occurrence of Copepod Parasite *Lernaea cyprinacea* in a Stream Fish Population," *Transactions of the American Fisheries Society* 108:100–102.

Bunch, A.J., A.S. Makinster, L.A. Avery, W.T. Stewart, and W.R. Persons, 2012, *Colorado River Fish Monitoring in Grand Canyon, Arizona – 2011 Annual Report*, submitted to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Bunch, A.J., R.J. Osterhoudt, M.C. Anderson, and W.T. Stewart, 2012, *Colorado River Fish Monitoring in Grand Canyon, Arizona – 2012 Annual Report*, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Bunzel, R., 1932, "Introduction to Zuni Ceremonialism," pp. 467–544 in *Forty-seventh Annual Report of the Bureau of American Ethnology*, Smithsonian Institution, Washington, D.C.

Camazine, S., 1978, "Native Zuni Indian Medical Practices with Special Reference to the Pharmacological and Physiological Bases of Plant Remedies," M.D. thesis, Harvard University, M.I.T. Division of Health Sciences and Technology, Cambridge, Mass. Carlisle, D., S. Gutreuter, C.C. Holdren, B. Roberts, and C.T. Robinson (panel), 2012, *Final Report of the Aquatic Food Base Study and Protocol Evaluation Panel*, Grand Canyon Monitoring and Research Center, Protocols Evaluation Program, Flagstaff, Ariz., Jan. 27.

Carothers, S.W., 1977, *Biology and Ecology of Feral Burros* (Equus sinus) *at Grand Canyon National Park, Arizona*, Final Research Report prepared for U.S. Department of Interior, National Park Service, Grand Canyon National Park, Ariz., Nov. 1.

Carothers, S.W., and S.W. Aitchison (eds.), 1976, *An Ecological Survey of the Riparian Zone of the Colorado River between Lees Ferry and the Grand Wash Cliffs, Arizona*, final report to U.S. Department of the Interior, National Park Service, Grand Canyon National Park, Ariz.

Carothers, S.W., and B.T. Brown, 1991, *The Colorado River Through Grand Canyon: Natural History and Human Change*, University of Arizona Press, Tucson, Ariz.

Carothers, S.W., and C.O. Minckley, 1981, *A Survey of the Aquatic Flora & Fauna of the Grand Canyon*, Final Report, U.S. Department of the Interior, Water and Power Resources Service, Boulder City, Nev., Feb. 4.

Carrell, T., 1987, Submerged Cultural Resources Trip Report: Charles H. Spencer's Mining Operation and Paddle Wheel Steamboat, Glen Canyon National Recreation Area, Southwest Cultural Resources Center Professional Papers Number 13, Santa Fe, N.Mex.

Casebier, D.G., 1980, *Camp Beals Springs and the Hualapai Indians*, Tales of the Mojave Road Publishing Co., Goffs, Calif.

CCS (Center for Climate Strategies), 2007, *Washington State Greenhouse Gas Inventory and Reference Case Projections, 1990–2020*, prepared in collaboration with the Washington State Department of Ecology (Ecology) and the Washington Department of Community, Trade and Economic Development (CTED) for the Washington Climate Advisory Team (CAT), Dec. Available at http://www.ecy.wa.gov/climatechange/docs/WA_GHGInventoryReferenceCase Projections_1990-2020.pdf.

CCSP (U.S. Climate Change Science Program), 2008a, *Abrupt Climate Change: A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research*, P.U. Clark, A.J. Weaver (coordinating lead authors); E. Brook, E.R. Cook, T.L. Delworth, and K. Steffen (chapter lead authors), U.S. Geological Survey, Reston, Va.

CCSP, 2008b, Abrupt Climate Change: Synthesis and Assessment Report, Summary and Findings, U.S. Geological Survey, Reston, Va.

CEQ (Council on Environmental Quality), 1978, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.* 40 CFR Parts 1500-1508. Available at https://ceq.doe.gov/ceq_regulations/Council_on_Environmental_Quality_Regulations.pdf. Accessed Sept. 2, 2016.

CEQ, 1997, *Environmental Justice: Guidance under the National Environmental Policy Act.* Available at http://www.epa.gov/environmentaljustice/ resources/policy/ej guidance nepa ceq1297.pdf. Accessed Jan. 13, 2015.

CEQ, 2016, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, Council on Environmental Quality's Memorandum for Heads of Federal Departments and Agencies, Aug. 1. Available at https://www.whitehouse.gov/sites/ whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf. Accessed Sept. 6, 2016.

Childs, M.R., R.W. Clarkson, and A.T. Robinson, 1998, "Resource Use by Larval and Early Juvenile Native Fishes in the Little Colorado River, Grand Canyon, Arizona," *Transactions of the American Fisheries Society* 127:620–629.

Chimoni, H., and E.R. Hart, 1994, "Zuni and the Grand Canyon," Annual Meeting of the Western History Association, Albuquerque, N.Mex.

Choudhury, A., T.L. Hoffnagle, and R.A. Cole, 2004, "Parasites of Native and Nonnative Fishes of the Little Colorado River, Grand Canyon, Arizona," *The Journal of Parasitology* 90(5):1042–1053.

Christensen, N.S., A.W. Wood, N. Voisin, D.P. Lettenmaier, and R.N. Palmer, 2004, "The Effects of Climate Change on the Hydrology and Water Resources of the Colorado River Basin," *Climate Change* 62:337–363.

City of Flagstaff City Council, 2013, *Information for Meeting Date June 4, 2013 (Erin Young, Water Resources Manager)*. Available at http://cityweb.flagstaffaz.gov. Accessed Feb. 18, 2015.

Clarke, A., R. Mac Nally, N. Bond, and P.S. Lake, 2008, "Macroinvertebrate Diversity in Headwater Streams: A Review," *Freshwater Biology* 53:1707–1721.

Clarkson, R.W., and M.R. Childs, 2000, "Temperature Effects of Hypolimnial-Release Dams on Early Life Stages of Colorado River Basin Big-River Fishes," *Copeia* 2002:402–412.

Clarkson, R.W., A.T. Robinson, and T.L. Hoffnagle, 1997, "Asian Tapeworm (*Bothriocephalus acheilognathi*) in Native Fishes from the Little Colorado River, Grand Canyon, Arizona," *Great Basin Naturalist* 57:66–69.

Clover, E.U., and L. Jotter, 1944, "Floristic Studies in the Canyon of the Colorado and Tributaries," *The American Midland Naturalist* 32(3):591–642.

Coggins, L., M. Yard, and C. Paukert, 2002, *Piscivory by Non-Native Salmonids in the Colorado River and an Evaluation of the Efficacy of Mechanical Removal of Non-Native Salmonids, An Operational Plan*, Grand Canyon Monitoring and Research Center, U.S. Geological Survey, Flagstaff, Ariz.

Coggins, L.G., Jr, W.E. Pine, C.J. Walters, D.R. Van Haverbeke, D. Ward, and H.C. Johnstone, 2006, "Abundance Trends and Status of the Little Colorado River Population of Humpback Chub," *North American Journal of Fisheries Management* 26:233–245.

Coggins, L.G., Jr, and W.E. Pine, 2010, "Development of a Temperature-Dependent Growth Model for the Endangered Humpback Chub Using Capture-Recapture Data," *The Open Fish Society Journal* 3:122–131.

Coggins, L.G., Jr., and C. Walters, 2009, *Abundance Trends and Status of the Little Colorado River Population of Humpback Chub: An Update Considering Data from 1989–2008*, Open-File Report 2009-1075, U.S. Geological Survey.

Coggins, L.G., Jr., M.D. Yard, and W.E. Pine, 2011, "Nonnative Fish Control in the Colorado River in Grand Canyon, Arizona – An Effective Program or Serendipitous Timing?" *Transactions of the American Fisheries Society* 140(2):456–470.

Cole, G.A., and D.M. Kubly, 1976, *Limnologic Studies on the Colorado River from Lees Ferry to Diamond Creek, Colorado River Research Program Final Report*, Technical Report No. 8, Colorado River Research Program, Report Series Grand Canyon National Park, National Park Service, U.S. Department of the Interior, June.

Cole, T.M., and S.A. Wells, 2003, *CE-QUAL-W2: A Two-Dimensional, Laterally Averaged, Hydrodynamic and Water Quality Model, Version 3.2*, Instruction Report EL-03-1, U.S. Army Engineering and Research Development Center, Vicksburg, Miss.

Collins, B.D., S.C. Corbett, J.B. Sankey, and H.C. Fairley, 2014, *High-Resolution Topography and Geomorphology of Select Archeological Sites in Glen Canyon National Recreation Area, Arizona:* U.S. Geological Survey Scientific Investigations Report 2014–5126.

Collins, B.D., D.R. Bedford, S.C. Corbett, C. Cronkite-Ratcliff, and H.C. Fairley, 2016, "Relations between Rainfall–Runoff-Induced Erosion and Aeolian Deposition at Archaeological Sites in a Semi-Arid Dam-Controlled River Corridor," *Earth Surface Processes and Landforms*, 41(7): 899–917. DOI: 10.1002/esp.3874.

Colorado Department of Local Affairs, 2013, "Population Totals for Colorado and Sub-state Regions." Available at http://www.colorado.gov/cs/Satellite?c=Page&childpagename=DOLA-Main%2FCBONLayout&cid=1251593346834&pagename=CBONWrapper. Accessed Jan. 13, 2015.

Colorado Springs Utilities, 2015, 2014 Annual Report. Available at https://www.csu.org/ CSUDocuments/2014annualreport.pdf. Accessed Nov. 2015.

Colwell-Chanthaphonh, C., S. Albert, W. Widener, and S. Kelley, 2011, Kwa Kyaw An Kwaał Łoh Umma (*Nothing is Stronger than Water*): *Zuni Ethnographic Assessment of the Lake Powell Pipeline Project Area*, report on file at the Zuni Heritage and Historic Preservation Office, Zuni, N.Mex. Confluence Partners, LLC, 2012a, *Grand Canyon Escalade: Master Land Use Plan*, April 27. Available at http://grandcanyonescalade.com/master-land-use-plan. Accessed Feb. 17, 2015.

Confluence Partners, LLC 2012b, Grand Canyon Escalade: Let's Get To the Bottom of This, April 27. Available at http://grandcanyonescalade.com/lets-get-to-the-bottom. Accessed Feb. 25, 2015.

Converse, Y.K., C.P. Hawkins, and R.A. Valdez, 1998, "Habitat Relationships of Subadult Humpback Chub in the Colorado River through Grand Canyon: Spatial Variability and Implications of Flow Regulation," *Regulated Rivers: Research and Management* 14:267–284.

Coues, E., 1900, *On the Trail of a Spanish Pioneer: The Diary and Itinerary of Francisco Garces,* Francis P. Harper, New York, N.Y.

Coulam, N., 2011, Hualapai Traditional Cultural Properties along the Colorado River, Coconino and Mohave Counties, Arizona, Registration Form, National Register of Historic Places.

CRBSCF (Colorado River Basin Salinity Control Forum), 2011, *Water Quality Standards for Salinity, Colorado River System 2011 Review*. Available at http://www.crb.ca.gov/Salinity/2011/2011%20REVIEW-June%20Draft.pdf. Accessed Feb. 26, 2015.

Cross, W.F., E.J. Rosi-Marshall, K.E. Behn, T.A. Kennedy, R.O. Hall, Jr., A.E. Fuller, and C.V. Baxter, 2010, "Invasion and Production of New Zealand Mud Snails in the Colorado River, Glen Canyon," *Biological Invasions* 12:3033–3043.

Cross, W.F., C.V. Baxter, K.C. Donner, E.J. Rosi-Marshall, T.A. Kennedy, R.O. Hall, Jr., H.A. Wellard Kelly, and R.S. Rogers, 2011, "Ecosystem Ecology Meets Adaptive Management: Food Web Response to a Controlled Flood on the Colorado River, Glen Canyon," *Ecological Applications* 21(6):2016–2033.

Cross, W.F., C.V. Baxter, E.J. Rosi-Marshall, R.O. Hall, Jr., T.A. Kennedy, K.C. Donner, H.A. Wellard Kelly, S.E.Z. Seegert, K.E. Behn, and M.D. Yard, 2013, "Food-Web Dynamics in a Large River Discontinuum," *Ecological Monographs* 83(3):311–337.

Cross, W.F., E.J. Rosi-Marshall, K.E. Behn, T.A. Kennedy, R.O. Hall, Jr., A.E. Fuller, and C.V. Baxter, 2010, "Invasion and Production of New Zealand Mud Snails in the Colorado River, Glen Canyon," *Biological Invasions* 12:3033–3043.

CSRI (Cultural Systems Research, Inc.), 2002, *The Native American Ethnography and Ethnohistory of Joshua Tree National Park: An Overview*, Aug. Available at http://www.nps.gov/history/history/online_books/jotr/historyt.htm. Accessed May 2013.

Culver, M., H.-W. Hermann, M. Miller, B. Roth, and J. Sorensen, 2013, *Anatomical and Genetic Variation of Western Oxyloma* (Pulmonata: Succineidae) *Concerning the Endangered Kanab Ambersnail* (Oxyloma haydeni kanabense) *in Arizona and Utah*, U.S. Geological Survey Scientific Investigations Report 2013-5164, U.S. Geological Survey, Reston, Va.

Cunnington, G.M., and L. Fahrig, 2010, "Plasticity in the Vocalizations of Anurans in Response to Traffic Noise," *Acta Oecologia* 36:463–470.

Czarnecki, D.B., D.W. Blinn, and T. Tompkins, 1976, *A Periphytic Microflora Analysis of the Colorado River and Major Tributaries in Grand Canyon and Vicinity*, Technical Report No. 6, June.

Davis, P.A., 2002, *Evaluation of Airborne Thermal-Infrared Image Data for Monitoring Aquatic Habitats and Cultural Resources within the Grand Canyon*, Open-File Report 02–367, U.S. Geological Survey.

Deseret Power Electric Cooperative, 2012, *Integrated Resource Plan*. Oct. Available at https://www.wapa.gov/EnergyServices/Documents/DeseretPower2012.pdf. Accessed Nov. 2015.

Dettman, J., 2005, *Glen Canyon Dam: A Mixed Blessing for Mammals, Reptiles, and Amphibians?*, report from Ecogeomorphology: Grand Canyon, Winter Quarter 2005, Center for Watershed Sciences, University of California, Davis, Calif., March 15. Available at https://watershed.ucdavis.edu/education/classes/ecogeomorphology-grand-canyon. Accessed Oct. 27, 2014.

Dodds, W.K., and D.A. Gudder, 1992, "The Ecology of *Cladophora*," *Journal of Phycology* 28:415–427.

Dodge, N.N., 1936, *Trees of Grand Canyon National Park: Natural History Bulletin No. 3*; Grand Canyon Natural History Association.

Dodrill, M.J., C.B. Yackulic, B. Gerig, W.E. Pine, J. Korman, and C. Finch, 2015, "Do Management Actions to Restore Rare Habitat Benefit Native Fish Conservation? Distribution of Juvenile Native Fish among Shoreline Habitats of the Colorado River," *River Research and Applications* 2015. DOI10.1002/rra.2842.

Dodson, S.B., 1995, *Water Quality on the Colorado River, Glen Canyon Dam to Lees Ferry:* 1994 Fecal Coliform Monitoring, NPS Resource Management Division, Glen Canyon National Recreation Area. Available at http://www.gcmrc.gov/library/reports/physical/hydrology/Dodson1995.pdf. Accessed Feb. 26, 2015.

DOI (U.S. Department of the Interior), 1995, "Series: Intergovernmental Relations, Part 512: American Indian and Alaska Native Programs, Chapter 2: Departmental Responsibilities for Indian Trust Resources," Office of American Indian Trust, 512 DM 2, *Department of the Interior Department Manual*, Dec. 1. Available at www.usbr.gov/native/policy/DM_FInal_12-1-95_512%20DM%202.pdf. Accessed Nov. 10, 2015. DOI, 1997, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act," Secretarial Order No. 3206, June. Available at http://www.fws.gov/nativeamerican/pdf/tek-secretarial-order-3206.pdf. Accessed Nov. 7, 2015.

DOI, 1998, "Series: Intergovernmental Relations, Part 512: American Indian and Alaska Native Programs, Chapter 3: Departmental Responsibilities for Protecting/Accommodating Access to Indian Sacred Sites," Office of American Indian Trust, 512 DM 3, Department of the Interior Department Manual, June 5. Available at www.sacredland.org/PDFs/DOI.pdf. Accessed Nov. 10, 2015.

DOI, 2004, Lower Colorado River Multi-Species Conservation Program (LCR MSCP)—Final Programmatic Environmental Impact Statement/Environmental Impact Report, Dec. Available at http://www.lcrmscp.gov/publications/voli_env_impact_st_dec04.pdf. Accessed May 2013.

DOI, 2005, *Record of Decision for Lower Colorado River Multi-Species Conservation Plan*, April. Available at http://www.lcrmscp.gov/publications/rec_of_dec_apr05.pdf. Accessed May 2013.

DOI, 2008, "Adaptive Management Implementation Policy," Part 522, Chapter 1 of *Department of the Interior Departmental Manual*, Office of Environmental Policy and Compliance, Feb. Available at http://www.doi.gov/initiatives/AdaptiveManagement/documents/3786dm.pdf. Accessed May 2013.

DOI, 2011a, "Department of the Interior Policy on Consultation with Indian Tribes," Secretarial Order No. 3317, Dec. 1.

DOI, 2011b, "Notice of Intent To Prepare a Draft Environmental Impact Statement and Conduct Public Scoping on the Adoption of a Long-Term Experimental and Management Plan for the Operation of Glen Canyon Dam," *Federal Register* 76(129):39435–39436. Available at http://www.usbr.gov/uc/rm/gcdltemp/fedreg/NOI-07062011.pdf. Accessed May 2013.

DOI, 2011c, "Notice To Solicit Comments and Hold Public Scoping Meetings on the Adoption of a Long-term Experimental and Management Plan for the Operation of Glen Canyon Dam," *Federal Register* 76(200):64104–64105.

DOI, 2012a, Northern Arizona Mineral Withdrawal Final Environmental Impact Statement. Available at http://www.blm.gov/az/st/en/info/nepa/environmental_library/eis/nazwithdraw.html. Accessed Jan. 13, 2015.

DOI, 2012b, Record of Decision: Northern Arizona Withdrawal, Mohave and Coconino Counties, Arizona, Jan. 9.

DOI, 2014, "Reaffirmation of the Federal Trust Responsibility to Federally Recognized Indian Tribes and Individual Indian Beneficiaries," Secretarial Order No. 3335, Aug. 2014.

Dolan, R., A. Howard, and Trimble, 1978, "Structural Control of the Rapids and Pools of the Colorado River in the Grand Canyon," *Science* 202:629–631.

Dongoske, K., 2001, Annual Report on the Hopi Tribe's Involvement in the Glen Canyon Dam Adaptive Management Program and the Programmatic Agreement Regarding Historic Properties, prepared by Hopi Cultural Preservation Office, Kykotsmovi, Ariz., for Bureau of Reclamation, Salt Lake City, Utah, March 19.

Dongoske, K., 2011a, *Pueblo of Zuni 2010 Cultural Resource Monitoring of the Colorado River Ecosystem through Grand Canyon*, prepared by Zuni Heritage and Historic Preservation Office, Pueblo of Zuni, Zuni, N.Mex., for Upper Colorado Regional Office, Bureau of Reclamation, Salt Lake City, Utah.

Dongoske, K., 2011b, *Chimik'yana'kya dey'a (Place of Emergence), K'yawan' A: honanne (Colorado River), and Ku'nin A'l'akkew'a (Grand Canyon), a Zuni Traditional Cultural Property*, Nomination Form, *National Register of Historic Places.*

Dongoske, K., 2012, personal communication from Dongoske (Zuni Heritage and Historic Preservation Office, Zuni, N.Mex.) to R. Sucec (Cultural Resources Program Manager, Glen Canyon National Recreation Area/Rainbow Bridge National Monument).

Dongoske, K.E., and O. Seowtewa, 2013, *Pueblo of Zuni 2011 Cultural Resource Monitoring of the Colorado River Ecosystem through Grand Canyon*, prepared in association with the Zuni Cultural Resource Advisory Team for the Bureau of Reclamation, Upper Colorado Regional Office, Salt Lake City, Utah, Aug.

Dongoske, K.E., L. Jackson-Kelley, and C. Bulletts, 2010, "Confluence of Values: The Role of Science and Native Americans in the Glen Canyon Dam Adaptive Management Program," pp. 133–140 in *Proceedings of the Colorado River Basin Science and Resource Management Symposium*, T.S. Melis, J.F. Hamill, L.G. Coggins, Jr., P.E. Grams, T.A. Kennedy, D.M. Kubly, and B.E. Ralston (eds.), Scientific Investigations Report 2010-5135, U.S. Geological Survey, Reston, Va.

Donner, K.S., 2011, "Secondary Production Rates, Consumption Rates, and Trophic Basis of Production of Fishes in the Colorado River, Grand Canyon, AZ: An Assessment of Potential Competition for Food," Master's thesis, Idaho State University, Program in Biology, Pocatello, Idaho, April.

Douglas, M.E., and P.C. Marsh, 1998, "Population and Survival Estimates of *Catostomus latipinnis* in Northern Grand Canyon, with Distribution and Abundance of Hybrids with *Xyrauchen texanus*," *Copeia* 1998(4):915–925.

Douglas, M.R., and M.E. Douglas, 2000, "Late Season Reproduction by Big-River Catostomidae in Grand Canyon," *Copeia* 2000(1):238–244.

Draut, A.E., 2012a, "Effects of River Regulation on Aeolian Landscapes, Colorado River, Southwestern USA," Journal of Geophysical Research—Earth Surface 117 (F2). http://dx.doi.org/10.1029/2011JF002329. Draut, A.E., 2012b, *Aeolian Landscapes and Sediment Movement in the Colorado River Corridor*, U.S. Geological Survey, Santa Cruz, Calif., Feb.

Draut, A.E., and D.M. Rubin, 2008, *The Role of Eolian Sediment in the Preservation of Archeologic Sites along the Colorado River Corridor in Grand Canyon National Park, Arizona*, U.S Geological Survey Professional Paper 1756.

Drost, C.A., 2005, *Population Status and Viability of Leopard Frogs* (Rana pipiens) *in Grand Canyon and Glen Canyon*, 2004 annual report, report to Bureau of Reclamation and Glen Canyon National Recreation Area and Grand Canyon National Park, National Park Service.

Drost, C.A., R.P. O'Donnell, K.E. Mock, and T.C. Theimer, 2011, *Population Status and Population Genetics of Northern Leopard Frogs in Arizona*, U.S. Geological Survey Open-File Report 2011-1186, U.S. Geological Survey, Reston, Va.

Drye, B., D. Austin, A. Phillips, III, D. Seibert, and K. Bulletts, 2006, 2005–2006 Southern *Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities*, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Drye, B., I. Bulletts, A. Phillips, III, L.V.F. Levi, M. Wall, A. Davis, E. Dean, D. Austin, and G. Stanfield, 2000, 2000 Southern Paiute Consortium Colorado River Corridor Monitoring and Education Program Summary Report, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Aug.

Drye, B., I. Bulletts, A. Phillips, III, T. Snow, G. Stanfield, E. Dean, S. Gerlak, D. Austin, M. Rogers, N. Bulletts, T. Wall, M. Snow, and F. John, 2001, 2001 Southern Paiute Consortium Colorado River Corridor Monitoring and Education Program Summary Report, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., July.

Drye, B., I. Bulletts, A. Phillips, III, T. Snow, M. Rogers, E. Dean, and D. Austin, 2002, 2002 Southern Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities, prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Oct.

Dudley, T.L., and D.J. Kazmer, 2005, "Field Assessment of the Risk Posed by *Diorhabda elongata*, a Biocontrol Agent for Control of Saltcedar (*Tamarix* spp.), to a Nontarget Plant, *Frankenia salina*," *Biological Control* 35:265–275.

Dzul, M.C., C.B. Yackulic, D.M. Stone, and D.R. Van Haverbeke, 2014, "Survival, Growth and Movement of Subadult Humpback Chub, *Gila cypha*, in the Little Colorado River, Arizona," *River Research and Applications*. DOI:10.1002/rra.2864. Available at http://onlinelibrary.wiley. com/doi/10.1002/rra.2864/pdf.

East, A.E., B.D. Collins, J.B. Sankey, S.C. Corbett, H.C. Fairley, and J. Caster, 2016, *Conditions and Processes Affecting Sand Resources at Archeological Sites in the Colorado River Corridor Below Glen Canyon Dam, Arizona*, U.S. Geological Survey Professional Paper 1825. Available at http://dx.doi.org/10.3133/pp1825.

Eaton, J.G., and R.M. Scheller, 1996, "Effects of Climate Warming on Fish Thermal Habitat in Streams of the United States," *Limnology and Oceanography* 41(5):1109–1115.

Ebersole, J.L., W.J. Liss, and C.A. Frissell, 2001, "Relationship between Stream Temperature, Thermal Refugia and Rainbow Trout *Oncorhynchus mykiss* Abundance in Arid-Land Streams in the Northwestern United States," *Ecology of Freshwater Fishes* 10:1–10.

Edge Environmental, Inc., 2009, *Piñon Ridge Project Environmental Report Montrose County, Colorado*, prepared by Edge Environmental, Inc., Lakewood, Colo., for Energy Fuels Resources Corporation, Lakewood, Colo., Nov.

Eggan, F., 1971, "Forward," pp. ix-xiv in *Spider Woman Stories*, G.M. Mullet, University of Arizona Press, Tucson, Ariz.

EIA (U.S. Energy Information Administration), 2013, *Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants*, April. Available at http://www.eia.gov/forecasts/capitalcost/pdf/updated_capcost.pdf. Accessed Jan. 21, 2015.

EIA, 2015, Proposed Clean Power Plan Rule Cuts Power Section CO₂ Emissions to Lowest Level Since 1980s. Available at http://eia.gov/today/energy/detail.cfm?id=21372. Accessed June 23, 2015.

EPA (U.S. Environmental Protection Agency), 2003, *Bacterial Water Quality Standards for Recreational Waters (Freshwater and Marine Waters): Status Report*, EPA-823-R-03-008, Office of Water, Washington, D.C.

EPA, 2004, *National Water Quality Inventory: Report to Congress, 2004 Reporting Cycle*, Office of Water, Washington, D.C. Available at http://water.epa.gov/lawsregs/guidance/cwa/ 305b/2004report_index.cfm.

EPA, 2006, *How Air Pollution Affects the View*, EPA-456/F-06-001, April. Available at http://www.epa.gov/oar/visibility/pdfs/haze_brochure_20060426.pdf. Accessed Oct. 28, 2013.

EPA, 2012, *Cyanobacteria and Cyanotoxins: Information for Drinking Water Systems*, EPA-810F11001, Office of Water, July. Available at http://water.epa.gov/scitech/swguidance/ standards/criteria/nutrients/upload/cyanobacteria_factsheet.pdf. Accessed Nov. 6, 2015. EPA, 2013a, *The Green Book Nonattainment Areas for Criteria Pollutants*. Available at http://www.epa.gov/oaqps001/greenbk. Accessed Oct. 28, 2013.

EPA, 2013b, 2011 National Emissions Inventory Data. Available at http://www.epa.gov/ttn/ chief/net/2011inventory.html. Accessed Oct. 9, 2013.

EPA, 2013c, *List of 156 Mandatory Class I Federal Areas*. Available at http://www.epa.gov/ visibility/class1.html. Accessed Oct. 28, 2013.

EPA, 2013d, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2011*, EPA 430-R-13-001, April 12. Available at http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2013-Main-Text.pdf. Accessed Oct. 28, 2013.

EPA, 2014a, *Clean Energy, eGRID, Ninth Edition with Year 2010 Data (Version 1.0).* Available at http://www.epa.gov/cleanenergy/energy-resources/egrid. Accessed May 23, 2014.

EPA, 2014b, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units: Proposed Rule by the EPA on 6/18/2014*. Available at https://www.federalregister.gov/articles/2014/06/18/2014-13726/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating. Accessed June 23, 2015.

EPA, 2014c, U.S. EPA Fact Sheet: Final Action – Best Available Retrofit Technology (BART) for Navajo Generating Station, Navajo Nation, July 28.

EPA, 2015a, *National Ambient Air Quality Standards (NAAQS)*, last updated Oct. 6, 2015. Available at http://www3.epa.gov/ttn/naaqs/criteria.html. Accessed Nov. 9, 2015.

EPA, 2015b, *The Green Book Nonattainment Areas for Criteria Pollutants*, as of Oct. 1, 2015. Available at http://www3.epa.gov/airquality/greenbook/. Accessed Nov. 9, 2015.

EPA, 2015c, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units." Final Rule. *Federal Register* 80 (205)-64662-64964. Available at http://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf. Accessed Dec. 4, 2015.

EPA, 2016, *Clean Power Plan for Existing Power Plants, Rule Summary*, last updated Feb. 11, 2016. Available at www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants. Accessed June 29.

Epps, C.W., J.D. Wehausen, V.C. Bleich, S.G. Torres, and J.S. Brashares, 2007, "Optimizing Dispersal and Corridor Models Using Landscape Genetics," *Journal of Applied Ecology* 44:714–724.

Erb, J., and H.R. Perry, 2003, "Muskrats (*Ondatra zibethicus* and *Neofiber alleni*)," pp. 311–348 in *Wild Mammals of North America*, 2nd ed., G.A. Feldhamer, B.C. Thompson, and J.A. Chapman (eds.), Johns Hopkins University Press, Baltimore, Md.

Evans, T.D., and L.J. Paulson, 1983, "The Influence of Lake Powell on the Suspended Sediment-Phosphorus Dynamics of the Colorado River Inflow to Lake Mead," in *Proceedings from 1981 Symposium on Aquatic Resource Management of the Colorado River Ecosystems*, Las Vegas, Nev., Nov. 16–18, 1981.

Fairley, H.C., 2003, *Changing River: Time, Culture, and the Transformation of Landscape in the Grand Canyon: A Regional Research Design for the Study of Cultural Resources along the Colorado River in Lower Glen Canyon and Grand Canyon National Park, Arizona*, GCMRC Library Call Number: 120.06 ENV-3.00 G751 24300.

Fairley, H.C., P.W. Bungart, C.M. Coder, J. Huffman, T.L. Samples, and J.R. Balsom, 1994, *The Grand Canyon River Corridor Survey Project: Archaeological Survey along the Colorado River between Glen Canyon Dam and Separation Canyon*, prepared in cooperation with the Glen Canyon Environmental Studies Program, Grand Canyon National Park, submitted to the U.S. Department of the Interior, National Park Service, Agreement No. 9AA-40-07920.

FERC (Federal Energy Regulatory Commission), 1995, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Docket Nos. RM95-8-000 and RM94-7-001, Washington, D.C., March 29.

FERC, 2011, Order Issuing Preliminary Permit and Granting Priority to File License Application, Project No. P12966-002, Utah Board of Water Resources, May 20.

Ferguson, T.J., and G. Lotenberg, 1998, *Öngtupqa Niqw Pisisvayu (Salt Canyon and the Colorado River), The Hopi People and the Grand Canyon (Public Version)*, produced by Hopi Cultural Preservation Office, on file at Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Ferrari, R.L., 2008, *2001 Lake Mead Sedimentation Survey*, Bureau of Reclamation, Technical Service Center, Denver, Colo. Available at http://www.usbr.gov/pmts/sediment/projects/ ReservoirSurveys/Reports/2001%20Lake%20Mead%20Sedimentation%20Survey.pdf. Accessed Feb. 26, 2015.

Fisher, S.G., and A. LaVoy, 1972, "Differences in Littoral Fauna Due to Fluctuating Water Levels below a Hydroelectric Dam," *Journal Fisheries Research Board of Canada* 29(1):1472–1476.

Flow Science, 2011, *ELCOM-CAEDYM Modeling and Statistical Analysis of Water Quality in Lake Mead*, FSI V084015 Task 13, prepared for Clean Water Coalition and Southern Nevada Water Authority, March 3. Available at http://ndep.nv.gov/forum/docs/AlgaeReport/ Flow_Science_Modeling_And_Statistical_Analysis_of_WQ_Lake_Mead_Task_13_Dec_2010.pdf. Flynn, M.E., R.J. Hart, G.R. Marzolf, and C.J. Bowser, 2001, *Daily and Seasonal Variability of pH, Dissolved Oxygen, Temperature, and Specific Conductance in the Colorado River between the Forebay of Glen Canyon Dam and Lees Ferry, Northeastern Arizona, 1989–99*, Water-Resources Investigations Report 01-4240, U.S. Geological Survey Open-File Report 01-222. Available at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA442571. Accessed Feb. 26, 2015.

FNA (Flora of North America), 2014, *Flora of North America North of Mexico*, 18+ vols., Flora of North America Editorial Committee (eds.), New York and Oxford, 1993+. Available at http://www.eFloras.org or http://www.floranorthamerica.org. Accessed Dec. 9, 2014.

Fort Mojave Indian Tribe, 2012, "About Us," official website of the Fort Mojave Indian Tribe. Available at http://mojaveindiantribe.com/about/. Accessed Nov. 22, 2013.

Francis, C.D., et al., 2009, "Noise Pollution Changes Avian Communities and Species Interactions," *Current Biology* 19:1415–1419.

Francis, T., D.S. Elverud, B.J. Schleicher, D.W. Ryden, and B. Gerig, 2015, *San Juan River Arm of Lake Powell Razorback Sucker* (Xyrauchen texanus) *Survey: 2012*, Draft interim progress report to the San Juan River Endangered Fish Recovery Program.

FWS (U.S. Fish and Wildlife Service), 1967, "Endangered Species," *Federal Register* 32(48):4001.

FWS, 1992, "Endangered and Threatened Wildlife and Plants; Final Rule to List the Kanab Ambersnail as Endangered," *Federal Register* 57(75):13657–13661.

FWS, 1995a, *Kanab Ambersnail* Oxyloma haydeni kanabensis *Recovery Plan*, prepared by J.L. England, U.S. Fish and Wildlife Service, Salt Lake City, Utah, for U.S. Fish and Wildlife Service, Albuquerque, N.Mex., and Denver, Colo.

FWS, 1995b, "Endangered and Threatened Species: Final Rule Determining Endangered Status for the Southwestern Willow Flycatcher," *Federal Register* 60(38):10694–10715.

FWS, 1996, "Endangered and Threatened Wildlife and Plants: Establishment of a Nonessential Experimental Population of California Condors in Northern Arizona; Final Rule," *Federal Register* 61(201):54044–54060.

FWS, 1999, "Endangered and Threatened Wildlife and Plants; Final Rule to Remove the American Peregrine Falcon from the Federal List of Endangered and Threatened Wildlife and to Remove the Similarity of Appearance Provision for Free-Flying Peregrines in the Conterminous United States; Final Rule," *Federal Register* 64(164):46542–46558.

FWS, 2002a, *Razorback Sucker* (Xyrauchen texanus) *Recovery Goals: Amendment and Supplement to the Razorback Sucker Recovery Plan*, Mountain-Prairie Region (6), Denver, Colo.

FWS, 2002b, *Southwestern Willow Flycatcher Recovery Plan*, U.S. Department of the Interior, Fish and Wildlife Service, Albuquerque, N.Mex., Aug.

FWS, 2005, "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*)," *Federal Register* 70(201):60886–61009.

FWS, 2007a, memorandum from Field Supervisor, FWS, to Area Manager, Reclamation, "Subject: Final Biological Opinion for the Proposed Adoption of Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead," Dec. 12. Available at http://www.fws.gov/southwest/es/arizona/ Documents/Biol_Opin/06224_final_shortage.pdf. Accessed July 18, 2014.

FWS, 2007b, "Endangered and Threatened Wildlife and Plants; Removing the Bald Eagle in the Lower 48 States from the List of Endangered and Threatened Wildlife," *Federal Register* 72(130):37346–37372.

FWS, 2008, *Final Biological Opinion for the Operation of Glen Canyon Dam*, U.S. Department of the Interior, U.S. Fish and Wildlife Service, Phoenix, Ariz.

FWS, 2009, *Supplement to the 2008 Final Biological Opinion for the Operation of Glen Canyon Dam*, U.S. Department of the Interior, U.S. Fish and Wildlife Service, Phoenix, Ariz.

FWS, 2011a, *Humpback Chub* (Gila cypha) *5-Year Review: Summary and Evaluation*, Upper Colorado River Endangered Fish Recovery Program, Denver, Colo.

FWS, 2011b, *Kanab Ambersnail* Oxyloma haydeni kanabensis *5-Year Review: Summary and Evaluation*, U.S. Fish and Wildlife Service, Utah Field Office, West Valley City, Utah, July.

FWS, 2011c, *Final Biological Opinion on the Operation of Glen Canyon Dam Including High Flow Experiments and Non-Native Fish Control*, U.S. Fish and Wildlife Service, Arizona Ecological Services Office, Phoenix, Ariz., Dec. Available at http://www.fws.gov/southwest/es/arizona/Documents/Biol_Opin/110112_HFE_NNR.pdf. Accessed July 18, 2014.

FWS, 2013a, memorandum from Field Supervisor, FWS, to Superintendents, GCNP and GCNRA, NPS, "Subject: Final Biological Opinion on the Comprehensive Fisheries Management Plan, Coconino and Mohave Counties, Arizona," Aug. 20. Available at http://www.fws.gov/Southwest/es/arizona/Documents/Biol_Opin/120252_CFMP.pdf. Accessed July 18, 2014.

FWS, 2013b, "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Southwestern Willow Flycatcher; Final Rule," *Federal Register* 78(2):344–534.

FWS, 2014a, "Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow-Billed Cuckoo; Proposed Rule," *Federal Register* 79(158):48548–48652.

FWS, 2014b, "Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*)," *Federal Register* 79(192):5992–60038.

FWS, 2014c, *Yuma Clapper Rail* (Rallus longirostris yumanensis). Available at http://www.fws.gov/nevada/protected_species/birds/species/yucr.html. Accessed Nov. 5, 2015.

Garfin, G., G. Franco, H. Blanco, A. Comrie, P. Gonzalex, T. Piechota, R. Smyth, and R. Waskom, 2014, "Chapter 20: Southwest," pp. 462–486 in *Climate Change Impacts in the United States: The Third National Climate Assessment*, J.M. Melillo, T.C. Richmond, and G.W. Yohe (eds.), U.S. Global Change Research Program. DOI10.7930/JO8G8HMN.

Gaston, T., D. Harpman, and J. Platt, 2014, *Recreation Economic Analysis for the Long-Term Experimental and Management Plan Environmental Impact Statement*, Draft, Economics Technical Report EC-2014-03, U.S. Department of the Interior, Bureau of Reclamation, Denver, Colo., July 11.

Gaston, T., D. Harpman, J. Platt, and S. Piper, 2015, *Recreation Economic Analysis for the Long-Term Experimental and Management Plan Environmental Impact Statement*, Technical Report EC-2014-03, U.S. Bureau of Reclamation, Aug.

Gatlin, B.P., 2013, *Birds of the Grand Canyon Region, An Annotated Checklist*, 3rd ed., Grand Canyon Association, Grand Canyon, Ariz.

GCMRC (Grand Canyon Monitoring and Research Center), 2011, *Recreation*. Available at http://www.gcmrc.gov/research_areas/recreation/recreation_Default.aspx. Accessed Jan. 4, 2013.

GCMRC, 2014, *Fiscal Year 2013 Annual Project Report*, prepared for the Glen Canyon Dam Adaptive Management Program, Grand Canyon Monitoring and Research Program, Flagstaff, Ariz.

GCMRC, 2015a, "Discharge, Sediment, and Water Quality Monitoring," U.S. Geological Survey. Available at http://www.gcmrc.gov/discharge_qw_sediment/. Accessed Nov. 5, 2015.

GCMRC, 2015b, "Maps and Data Portal." Available at http://www.gcmrc.gov/dasa. Accessed March 26, 2015.

GCNHA (Grand Canyon Natural History Association), 1936, "Check-List of Plants of Grand Canyon National Park," *Natural History Bulletin* No. 6, Grand Canyon National Park.

GCNP (Grand Canyon National Park), 2013, *Comments and Concerns Regarding the Proposed Wate Mine and Potentials for Expanded Arizona State Land Breccia Pipe Uranium Mining*, prepared by Grand Canyon National Park, Division of Science and Resource Management, May 9.

GCNRA (Grand Canyon National Recreation Area), 2014, "Glen Canyon NRA Campgrounds." Available at http://www.nps.gov/glca/planyourvisit/campgrounds.htm. Accessed Jan. 2015.

GCWC (Grand Canyon Wildlands Council), 2011, Potential Riparian Restoration Projects in Grand Canyon National Park, Arizona, Flagstaff, Ariz., Aug.

Gerig, B., M.J. Dodrill, and W.E. Pine, III, 2014, "Habitat Selection and Movement of Adult Humpback Chub in the Colorado River in Grand Canyon, Arizona, during an Experimental Steady Flow Release," *North American Journal of Fisheries Management* 34(1):39–48.

Gillis, C.-A., and M. Chalifour, 2010, "Changes in the Macrobenthic Community Structure Following the Introduction of the Invasive Algae *Didymosphenia geminata* in the Matapedia River (Québec, Canada)," *Hydrobiologia* 647:63–70.

Gimbel J., 2015, memorandum from Gimbel (U.S. Department of the Interior) to B. Rhees (Bureau of Reclamation), "Subject: Approval for Recommendation for No Experimental High-Flow Release from Glen Canyon Dam, November 2015," Oct. 19. Available at http://www.usbr.gov/uc/rm/amp/twg/mtgs/15oct20/pdfs/Attach_10a.pdf. Accessed Aug. 10, 2016.

Gislason, J.C., 1985, "Aquatic Insect Abundance in a Regulated Stream under Fluctuating and Stable Diel Flow Patterns," *North American Journal of Fisheries Management* 5:39–46.

Gloss, S.P., and L.G. Coggins, 2005, "Fishes of Grand Canyon," Chapter 2 in *The State of the Colorado River Ecosystem in Grand Canyon*, U.S. Geological Survey Circular 1282, S.P. Gloss et al. (eds.), U.S. Geological Survey, Reston, Va.

Gloss, S.P., J.E. Lovich, and T.S. Melis (eds.), 2005, *The State of the Colorado River Ecosystem in Grand Canyon*, a report of the Grand Canyon Monitoring and Research Center 1991–2004, U.S. Geological Survey Circular 1282.

Gorman, O.T., 1994, *Habitat Use by Humpback Chub*, Gila cypha, *in the Little Colorado River and Other Tributaries of the Colorado River*, prepared for U.S. Bureau of Reclamation, Glen Canyon Environmental Studies, by U.S. Fish and Wildlife Service, Arizona Fisheries Resources Office, Flagstaff, Ariz.

Gorman, O.T, and D.M. Stone, 1999, "Ecology of Spawning Humpback Chub, *Gila cypha*, in the Little Colorado River Near Grand Canyon, Arizona," *Environmental Biology of Fishes* 55:115–133.

Governor's Office of Planning and Budget, 2013, "Demographic and Economic Projections." Available at http://www.governor.utah.gov/dea/projections.html. Accessed Jan. 13, 2015.

Graf, J.B., 1995, "Measured and Predicted Velocity and Longitudinal Dispersion at Steady and Unsteady Flow, Colorado River, Glen Canyon Dam to Lake Mead," *Water Resources Bulletin* 31(2):265–281.

Graf, W.L., 1978, "Fluvial Adjustments to the Spread of Tamarisk in the Colorado Plateau Region," *Geological Society of America Bulletin* 89(10):1491–1501. Graham, H., 1980, "The Impacts of Modern Man," pp. 288–309 in *The Desert Bighorn: Its Life History, Ecology, and Management*, G. Monson and L. Sumner (eds.), The University of Arizona Press, Tucson, Ariz. Grams, P.E., 2014, personal communication from Grams (Grand Canyon Monitoring and Research Center) to D. Varyu (Bureau of Reclamation), Aug. 1.

Grams, P.E., 2016, personal communication from Grams (Grand Canyon Monitoring and Research Center) to K. LaGory (Argonne National Laboratory), Aug. 9.

Grams, P.E., J.C. Schmidt, and M.E. Andersen, 2010, 2008 High-Flow Experiment at Glen Canyon Dam—Morphologic Response of Eddy-Deposited Sandbars and Associated Aquatic Backwater Habitats along the Colorado River in Grand Canyon National Park, Open-File Report 2010-1032, U.S. Geological Survey, Grand Canyon Monitoring and Research Center.

Grams, P.E., J.C. Schmidt, and D.J. Topping, 2007, "The Rate and Pattern of Bed Incision and Bank Adjustment on the Colorado River in Glen Canyon Downstream from Glen Canyon Dam, 1956–2000," *Geological Society of America Bulletin* 119(5-6):556–575.

Grams, P.E., J.C. Schmidt, S.A. Wright, D.J. Topping, T.S. Melis, and D.M. Rubin, 2015, "Building Sandbars in the Grand Canyon," *EOS, Transactions of the American Geophysical Union*, 96 (11):12–16.

Grams, P.E., T. Andrews, D. Buscombe, T. Gushue, D. Hamill, J. Hazel, M. Kaplinski, K. Kohl, E. Mueller, R. Ross, and R. Tusso, 2015, *Sandbars and Sediment Storage in Marble and Grand Canyons: Response to Recent High-flow Experiments and Long-term Trends*, Glen Canyon Dam Adaptive Management Program, High Flow Experiment Workshop, February 25–26. Available at https://www.usbr.gov/uc/rm/amp/amwg/mtgs/15feb25. Accessed June 30, 2016.

Granath, W.O., and G.W. Esch, 1983, "Temperature and Other Factors That Regulate the Composition and Infrapopulation Densities of *Bothriocephalusa cheilognathi* (Cestoda) in *Gambusia affinis*," *Journal of Parasitology* 69:1116–1124.

Grantz, K.A., 2014, personal communication from Grantz (Bureau of Reclamation, Salt Lake City, Utah) to K.K. Wuthrich (Argonne National Laboratory, Argonne, Ill.) Feb. 28.

Green, J. (ed.), 1979, Zuni: Selected Writings of Frank Hamilton Cushing, University of Nebraska Press, Lincoln, Nebr.

Gregory, R.S., and R.L. Keeney, 2002, "Making Smarter Environmental Management Decisions," *Journal of the American Water Resources Association* 38(6):1601–1612.

Griffiths, P.G.G., R.H. Webb, and T.S. Melis, 1996, *Initiation and Frequency of Debris Flows in Grand Canyon, Arizona*, U.S. Geological Survey Open-File Report 96-491.

Griffiths, R.E., and Topping, D.J., 2015, "Inaccuracies in Sediment Budgets Arising from Estimations of Tributary Sediment Inputs: An Example from a Monitoring Network on the Southern Colorado Plateau," pp. 583–594 in *Proceedings of the 3rd Joint Federal Interagency Conference on Sedimentation and Hydrologic Modeling*, April 19–23, Reno, Nev. Available at http://acwi.gov/sos/pubs/3rdJFIC/Proceedings.pdf. Accessed Nov. 9, 2015.

Grim, D., 2012, personal communication from Grim (Colorado River Discovery) to J. May (Argonne National Laboratory), Nov. 27.

Gunn, W., 2012, personal communication from Gunn (Lees Ferry Anglers) to J. May (Argonne National Laboratory), Nov. 19.

Guse, N.G., Jr., 1974, "Colorado River Bighorn Sheep Survey," Plateau 46(4):135-138.

Haden, A., D.W. Blinn, J.P. Shannon, and K.P. Wilson, 1999, "Interference Competition between the Net-Building Caddisfly *Ceratopsyche oslari* and the Amphipod *Gammarus lacustris*," *Journal of Freshwater Ecology* 14(3):277–280.

Haden, G.A., J. P. Shannon, K.P. Wilson, and D.W. Blinn, 2003, "Benthic Community Structure of the Green and Colorado Rivers through Canyonlands National Park, Utah, USA," *The Southwestern Naturalist* 48(1):23–35.

Hall, T., and B. Shelby, 2000, *1998 Colorado River Boater Study, Grand Canyon National Park*, prepared for Grand Canyon Association and Grand Canyon National Park, June 15.

Hall, R.O., Jr., M.F. Dybdahl, and M.C. Vander Loop, 2006, "Extremely High Secondary Production of Introduced Snails in Rivers," *Ecological Applications* 16(3):1121–1131.

Hall, R.O., Jr., J.L. Tank, and M.F. Dybdahl, 2003, "Exotic Snails Dominate Nitrogen and Carbon Cycling in a Highly Productive Stream," *Frontiers in Ecology and the Environment* 1(8):407–411.

Hall, R. O., T.A. Kennedy, and E.J. Rosi-Marshall, 2012, "Air–Water Oxygen Exchange in a Large Whitewater River," *Limnology and Oceanography: Fluids and Environments*, 2(1):1–11.

Hall, R.O., Jr., C.B. Yackulic, T.A. Kennedy, M.D. Yard, E.J. Rosi-Marshall, N. Voichick, and K.E. Behn, 2015, "Turbidity, Light, Temperature, and Hydropeaking Control Primary Productivity in the Colorado River, Grand Canyon," *Limnology and Oceanography* 60:512–526.

Hamill, J.F., 2009, *Status and Trends of Resources Below Glen Canyon Dam Update*—2009, USGS Fact Sheet 2009–3033, USGS Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Hamman, R.L., 1982, "Spawning and Culture of Humpback Chub," *Progressive Fish Culturist* 44:213–216.

Hand, J.L., S.A. Copeland, D.E. Day, A.M. Dillner, H. Indresand, W.C. Malm, C.E. McDade, C.T. Moore Jr., M.L. Pitchford, B.A. Schichtel, and J.G. Watson, 2011, *Spatial and Seasonal Patterns and Temporal Variability of Haze and Its Constituents in the United States*, Interagency Monitoring of Protected Visual Environments (IMPROVE) Report V, June. Available at http://vista.cira.colostate.edu/improve/publications/Reports/2011/PDF/Cover_TOC.pdf. Accessed Oct. 28, 2013.

Hardwick, G.G., D.W. Blinn, and H.D. Usher, 1992, "Epiphytic Diatoms on Cladophora glomerata in the Colorado River, Arizona: Longitudinal and Vertical Distribution in a Regulated River," *The Southwestern Naturalist* 37(2):148–156.

Harpman, D., M. Welsh, and R. Bishop, 1995, "Nonuse Economic Value: Emerging Policy Analysis Tool, *Rivers* 4(4): 280–291.

Hart, E.R., 1980, "Boundaries of Zuni Land, 1846–1946," expert testimony submitted to the United States Claims Court as evidence in the case *Zuni Indian Tribe v. United States*, Docket 327-81L.

Hart, E.R., 1995, Zuni and the Grand Canyon: A Glen Canyon Environmental Studies Report, Zuni GCES Ethnohistorical Report: Summary of Zuni Fieldwork and Interviews, confidential report on file at the Zuni Heritage and Historic Preservation Office, Zuni, N.Mex.

Hart, R.J., and K.M. Sherman, 1996, *Physical and Chemical Characteristics of Lake Powell at the Forebay and Outflow of Glen Canyon Dam, Northeastern Arizona, 1990–91*, Water-Resources Investigations Report 96-4016, U.S. Department of the Interior, U.S. Geological Survey.

Haury, L.R., 1986, *Zooplankton of the Colorado River: Glen Canyon Dam to Diamond Creek*, Oct. Available at http://www.riversimulator.org/Resources/GCMRC/FoodBase/Haury1991.pdf. Accessed Dec. 4, 2015.

Havasupai, 2012, official website of the Havasupai Tribe, Available at http://www.havasupai-nsn.gov/. Accessed March 6, 2012.

Havasupai Tribal Council, 2015, Comments of the Havasupai Tribe on LTEMP Draft dated June 2015, Sept. 30.

Havatone, E., 2013, personal communication from Havatone (Executive Director, Grand Canyon West) to J. May (Argonne National Laboratory), Dec. 16.

Haynes, A., and B.J.R. Taylor, 1984, "Food Finding and Food Preference in *Potamopyrgus jenkinsi* (E.A. Smith) (Gastropoda: Prosobranchia)," *Archiv für Hydrobiologie* 100(4):479–491.

Haynes, A., B.J.R. Taylor, and M.E. Varley, 1985, "Influence of the Mobility of *Potamopyrgus jenkinsi* (Smith, E.A.) (Prosobranchia: Hydrobiidae) on Its Spread," *Archiv für Hydrobiologie* 103(4):497–508.

Hazel, J.E., Jr., P.E. Grams, J.C. Schmidt, and M. Kaplinski, 2010, *Sandbar Response in Marble and Grand Canyons, Arizona, Following the 2008 High-Flow Experiment on the Colorado River*, U.S. Geological Survey Scientific Investigations Report 2010-5051.

Hazel, J.E., Jr., D.J. Topping, J.C. Schmidt, and M. Kaplinski, 2006, "Influence of a Dam on Fine-Sediment Storage in a Canyon River," *Journal of Geophysical Research* 111:F01025.

HDCR (Hualapai Department of Cultural Resources), 2010, "About the Hualapai Nation." Available at http://hualapai-nsn.gov/wp-content/uploads/2011/05/AboutHualapaiBooklet.pdf. Accessed March 8, 2012.

Healy, B., E. Omana Smith, C. Nelson, and M. Trammell, 2014, *Translocation of Humpback Chub to Grand Canyon Tributaries and Related Nonnative Fish Control Activities: 2011–2013*, report prepared for the Upper Colorado Region, Bureau of Reclamation, Interagency Agreement Number: 09-AA-40-2890.

Heino, J., R. Virkkala, and H. Toivonen, 2009, "Climate Change and Freshwater Biodiversity: Detected Patterns, Future Trends and Adaptations in Northern Regions," *Biological Reviews* 84:39–54.

Hinck, J.E., G. Linder, S. Finger, E. Little, D. Tillitt, and W. Kuhne, 2010, "Biological Pathways of Exposure and Ecotoxicity Values for Uranium and Associated Radionuclides," Chapter D in *Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona*, Alpine, A.E. (ed.), Scientific Investigations Report 2010-5025, U.S. Department of the Interior, U.S. Geological Survey.

Hirst, S., 1985, *Havsuw 'Baaja: People of the Blue Green Water*, Havasupai Tribal Council, Grand Canyon, Ariz.

Hockin, D., et al., 1992, "Examination of the Effects of Disturbance on Birds with Reference to Its Importance in Ecological Assessments," *Journal of Environmental Management* 36:253–286.

Hoffnagle, T.L., 1996, *Changes in Water Quality Parameters and Fish Usage of Backwaters During Fluctuating vs. Short-Term Steady Flows in the Colorado River, Grand Canyon*, prepared for Glen Canyon Environmental Studies, U.S. Bureau of Reclamation, by Arizona Game and Fish Department.

Hoffnagle, T.L., A. Choudhury, and R.A. Cole, 2006, "Parasitism and Body Condition in Humpback Chub from the Colorado and Little Colorado Rivers, Grand Canyon, Arizona," *Journal of Aquatic Animal Health* 18:184–193.

Holden, P.B., and C.B. Stalnaker, 1975, "Distribution and Abundance of Mainstream Fishes of the Middle and Upper Colorado River Basins, 1967–1973," *Transactions of the American Fisheries Society* 104:217–231.

Holdren, C., 2012, *An Introduction to Lake Mead*, Nevada Water Resources Association, presented at Lake Mead Symposium, March 5.

Holdren, G.C., T. Tietjen, K. Turner, and J.M. Miller, 2012, "Hydrology and Management of Lakes Mead and Mohave within the Colorado River Basin," in *A Synthesis of Aquatic Science for Management of Lakes Mead and Mohave*, M.R. Rosen et al. (eds.), USGS Circular 1381. Available at http://pubs.usgs.gov/circ/1381/pdf/circ1381.pdf. Accessed Feb. 26, 2015.

Holmes, J.A., J.R. Spence, and M.K. Sogge, 2005, "Birds of the Colorado River in Grand Canyon: A Synthesis of Status, Trends, and Dam Operation Effects," Chapter 7 in *The State of the Colorado River Ecosystem in Grand Canyon*, S.P. Gloss, J.E. Lovich, and T.S. Melis (eds.), USGS Circular 1282, U.S. Geological Survey, Reston, Va.

Holton, B., 2014, *Ecology of Desert Bighorn Sheep in Grand Canyon National Park, Progress Report*, U.S. Department of the Interior, National Park Service, Grand Canyon National Park, Grand Canyon, Ariz., March.

Hopi CPO (Cultural Preservation Office), 2001, Öngtupqa (Grand Canyon), Palavayu (Little Colorado River), and Pizizvayu (Colorado River), A Hopi Traditional Cultural Property, Registration Form, National Register of Historic Places.

Horn, M., and J.F. LaBounty, 1997, *Summary of the Fate of Colorado River Water Entering Lake Mead*, Bureau of Reclamation, Denver, Colo. Available at http://www.gcmrc.gov/library/reports/physical/hydrology/Horn1996.pdf. Accessed Feb. 26, 2015.

Hough, W., 1906, "Sacred Springs in the Southwest," Records of the Past 5(6):164-169.

Howard, A., and R. Dolan, 1981, "Geomorphology of the Colorado River in the Grand Canyon," *The Journal of Geology* 89(3):269–298.

Hualapai Tribe, 2013, "Hualapai Seal." Available at http://hualapai-nsn.gov/about-2/hualapai-seal/. Accessed Jan. 28, 2015.

Hueftle, S.J., and L.E. Stevens, 2001, "Experimental Flood Effects on the Limnology of Lake Powell," in *Ecological Applications* 11(3). Available at http://www.jstor.org/stable/pdfplus/3061107.pdf. Accessed Feb. 26, 2015.

Hughes, C., 2014a, personal communication from Hughes (Chief of Science and Resource Management, Glen Canyon National Recreation Area and National Bridge Monument, National Park Service) to J. May (Argonne National Laboratory), Feb. 3–7.

Hughes, C., 2014b, personal communication from Hughes (Chief of Science and Resource Management, Glen Canyon National Recreation Area and National Bridge Monument, National Park Service) to J. Abplanalp (Argonne National Laboratory), Dec. 12.

Hultine, K.R., J. Belnap, C. van Riper, III, J.R. Ehleringer, P.E. Dennison, M.E. Lee, P.L. Nagler, K.A. Snyder, S.M. Uselman, and J.B. West, 2010, "Tamarisk Biocontrol in the Western United States: Ecological and Societal Implications," *Frontiers in Ecology and the Environment* 8(9):467–474. DOI:10.1890/090031.

ICC (Indian Claims Commission), 1965, "Findings of Fact," *Decisions of the Indian Claims Commission*, Vol. 14, Oklahoma State University. Available at http://digital.library.okstate.edu/ icc/. Accessed May 7, 2013.

IKAMT (The Interagency Kanab Ambersnail Monitoring Team), 1998, *The Endangered Kanab Ambersnail at Vaseys Paradise, Grand Canyon, Arizona: 1997 Final Report*, prepared by the Interagency Kanab Ambersnail Monitoring Team for the Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., April 29.

IMPLAN Group, LLC, 2014, IMPLAN Data files, Huntersville, N.C.

Iorns, W.V., C.H. Hombree, and G.L. Oakland, 1965, *Water Resources of the Upper Colorado River Basin*, Technical Report, Professional Paper 441, U.S. Geological Survey.

IPCC (Intergovernmental Panel on Climate Change), 2007, *Climate Change 2007: Synthesis Report*, Fourth Assessment Report of the Intergovernmental Panel on Climate Change, R.K. Pachauri and A. Reisinger (eds.), Geneva, Switzerland. Available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf. Accessed Feb. 26, 2015.

Jackson, L., D.J. Kennedy, and A.M. Phillips, III, 2001, *Evaluating Hualapai Cultural Resources along the Colorado River, 2001, Final Report*, prepared by Hualapai Department of Cultural Resources, Peach Springs, Ariz., for U.S. Department of the Interior, Bureau of Reclamation, Salt Lake City, Utah.

Jackson-Kelly, L., 2008, "Hualapai Tribe's Participation in the Adaptive Management Program: A Stakeholder's Perspective," presented at the Glen Canyon Dam Adaptive Management Work Group Meeting, Sept. 9–10. Available at http://www.usbr.gov/uc/rm/amp/amwg/mtgs/08sep09/Attach_08.pdf. Accessed March 7, 2012.

Jackson-Kelly, L., D. Hubbs, C. Cannon, and A.M. Phillips, III, 2009, *Evaluating Hualapai Cultural Resources along the Colorado River*, prepared by Hualapai Department of Cultural Resources, Peach Springs, Ariz., for Upper Colorado Regional Office, Bureau of Reclamation, Salt Lake City, Utah.

Jackson-Kelly, L., D. Hubbs, C. Cannon, and A.M. Phillips, III, 2010, *Evaluating Hualapai Cultural Resources along the Colorado River*, prepared by Hualapai Department of Cultural Resources, Peach Springs, Ariz., for Upper Colorado Regional Office, Bureau of Reclamation, Salt Lake City, Utah.

Jackson-Kelly, L., D. Hubbs, C. Cannon, and A.M. Phillips, III, 2013, *Evaluating Hualapai Cultural Resources along the Colorado River May and August, 2012*, prepared by Hualapai Department of Cultural Resources, Peach Springs, Ariz., for Bureau of Reclamation, Upper Colorado Regional Office, Salt Lake City, Utah.

Jackson-Kelly, L., D. Hubbs, C. Cannon, A.M. Phillips, III, and W.G. Wright, 2011, *Evaluating Hualapai Cultural Resources along the Colorado River: FY2011 Report*, Hualapai Tribe Department of Cultural Resources, Peach Springs, Ariz., submitted to Bureau of Reclamation, Upper Colorado Regional Office, Salt Lake City, Utah.

Jacobs, J., 2011, "The Sustainability of Water Resources in the Colorado River Basin," in *The Bridge: Linking Engineering and Society*, National Academy of Engineering, Winter:6–12.

Jalbert, L., 2014, personal communication from Jalbert (National Park Service) to J. May (Argonne National Laboratory), March 10, 2014.

Jennings, J.D., 1966, *Glen Canyon: A Summary*, Anthropological Papers No. 81, University of Utah, Salt Lake City, Utah.

Johnson, M., B.E. Ralston, L. Jamison, L. Makarick, and J. Holmes, 2012, 2011 Monitoring Tamarisk Foliage Removal by the Introduced Tamarisk Leaf Beetle (Diorhabda carinulata), and Its Effects on Avian Habitat Parameters along the Colorado River in Grand Canyon National Park, Arizona, U.S. Department of the Interior, National Park Service.

Johnson, M.J., R.T. Magill, and C. van Riper, III, 2010, "Yellow-Billed Cuckoo Distribution and Habitat Associations in Arizona, 1998–1999," pp. 197–212 in *The Colorado Plateau IV: Integrating Research and Resources Management for Effective Conservation*, C. van Riper, III, B.F. Wakeling, and T.D. Sisk (eds.), The University of Arizona Press, Tucson, Ariz.

Johnson, M.J., S.L. Scott, C.M. Calvo, L. Stewart, M.K. Sogge, G. Bland, and T. Arundel, 2008, *Yellow-Billed Cuckoo Distribution, Abundance, and Habitat Use along the Colorado River and Its Tributaries, 2007 Annual Report*, U.S. Geological Survey Open-File Report 2008-1177, U.S. Geological Survey, Reston, Va.

Johnson, N.M., and D.H. Merritt, 1979, "Convective and Advective Circulation of Lake Powell, Utah-Arizona, during 1972–1975," *Water Resources Research* 1.5(4):873–884.

Johnson, R.R., 1991, "Historic Changes in Vegetation along the Colorado River in the Grand Canyon," in *Colorado River Ecology and Dam Management,* proceedings of a symposium, May 24–25, 1990, Santa Fe, N.Mex., prepared by the Committee to Review the Glen Canyon Environmental Studies, Water Science and Technology Board, Commission on Geosciences, Environment, and Resources, National Research Council, National Academy Press.

Johnson, R.R., and S.W. Carothers, 1987, "External Threats: The Dilemma of Resource Management on the Colorado River in Grand Canyon National Park, USA," *Environmental Management* 11(1):99–107.

Johnstone, H.C., and M. Lauretta, 2007, *Native Fish Monitoring Activities in the Colorado River within Grand Canyon during 2004*, SWCA Environmental Consultants, Flagstaff, Ariz., final report to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Jones, B.A., R.P. Berrens, H.C. Jenkins-Smith, C.L. Silva, D.E. Carlson, J.T. Ripberger, K. Gupta, and N. Carlson, 2016, "Valuation in the Anthropocene: Exploring Options for Alternative Operations of the Glen Canyon Dam," *Water Resources and Economics* 14:13–30.

Jones, N.E., 2013a, "The Dual Nature of Hydropeaking Rivers: Is Ecopeaking Possible?" *River Research and Applications* 2013. Available at wileyonlinelibrary.com. DOI:10:1002/rra.2653.

Jones, N.E., 2013b, "Spatial Patterns of Benthic Invertebrates in Regulated and Natural Rivers," *River Research and Applications* 29:343–351.

Kaeding, L.R, and M.A. Zimmerman, 1983, "Life History and Ecology of the Humpback Chub in the Little Colorado and Colorado Rivers in Grand Canyon," *Transactions of the American Fisheries Society* 112:577–594.

Kaibab Paiute Indian Tribe, 2013, official website of the Kaibab Paiute Tribe. Available at http://www.kaibabpaiute-nsn.gov/. Accessed May 8, 2013.

Kaiser, J., 2010, Grand Canyon, the Complete Guide, 4th ed., Destination Press, Chicago, Ill.

Kaplinski, M., J. Hazel, and R. Parnell, 2005, *Campsite Area Monitoring in the Colorado River Ecosystem: 1998 to 2003*, Department of Geology, Northern Arizona University, Flagstaff, Ariz., prepared for Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., May 2.

Kaplinski, M., J.E. Hazel, Jr., and R. Parnell, 2010, "Colorado River Campsite Monitoring, 1998–2006, Grand Canyon National Park, Arizona," pp. 275–284 in *Proceedings of the Colorado River Basin Science and Resource Management Symposium*, U.S. Department of the Interior, U.S. Geological Survey, Nov. 18–20, 2008, Scottsdale, Ariz.

Kearsley, L., and K. Warren, 1993, *River Campsites in Grand Canyon National Park: Inventory and Effects of Discharge on Campsite Size and Availability, Final Report*, Grand Canyon National Park, Division of Resources Management, National Park Service, in cooperation with the Glen Canyon Environmental Studies, May.

Kearsley, L.H., J.C. Schmidt, and K.D. Warren, 1994, "Effects of Glen Canyon Dam on Colorado River Sand Deposits Used as Campsites in Grand Canyon National Park, USA," *Regulated Rivers: Research & Management* 9:137–149.

Kearsley, M.J.C., and T. Ayers, 1996, *The Effects of Interim Flows from Glen Canyon Dam on Riparian Vegetation in the Colorado River Corridor, Grand Canyon National Park, Arizona*, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Kearsley, M.J.C., and T.J. Ayers, 1999, "Riparian Vegetation Responses: Snatching Defeat from the Jaws of Victory and Vice Versa," pp. 309–328 in *The Controlled Flood in Grand Canyon*, R.H. Webb, J.C. Schmidt, G.R. Marzolf, and R.A. Valdez (eds.), American Geophysical Union Monograph 110, Washington, D.C.

Kearsley, M.J.C., N.S. Cobb, H. Yard, D. Lightfoot, S. Brantley, G. Carpenter, and J. Frey, 2003, *Inventory and Monitoring of Terrestrial Riparian Resources in the Colorado River Corridor of Grand Canyon: A Integrative Approach, 2003 Annual Report*, submitted to the Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Aug.

Kearsley, M.J.C., N.S. Cobb, H.K. Yard, D. Lightfoot, S.L. Brantley, G.C. Carpenter, and J.K. Frey, 2006, *Inventory and Monitoring of Terrestrial Riparian Resources in the Colorado River Corridor of Grand Canyon: An Integrative Approach*, final report, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Cooperative Agreement 01-WRAG 0034/0044.

Kearsley, M.J.C., K. Green, M. Tukman, M. Reid, M. Hall, T. J. Ayers, and K. Christie, 2015, *Grand Canyon National Park-Grand Canyon/Parashant National Monument Vegetation Classification and Mapping Project*, Natural Resource Report NPS/GRCA/NRR—2015/913, National Park Service, Fort Collins, Colo.

Kegerries, R., and B. Albrecht, 2012, *Razorback Sucker Studies at the Colorado River Inflow of Lake Mead, Nevada and Arizona – 2012*, presentation to the Lake Mead Razorback Sucker Workgroup, Nev.

Kegerries, R., B. Albrecht, R. Rogers, E. Gilbert, W.H. Brandenburg, A.L. Barkalow, S.P. Platania, M. McKinstry, B. Healy, J. Stolberg, Emily Omana Smith, Clay Nelson, and H. Mohn, 2015, *Razorback Sucker* Xyrauchen texanus *Research and Monitoring in the Colorado River Inflow Area of Lake Mead and the Lower Grand Canyon, Arizona and Nevada*, final report prepared by BIO-WEST, Inc., for the U.S. Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah.

Kennedy, T., 2016, e-mail from Kennedy (U.S. Geological Survey, Southwest Biological Center, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.) to R. Billerbeck (National Park Service, Lakewood, Colo.), Subject: "Request for Comment or Help," July 8.

Kennedy, T.A., 2007, *A* Dreissena *Risk Assessment for the Colorado River Ecosystem*, U.S. Geological Survey Open-File Report 2007-1085.

Kennedy, T.A., and S.P. Gloss, 2005, "Aquatic Ecology: The Role of Organic Matter and Invertebrates," Chapter 5 in *The State of the Colorado River Ecosystem in Grand Canyon*, U.S. Geological Survey Circular 1282, S.P. Gloss et al. (eds.), U.S. Geological Survey, Reston, Va.

Kennedy, T.A., and B.E. Ralston, 2011, "Biological Responses to High-Flow Experiments at Glen Canyon Dam," pp. 93–125 in *Effects of Three High Flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, T.S. Melis (ed.), U.S. Geological Survey Circular 1366, U.S. Geological Survey, Reston, Va.

Kennedy, T.A., and B.E. Ralston, 2012, "Regulation Leads to Increases in Riparian Vegetation, but Not Direct Allochthonous Inputs, along the Colorado River in Grand Canyon, Arizona," *River Research and Applications* 28:2–12. Kennedy, T.A., Cross, W.F., Hall, R.O., Jr., Baxter, C.V., and Rosi-Marshall, E.J., 2013, *Native and Nonnative Fish Populations of the Colorado River Are Food Limited—Evidence from New Food Web Analyses*, U.S. Geological Survey Fact Sheet 2013–3039. Available at http://pubs.usgs.gov/fs/2013/3039/. Accessed Jan, 21, 2015.

Kennedy, T., J. Muehlbauer, and C. Yackulic, 2014, *Foodweb Update*, U.S. Department of the Interior, U.S. Geological Survey, presented at Annual Reporting Meeting, Phoenix, Ariz., Jan. 28. Available at http://www.usbr.gov/uc/rm/amp/twg/mtgs/14jan30/ AR_Kennedy_Foodweb_Update.pdf. Accessed Oct. 31, 2014.

Kennedy, T.A., C.B. Yackulic, W.F. Cross, P.E. Grams, M.D. Yard, and A.J. Copp, 2014, "The Relation between Invertebrate Drift and Two Primary Controls, Discharge and Benthic Densities, in a Large Regulated River," *Freshwater Biology* 59:557–572.

Kennedy, T.A., M. Dodrill, J. Muehlbauer, C. Yackulic, and R. Payn, 2015, *Big Flood, Small Flood, Spring Flood, Fall Flood: HFE Timing Affects Foodbase Response in Lees Ferry*, Glen Canyon Dam Adaptive Management Program, High Flow Experiment Workshop, February 25–26. Available at https://www.usbr.gov/uc/rm/amp/amwg/mtgs/15feb25. Accessed June 30, 2016.

Kennedy, T.A., J.D. Muehlbauer, C.B. Yackulic, D.A. Lytle, S.W. Miller, K.L. Dibble, E.W. Kortenhoeven, A.N. Metcalfe, and C.V. Baxter, 2016, "Flow Management for Hydropower Extirpates Aquatic Insects, Undermining River Food Webs," *BioScience* biw059, Advanced Access, May 2.

Kerans, B.L., M.F. Dybdahl, M.M. Gangloff, and J.E. Jannot, 2005, "*Potamopyrgus antipodarum*: Distribution, Density, and Effects on Native Macroinvertebrate Assemblages in the Greater Yellowstone Ecosystem," *Journal of the North American Benthological Society* 24(1):123–138.

Kilroy, C., S.T. Larned, and B.J.F. Biggs, 2009, "The Non-Indigenous Diatom *Didymosphenia geminata* Alters Benthic Communities in New Zealand Rivers," *Freshwater Biology* 54:1990–2002.

King, M.A., 2005, *New Habitats for Old: Tamarisk-Dominated Riparian Communities and Marshes in the Grand Canyon*, report from Ecogeomorphology: Grand Canyon, Winter Quarter 2005, Center for Watershed Sciences, University of California, Davis, Calif., March 15. Available at https://watershed.ucdavis.edu/education/classes/ecogeomorphology-grand-canyon. Accessed Oct. 27, 2014.

Kirkwood, A.E., T. Shea, L.J. Jackson, and E. McCauley, 2007, "*Didymosphenia geminata* in Two Alberta Headwater Rivers: An Emerging Invasive Species That Challenges Conventional Views on Algal Bloom Development," *Canadian Journal of Fisheries and Aquatic Sciences* 64:1703–1709.

Korman, J., and S.E. Campana, 2009, "Effects of Hydropeaking on Nearshore Habitat Use and Growth of Age-0 Rainbow Trout in a Large Regulated River," *Transactions of the American Fisheries Society* 138:76–87.

Korman, J., and T.S. Melis, 2011, "The Effects of Glen Canyon Dam Operations on Early Life Stages of the Rainbow Trout in the Colorado River," USGS Fact Sheet 2011-3002, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Korman, J., M. Kaplinski, J.E. Hazel, III, and T.S. Melis, 2005, *Effects of the Experimental Fluctuating Flows from Glen Canyon Dam in 2003 and 2004 on the Early Life Stages of Rainbow Trout in the Colorado River*, final report, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Korman, J., M. Kaplinski, and J. Buszwoski, 2006, *Effects of Air and Mainstem Water Temperatures, Hydraulic Isolation, and Fluctuating Flows from Glen Canyon Dam on Water Temperatures in Shoreline Environments of the Colorado River in Grand Canyon*, final report to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Korman, J., M. Kaplinski, and T.S. Melis, 2010, *Effects of High-Flow Experiments from Glen Canyon Dam on Abundance, Growth, and Survival Rates of Early Life Stages of Rainbow Trout in the Lees Ferry Reach of the Colorado River*, U.S. Geological Survey Open-File Report 2010–1034.

Korman, J., M. Kaplinski, and T.S. Melis, 2011, "Effects of Fluctuating Flows and a Controlled Flood on Incubation Success and Early Survival Rates and Growth of Age-0 Rainbow Trout in a Large Regulated River," *Transactions of the American Fisheries Society* 140:487–505.

Korman, J., M.D. Yard, and C.B. Yackulic, 2015, "Factors Controlling the Abundance of Rainbow Trout in the Colorado River in Grand Canyon in a Reach Utilized by Endangered Humpback Chub," *Canadian Journal of Fisheries and Aquatic Sciences* 73:105–124. dx.doi.org/10.1139/cjfas-2015-0101.

Korman, J., S.J.D. Martell, C.J. Walters, A.S. Makinster, L.G. Coggins, M.D. Yard, and W.R. Persons, 2012, "Estimating Recruitment Dynamics and Movement of Rainbow Trout in the Colorado River in Grand Canyon Using an Integrated Assessment Model," *Canadian Journal of Fisheries and Aquatic Sciences* 69:1827–1849.

Korman, J., B. Persons, and M. Yard, 2011, "Salmonid Population Status and Trends," Knowledge Assessment II: 2nd Synthesis Workshop with the Grand Canyon Technical Workgroup – Aquatic Resources, Oct. 18–19, 2011. Available at http://www.gcmrc.gov/about/ka/KA%202%20-%2010-18-11/PM%20Talks/ Korman_salmonid%20status%20and%20trends.pdf. Accessed April 11, 2014. Ladd, E.J., 1963, *Zuni Ethno-ornithology*, University of New Mexico, Albuquerque, N.Mex. Ladenburger, C.G., A.L. Hild, D.J. Kazmer, and L.C. Munn, 2006, "Soil Salinity Patterns in *Tamarix* Invasions in the Bighorn Basin, Wyoming, USA," *Journal of Arid Environments* 65:111–128.

Larson, A., and J. Carreiro, 2008, "Relationship between Nuisance Blooms of *Didymosphenia* geminata and Measures of Aquatic Community Composition in Rapid Creek, South Dakota," *Canadian Technical Report on Fisheries and Aquatic Sciences* 2795:45–49.

LaRue, C.T., L.L. Dickson, N.L. Brown, J.R. Spence, and L.E. Stevens, 2001, "Recent Bird Records from the Grand Canyon Region, 1974–2000," *Western Birds* 32:101–118.

Lauretta, M.V., and K.M. Serrato, 2006, *Native Fish Monitoring Activities in the Colorado River within Grand Canyon during 2005*, prepared by SWCA Environmental Consultants, Flagstaff, Ariz., for U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

LCRMSCP (Lower Colorado River Multi-Species Conservation Program), 2004, *Lower Colorado River Multi-Species Conservation Program, Vol. II: Habitat Conservation Plan*, Dec. 17.

Leibfried, W.C., and D.W. Blinn, 1987, *The Effects of Steady Versus Fluctuating Flows on Aquatic Macroinvertebrates in the Colorado River below Glen Canyon Dam, Arizona*, final report, June 1.

Leopold, L.B., 1969, *The Rapids and the Pools–Grand Canyon*, U.S. Geological Survey Professional Paper 669-D.

Leslie, E.F., 2004, *Trip Report Regarding Impacts of Feral Burros*, on file at Grand Canyon National Park, Ariz.

Lima, I.B.T., F.M. Ramos, L.A.W. Bambace, and R.R. Rosa, 2008, "Methane Emissions from Large Dams as Renewable Energy Resources: A Developing Nation Perspective," *Mitigation and Adaptation Strategies for Global Change* 13:193–206.

Linford, L.D., 2000, Navajo Places, History, Legend, Landscape: A Narrative of Important Places on and near the Navajo Reservation, with Notes on Their Significance to Navajo Culture and History, University of Utah Press, Salt Lake City, Utah.

Littlefield, J., 2007, *Endangered or Not? Taxonomy of the Kanab Ambersnail*, Arizona Agricultural Experiment Station Research Report for 2007.

Lomaomvaya, M., T.J. Ferguson, and M. Yeatts, 2001, *Öngtuvqava Sakwtala, Hopi Ethnobotany in the Grand Canyon*, prepared by Hopi Cultural Preservation Office, March, on file at Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Longshore, K.M., C. Lowrey, and D.B. Thompson, 2009, "Compensating for Diminishing Natural Water: Predicting the Impacts of Water Development on Summer Habitat of Desert Bighorn Sheep," *Journal of Arid Environments* 73:280–286.

Loomis, J., A.J. Douglas, and D.A. Harpman, 2005, "Recreation Use Values and Nonuse Values of Glen and Grand Canyons, pp. 153–164 in *The State of the Colorado River Ecosystem in the Grand Canyon*, S.P. Gloss, J.E. Lovich, and T.S. Melis (eds.), U.S. Geological Survey Circular 1282.

Loomis, J.B., 2014, *Market and Non-Market Values of Water Resources and Non-Market Values of Hydropower Associated With Glen Canyon Dam: A Theoretical Framework and Literature Review*, Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, Colo., May.

Lovett, M., 2013, personal communication from Lovett (Marble Canyon Outfitters) to J. May (Argonne National Laboratory), July.

Lovich, J., and T.S. Melis, 2007, "The State of the Colorado River Ecosystem in Grand Canyon: Lessons from 10 Years of Adaptive Ecosystem Management," *Intl. J. River Basin Management* 5(3):207–221.

Maddux, H.R., and W.G. Kepner, 1988, "Spawning of Bluehead Sucker in Kanab Creek, Arizona (Pisces: Catostomidae)," *Southwest Naturalist* 33(3):364–365.

Maddux, H.R., D.M. Kubly, J.C. DeVos, Jr., W.R. Pearsons, R. Staedicke, and R.L. Wright, 1987, *Effects of Varied Flow Regimes on Aquatic Resources of Glen and Grand Canyons*, Glen Canyon Environmental Studies Technical Report, Arizona Game and Fish Department, Phoenix, Ariz.

Magirl, C.S., M.J. Breedlove, R.H. Webb, and P.G. Griffiths, 2008, *Modeling Water-Surface Elevations and Virtual Shorelines for the Colorado River in Grand Canyon, Arizona*, U.S. Geological Survey Scientific Investigation Report 2008-5075.

Magirl, C.S., R.H. Webb, and P.G. Griffiths, 2005, "Changes in the Water Surface Profile of the Colorado River in Grand Canyon, Arizona, between 1923 and 2000," *Water Resources Research* 41:W05021.

Makarick, L., 2015, personal communication from Makarick (Grand Canyon National Park) to R. Van Lonkhuyzen (Argonne National Laboratory), June 16.

Makinster, A.S., 2007, "Recent Trends in the Lee's Ferry Tailwater Fishery, with Additional Input on Findings of Whirling Disease, Crayfish and Exotic Species," presentation to the Glen Canyon Dam Adaptive Management Program Adaptive Management Workgroup. Available at http://www.usbr.gov/uc/rm/amp/amwg/mtgs/07aug29/Attach_03e.pdf. Accessed April 9, 2014. Makinster, A.S., R.S. Rogers, and W.R. Persons, 2007, *Status of the Lee's Ferry Trout Fishery: 2003–2005 Annual Report*, Arizona Game and Fish Department, Phoenix, Ariz.

Makinster, A.S., R.S. Rogers, M. Hangsleben, L.A. Avery, and W.R. Persons, 2009, *Grand Canyon Long-Term Non-Native Fish Monitoring, 2008 Annual Report*, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Makinster, A.S., W.R. Persons, and L.A. Avery, 2011, *Status and Trends of the Rainbow Trout Population in the Lees Ferry Reach of the Colorado River Downstream from Glen Canyon Dam, Arizona, 1991–2009*, Scientific Investigations Report 2011–5015, U.S. Geological Survey, Reston, Va.

Makinster, A.S., W.R. Persons, L.A. Avery, and A.J. Bunch, 2010, *Colorado Fish Monitoring in the Grand Canyon, Arizona – 2000 to 2009 Summary*, U.S. Geological Survey Open-File Report 2010-1246.

Maldanado, R.P., 2011, Navajo Traditional Cultural Properties along the Colorado and Little Colorado Rivers in Coconino and Mohave Counties, Arizona, Registration Form, National Register of Historic Places.

Marcogliese, D.J., and G.W. Esch, 1989, "Experimental and Natural Infection of Planktonic and Benthic Copepods by the Asian Tapeworm, *Bothriocephalus acheilognathi*," *Proceedings of the Helminthological Society of Washington* 56(2):151–155.

Marsh, P.C., 1987, "Digestive Tract Contents of Adult Razorback Suckers in Lake Mohave, Arizona-Nevada," *Transactions of the American Fisheries Society* 116:117–119.

Marsh, P.C., and M.E. Douglas, 1997, "Predation by Introduced Fishes on Endangered Humpback Chub and Other Native Species in the Little Colorado River, Arizona," *Transactions of the American Fisheries Society* 126:343–346.

Marsh, P.C., C.A. Pacey, and B.R. Kesner, 2003, "Decline of the Razorback Sucker in Lake Mohave, Colorado River, Arizona and Nevada," *Transactions of the American Fisheries Society* 132:1251–1256.

Martin, T., 2010, Day Hikes from the River, 4th ed., Vishnu Temple Press, Flagstaff, Ariz.

Martin, T., and D. Whitis, 2008, *Guide to the Colorado River in the Grand Canyon, Lee's Ferry to South Cove*, 4th ed., Vishnu Temple Press, Flagstaff, Ariz.

Martinez, P., K. Wilson, P. Cavalli, H. Crockett, D. Speas, M. Trammell, B. Albrecht, and D. Ryden, 2014, *Upper Colorado River Basin Nonnative and Invasive Aquatic Species Prevention and Control Strategy*, Upper Colorado River Endangered Fish Recovery Program, Lakewood, Colo., Feb.

Maxell, B.A., 2000, Management of Montana's Amphibians: A Review of Factors That May Present a Risk to Population Viability and Accounts on the Identification, Distribution, Taxonomy, Habitat Use, Natural History, and the Status and Conservation of Individual Species, a report (Order Number 43-0343-0-0224) to Northern Regional Office (Region 1), USDA Forest Service, Missoula, Mont., Sept. 20. Available at http://www.isu.edu/~petechar/iparc/ Maxell_Mgmnt.pdf. Accessed Aug. 10, 2009.

McDonald, D.B., and P.A. Dotson, 1960, "Fishery Investigations of the Glen Canyon and Flaming Gorge Impoundment Areas," *Utah State Department of Fish and Game Information Bulletin* 60-3:1–70.

McKinney, T., and W.R. Persons, 1999, *Rainbow Trout and Lower Trophic Levels in the Lees Ferry Tailwater below Glen Canyon Dam, Arizona – A Review*, March.

McKinney, T., W.R. Persons, and R.S. Rogers, 1999, "Ecology of Flannelmouth Sucker in the Lees Ferry Tailwater, Colorado River, Arizona," *Great Basin Naturalist* 59(3):259–265.

McKinney, T., D.W. Speas, R.S. Rodgers, and W.R. Persons, 2001, "Rainbow Trout in a Regulated River Below Glen Canyon Dam, Arizona, Following Increased Minimum Flows and Reduced Discharge Variability," *North American Journal of Fisheries Management* 21(1):216–222.

McKinney, T., A.T. Robinson, D.W. Speas, and R.S. Rogers, 2001, "Health Assessment, Associated Metrics, and Nematode Parasitism of Rainbow Trout in the Colorado River below Glen Canyon Dam, Arizona," *North American Journal of Fisheries Management* 21:62–69.

Melis, T.S. (ed.), 2011, *Effects of Three High-Flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, U.S. Geological Survey Circular 1366. Available at http://pubs.usgs.gov/circ/1366/c1366.pdf. Accessed Feb. 19, 2015.

Melis, T.S., and R.H. Webb, 1993, "Debris Flows in Grand Canyon National Park, Arizona: Magnitude, Frequency, and Effect on the Colorado River," pp. 1290–1295 in *American Society of Civil Engineers, Proceedings of the Conference Hydraulic Engineering '93*, H.W. Shen et al. (eds.), Vol. 2.

Melis, T.S., P.E. Grams, T.A. Kennedy, B.E. Ralston, C.T. Robinson, J.C. Schmidt, L.M. Schmit, R.A. Valdez, and S.A. Wright, 2011, "Three Experimental High-Flow Releases from Glen Canyon Dam, Arizona—Effects on the Downstream Colorado River Ecosystem," Fact Sheet 2011–301, U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, Feb. Available at http://pubs.usgs.gov/fs/2011/3012/fs2011-3012.pdf. Accessed Feb. 19, 2015.

Melis, T.S., J. Korman, and T.A. Kennedy, 2012, "Abiotic and Biotic Responses of the Colorado River to Controlled Floods at Glen Canyon Dam, Arizona, USA," *River Research and Applications* 28:764–776.

Melis, T.S., D.J. Topping, P.E. Grams, D.M. Rubin, S.A. Wright, A.E. Draut, J.E. Hazel, Jr., B.E. Ralston, T.A. Kennedy, E. Rosi-Marshall, J. Korman, K.D. Hilwig, and L.M. Schmitt, 2010, "2008 High-Flow Experiment at Glen Canyon Dam Benefits Colorado River Resources in Grand Canyon National Park," Fact Sheet 2010–3009, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Melis, T.S., R.H. Webb, P.G. Griffiths, and T.W. Wise, 1995, *Magnitude and Frequency Data for Historic Debris Flows in Grand Canyon National Park and Vicinity, Arizona*, U.S. Geological Survey Water-Resources Investigations Report 94–4214.

Melis, T.S., S.A. Wright, B.E. Ralston, H.C. Fairley, T.A. Kennedy, M.E. Andersen, and L.G. Coggins, Jr., 2006, 2005 Knowledge Assessment of the Effects of Glen Canyon Dam on the Colorado River Ecosystem: An Experimental Planning Support Document, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, in cooperation with Josh Korman, Ecometric Research, Inc.

Meretsky, V., and D. Wegner, 2000, *Kanab Ambersnail at Vasey's Paradise, Grand Canyon National Park 1998–99 Monitoring and Research, Final Report*, prepared by SWCA Environmental Consultants, Flagstaff, Ariz., for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Sept.

Merritt, D.M., M.L. Scott, N.L. Poff, G.T. Auble, and D.A. Lytle, 2010, "Theory, Methods and Tools for Determining Environmental Flows for Riparian Vegetation—Riparian Vegetation Flow Response Guilds," *Freshwater Biology* 55:206–225.

Minckley, W.L., 1991, "Native Fishes of the Grand Canyon Region: An Obituary?" pp. 124–177 in *Colorado River Ecology and Dam Management*, prepublication copy, proceedings of a symposium, May 24–25, 1990, Santa Fe, New Mexico, National Academy Press, Washington, D.C.

Minckley, W.L., P.C. Marsh, J.E. Brooks, J.E. Johnson, and B.L. Jensen, 1991, "Management toward Recovery of the Razorback Sucker," Chapter 17 in *Battle Against Extinction: Native Fish Management in the American West*, University of Arizona Press, Tucson, Ariz.

Moffitt, C.M., and C.A. James, 2012, "Dynamics of *Potamopyrgus antipodarum* Infestations and Seasonal Water Temperatures in a Heavily Used Recreational Watershed in Intermountain North America," *Aquatic Invasions* 7(2):193–202.

Mohseni, O., H.G. Stefan, and J.G. Eaton, 2003, "Global Warming and Potential Changes in Fish Habitat in U.S. Streams," *Climatic Change* 59:389–409.

Mormon, S.A., 2010, "Arsenic: A Detective Story in Dusts," *Earth* 55(6):40–47, June.

Mortenson, S.G., P.J. Weisberg, and B.E. Ralston, 2008, "Do Beaver Promote the Invasion of Non-native *Tamarix* in the Grand Canyon Riparian Zone?" *Wetlands* 28:666–675.

Mortenson, S.G., P.J. Weisberg, and L.E. Stevens, 2012, "The Influence of Floods and Precipitation on Tamarix Establishment in Grand Canyon, Arizona: Consequences for Flow Regime Restoration," *Biological Invasions* 14:1061–1076.

Mueller, G., P.C. Marsh, G. Knowles, and T. Wolters, 2000, "Distribution, Movements, and Habitat Use of Razorback Suckers (*Xyrauchen texanus*) in a Lower Colorado Reservoir, Arizona-Nevada," *Western North American Naturalist* 60:180–187.

Mueller, G.A., 2005, "Predatory Fish Removal and Native Fish Recovery in the Colorado River Mainstem: What Have We Learned?" *Fisheries* 30(9):10–19.

Mueller, G.A., and J.L. Brooks, 2004, "Collection of an Adult Gizzard Shad (*Dorosoma cepedianum*) from the San Juan River, Utah," *Western North American Naturalist* 64:135–136.

Nagler, P., and E. Glenn, 2013, "Tamarix and Diorhabda Leaf Beetle Interactions: Implications for Tamarix Water Use and Riparian Habitat," *Journal of the American Water Resources Association* 49(3):534–548.

Nagler, P.L., T. Brown, K.R. Hultine, C. Van Riper III, D.W. Bean, P.E. Dennison, R. Scott Murray, and E.P. Glenn, 2012, "Regional Scale Impacts of Tamarix Leaf Beetles (*Diorhabda carinulata*) on the Water Availability of Western U.S. Rivers as Determined by Multi-scale Remote Sensing Methods," *Remote Sensing of Environment* 118:227–240.

Nalepa, T.F., 2010, "An Overview of the Spread, Distribution, and Ecological Impacts of the Quagga Mussel, *Dreissena rostriformis bugensis*, with Possible Implications to the Colorado River System," pp. 113–121 in *Proceedings of the Colorado River Basin Science and Resource Management Symposium – Coming Together, Coordination of Science and Restoration Activities for the Colorado River Ecosystem*, T.S. Melis, J.F. Hamill, G.E. Bennett, L.G. Coggins, Jr., P.E. Grams, T.A. Kennedy, D.M. Kubly, and B.E. Ralston (eds.), November 18–20, 2008, Scottsdale, Ariz., U.S. Geological Survey Scientific Investigations Report 2010–5135.

NAS (National Academies of Science), 2007, Colorado River Basin Water Management: Evaluating and Adjusting to Hydro Climatic Variability, Feb.

NatureServe, 2014, "NatureServe Explorer: An Online Encyclopedia of Life" (web application), Version 7.1. NatureServe, Arlington, Va. Available at http://explorer.natureserve.org. Accessed Dec. 17, 2014.

Navajo Nation, undated, Forms for Archaeological Sites in the Area of the Navajo Land Claim by the Indian Claims Commission, doc. 229, mss. on file, Navajo Nation Reservation Library, Window Rock, Ariz.

Navajo Nation, 1962, *Proposed Findings of Fact on Behalf of the Navajo Tribe of Indians in Area of Havasupai Overlap*, Docket No. 91 before the Indian Claims Commission, Little and Grahm, Attorneys for the Navajo Tribe of Indians, Washington, D.C.

Navajo Tribal Utility Authority, 2012, *Integrated Resource Plan*, Oct. Available at https://www.wapa.gov/EnergyServices/Documents/NTUA2012.pdf. Accessed Nov. 2015.

NDEP (Nevada Division of Environmental Protection), 2008, *Nevada Statewide Greenhouse Gas Emissions Inventory and Projections, 1990–2020*, Dec. Available at http://ndep.nv.gov/baqp/technical/docs/NV_Statewide_GHG_Inventory2008.pdf. Accessed Oct. 29, 2013.

Neal, L., and D. Gilpin, 2000, *Cultural Resources Data Synthesis within the Colorado River Corridor, Grand Canyon National Park and Glen Canyon National Recreation Area, Arizona*, prepared for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Nebeker, A.V., 1971, "Effect of High Winter Water Temperatures on Adult Emergence of Aquatic Insects," *Water Research* 5:777–783.

Nebraska Department of Economic Development, 2013, "Population." Available at http://www.neded.org/business/data-a-research/population. Accessed Jan. 13, 2015.

Neher, C., J. Duffield, and D. Patterson, 2013, *A Natural Experiment in Reservoir Levels and Recreational Use: Modeling Visitation on Lake Mead and Lake Powell*, Draft. Available at http://cas.umt.edu/math/research/technical-reports/documents/2013/2013_12_Powell_Mead_Reservoir_Model.pdf.

Neher, C., J. Duffield, and D. Patterson, 2016, *Glen Canyon Total Value Survey: Report on Estimated Total Value Associated with Glen Canyon LTEMP EIS Alternative Characteristics*, University of Montana, Missoula, July.

Nelson, C., B. Healy, S. Blackburn, and E. Omana Smith, 2015, *Bright Angel Creek Comprehensive Brown Trout Control Project, October 1st–December 1st, 2014*, trip report, report prepared for the Upper Colorado Region, Bureau of Reclamation, Interagency Agreement Number: 09-AA-40-2890.

Nelson, C., E. Omana Smith, and B. Healy, 2012, *Bright Angel Creek Trout Control Project: September 29–December 9, 2012*, trip report, report prepared for the Upper Colorado Region, Bureau of Reclamation, Interagency Agreement Number: R12PG40034.

Nevada State Demographer's Office, 2013, *Nevada County Population Projections 2013 to 2032 Based on the Last Estimate Year of 2012*. Available at http://nvdemography.org/wpcontent/uploads/2013/10/Nevada-County-Population-Projections-2013-to-2032.pdf. Accessed Jan. 13, 2015.

NGSTWG (Navajo Generating Station Technical Working Group), 2013, Technical Work Group Agreement Related to Navajo Generating Station (NGS), July 25.

NNHPD (Navajo Nation Historic Preservation Department), 2012, 2012 Navajo Nation River Monitoring Trip Report, prepared by Traditional Culture Program, Window Rock, Ariz., submitted to Grand Canyon National Park, Flagstaff, Ariz.

NNHPD, 2015, *Navajo Nation River Monitoring Trip Report 2011–2015*, Report on file at the Navajo Historic Preservation & Heritage Department, Navajo Nation, Window Rock, Ariz.

NPS (National Park Service), 1979, *Glen Canyon National Recreation Area/Arizona-Utah: Proposed General Management Plan, Wilderness Recommendation, Road Study Alternatives, Final Environmental Statement*. Available at http://www.nps.gov/glca/parkmgmt/upload/ General-Management-Plan.pdf. Accessed May 2013.

NPS, 1986, *Final Environmental Impact Statement, General Management Plan and Alternatives. Lake Mead National Recreation Area/Arizona-Nevada*, FES-86-27. Available at http://www.nps.gov/lake/parkmgmt/upload/GMP_vol1.pdf. Accessed Aug. 2013.

NPS, 1988, *Backcountry Management Plan, Grand Canyon National Park, AZ*, Sept. Available at http://www.nps.gov/grca/parkmgmt/upload/1988_BCMP.pdf. Accessed May 2013.

NPS, 1995, *General Management Plan: Grand Canyon, Arizona*, Aug. Available at http://www.nps.gov/grca/parkmgmt/upload/GRCA_General_Management_Plan.pdf. Accessed Jan. 12, 2015.

NPS, 1996, *Fish Management Plan*, Glen Canyon National Recreation Area, State of Utah and State of Arizona, April.

NPS, 1997, *Grand Canyon National Park Resource Management Plan*, Jan. Available at http://www.nps.gov/grca/parkmgmt/upload/1997_Resource_Mgmt_Plan.pdf. Accessed May 2013.

NPS, 1998, *Cultural Resource Management Guideline*, NPS-28, June. Available at http://www.cr.nps.gov/history/online_books/nps28/28contents.htm. Accessed Jan. 28, 2015.

NPS, 2002a, Environmental Assessment/Assessment of Effect – Tamarisk Management and Tributary Restoration, Grand Canyon National Park, Arizona, U.S. Department of the Interior, Feb.

NPS, 2002b, Finding of No Significant Impact – Tamarisk Management and Tributary Restoration, Grand Canyon National Park, July.

NPS, 2002c, *Final Environmental Impact Statement for the Lake Mead National Recreation Area, Lake Management Plan*, Dec. Available at http://www.nps.gov/lake/parkmgmt/park-management-plans.htm. Accessed Aug. 2013.

NPS, 2005a, *Final Environmental Impact Statement Colorado River Management Plan*, U.S. Department of the Interior, National Park Service, Grand Canyon National Park, Coconino County, Arizona, Nov. Available at http://www.riversimulator.org/Resources/ NPS/GCNPcrmp/2005FEISVolumeOne.pdf. Accessed Feb. 26, 2015.

NPS, 2005b, *Finding of No Significant Impact: General Management Plan Amendment for Low Water Conditions*, Environmental Assessment, Lake Mead National Recreation Area, Nevada/Arizona, Oct.

NPS, 2006a, *Record of Decision, Colorado River Management Plan Final Environmental Impact Statement,* Grand Canyon National Park, Feb. Available at http://www.nps.gov/grca/parkmgmt/upload/Appendix%20A.pdf. Accessed May 2013.

NPS, 2006b, *Colorado River Management Plan,* Grand Canyon National Park, Department of the Interior, National Park Service, Grand Canyon National Park, Office of Planning and Compliance. Nov. Available at http://www.nps.gov/grca/parkmgmt/upload/CRMPIF_s.pdf. Accessed May 2013.

NPS, 2006c, *Strategic Plan for Glen Canyon NRA and Rainbow Bridge National Monument FY2007-FY2011*, Dec. Available at http://www.nps.gov/glca/parkmgmt/upload/GLCA.RABR.SP.FY07.FY11.pdf. Accessed April 30, 2014.

NPS, 2006d, *Management Policies 2006*, U.S. Department of Interior, Washington, D.C. Available at http://www.nps.gov/policy/mp2006.pdf. Accessed April 30, 2014.

NPS, 2007, *Horseshoe Bend Hiking Guide, Glen Canyon*. Available at http://www.nps.gov/glca/planyourvisit/upload/Horseshoe%20Bend2.pdf. Accessed Dec. 4, 2015.

NPS, 2008, Management & Control of Tamarisk and Other Invasive Vegetation at Backcountry Seeps, Springs and Tributaries in Grand Canyon National Park, Oct. Available at http://www.nps.gov/grca/naturescience/upload/GRCA-AWPF-Phase-IIB-FINAL2008-TAMARISK-REPORTweb.pdf. Accessed May 2013.

NPS, 2009a, *Environmental Assessment and Assessment of Effect, Exotic Plant Management Plan Grand Canyon National Park, Arizona*, Feb. Available at http://parkplanning.nps.gov/documentsList.cfm?parkID=65&projectID=18978. Accessed May 2013.

NPS, 2009b, *Page-LeChee Water Supply Project Environmental Assessment*, Glen Canyon National Recreation Area, Page, Ariz., Dec.

NPS, 2010a, *Grand Canyon National Park Foundation Statement*, April. Available at http://www.nps.gov/grca/parkmgmt/upload/grca-foundation20100414.pdf. Accessed July 17, 2014.

NPS, 2010b, Environmental Assessment: Proposal to Close Abandoned Mine Lands within Coronado National Memorial, Grand Canyon National Park, Organ Pipe Cactus National Monument, and Saguaro National Park, Feb.

NPS, 2011, "Native American Perspectives, River Trip Orientation Video—Chapter 11." Available at http://www.nps.gov/grca/photosmultimedia/riv-or11.htm. Accessed January 29, 2015.

NPS, 2012a, "Water Quality, Grand Canyon National Park, Arizona," U.S. Department of the Interior. Available at http://www.nps.gov/grca/naturescience/waterquality.htm. Accessed Feb. 26, 2015.

NPS, 2012b, *Humpback Chub Tributary Translocations*, bulletin. Available at http://www.nps.gov/grca/naturescience/upload/S-Bulletin-HBCtransloc2012.pdf. Accessed Jan. 21, 2015.

NPS, 2012c, "Mussel Monitoring Update." Available at http://www.nps.gov/glca/parknews/ musselupdate.htm. Accessed Jan. 10, 2013.

NPS, 2012d, *Grand Canyon National Park Fire Management Plan*, March. Available at http://www.nps.gov/grca/learn/management/upload/GRCA_FMP.pdf. Accessed Dec. 4, 2015.

NPS, 2012e, *November 2012 High-Flow Experiment*, Grand Canyon National Park, U.S. Department of the Interior. Available at http://www.nps.gov/grca/naturescience/upload/ 2012hfe-fact-sheet.pdf.

NPS, 2013a, "People, Glen Canyon National Recreation Area." Available at http://www.nps.gov/glca/historyculture/people.htm. Accessed May 2013.

NPS, 2013b, "Nature & Science, Glen Canyon National Recreation Area." Available at http://www.nps.gov/glca/naturescience/index.htm. Accessed May 2013.

NPS, 2013c, "Glen Canyon National Recreation Area." Available at http://www.nps.gov/glca/ index.htm. Accessed May 2013.

NPS, 2013d, "San Juan Paiute, Navajo National Monument." Available at http://www.wnpa.org/ freepubs/NAVA/San%20Juan_Paiute.pdf. Accessed Dec. 5, 2013.

NPS, 2013e, Comprehensive Fisheries Management Plan, Environmental Assessment, Grand Canyon National Park and Glen Canyon National Recreation Area, Coconino County, Arizona, U.S. Department of the Interior, May.

NPS, 2013f, *Life in the Canyon*. Available at http://www.nature.nps.gov/views/Sites/GRCA/HTML/ET_01_Life.htm. Accessed May 2013.

NPS, 2013g, *Translocated Humpback Chub Spawn in Havasu Creek*. Available at http://www.nps.gov/grca/parknews/translocated-humpback-chub-spawn-in-havasu-creek.htm. Accessed Jan. 21, 2015.

NPS, 2013h, *Finding of No Significant Impact: Comprehensive Fisheries Management Plan*, National Park Service, U.S. Department of the Interior, Dec. 13.

NPS, 2013i, *Hydrologic Activity*, Glen Canyon Nation Recreation Area. Available at http://nps.gov/glca/naturescience/hydrologicactivity.htm. Accessed Jan. 4, 2013.

NPS, 2013j, *November 2013 High-Flow Experiment*, Grand Canyon National Park, U.S. Department of the Interior. Available at http://www.nps.gov/grca/naturescience/upload/ 2013_hfe_fact-sheet.pdf.

NPS, 2013k, Comments and Concerns Regarding the Proposed Wate Mine and Potentials for Expanded Arizona State Land Breccia Pipe Uranium Mining, U.S. Department of the Interior, May 9.

NPS, 2013l, *Grand Canyon Park Profile 2012*, Grand Canyon National Park. Available at http://www.nps.gov/grca/learn/management/upload/2013-park-profile.pdf. Accessed Dec. 4, 2015.

NPS, 2014a, *A Study of Seeps and Springs*, U.S. Department of the Interior, Grand Canyon National Park.

NPS, 2014b, data provided to Argonne National Laboratory by the National Park Service, Dec. 12, 2014.

NPS, 2014c, "Grand Canyon – Animals," National Park Service, Grand Canyon National Park, Grand Canyon, Ariz. Available at http://www.nps.gov/grca/naturescience/animals.htm. Accessed Dec. 11, 2014.

NPS, 2014d, "NPS Stats, National Park Service Visitor Use Statistics, Glen Canyon NRA." Available at https://irma.nps.gov/Stats/. Accessed March 18, 2014.

NPS, 2014e, "Frequently Asked Questions." Available at http://www.nps.gov/gcla/faqs.htm. Accessed March 18, 2014.

NPS, 2014f, "Tourism to Glen Canyon National Recreation Area and Rainbow Bridge National Monument Creates Economic Benefits," March. Available at http://www.nps.gov/glca/parknews/ tourism-to-glen-canyon-national-recreation-area-and-rainbow-bridge-national-monument-creates-economic-benefits.htm. Accessed July 17, 2014.

NPS, 2014g, *Tamarisk Management and Tributary Restoration*, U.S. Department of the Interior. Available at http://www.nps.gov/grca/naturescience/upload/TAMRAMbulletin20110304.pdf. Accessed June 25, 2014.

NPS, 2014h, *Glen Canyon National Recreation Area, Off-road Vehicle Management Plan, Draft Environmental Impact Statement*. Available at http://parkplanning.nps.gov/document.cfm?parkID=62&projectID=19520&documentID=56859.

NPS, 2014i, Foundation Document Overview, Glen Canyon National Recreation Area and Rainbow Bridge National Monument, Arizona and Utah. Available at http://www.nps.gov/glca/learn/upload/GLCA-RABR_OV_SP.pdf. Accessed Nov. 2, 2015.

NPS, 2015a, *Eagles – Glen Canyon National Recreation Area, Glen Canyon National Recreation Area*, Page, Ariz. Available at http://www.nps.gov/glca/learn/nature/eagles.html. Accessed Nov. 4, 2015.

NPS, 2015b, *Grand Canyon National Park Backcountry Management Plan*. Available at http://parkplanning.nps.gov/document.cfm?parkID=65&projectID=22633&documentID=69426. Accessed Dec. 4, 2015.

NPS, 2015c, *Lake Mead National Recreation Area Park Map*. Available at http://www.nps.gov/lake/planyourvisit/upload/Lake-Mead-Detailed-Large.pdf. Accessed Dec. 4, 2015.

NPS, 2015d *Grand Canyon National Park Map*. Available at http://www.nps.gov/grca/planyourvisit/upload/GRCAmap2.pdf. Accessed Dec. 4, 2015.

NRC (National Research Council), 1991, "Colorado River Ecology and Dam Management," Proceedings of a Symposium May 24–25, 1990, Santa Fe, N.Mex., National Academy Press, Washington, D.C.

NRC, 2004, *Adaptive Management for Water Resources Project Planning*, Panel on Adaptive Management for Resource Stewardship, Committee to Assess the U.S. Army Corps of Engineers Methods of Analysis and Peer Review for Water Resources Project Planning, National Research Council of the National Academies, The National Academies Press, Washington, D.C. Available at http://www.nap.edu/catalog.php?record_id=10972#toc. Accessed May 2013.

NREL (National Renewable Energy Laboratory), 2015, *Jobs and Economic Development Impact Models*. Available at http://www.nrel.gov/analysis/jedi.

NRHP (*National Register of Historic Places*), 1997, Lees Ferry and Lonely Dell Ranch, #97001234.

NVCR (Native Voices on the Colorado River), undated, "Affiliated Tribes." Available at https://nativevoicesonthecolorado.wordpress.com/affiliated-tribes/. Accessed Jan. 29, 2015.

Oberlin, G.E., J.P. Shannon, and D.W. Blinn, 1999, "Watershed Influence on the Macroinvertebrate Fauna of Ten Major Tributaries of the Colorado River through Grand Canyon, Arizona," *The Southwestern Naturalist* 44(1):17–30.

O'Connor, J.E., L.L. Ely, E.E. Wohl, L.E. Stevens, T.S. Melis, V.S. Kale, and V.R. Baker, 1994, "A 4500-year Record of Large Floods on the Colorado River in the Grand Canyon, Arizona," *J. Geol.* 102:1–9.

ODEQ, ODOE, and ODOT (Oregon Department of Environmental Quality, Oregon Department of Energy, and Oregon Department of Transportation), 2013, *Oregon's Greenhouse Gas Emissions Through 2010: In-Boundary, Consumption-Based and Expanded Transportation Sector Inventories*, July 18. Available at http://www.oregon.gov/deq/AQ/Documents/ OregonGHGinventory07_17_13FINAL.pdf.

Olden, J.D., and N.L. Poff, 2005, "Long-term Trends of Native and Non-native Fish Faunas in the American Southwest," *Animal Biodiversity and Conservation* 28(1):75–89.

Olden, J.D., and R.J. Naiman, 2010, "Incorporating Thermal Regimes into Environmental Flows Assessments: Modifying Dam Operations to Restore Freshwater Ecosystem Integrity," *Freshwater Biology* 55:86–107. DOI:10.1111/j.1365-2427.2009.02179.x.

Osiek, B., 2015, personal communication from Osiek (Western Area Power Administration) to D. Graziano (Argonne National Laboratory), Feb. 23.

OSMRE (Office of Surface Mining Reclamation and Enforcement), 2015a, *Four Corners Power Plant and Navajo Mine Energy Project*. Available at http://www.wrcc.osmre.gov/initiatives/ fourCorners.shtm. Accessed June 23, 2015.

OSMRE, 2015b, Final Environmental Impact Statement for the Four Corners Power Plant and Navajo Mine Energy Project, Navajo Nation, New Mexico, May 1. Available at http://www.wrcc.osmre.gov/initiatives/fourCorners/documentLibrary.shtm. Accessed June 23, 2015.

OSMRE, 2015c, *Pinabete Permit Application Package*. Available at http://www.wrcc.osmre. gov/initiatives/navajoMine/pinabetePermit.shtm. Accessed June 23, 2015.

Otero, L., 2012, LTEMP Consultation Meeting with Fort Mojave Tribe Meeting Notes, May 4.

Otton, J.K., and B.S. Van Gosen, 2010, "Uranium Resource Availability in Breccia Pipes in Northern Arizona," Chapter A in *Hydrological, Geological, and Biological Characterization of Breccia Pipe Uranium Deposits in Northern Arizona*, A.E. Alpine (ed.), Scientific Investigations Report 2010-5025, U.S. Geological Survey.

Ouarda, T., D. Labadie, and D. Fontare, 1997, "Indexed Sequential Hydrologic Modeling for Hydropower Capacity Estimates," *Journal of the American Water Resources Association* 33(6), Dec.

Pacca, S., and A. Horvath, 2002, "Greenhouse Gas Emissions from Building and Operating Electric Power Plants in the Upper Colorado River Basin," *Environmental Science & Technology* 36:3194–3200.

Paetzold, A., J.F. Bernet, and K. Tockner, 2006, "Consumer-Specific Responses to Riverine Subsidy Pulses in a Riparian Arthropod Assemblage," *Freshwater Biology* 51:1103–1115.

Page, L.M., and B.M. Burr, 1991, *A Field Guide to Freshwater Fishes, North America North of Mexico*, Houghton Mifflin Company, Boston, Mass.

Painter, T.H., A.P. Barrett, C.C. Landry, J.C. Neff, M.P. Cassidy, C.R. Lawrence, K.E. McBride, and G.L. Farmer, 2007, "Impact of Disturbed Desert Soils on Duration of Mountain Snow Cover," *Geophysical Research Letters* 34:L12502. DOI:10.1029/2007GL030284.

Palmer, S.C., S. Loftin, and T. Veselka, 2007, "Analysis of Power and Energy Impacts to Glen Canyon Dam, Shortage Criteria EIS, July 30, 2007, Update for FEIS," Appendix O in *Environmental Impact Statement—Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead*, Bureau of Reclamation, Upper and Lower Colorado Region, Oct.

Pandey, T.N., 1995, "The Zuni View of Nature," in *Man in Nature*, B. Saraswati (ed.), Indira Gandhi National Centre for the Arts, New Delhi, Sept. 21.

Panteah, V., 2016, Pueblo of Zuni Comments on the Public Draft of the Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement, May 4.

Parker, P.L., and T.F. King, 1990, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, National Park Service National Register Bulletin 38, U.S. Government Printing Office, Washington, D.C.

Paukert, C., and R.S. Rogers, 2004, "Factors Affecting Condition of Flannelmouth Suckers in the Colorado River, Grand Canyon, Arizona," *North American Journal of Fisheries Management* 24:648–653.

Paukert, C.P., L.G. Coggins Jr., and C.E. Flaccus, 2006, "Distribution and Movement of Humpback Chub in the Colorado River, Grand Canyon, Based on Recaptures," *Transactions of the American Fisheries Society* 135:539–544.

Paxton, E.H., T.C. Theimer, and M.K. Sogge, 2011, "Winter Distribution of Willow Flycatcher Subspecies," *The Condor* 113(3):608–618.

Payne, K., J. White, and R.V. Ward, 2010, *Potential Impacts of Uranium Mining on the Wildlife Resource of Grand Canyon National Park*, U.S. Department of the Interior, National Park Service, Natural Resource Program Center, Natural Sounds Program, Jan.

Pederson, J., G. O'Brien, T. Neff, and K. Spurr, 2011, *Grand Canyon Geoarchaeology Project: Report on Data Recovery at Nine Cultural Sites in Grand Canyon and Lower Glen Canyon*, 2008–2010, technical report, U.S. Bureau of Reclamation. Pershern, S., J. Keller, and D. Conlin, 2014, *Glen Canyon National Recreation Area, Charles H. Spencer Documentation and Recommendations Report*, Submerged Resources Center Technical Report No. 35, Submerged Resources Center, Lakewood, Colo.

Persons, W., 2014, personal communication from William Persons (Grand Canyon Monitoring and Research Center) to John Hayse (Environmental Science Division, Argonne National Laboratory), March 3.

Pinney, C.A., 1991, "The Response of *Cladophora glomerata* and Associated Epiphytic Diatoms to Regulated Flow, and the Diet of *Gammarus lacustris* in the Tailwaters of Glen Canyon Dam," M.S. Thesis, Northern Arizona University, Flagstaff, Ariz., Dec.

PITU (Paiute Indian Tribe of Utah), 2013, "Paiute Indian Tribe of Utah: Reservation Information, official website of the Paiute Indian Tribe of Utah, Cedar City, Utah. Available at http://www.utahpaiutes.org/about/reservationinformation/. Accessed Dec. 5, 2013.

Platte River Power Authority, 2015, *Annual Report 2014*. Available at http://www.prpa.org/financial-information/. Accessed Nov. 2015.

Poch, L., T. Veselka, C. Palmer, S. Loftin, and B. Osiek, 2011, *Financial Analysis of Experimental Releases Conducted at Glen Canyon Dam during Water Years 2006 through 2010,* Technical Memorandum ANL/DIS-11-4, Argonne National Laboratory, Argonne, Ill.

Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegaard, B.D. Richter, R.E. Sparks, and J.C. Stromberg, 1997, "The Natural Flow Regime: a Paradigm for River Conservation and Restoration," *Bioscience* 47:769–784.

Porter, M.E., 2002, "Riparian Vegetation Responses to Contrasting Managed Flows of the Colorado River in Grand Canyon, Arizona," Master's thesis, Northern Arizona University, Flagstaff, Ariz.

Powell, J.W., 1875, *Explorations of the Colorado River of the West and Its Tributaries, Explored in 1869, 1870, 1871 and 1872 under the Direction of the Secretary of the Smithsonian Institution*, U.S. Government Printing Office, Washington D.C.

Power, M.E., R.J. Stout, C.E. Cushing, P.P. Harper, F.R. Hauer, W.J. Matthews, P.B. Moyle, B. Statzner, and I. R. Wais de Badgen, 1988, "Biotic and Abiotic Controls in River and Stream Communities," *Journal of the North American Benthological Society* 7(4): 456–479.

Protiva, F.R., B.E. Ralston, D.M. Stone, K.A. Kohl, M.D. Yard, and G.A. Haden, 2010, *Effects* of Glen Canyon Dam Discharges on Water Velocity and Temperatures at the Confluence of the Colorado and Little Colorado Rivers and Implications for Habitat for Young-of-Year Humpback Chub (Gila cypha), Open-File Report 2010–1137, U.S. Geological Survey. Available at http://pubs.usgs.gov/of/2010/1137/of2010-1137.pdf. Accessed Feb. 26, 2015.

Ptacek, J.A., D.E. Rees, and W.J. Miller, 2005, *Bluehead Sucker* (Catostomus discobolus): *A Technical Conservation Assessment*, prepared for U.S. Department of Agriculture, Forest Service, Rocky Mountain Region, Species Conservation Project, by Miller Ecological Consultants, Inc., Fort Collins, Colo.

Puckett, S.L., and C. van Riper, III, 2014, *Influences of the Tamarisk Leaf Beetle* (Diorhabda carinulata) *on the Diet of Insectivorous Birds along the Dolores River in Southwestern Colorado*, U.S. Geological Survey Open File Report 2014-1100. Available at http://pubs.usgs.gov/ of/2014/1100. Accessed Nov. 25, 2014.

Pueblo of Zuni, 2013, "About Us," official website of the Zuni Tribe. Available at http://www.ashiwi.org/AboutUs.aspx. Accessed May 7, 2013.

Rahel, F.J., and J.D. Olden, 2008, "Assessing the Effects of Climate Change on Aquatic Invasive Species," *Conservation Biology* 22(3):521–533. DOI:10.1111/j.1523-1739.2008.00950.x.

Rahel, F.J., B. Bierwagen, and Y. Taniguchi, 2008, "Managing Aquatic Species of Conservation Concern in the Face of Climate Change and Invasive Species," *Conservation Biology* 22(3):551–561. DOI:10.1111/j.1523-1739.2008.00953.x.

Ralston, B.E., 2005, "Riparian Vegetation and Associated Wildlife," in *The State of the Colorado River Ecosystem in Grand Canyon, a Report of the Grand Canyon Monitoring and Research Center 1991–2004*, S.P. Gloss, J.E. Lovich, and T.S. Melis (eds.), U.S. Geological Survey Circular 12.

Ralston, B.E., 2010, *Riparian Vegetation Response to the March 2008 Short-Duration, High Flow Experiment—Implications of Timing and Frequency of Flood Disturbance on Nonnative Plant Establishment along the Colorado River below Glen Canyon Dam*, U.S. Geological Survey Open-File Report 2010–1022. Available at http://pubs.usgs.gov/of/2010/1022. Accessed Jan. 15, 2015.

Ralston, B.E., 2011, Summary Report of Responses of Key Resources to the 2000 Low Steady Summer Flow Experiment, along the Colorado River Downstream from Glen Canyon Dam, Arizona, Open-File Report 2011–1220, U.S. Geological Survey. Available at http://pubs.usgs.gov/of/2011/1220/of2011-1220.pdf. Accessed Feb. 26, 2015.

Ralston, B.E., 2012, *Knowledge Assessment of the Riparian Vegetation Response to Glen Canyon Dam Operations in Grand Canyon, Arizona*, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Ralston, B.E., P.A. Davis, R.M. Weber, and J.M. Rundall, 2008, *A Vegetation Database for the Colorado River Ecosystem from Glen Canyon Dam to the Western Boundary of Grand Canyon National Park, Arizona*, U.S. Geological Survey Open-File Report 2008-1216.

Ralston, B.E., A.M. Starfield, R.S. Black, and R.A. Van Lonkhuyzen, 2014, *State-and-Transition Prototype Model of Riparian Vegetation Downstream of Glen Canyon Dam, Arizona*, Open-File Report 2014-1095, U.S. Department of the Interior, U.S. Geological Survey.

Randle, T.J., J.K. Lyons, R.J. Christensen, and R.D. Stephen, 2006, *Colorado River Ecosystem Sediment Augmentation Appraisal Engineering Report*, Bureau of Reclamation.

Reclamation (Bureau of Reclamation), 1994, Programmatic Agreement among the Bureau of Reclamation, The Advisory Council on Historic Preservation, The National Park Service, The Arizona State Historic Preservation Officer, Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Paiute Tribe, Navajo Nation, San Juan Southern Paiute Tribe, Shivwits Paiute Tribe, and Zuni Pueblo Regarding Operations of the Glen Canyon Dam.

Reclamation, 1995, *Operation of Glen Canyon Dam: Colorado River Storage Project, Arizona, Final Environmental Impact Statement*, U.S. Department of the Interior, Bureau of Reclamation, Salt lake City, Utah, March. Available at http://www.usbr.gov/uc/library/envdocs/eis/gc/gcdOpsFEIS.html. Accessed Feb. 19, 2015.

Reclamation, 1996, *Record of Decision, Operation of Glen Canyon Dam Colorado River Storage Project, Final Environmental Impact Statement*, U.S. Department of the Interior, Bureau of Reclamation, Salt lake City, Utah, Oct. Available at http://www.usbr.gov/uc/rm/amp/pdfs/sp_appndxG_ROD.pdf. Accessed May 2013.

Reclamation, 1998, *Indian Policy of the Bureau of Reclamation*. Feb. 25. Available at www.usbr.gov/native/naao/policies/indianpol.pdf. Accessed Nov. 10, 2015.

Reclamation, 1999a, "43 CFR Part 414, Offstream Storage of Colorado River Water; Development and Release of Intentionally Created Unused Apportionment in the Lower Division States; Final Rule," *Federal Register* 64:59006, Nov. 1. Available at http://www.usbr.gov/lc/ region/g4000/contracts/FinalRule43cfr414.pdf. Accessed May 2013.

Reclamation, 1999b, *Plan and Draft Environmental Assessment, Modifications to Control Downstream Temperatures at Glen Canyon Dam*, U.S. Department of the Interior, Jan.

Reclamation, 2000, *Colorado River Interim Surplus Criteria, Final Environmental Impact Statement*, U.S. Department of the Interior, Dec.

Reclamation, 2002, *Grand Canyon National Park Water Supply Appraisal Study: Coconino, Mohave, and Yavapai Counties, Arizona*, U.S. Department of the Interior, Phoenix Area Office, Phoenix, Arizona and Technical Service Center, Denver, Colo., Jan. Available at http://www.usbr.gov/lc/phoenix/reports/ncawss/allfiles/10_grandcanyon.pdf. Accessed Feb. 26, 2015.

Reclamation, 2005a, *Quality of Water Colorado River Basin, Progress Report No. 22*, U.S. Department of the Interior. Available at http://www.usbr.gov/uc/progact/salinity/pdfs/PR22.pdf. Accessed Feb. 26, 2015.

Reclamation, 2005b, *Operation of Flaming Gorge Dam Final Environmental Impact Statement*, FES-05-27, Sept.

Reclamation, 2006a, *Record of Decision, Operation of Flaming Gorge Dam, Final Environmental Impact Statement*, Feb. 16.

Reclamation, 2006b, *North Central Arizona Water Supply Study – Report of Findings*, Oct. Available at http://www.usbr.gov/lc/phoenix/reports/ncawss/NCAWSSP1NOAPP.pdf. Accessed Dec. 4, 2015.

Reclamation, 2007a, *Environmental Impact Statement—Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead*, Bureau of Reclamation, Upper and Lower Colorado Region, Oct. Available at http://www.usbr.gov/lc/region/programs/strategies.html. Accessed May 2013.

Reclamation, 2007b, *Record of Decision, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead*, Bureau of Reclamation, Upper and Lower Colorado Region, Dec. Available at http://www.usbr.gov/lc/region/programs/strategies.html. Accessed May 2013.

Reclamation, 2007c, "Appendix U: Climate Technical Work Group Report," in *Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead, Final EIS*, U.S. Department of the Interior.

Reclamation, 2007d, *Biological Assessment on the Operation of Glen Canyon Dam and Proposed Experimental Flows for the Colorado River Below Glen Canyon Dam during the Years* 2008–2012, U.S. Department of the Interior, Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, Dec. 1.

Reclamation, 2008a, "Colorado River Storage Project." Available at http://www.usbr.gov/uc/rm/crsp/gc/. Accessed May 2013.

Reclamation, 2008b, "Hoover Dam Frequently Asked Questions and Answers: The Colorado River." Available at http://www.usbr.gov/lc/hooverdam/faqs/riverfaq.html. Accessed May 2013.

Reclamation, 2008c, *Environmental Assessment Experimental Releases from Glen Canyon Dam, Arizona, 2008 through 2012*, U.S. Department of the Interior, Bureau of Reclamation, Salt Lake City, Utah, Feb. 8.

Reclamation, 2008d, *Species Accounts for the Lower Colorado River Multi-Species Conservation Program*, U.S. Department of the Interior, Bureau of Reclamation, Lower Colorado River Multi-Species Conservation Program, Lower Colorado Region, Boulder City, Nev., Sept. Reclamation, 2011a, *Environmental Assessment for Non-Native Fish Control Downstream from Glen Canyon Dam*, Upper Colorado Region, Salt Lake City, Utah. Available at http://www.usbr.gov/uc/envdocs/ea/gc/nnfc/index.html. Accessed May 2013.

Reclamation, 2011b, *Environmental Assessment Development and Implementation of a Protocol for High-flow Experimental Releases from Glen Canyon Dam, Arizona, 2011–2020*, Upper Colorado Region, Salt Lake City, Utah, Dec. Available at http://www.usbr.gov/uc/envdocs/ea/gc/HFEProtocol/index.html. Accessed May 2013.

Reclamation, 2011c, *Quality of Water Colorado River Basin, Progress Report No. 23*, U.S. Department of the Interior. Available at http://www.usbr.gov/uc/progact/salinity/pdfs/PR23final.pdf. Accessed Feb. 26, 2015.

Reclamation, 2011d, *Colorado River Basin Water Supply and Demand Study: Technical Report B – Water Supply Assessment*, Interim Report No. 1, U.S. Department of the Interior, June.

Reclamation, 2011e, *SECURE Water Act Section 9503(c) – Reclamation Climate Change and Water 2011*, U.S. Department of the Interior, Policy and Administration, April.

Reclamation, 2011f, *West-Wide Climate Risk Assessments: Bias-Corrected and Spatially Downscaled Surface Water Projections*, Technical Memorandum 86-68210-2011-01, prepared by U.S. Department of the Interior, Bureau of Reclamation, Technical Services Center, Denver, Colo.

Reclamation, 2012a, *Finding of No Significant Impact for the Environmental Assessment for Development and Implementation of a Protocol for High-Flow Experimental Releases from Glen Canyon Dam, Arizona through 2020*, Upper Colorado Region, Salt Lake City, Utah, May. Available at http://www.usbr.gov/uc/envdocs/ea/gc/HFEProtocol/FINAL-FONSI.pdf. Accessed May 2013.

Reclamation, 2012b, *Finding of No Significant Impact for the Environmental Assessment for Non-Native Fish Control Downstream from Glen Canyon Dam*, Bureau of Reclamation, Upper Colorado Region, May 22. Available at http://www.usbr.gov/uc/envdocs/ea/gc/nnfc/FINAL-FONSI.pdf. Accessed May 2013.

Reclamation, 2012c, "Hoover Dam Frequently Asked Questions and Answers: Lake Mead, Lower Colorado Region," June. Available at http://www.usbr.gov/lc/hooverdam/faqs/lakefaqs.html. Accessed Feb. 26, 2015.

Reclamation, 2012d, *Record of Decision for the Aspinall Unit Operations Final Environmental Impact Statement*, April 2012. Available at https://www.usbr.gov/uc/envdocs/eis/AspinallEIS/ROD.pdf. Accessed Feb. 26, 2015.

Reclamation, 2012e, *Colorado River Basin Water Supply and Demand Study: Technical Report D—System Reliability Metrics*, U.S. Department of the Interior, Dec. Available at http://www.usbr.gov/lc/region/programs/crbstudy/finalreport/studyrpt.html.

Reclamation, 2012f, *Record of Decision for the Aspinall Unit Operations Final Environmental Impact Statement*, Upper Colorado Region, Salt Lake City, Utah, April.

Reclamation, 2012g, *Protocol Guidelines: Consulting with Indian Tribal Governments*. Available at http://www.usbr.gov/native/policy/protocol_guidelines.pdf. Accessed Dec. 4, 2015.

Reclamation, 2012h, *Colorado River Basin Water Supply and Demand Study: Study Report*, U.S. Department of the Interior, Dec. Available at http://www.usbr.gov/lc/region/programs/ crbstudy/finalreport/studyrpt.html. Accessed July 13, 2016.

Reclamation, 2013a, *Lower Colorado River Operations: Overview*, Lake Mead Water Quality Forum, Oct. 22. Available at http://ndep.nv.gov/forum/EcoMtg/CoRivOpsOverview_102213.pdf. Accessed Feb. 26, 2015.

Reclamation, 2013b, *Literature Synthesis on Climate Change Implications for Water and Environmental Resources, Third Edition*, Technical Memorandum 86-68210-2013-06, U.S. Department of the Interior, Technical Service Center Water Resources Planning and Operations Support Group, Water and Environmental Resources Division, Sept.

Reclamation, 2013c, *Quality of Water Colorado River Basin, Progress Report No. 24*, U.S. Department of the Interior. Available at https://www.usbr.gov/uc/progact/salinity/pdfs/PR24final.pdf. Accessed Feb. 26, 2015.

Reclamation, 2014a, *Accumulations for March 2014*. Available at http://www.usbr.gov/lc/region/g4000/hourly/levels.html. Accessed March 17, 2014.

Reclamation, 2014b, *Gross Power Generation*. Available at http://www.usbr.gov/uc/power/progact/power-generation-table.pdf. Accessed Feb. 26, 2015.

Reclamation, 2014c, "Colorado River Basin Salinity Control Program," Available at http://www.usbr.gov/uc/progact/salinity/. Accessed May 2013.

Reclamation, 2014d, *Glen Canyon Adaptive Management Working Group*, Glen Canyon Adaptive Management Program. Available at https://www.usbr.gov/uc/rm/amp/amwg/amwg_index.html. Accessed Feb. 25, 2014.

Reclamation, 2014e, Consumptive Uses and Losses: Provisional Estimate, Arizona Portion of the Upper Colorado River Basin Calendar Year 2013, Denver, Colo., Oct. 1.

Reclamation, 2015, *Glen Canyon Powerplant*. Available at http://www.usbr.gov/projects/ Powerplant.jsp?fac_Name=Glen%20Canyon%20Powerplant. Accessed June 26, 2016. Reclamation, 2016, *Lower Colorado Region, Phoenix Area Office – Facilities, Central Arizona Project.* Available at www.usbr.gov/lc/phoenix/projects/capproj.html. Accessed June 30.

Reclamation and NPS (Bureau of Reclamation and National Park Service), 2012, *Summary of Public Scoping Comments on the Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement*, prepared by Argonne National Laboratory for Bureau of Reclamation Upper Colorado Region, Salt Lake City, Utah, and National Park Service, Intermountain Region, Denver, Colo., March. Available at http://ltempeis.anl.gov/documents/docs/sr/LTEMP_EIS_Scoping_Report_Part1.pdf. Accessed May 2013.

Reclamation et al. (Bureau of Reclamation, National Park Service, and U.S. Geological Survey), 2002, *Environmental Assessment Proposed Experimental Releases from Glen Canyon Dam and Removal of Non-Native Fish*, Bureau of Reclamation, Upper Colorado Region; National Park Service, Glen Canyon National Recreation Area and Grand Canyon National Park; and U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Oct. 30.

Rees, D.E., J.A. Ptacek, R.J. Carr, and W.J. Miller, 2005, *Flannelmouth Sucker* (Catostomus latipinnis): *A Technical Conservation Assessment*, prepared for the U.S. Department of Agriculture, Forest Service, Rocky Mountain Region, Species Conservation Project, by Miller Ecological Consultants, Inc., Fort Collins, Colo.

Renöfält, B.M., R. Jansson, and C. Nilsson, 2010, "Effects of Hydropower Generation and Opportunities for Environmental Flow Management in Swedish Riverine Ecosystems," *Freshwater Biology* 55:49–67.

Repanshek, K., 2014, "Quagga Mussel Infestation Greater than Feared at Lake Powell in Glen Canyon NRA," *National Parks Traveler*, Feb. 25. Available at http://www.nationalparkstraveler. com/2014/02/quagga-mussel-infestation-greater-feared-lake-powell-glen-canyon-nra24709. Accessed Feb. 25, 2014.

Reynolds, L.V., and D.J. Cooper, 2011, "Ecosystem Response to Removal of Exotic Riparian Shrubs and a Transition to Upland Vegetation," *Plant Ecology* 212:1243–1261.

Rice, S.E., 2013, *Springs and Seeps: The Life Source of Grand Canyon*, CanyonVIEWS, XX(3):3–4. Available at https://www.grandcanyon.org/sites/default/files/public/ CViews%203%20Summer%202013.pdf. Accessed Feb. 26, 2015.

Riedle, J.D., 2006, "Spiny Softshell Turtle," Arizona Wildlife Views January-February, p.17.

Riley, L.A., M.F. Dybdahl, and R.O. Hall, Jr., 2008, "Invasive Species Impact: Asymmetric Interactions between Invasive and Endemic Freshwater Snails," *Journal of the North American Benthological Society* 27(3):509–520.

Rinne, J.N., and H.A. Magana, 2002, "Catostomus discobolus, BISON No. 010495," U.S. Forest Service, Air, Water and Aquatic Environments Science Program, Rocky Mountain Research Station, Boise, Idaho.

Rinne, J.N., and W.L. Minckley, 1991, *Native Fishes of Arid Lands: A Dwindling Resource of the Desert Southwest*, General Technical Report RM-206, U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, Ft. Collins, Colo.

Roberts, A., R.M. Begay, K.B. Kelley, A.W. Yazzie, and J.R. Thomas, 1995, *Bits'iis Ninéézi* (*The River of Neverending Life*), *Navajo History and Cultural Resources of the Grand Canyon and the Colorado River*, prepared by the Navajo Nation Historic Preservation Department, submitted to Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, Aug.

Roberts, C.A., and J.A. Bieri, 2001, *Impacts of Low Flow Rates on Recreational Rafting Traffic on the Colorado River in Grand Canyon National Park*, prepared for Bureau of Reclamation, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., May 15.

Robinson, A.T., and M.R. Childs, 2001, "Juvenile Growth of Native Fishes in the Little Colorado River and in a Thermally Modified Portion of the Colorado River," *North American Journal of Fisheries Management* 21:809–815.

Robinson, A.T., R.W. Clarkson, and R.E. Forrest, 1998, "Dispersal of Larval Fishes in a Regulated River Tributary," *Transactions of the American Fisheries Society* 127(5):772–786.

Robinson, A.T., D.M. Kubly, and R.W. Clarkson, 1995, *Limnology and the Distributions of Native Fishes in the Little Colorado River, Grand Canyon, Arizona*, final report, prepared for Bureau of Reclamation, Upper Colorado Region, Glen Canyon Environmental Studies, Flagstaff, Ariz.

Roe, S., R. Strait, A. Bailie, H. Lindquist, and A. Jamison, 2007, *Utah Greenhouse Gas Inventory and Reference Case Projections, 1990–2020*, prepared for the Utah Department of Environmental Quality, by the Center for Climate Strategies, Spring. Available at http://www.climatestrategies.us/library/library/download/409. Accessed Oct. 29, 2013.

Rogers, R.S., and A.S. Makinster, 2006, *Grand Canyon Long-Term Non-Native Fish Monitoring, 2003 Annual Report*, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., revised January 2006.

Rogers, R.S., W.R. Persons, and T. McKinney, 2003 *Effects of a 31,000-cfs Spike Flow and Low Steady Flows on Benthic Biomass and Drift Composition in the Lee's Ferry Tailwater*, final report, Arizona Game and Fish Department, Phoenix, Ariz., Oct.

Rogowski, D.L., and P.N. Wolters, 2014, *Colorado River Fish Monitoring in Grand Canyon, Arizona* — 2013 Annual Report, prepared by the Arizona Game and Fish Department, Research Division, for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Rogowski, D.L., L.K. Winters, P.N. Wolters, and K.M. Manuell, 2015, *Status of the Lees Ferry Trout Fishery 2014. Annual Report,* prepared by the Arizona Game and Fish Department, Research Division, for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Arizona. Arizona Game and Fish Department, Phoenix, Ariz.

Rogowski, D.L., P.N. Wolters, and L.K. Winters, 2015, *Colorado River Fish Monitoring in Grand Canyon, Arizona* — 2014 Annual Report, prepared by the Arizona Game and Fish Department, for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Rosi-Marshall, E.J., T.A. Kennedy, D.W. Kincaid, W.F. Cross, H.A.W. Kelly, K.A. Behn, T. White, R.O. Hall, Jr., and C.V. Baxter, 2010, *Short-term Effects of the 2008 High-Flow Experiment on Macroinvertebrates in the Colorado River below Glen Canyon Dam, Arizona*, U.S. Geological Survey Open-File Report 2010–1031, U.S. Geological Survey, Reston, Va.

Rubin, D.M., J. M. Nelson, and D.J. Topping, 1998, "Relation of Inversely Graded Deposits to Suspended-Sediment Grain-Size Evolution during the 1996 Flood Experiment in Grand Canyon," *Geology* 26(2):99–102.

Rubin, D.M., D.J. Topping, J.C. Schmidt, J. Hazel, M. Kaplinski, and T.S. Melis, 2002, "Recent Sediment Studies Refute Glen Canyon Dam Hypothesis," *EOS, Transactions of the American Geophysical Union* 83(25):273, 277–278.

Russell, K., and V. Huang, 2010, *Sediment Analysis for Glen Canyon Dam Environmental Assessment, Upper Colorado Region, AZ*, prepared for Bureau of Reclamation, Salt Lake City, Utah.

Sabo, J.L., and M.E. Power, 2002, "River-Watershed Exchange: Effects of Riverine Subsidies on Riparian Lizards and Their Terrestrial Prey," *Ecology* 93(7):1860–1869.

Salt River Project, 2015, *Five-Year Operational and Statistical Review*. Available at http://www.srpnet.com/about/financial/2015AnnualReport/pdfx/FiveYearOperationalStudy.pdf. Accessed Nov. 2015.

Sankey, J., and A. Draut, 2014, "Gully Annealing by Aeolian Sediment: Field and Remote-Sensing Investigation of Aeolian-Hillslope-Fluvial Interactions, Colorado River Corridor, Arizona, USA," *Geomorphology* 220:68–80.

Sankey, J., D. Bedford, J. Caster, B. Collins, S. Corbett, A. East, and H. Fairley, 2015, "Project Summary: Conditions and Processes Affecting Sand Resources at Archaeological Sites," presented at Tribal Work Group Meetings, Phoenix, Ariz., Jan. 20.

Sankey, J.B., B.E. Ralston, P.E. Grams, J.C. Schmidt, and L.E. Cagney, 2015, "Riparian Vegetation, Colorado River, and Climate: Five Decades of Spatiotemporal Dynamics in the Grand Canyon with River Regulation," *Journal of Geophysical Research: Biogeosciences*, 120: 1532–1547. DOI:10.1002/2015JG002991.

Saunders S., C. Montgomery, T. Easley, and T. Spencer, 2008, *Hotter and Drier: The West's Changed Climate*, The Rocky Mountain Climate Organization and Natural Resources Defense Council, March. Available at http://www.rockymountainclimate.org/website%20pictures/ Hotter%20and%20Drier.pdf. Accessed Feb. 26, 2015.

Schell, R.A., 2005, "Effects of Glen Canyon Dam on the Avifauna of the Grand Canyon, Arizona," in *Ecogeomorphology of the Grand Canyon and Its Tributary Streams*, J. Mount, P. Moyle, and C. Hammersmark (eds.), Center for Watershed Sciences, University of California, Davis, Calif., March 15. Available at https://watershed.ucdavis.edu/education/classes/ ecogeomorphology-grand-canyon. Accessed Oct. 27, 2014.

Schindler, D.W., 2001, "The Cumulative Effects of Climate Warming and Other Human Stresses on Canadian Freshwaters in the New Millennium," *Canadian Journal of Fisheries and Aquatic Sciences* 58:18–29.

Schmidt, J., 2015, "High Flow Experiments in the Colorado River Ecosystem Downstream from Glen Canyon Dam — Insights from Sediment Transport Data," Spring Runoff Conference, Utah State University, Logan, Utah. Available at https://www.usbr.gov/uc/rm/amp/amwg/mtgs/15feb25/Attach_HFE02.pdf. Accessed June 30, 2016.

Schmidt, J.C., and J.B. Graf, 1990, *Aggradation and Degradation of Alluvial Sand Deposits*, 1965 to 1986, *Colorado River, Grand Canyon National Park, Arizona*, U.S. Geological Survey Professional Paper 1493.

Schmidt, J.C., and P.E. Grams, 2011a, "The High Flows-Physical Science Results," pp. 53–91 in *Effects of Three High-Flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, U.S. Geological Survey Circular 1366.

Schmidt, J.C., and P.E. Grams, 2011b, "Understanding Physical Processes of the Colorado River," pp. 17–51 in *Effects of Three High-Flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, U.S. Geological Survey Circular 1366.

Schmidt, J.C., and D.M. Rubin, 1995, "Regulated Streamflow, Fine-Grained Deposits, and Effective Discharge in Canyons with Abundant Debris Fans," pp. 177–195 in *Natural and Anthropogenic Influences in Fluvial Geomorphology*, J.E. Costa et al. (eds.), Geophysical Monograph, American Geophysical Union.

Schmidt, J.C., D.J. Topping, P.E. Grams, and J.E. Hazel, 2004, *System-Wide Changes in the Distribution of Fine Sediment in the Colorado River Corridor between Glen Canyon Dam and Bright Angel Creek, Arizona, Final Report*, prepared by Utah State University, Department of Aquatic, Watershed, and Earth Resources, Fluvial Geomorphology Laboratory, submitted to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Oct.

Schmidt, J.C., D.J. Topping, D.M. Rubin, J.E. Hazel, Jr., M. Kaplinski, S.M. Wiele, and S.A. Goeking, 2007, *Streamflow and Sediment Data Collected to Determine the Effects of Low Summer Steady Flows and Habitat Maintenance Flows in 2000 on the Colorado River between Lees Ferry and Bright Angel Creek, Arizona*, U.S. Geological Survey Open-File Report 2007–1268.

Schmit, L.M., and J.C. Schmidt, 2011, "Introduction and Overview," pp. 1–17 in *Effects of Three High-flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, U.S. Geological Survey Circular 1366.

Schwartz, D.W., M.P. Marshall, and J. Kepp, 1979, *Archaeology of the Grand Canyon-Bright Angel Site*, Grand Canyon Archaeology Series, School of American Research Press, Santa Fe, N.Mex.

Seager, R., M. Ting, I. Held, Y. Kushnir, J. Lu, G. Vecchi, H-P Huang, N. Harnik, A. Leetmaa, N-C Lau, C. Li, J. Velez, and N. Naik, 2007, "Model Projections of an Imminent Transition to a More Arid Climate in Southwestern North America," *Science* 316:1181–1184.

Seay, J., 2013, personal communication from Seay (National Park Service, Glen Canyon National Recreation Area) to J. May (Argonne National Laboratory), Nov. 19.

Seegert, S.E.Z., 2010, "Diet Overlap and Competition among Native and Non-Native Small-Bodied Fishes in the Colorado River, Grand Canyon, Arizona," Master's thesis, Loyola University of Chicago, eCommons Paper 563. Available at http://ecommons.luc.edu/ luc_theses/563/. Accessed April 7, 2014.

Seegert, S.E.Z., E.J. Rosi-Marshall, C.V. Baxter, T.A. Kennedy, R.O. Hall Jr, and W.F. Cross, 2014, "High Diet Overlap Between Native Small-Bodied Fishes and Nonnative Fathead Minnow in the Colorado River, Grand Canyon, Arizona," *Transactions of the American Fisheries Society* 143(4):1072–1083.

Seegmiller, R.F., and R.D. Ohmart, 1981, "Ecological Relationships of Feral Burros and Desert Bighorn Sheep," *Wildlife Monographs* No. 78:1–58.

Shafroth, P.B., J.R. Cleverly, T.L. Dudley, J.P. Taylor, C. Van Riper III, E.P. Weeks, and J.N. Stuart, 2005, "Control of *Tamarix* in the Western United States: Implications for Water Salvage, Wildlife Use, and Riparian Restoration," *Environmental Management* 35(3):231–246.

Shafroth, P.B., D.M. Merritt, V.B. Beauchamp, and K. Lair, 2010, "Restoration and Revegetation Associated with Control of Saltcedar and Russian Olive," in *Saltcedar and Russian Olive Control Demonstration Act Science Assessment*, P.B. Shafroth, C.A. Brown, and D.M. Merritt (eds.), U.S. Geological Survey Scientific Investigations Report 2009-5247.

Shafroth, P.B., C.A. Brown, and D.M. Merritt (eds.), 2010, *Saltcedar and Russian Olive Control Demonstration Act Science Assessment*, Scientific Investigations Report 2009–5247, U.S. Geological Survey.

Shannon, J., H. Kloeppel, M. Young, and K. Coleman, 2003, 2003 Annual Report: Aquatic Food Base Response to the 2003 Ecological Restoration Flows, Northern Arizona University, Department of Biological Sciences, Aquatic Food Base Project, Flagstaff, Ariz., Dec. 24.

Shannon, J., H. Kloeppel, M. Young, and K. Coleman, 2004, 2004 Final Report: Aquatic Food Base Response to the 2003 Ecological Restoration Flows, Northern Arizona University, Department of Biological Sciences, NAU Aquatic Food Base Project, Flagstaff, Ariz., April. 30.

Shannon, J.P., E.P. Benenati, H. Kloeppel, and D. Richards, 2003, *Monitoring the Aquatic Food Base in the Colorado River, Arizona during June and October 2002*, Feb. 20.

Shannon, J.P., D.W. Blinn, and L.E. Stevens, 1994, "Trophic Interactions and Benthic Animal Community Structure in the Colorado River, Arizona, U.S.A.," *Freshwater Biology* 31:213–220.

Shannon, J.P., D.W. Blinn, P.L. Benenati, and K.P. Wilson, 1996, "Organic Drift in a Regulated Desert River," *Canadian Journal of Fisheries and Aquatic Sciences* 53:1360–1369.

Shannon, J.P., D.W. Blinn, T. McKinney, E.P. Benenati, K.P. Wilson, and C. O'Brien, 2001, "Aquatic Food Base Response to the 1996 Test Flood Below Glen Canyon Dam, Colorado River, Arizona," *Ecological Applications* 11(3):672–685.

Shattuck, Z., B. Albrecht, and R.J. Rogers, 2011, *Razorback Sucker Studies on Lake Mead, Nevada and Arizona, 2010–2011 Final Annual Report*, prepared for the Lower Colorado River Multi-Species Conservation Program, Bureau of Reclamation, Lower Colorado Region, Boulder City, Nev.

Shaver, M.L., J.S. Shannon, K.P. Wilson, P.L. Benenati, and D.W. Blinn, 1997, "Effects of Suspended Sediment and Desiccation on the Benthic Tailwater Community in the Colorado River, USA," *Hydrobiologia* 357:63–72.

Shelby, B., T.C. Brown, and R. Baumgartner, 1992, "Effects of Streamflows on River Trips in Grand Canyon, Arizona," *Rivers* 3(3):191–201.

Sher, A.A., D.L. Marshall, and S.A. Gilbert, 2000, "Competition between Native *Populus deltoides* and Invasive *Tamarix ramosissima* and the Implications for Reestablishing Flooding Disturbance," *Society of Conservation Biology* 14(6):1744–1754.

Sigler, W.F., and J.W. Sigler, 1987, *Fishes of the Great Basin. A Natural History*, University of Nevada Press, Reno, Nev.

Smith, T.S., and J.T. Flinders, 1991, *The Bighorn Sheep of Bear Mountain: Ecological Investigations and Management Recommendations*, Utah Division of Wildlife Resources, Research Final Report.

Snow, T., A. Phillps, III, K. Bulletts, D. Austin, A. Storey, and V. Ibanez, 2007, 2007 Southern *Paiute Consortium Colorado River Corridor Resources Evaluation Program Annual Report of Activities,* prepared by the Southern Paiute Consortium, Pipe Spring, Ariz., and the Bureau of Applied Research in Anthropology, University of Arizona, Tucson, Ariz., for the Bureau of Reclamation, Flagstaff, Ariz., Dec.

Snyder, K.A., S.M. Uselman, T.J. Jones, and S. Duke, 2010, "Ecophysiological Responses of Salt Cedar (*Tamarix spp.* L.) to the Northern Tamarisk Beetle (*Diorhabda carinulata* Desbrochers) in a Controlled Environment," *Biological Invasions* 12:3795–3808.

Sogge, M., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts, 1997, *A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol*, Technical Report NPS/NAUCPRS/NRTR-97/12, U.S. Department of the Interior, National Park Service, Colorado Plateau Research Station at Northern Arizona University, May.

Sogge, M.K., and T.J. Tibbitts, 1994, *Wintering Bald Eagles in the Grand Canyon: 1993–1994, Summary Report*, National Biological Survey Colorado Plateau Research Station/Northern Arizona University and U.S. Fish and Wildlife Service, Phoenix, Ariz., Dec.

Sogge, M.K., D. Ahlers, and S.J. Sferra, 2010, *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher*, Techniques and Methods 2A-10, U.S. Department of the Interior, U.S. Geological Survey, Reston, Va.

Sogge, M.K., D. Felley, and M. Wotawa, 1998, *Riparian Bird Community Ecology in the Grand Canyon, Final Report*, U.S. Geological Survey, Colorado Plateau Field Station.

Sogge, M.K., C. van Riper III, T.J. Tibbitts, and T. May, 1995, *Monitoring Winter Bald Eagle Concentrations in the Grand Canyon: 1993–1995*, National Biological Service Colorado Plateau Research Station/Northern Arizona University, Flagstaff, Ariz.

Solomon, S.D., Q.M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller, 2007, *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*, Intergovernmental Panel on Climate Change (IPCC). Available at https://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html.

Sommerfeld, M.R., W.M. Crayton, and N.L. Crane, 1976, *Survey of Bacteria, Phytoplankton and Trace Chemistry of the Lower Colorado River and Tributaries in the Grand Canyon National Park*, Technical Report No. 12, July 15.

Sorensen, J.A., 2009, *Kanab Ambersnail Habitat Mitigation for the 2008 High Flow Experiment*, Technical Report 257, Arizona Game and Fish Department, Phoenix, Ariz., Aug.

Sorensen, J.A., 2010, *New Zealand Mudsnail Risk Analysis for Arizona*. Available at http://azgfdportal.az.gov/PortalImages/files/fishing/InvasiveSpecies/RA/MudsnailRisk Analysis.pdf. Accessed Aug. 3, 2014.

Sorensen, J.A., 2012, *Kanab Ambersnail 2011 Status Report*, Technical Report 268, Arizona Game and Fish Department, Phoenix, Ariz., Jan.

Sorensen, J.A., and C.B. Nelson, 2000, *Translocation of Kanab Ambersnails to Establish a New Population in Grand Canyon, Arizona*, Nongame and Endangered Wildlife Program Technical Report 153, Arizona Fish and Game Department, Phoenix, Ariz.

Sorensen, J.A., and C.B. Nelson, 2002, *Interim Conservation Plan for* Oxyloma (haydeni) kanabensis *Complex and Related Ambersnails in Arizona and Utah*, Nongame and Endangered Wildlife Program Technical Report 192, Arizona Game and Fish Department, Phoenix, Ariz., April.

Spamer, E.E., and A.E. Bogan, 1993, "Mollusca of the Grand Canyon and Vicinity, Arizona: New and Revised Data on Diversity and Distribution with Notes on Pleistocene-Holocene Mollusks of the Grand Canyon," *Proceedings of the Academy of Natural Sciences of Philadelphia* 144:21–68.

Spaulding, S., and L. Elwell, 2007, "Increase in Nuisance Blooms and Geographic Expansion of the Freshwater Diatom Didymosphenia geminata: Recommendations for Response," White Paper, Jan.

Speas, D.W., 2000, "Zooplankton Density and Community Composition Following an Experimental Flood in the Colorado River, Grand Canyon, Arizona," *Regulated Rivers: Research and Management* 16:73–81.

Spence, J., 2014a, e-mail from Spence (National Park Service, Glen Canyon National Recreation Area, Page, Ariz.) to W. Vinikour (Argonne National Laboratory, Argonne, Ill.), Subject: "Osprey Nesting near Glen Canyon Dam," Nov. 12.

Spence, J., 2014b, e-mail from Spence (National Park Service, Glen Canyon National Recreation Area, Page, Ariz.) to W. Vinikour (Argonne National Laboratory, Argonne, Ill.), Subject: "Response to Comments on LTEMP EIS," Dec. 12.

Spence, J.H., C.T. LaRue, and J.D. Grahame, 2011, "Birds of Glen Canyon National Recreation Area, Utah and Arizona," *Monographs of the North American Naturalist* 5:20–70.

Spence, J.R., 1996, *The Controlled Flood of 1996: Effects on Vegetation and Leopard Frogs* (Rana pipiens) *at RM-8.8L Marsh, Colorado River, Glen Canyon*, unpublished report to Glen Canyon Environmental Studies, Resource Management Division, Glen Canyon National Recreation Area.

Spence, J.R., 2006, *The Riparian and Aquatic Bird Communities along the Colorado River from Glen Canyon Dam to Lake Mead, 1996–2000*, final report to the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., Resource Management Division, Glen Canyon National Recreation Area.

Spencer, J.E., and K. Wenrich, 2011, *Brecicia-Pipe Uranium Mining in the Grand Canyon Region and Implications for Uranium Levels in Colorado River Water*, OFR-11-04, V1.0, Arizona Geological Survey, April.

Spurgeon, J.J., C.P. Paukert, B.D. Healy, M.T. Trammell, D.W. Speas, and E. Omana-Smith, 2015, "Translocation of Humpback Chub into Tributary Streams of the Colorado River: Implications for Conservation of Large-River Fishes," *Transactions of the American Fisheries Society* 144(3):502–514.

SRP, 2016, *Navajo Generating Station*. Available at www.srpnet.com/about/stations/ navajo.aspx. Accessed June 30.

Stanford, J.A., and J.V. Ward, 1986, "9B. Fishes of the Colorado System," pp. 385–402 in *The Ecology of River Systems*, B.R. Davies and K.F. Walker (eds.), Dr. W. Junk Publishers, Dordrecht, The Netherlands.

Stanford, J.A., and J.V. Ward, 1991, "Limnology of Lake Powell and the Chemistry of the Colorado River," pp. 75–101 in *Colorado River Ecology and Dam Management, Proceedings of a Symposium*, May 24–25,1990, Santa Fe, New Mexico, National Academy Press, Washington, D.C.

Steinbach Elwell, L.C., K.E. Stromberg, E.K.N. Ryce, and J.L. Bartholomew, 2009, *Whirling Disease in the United States*, A Summary of Progress in Research and Management 2009.

Stevens, L.E., 2007, A Compilation and Evaluation of Historic Water Temperature and Related Water Quality Data from the Colorado River, Grand Canyon, with Particular Emphasis on River Miles 55 to 65: Final Report, U.S. Geological Survey, Grand Canyon Monitoring and Research Center. Available at www.gcmrc.gov/library/reports/HistWattempdataStevens.doc. Accessed Feb. 26, 2015.

Stevens, L.E., 2012, "The Biogeographic Significance of a Large, Deep Canyon: Grand Canyon of the Colorado River, Southwestern USA," pp. 169–208 in *Global Advances in Biogeography*, L.E. Stevens (ed.), InTech Publications, Rijeka. ISBN: 978-953-51-0454-4.

Stevens, L.E., and G. Siemion, 2012, "Tamarisk Reproductive Phenology and Colorado River Hydrography, Southwestern USA," *Journal of the Arizona-Nevada Academy of Science* 44:(1):46–58.

Stevens, L.E., and G.L. Waring, 1986a, *Effects of Post-Dam Flooding on Riparian Substrates, Vegetation, and Invertebrate Populations in the Colorado River Corridor in Grand Canyon, Arizona*, Bureau of Reclamation, Glen Canyon Environmental Studies, Flagstaff, Ariz., contract no. IA4-AA-40-01930, GCES 19/87, 175 p. NTIS Report PB88-183488, April 15.

Stevens, L.R., and G.L. Waring, 1986b, "The Effects of Prolonged Flooding on the Riparian Plant Community in Grand Canyon," pp. 81–86 in *Riparian Ecosystems and Their Management: Reconciling Conflicting Uses*, R.R. Johnson, C.D. Ziebell, D.R. Patton, P.F. Folliott, and R.H. Hamre (tech. coords.), First North American Riparian Conference, April 16–18, 1985, Tucson, Ariz., General Technical Report RM-GTR-120, U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station.

Stevens, L.E., T.J. Ayers, J.B. Bennett, K. Christensen, M.J.C. Kearsley, V.J. Meretsky, A.M. Phillips III, R.A. Parnell, J. Spence, M.K. Sogge, A E. Springer, and D.L. Wegner, 2001, "Planned Flooding and Colorado River Riparian Trade-offs Downstream from Glen Canyon Dam, Arizona," *Ecological Applications* 11(3):701–710.

Stevens, L.E., B.T. Brown, and K. Rowell, 2009, "Foraging Ecology of Peregrine Falcons (*Falco peregrinus*) along the Colorado River, Grand Canyon, Arizona," *The Southwestern Naturalist* 54(3):284–299.

Stevens, L.E., K.A. Buck, B.T. Brown, and N.C. Kline, 1997, "Dam and Geomorphological Influences on Colorado River Waterbird Distribution, Grand Canyon, Arizona, USA," *Regulated Rivers Research & Management* 13:151–169.

Stevens, L.E., F.R. Protiva, D.M. Kubly, V.J. Meretsky, and J. Petterson, 1997, *The Ecology of Kanab Ambersnail (Succineidae:* Oxyloma haydeni kanabensis *Pilsbry, 1948) at Vaseys Paradise, Grand Canyon, Arizona: 1995 Final Report*, prepared for the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., July 15.

Stevens, L.E., J.C. Schmidt, T.J. Ayers, and B.T. Brown, 1995, "Flow Regulation, Geomorphology, and Colorado River Marsh Development in the Grand Canyon, Arizona," *Ecological Applications* 5(4):1025–1039.

Stevens, L.E., J.P. Shannon, and D.W. Blinn, 1997, "Colorado River Benthic Ecology in Grand Canyon, Arizona, USA: Dam, Tributary and Geomorphological Influences," *Regulated Rivers: Research & Management* 13:129–149.

Stevens, L.E., J.E. Sublette, and J.P. Shannon, 1998, "Chironomidae (Diptera) of the Colorado River, Grand Canyon, Arizona, USA, II: Factors Influencing Distribution," *Great Basin Naturalist* 58(2):147–155.

Stevenson, M.C., 1914, "Ethnobotany of the Zuni Indians," in *Thirtieth Annual Report of the Bureau of American Ethnology*, 1908–1909, Smithsonian Institution, Washington, D.C.

Stevenson, M.C., 1993, *The Zuni Indians and Their Uses of Plants*, Dover Publications, New York, N.Y.

Steward, J.H., 1941, *Archaeological Reconnaissance of Southern Utah*, Bulletin No. 18, Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Stewart, B., 2016, "Brown Trout Update Lees Ferry," presentation at Glen Canyon Dam Adaptive Management Technical Work Group Annual Reporting Meeting, January 26–27.

Stewart, K.M., 1983, "Mohave," pp. 55–70 in *Handbook of North American Indians, Vol. 10 Southwest,* A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Stewart, W., K. Larkin, B. Orland, D. Anderson, R. Manning, D. Cole, J. Taylor, and N. Tomar, 2000, *Preferences of Recreation User Groups of the Colorado River in Grand Canyon*, submitted to the U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., April.

Stoffle, R., D.B. Halmo, and D.E. Austin, 1997, "Cultural Landscapes and Traditional Cultural Properties: A Southern Paiute View of the Grand Canyon and Colorado River," pp. 229–249 in *American Indian Quarterly*, Vol. 21, No. 2, Spring. Available at http://www.jstor.org/stable/1185646. Accessed March 9, 2012.

Stoffle, R.W., D.E. Austin, B.K. Fulfrost, A.M. Phillips, III, T.F. Drye, A.S. Bulletts, C. Groessl, and D.L. Shaul, 1995, *ITUs, AUV, TE'EK (Past, Present, Future). Managing Southern Paiute Resources in the Colorado River Corridor*, prepared for Glen Canyon Environmental Studies, Bureau of Reclamation, Flagstaff, Ariz.

Stoffle, R.W., D.B. Halmo, M.J. Evans, D.E. Austin, H.F. Dobyns, H.C. Fairley, A.M. Phillips, III, D.L. Shaul, G. Harper, A.S. Bulletts, and V.C. Jake, 1994, *Piapaxa 'Uipi (Big River Canyon): Southern Paiute Ethnographic Resource Inventory and Assessment for Colorado River Corridor, Glen Canyon, National Recreation Area, Utah and Arizona, and Grand Canyon National Park, Arizona*, prepared for National Park Service, Rocky Mountain Regional Office, Denver, Colorado, and Glen Canyon Environmental Studies, Bureau of Reclamation, Flagstaff, Ariz.

Stone, D.M., and O.T. Gorman, 2006, "Ontogenesis of Endangered Humpback Chub (*Gila cypha*) in the Little Colorado River, Arizona," *The American Midland Naturalist* 155:123–135.

Stone, D.M., D.R. van Haverbeke, D.L. Ward, and T.A. Hunt, 2007, "Dispersal of Nonnative Fishes and Parasites in the Intermittent Little Colorado River, Arizona," *Southwestern Naturalist* 52(1):130–137.

Strait, R., S. Roe, A. Bailie, H. Lindquist, A. Jamison, E. Hausman, and A. Napoleon, 2007, *Final Colorado Greenhouse Gas Inventory and Reference Case Projections 1990–2020*, prepared for the Colorado Department of Public Health and Environment, by the Center for Climate Strategies, Oct. Available at http://www.coloradoclimate.org/ewebeditpro/items/ 014F13894.pdf. Accessed Oct. 29, 2013.

Strait, R., S. Roe, A. Bailie, H. Lindquist, and A. Jamison, 2008, *Idaho Greenhouse Gas Inventory and Reference Case Projections 1990–2020*, Center for Climate Strategies, Spring. Available at https://www.deq.idaho.gov/media/345475-ghg_inventory_idaho_sp08.pdf.

Strand, R.I., and E.L. Pemberton, 1982, *Reservoir Sedimentation Technical Guidelines for Bureau of Reclamation*, Bureau of Reclamation, Denver, Colo.

Stroud-Settles, J., 2012, e-mail from Stroud-Settles (National Park Service, Grand Canyon, Ariz.) to L. Walston (Argonne National Laboratory, Argonne, Ill.), Subject: "Response to Information Request for Glen Canyon LTEMP EIS," Aug. 8.

Stroud-Settles, J., G. Holm, and R. Palarino, 2013, *Surveying for Southwestern Willow Flycatchers in Grand Canyon National Park, 2010–2012*, final project report, U.S. Department of the Interior, National Park Service, Grand Canyon National Park, Grand Canyon, Ariz., Aug.

Sublette, J.E., L.E. Stevens, and J.P. Shannon, 1998, "Chironomidae (Diptera) of the Colorado River, Grand Canyon, Arizona, USA, I: Systematics and Ecology," *Great Basin Naturalist* 58(2):97–146.

Sublette, J.E., M.D. Hatch, and M. Sublette, 1990, *The Fishes of New Mexico*, University of New Mexico Press, Albuquerque, N.Mex.

Suttkus, R.D., G.H. Clemmer, and C. Jones, 1978, "Mammals of the Riparian Region of the Colorado River in the Grand Canyon Area of Arizona," *Occasional Papers of the Tulane Museum of Natural History* 2:1–23.

Taylor, H.E., R.C. Antweiler, G.G. Fisk, G.M. Anderson, D.A. Roth, M.E. Flynn, D.B. Peart, M. Truini, L.B. Barber, and R.J. Hart, 2004, *Physical and Chemical Characteristics of Knowles, Forgotten, and Moqui Canyons, and Effects of Recreational Use on Water Quality, Lake Powell, Arizona and Utah*, Scientific Investigations Report 2004-5120, U.S. Geological Survey. Available at http://pubs.water.usgs.gov/sir20045120. Accessed Feb. 26, 2015.

Taylor, H.E., D.B. Peart, R.C. Antweiler, T.I. Brinton, W.L. Campbell, J.R. Garbarino, D.A. Roth, R.J. Hart, and R.C. Averett, 1996, *Data from Synoptic Water-Quality Studies on the Colorado River in the Grand Canyon Arizona, November 1990 and June 1991*, Open-File Report 96-614, U.S. Geological Survey. Available at http://wwwbrr.cr.usgs.gov/projects/SW_inorganic/ download/Synoptic.pdf. Accessed Feb. 26, 2015.

Taylor, W.W., 1958, *Two Archaeological Studies in Northern Arizona: The Pueblo Ecology Study: Hail and Farewell and a Brief Survey through the Grand Canyon of the Colorado River*, Bulletin No. 30, Museum of Northern Arizona, Flagstaff, Ariz.

Thieme, M.L., C.C. McIvor, M.J. Brouder, and T.L. Hoffnagle, 2001, "Effects of Pool Formation and Flash Flooding on Relative Abundance of Young-of-Year Flannelmouth Suckers in the Paria River, Arizona," *Regulated Rivers: Research and Management* 17:145–156.

Thomas, J.R., 1993, *Navajo Nation Position Paper, Glen Canyon Dam Environmental Impact Statement*, June. Available at http://www.gcmrc.gov/library/reports/cultural/Navajo/Thomas1993.pdf. Accessed Dec. 4, 2015.

Tietjen, T., 2013, *The Impact of the Grand Canyon High Flow Experiment on Lake Mead*, Ecosystem Monitoring Workgroup Meeting, Southern Nevada Water Authority, May 23. Available at http://ndep.nv.gov/forum/EcoMtg/Tietjen_LaMEM_20130523.pdf. Accessed Feb. 26, 2015.

Tietjen, T., 2014, *Lake Mead Water Quality: Upstream Influences*, Regional Water Quality, Southern Nevada Water Authority, Nov. 17.

Tietjen, T., 2015, *Lake Mead Water Quality: Upstream Influences*, Regional Water Quality, Southern Nevada Water Authority, March.

Tietjen T., G.C. Holdren, M.R. Rosen, R.J. Veley, M.J. Moran, B. Vanderford, W.H. Wong, and D.D. Drury, 2012, "Lake Water Quality," in *A Synthesis of Aquatic Science for Management of Lakes Mead and Mohave*, M.R. Rosen et al. (eds.), U.S. Geological Survey Circular 1381. Available at http://pubs.usgs.gov/circ/1381/pdf/circ1381.pdf. Accessed Feb. 26, 2015.

Tinkler, D., 1992, *Water Quality on the Colorado River from Glen Canyon Dam to Lees Ferry*. Available at http://www.gcmrc.gov/library/reports/other/physical/Hydrology/Tinkler1992b.pdf. Accessed Feb. 26, 2015.

Topping, D.J., 1997, "Physics of Flow, Sediment Transport, Hydraulic Geometry, and Channel Geomorphic Adjustment during Flash Foods in an Ephemeral River, the Paria River, Utah and Arizona," Ph.D. thesis, University of Washington, Seattle, Wash.

Topping, D.J., 2014, personal communication from Topping (Grand Canyon Monitoring and Research Center) to D. Varyu (Bureau of Reclamation), Aug. 1.

Topping, D.J., D.M. Rubin, and L.E. Vierra, Jr., 2000a, "Colorado River Sediment Transport: Part 1: Natural Sediment Supply Limitations and the Influence of the Glen Canyon Dam," *Water Resources Research* 36:515–542.

Topping, D.J., D.M. Rubin, J.M. Nelson, P.J. Kinzel, III, and I.C. Corson, 2000b, "Colorado River Sediment Transport: 2. Systematic Bed-Elevation and Grain-Size Effects of Sand Supply Limitation," *Water Resources Res*earch 36:543–570.

Topping, D.J., D.M. Rubin, P.E. Grams, R.E. Griffiths, T.A. Sabol, N. Voichick, R.B. Tusso, K.M. Vanaman, and R.R. McDonald, 2010, *Sediment Transport during Three Controlled-Flood Experiments on the Colorado River Downstream from Glen Canyon Dam, with Implications for Eddy-Sandbar Deposition in Grand Canyon National Park*, U.S. Geological Survey Open-File Report 2010-1128.

Topping, D.J., J.C. Schmidt, and L.E. Vierra, Jr., 2003, *Computation and Analysis of the Instantaneous-Discharge Record for the Colorado River at Lees Ferry, Arizona—May 8, 1921, through September 30, 2000*, Professional Paper 1677, U.S. Department of the Interior, U.S. Geological Survey, Reston, Va.

Torgersen, C.E., D.M. Price, H.W. Li, and B.A. McIntosh, 1999, "Multiscale Thermal Refugia and Stream Habitat Associations of Chinook Salmon in Northeastern Oregon," *Ecological Applications* 9(1):301–319.

Trammell, M., R. Valdez, S. Carothers, and R. Ryel, 2002, *Effects of Low Steady Summer Flow Experiment on Native Fishes of the Colorado River in Grand Canyon, Arizona*, final report, prepared by SWCA Environmental Consultants, Flagstaff, Ariz., for U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Trammell, M., and R. Valdez, 2003, *Native Fish Monitoring in the Colorado River within Grand Canyon during 2001*, prepared by SWCA Environmental Consultants, Flagstaff, Ariz., for U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Tremblay, A., L. Varfalvy, C. Roehm, and M. Garneau, 2004, "The Issue of Greenhouse Gases from Hydroelectric Reservoirs: From Boreal to Tropical Regions," *United Nations Symposium on Hydropower and Sustainable Development*, Beijing, China, Oct. 27–29, 2004. Available at http://www.un.org/esa/sustdev/sdissues/energy/op/hydro_tremblaypaper.pdf. Accessed June 18, 2015.

Tri-State G&T, 2015, *2013 Annual Report*. Available at http://tristate.coop/Financials/ documents/Tri-State-2013-annual-report.pdf. Accessed Nov. 2015.

Tropicos, 2014, "Plant Nomenclature Database, Missouri Botanical Garden." Available at http://www.tropicos.org. Accessed Dec. 9, 2014.

Tunnicliff, B., and S.K. Brickler, 1984, "Recreational Water Quality Analyses of the Colorado River Corridor of Grand Canyon," *Applied and Environmental Microbiology* 48(5):909–917. Available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC241650/pdf/aem00156-0009.pdf. Accessed Feb. 26, 2015.

Turner, J.C., C.L. Douglas, C.R. Hallum, P.R. Krausman, and R.R. Ramey, 2004, "Determination of Critical Habitat for the Endangered Nelson's Bighorn Sheep in Southern California," *Wildlife Society Bulletin* 32(2):427–448. Turner, K., J.M. Miller, and C.J. Palmer, 2011, *Long-Term Limnological and Aquatic Resource Monitoring and Research Plan for Lakes Mead and Mohave*, Approved Working Document Version 1.0, April. Available at http://www.nps.gov/lake/naturescience/loader.cfm?csModule= security/getfile&%3bpageid=431205. Accessed Feb. 26, 2015.

Turner, K., M.R. Rosen, G.C. Holdren, S.L. Goodbred, and D.C. Twichell, 2012, "Environmental Setting of Lake Mead National Recreation Area," in *A Synthesis of Aquatic Science for Management of Lakes Mead and Mohave*, M.R. Rosen et al. (eds.), USGS Circular 1381. Available at http://pubs.usgs.gov/circ/1381/pdf/circ1381.pdf. Accessed Feb. 26, 2015.

Turner, R.M., and M.M. Karpiscak, 1980, *Recent Vegetation Changes along the Colorado River between Glen Canyon Dam and Lake Mead, Arizona*, Professional Paper 1132, U.S. Geological Survey, Flagstaff, Ariz.

Two Bears, D., 2012, "Navajo Traditional History," *Native Voices on the Colorado River Tribal Series*. Available at https://nativevoicesonthecolorado.files.wordpress.com/2011/11/navajo-traditional-history.pdf. Accessed Jan. 29, 2015.

Tyler, H.A., 1964, *Pueblo Gods and Myths*, Volume 71 in The Civilization of the American Indian Series, University of Oklahoma Press, Norman, Okla.

Tyus, H.M., and G.B. Haines, 1991, "Distribution, Habitat Use, and Growth of Age-0 Colorado Squawfish in the Green River Basin, Colorado and Utah," *Transactions of the American Fisheries Society* 120:78–89.

Tyus, H.M., and C.A. Karp, 1990, "Spawning and Movements of Razorback Sucker, *Xyrauchen texanus*, in the Green River Basin of Colorado and Utah," *Southwestern Naturalist* 35:427–433.

UBWR (Utah Board of Water Resources), 2011a, *Lake Powell Pipeline – Draft Study Report 2: Aquatic Resources*, Mar. Available at http://www.wcwcd.org/downloads/projects/proposed-projects/lake%20powell%20pipeline/technical%20reports/02%20Draft%20Aquatic%20Resource s%20Study%20Report%20031011.pdf. Accessed July 2, 2014.

UBWR, 2011b, *Lake Powell Pipeline – Draft Study Report 18: Surface Water Resources*, March. Available at http://www.wcwcd.org/projects/current-projects/lpp-lake-powell-pipeline. Accessed July 2, 2014.

UBWR, 2011c, *Lake Powell Pipeline, Draft Study Report 16, Visual Resources*, Jan. Available at http://www.wcwcd.org/downloads/projects/proposed-projects/lake%20powell%20pipeline/ technical%20reports/16%20Draft%20Visual%20Resources%20Study%20Report% 20031011.pdf.

UBWR, 2015, *Lake Powell Pipeline – General Information*. Available at http://www.water.utah. gov/lakepowellpipeline/generalinformation/default.asp. Accessed Feb. 16, 2015.

UNESCO (United Nations Educational, Scientific and Cultural Organization), 2012, *Grand Canyon National Park.* Available at http://whc.unesco.org/en/list/75. Accessed Jan. 7, 2013.

University of New Mexico, 2013, "Projected Population New Mexico Counties, July 1, 2010 to July 1, 2040," Bureau of Business and Economic Research. Available at http://bber.unm.edu/demo/PopProjTable1.htm. Accessed Jan. 13, 2015.

U.S. Census Bureau, 2013a, "State & County QuickFacts." Available at http://quickfacts. census.gov/qfd/index.html. Accessed Jan. 13, 2015.

U.S. Census Bureau, 2013b, "American Fact Finder." Available at http://factfinder2.census. gov/faces/nav/jsf/pages/index.xhtml. Accessed Jan. 13, 2015.

U.S. Census Bureau, 2013c, "County Business Patterns, 2009." Available at http://www.census. gov/ftp/pub/epcd/cbp/view/cbpview.html. Accessed Jan. 13, 2015.

USDA (U.S. Department of Agriculture), 2013, "2007 Census of Agriculture: State and County Data," Vol. 1, National Agricultural Statistics Service, Washington, D.C. Available at http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_ Level. Accessed Jan. 13, 2015.

U.S. Department of Commerce, 2013, "Regional Data: GDP & Personal Income," Bureau of Economic Analysis. Available at http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=3#reqid=70&step=1&isuri=1. Accessed Jan. 14, 2015.

U.S. Department of Labor, 2013, "Local Area Unemployment Statistics," Bureau of Labor Statistics. Available at http://data.bls.gov/cgi-bin/dsrv?la. Accessed Jan. 13, 2015.

Uselman, S.M., K.A. Snyder, and R.R. Blank, 2011, "Insect Biological Control Accelerates Leaf Litter Decomposition and Alters Short-term Nutrient Dynamics in a Tamarix-invaded Riparian Ecosystem," *Oikos* 120:409–417.

USGCRP (U.S. Global Change Research Program), 2014, *Climate Change Impacts in the United States: The Third National Climate Assessment*, Melillo, J.M., T.C. Richmond, and G.W. Yohe (eds.), U.S. Government Printing Office, Washington, D.C. Available at http://nca2014.globalchange.gov/downloads. Accessed Feb. 26, 2015.

USGS (U.S. Geological Survey), 2002, *Observations of Environmental Change in Grand Canyon, Arizona*, Water-Resources Investigations Report 02–4080, Tucson, Ariz. Available at http://pubs.usgs.gov/wri/wri024080/pdf/WRIR4080.pdf. Accessed Nov. 13, 2015.

USGS, 2004, *Endangered Fish Threatened by Asian Fish Tapeworm*, FS 2005-3057, Aug. Available at http://www.nwhc.usgs.gov/publications/fact_sheets/pdfs/ FishTapeworm.pdf. Accessed Feb. 28, 2014. USGS, 2006, Assessment of the Estimated Effects of Four Experimental Options on Resources below Glen Canyon Dam, Draft Report, U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

USGS, 2007, *Research Furthers Conservation of Grand Canyon Sandbars*, Fact Sheet 2007-3020, March.

USGS, 2008, USGS Workshop on Scientific Aspects of a Long-Term Experimental Plan for Glen Canyon Dam, April 10–11, 2007, Flagstaff, Arizona, U.S. Geological Survey, Open-File Report 2008–1153.

USGS, 2013a, "80154 Suspended Sediment Concentration, Milligrams per Liter, Table of Monthly Mean," in USGS 09380000 Colorado River at Lees Ferry, AZ, USGS Surface-Water Monthly Statistics for the Nation, U.S. Department of the Interior. Available at http://waterdata.usgs.gov/nwis/monthly?referred_module=sw&site_no=09380000&por_0938000 0_11=19133,80154,11,1928-10,1965-08&format=html_table&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=parameter_selection_list. Accessed Feb. 26, 2015.

USGS, 2013b, "Suspended Sediment Concentration, mg/L (80154)," in *Water Quality Samples for Arizona, USGS Water Data for the Nation*, U.S. Department of the Interior. Available at http://nwis.waterdata.usgs.gov/az/nwis/qwdata/?site_no=09380000&agency_cd=USGS&invento ry_output=0&rdb_inventory_output=file&TZoutput=0&pm_cd_compare=Greaterthan&radio_pa rm_cds=parm_cd_list&radio_multiple_parm_cds=80154&format=html_table&qw_attributes=0&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=brief_list. Accessed Feb. 26, 2015.

USGS, 2014a, "Geologic History of Lake Mead National Recreation Area," March. Available at http://3dparks.wr.usgs.gov/lame/html/lame_history.htm. Accessed July 2014.

USGS, 2014b, *National Water Information System: Web Interface*, U.S. Geological Survey Water Data Report. Available at http://waterdata.usgs.gov/nwis. Accessed Jan. 21, 2015.

U.S. President, 1970, "Protection and Enhancement of Environmental Quality," Executive Order 11514, as amended by Executive Order 11991. Available at http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/Req-EO11514envtlquality.pdf. Accessed July 18, 2014.

U.S. President, 1971, "Protection and Enhancement of the Cultural Environment," Executive Order 11593, *Federal Register* 36:8921, May 13. Available at http://www.fsa.usda.gov/Internet/FSA_File/eo11593.pdf. Accessed June 2013.

U.S. President, 1977a, "Floodplain Management," Executive Order 11988, *Federal Register* 42:26951. Available at http://water.epa.gov/lawsregs/guidance/wetlands/eo11988.cfm. Accessed July 18, 2014.

U.S. President, 1977b, "Protection of Wetlands," Executive Order 11990, *Federal Register* 42:26961. Available at http://water.epa.gov/lawsregs/guidance/wetlands/eo11988.cfm. Accessed July 18, 2014.

U.S. President, 1994a, "Memorandum on Government-to-Government Relations with Native American Tribal Governments," *Federal Register* 59:936, April 29. Available at http://www.dot.gov/sites/dot.dev/files/docs/Govt%20to%20Govt%20Relations%20w%20Native %20Am%20Tribal%20Govts.pdf. Accessed May 2013.

U.S. President, 1994b, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," Executive Order 12898, *Federal Register* 59:7629, Feb. 11.

U.S. President, 1996, "Indian Sacred Sites," Executive Order 13007, *Federal Register* 61:26771, May 24. Available at http://www.gpo.gov/fdsys/pkg/FR-1996-05-29/pdf/96-13597.pdf. Accessed June 2013.

U.S. President, 1999, "Invasive Species," Executive Order 13112, *Federal Register* 64:6183. Available at http://www.gpo.gov/fdsys/pkg/FR-1999-02-08/pdf/99-3184.pdf. Accessed July 18, 2014.

U.S. President, 2000, "Consultation and Coordination with Indian Tribal Governments," Executive Order 13175, *Federal Register* 65:67249, Nov. 9. Available at http://www.gpo.gov/fdsys/pkg/FR-2000-11-09/pdf/00-29003.pdf. Accessed May 2013.

U.S. President, 2001, "Responsibilities of Federal Agencies to Protect Migratory Birds," Executive Order 13186, *Federal Register* 66:3853. Available at http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/Req-EO13186migratorybirds.pdf. Accessed July 18, 2014.

U.S. President, 2009, "Tribal Consultation," Presidential Memorandum. Available at http://www.whitehouse.gov/the-press-office/memorandum-tribal-consultation-signed-president. Accessed July 18, 2014.

Utah Associated Municipal Power Systems, 2015, *2013 Annual Report*. Available at http://uamps.com/images/annualreports/UAMPS%202013%20Annual%20Report%202.pdf. Accessed Nov. 2015.

Utah Municipal Power Agency, 2015, *34th Annual Report. UMPA 2014*. Available at http://www.umpa.cc/downloads/UMPA_ANNUAL_2014_ELECTRONIC_VERSION.pdf. Accessed Nov. 2015.

Valdez, R.A., 1991, *Evaluation of Alternatives for the Glen Canyon Dam Environmental Impact Statement*, BIO/WEST Report No. TR-250-06, Logan, Utah.

Valdez, R.A., and S.W. Carothers, 1998, *The Aquatic Ecosystem of the Colorado River in Grand Canyon. Report to Bureau of Reclamation*, Salt Lake City, Utah, SWCA Environmental Consultants, Flagstaff, Ariz.

Valdez, R.A., and W.C. Liebfried, 1999, "Captures of Striped Bass in the Colorado River in Grand Canyon, Arizona," *Southwestern Naturalist* 44:388–392.

Valdez, R.A., and W.J. Masslich, 1999, "Evidence of Reproduction by Humpback Chub in a Warm Spring of the Colorado River in Grand Canyon, Arizona," *The Southwestern Naturalist* 44(3):384–387.

Valdez, R.A., and R.J. Ryel, 1995, *Life History and Ecology of the Humpback Chub* (Gila cypha) *in the Colorado River, Grand Canyon, Arizona*, Report No. TR-250-08, final report to Bureau of Reclamation, Salt Lake City, Utah.

Valdez, R.A., and R.J. Ryel, 1997, "Life History and Ecology of the Humpback Chub in the Colorado River in Grand Canyon, Arizona," pp. 3–31 in *Proceedings of the Third Biennial Conference of Research on the Colorado Plateau*, C. VanRiper, III, and E.T. Deshler (eds.), National Park Service Transactions Proceedings Series NPS/NRNAU/ NRTP 97/12.

Valdez, R.A., and D.W. Speas, 2007, *A Risk Assessment Model to Evaluate Risks and Benefits to Aquatic Resources from a Selective Withdrawal Structure on Glen Canyon Dam*, Bureau of Reclamation, Salt Lake City, Utah.

Valdez, R.A., D.A. House, M.A. McLeod, and S.W. Carothers, 2012, *Review and Summary of Razorback Sucker Habitat in the Colorado River System*, Report Number 1, Final Report, prepared by SWCA Environmental Consultants, Flagstaff, Ariz., for U.S. Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah.

Valdez, R.A., S.W. Valdez, D.A. Carothers, M.E. House, M. Douglas, R.J. Ryel, K.R. Bestgen, and D.L. Wegner, 2000, *A Program of Experimental Flows for Endangered and Native Fishes of the Colorado River in Grand Canyon*, prepared for U.S. Geological Survey, Grand Canyon Monitoring and Research Center, U.S. Department of the Interior, Flagstaff, Ariz., Dec. 31.

VanderKooi, S., 2011, *Humpback Chub: Population Status and Trends*, U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., unpublished data.

VanderKooi, S., 2012, personal communication from VanderKooi (Acting Deputy Chief, Grand Canyon Monitoring and Research Center) to G. Knowles (High Flow Experiment Technical Team Lead, Bureau of Reclamation), Oct. 22.

VanderKooi, S., 2015, *Native and Nonnative Fishes in Glen, Marble, and Grand Canyons*, Glen Canyon Dam Adaptive Management Program, High Flow Experiment Workshop, February 25–26. Available at https://www.usbr.gov/uc/rm/amp/amwg/mtgs/15feb25/ Attach_HFE08.pdf. Accessed July 1, 2016. Van Haverbeke, D.R., K.L Young, and B. Healy, 2016, *Translocation and Refuge Framework for Humpback Chub* (Gila cypha) *in Grand Canyon*, USFWS-AZFWCO-FL-16-03, U.S. Fish and Wildlife Service, Flagstaff, Ariz.

Vannote, R.L., and B.W. Sweeney, 1980, "Geographic Analysis of Thermal Equilibria: A Conceptual Model for Evaluating the Effect of Natural and Modified Thermal Regimes on Aquatic Insect Communities," *The American Naturalist* 115(5):667–695.

Vano, J.A., B. Udall, D.R. Cayan, J.T. Overpeck, L.D. Brekke, T. Das, H.C. Hartmann, H.G. Hidalgo, M. Hoerling, G.J. McCabe, K. Morino, R.S. Webb, K. Werner, and D.P. Lettenmaier, 2013, *Understanding Uncertainties in Future Colorado River Streamflow*, Bulletin of the American Meteorological Society. DOI:10.1175/BAMS-D-12-00228.1

van Riper, C., III, K.L. Paxton, C. O'Brien, P.B. Shafroth, and L.J. McGrath, 2008, "Rethinking Avian Response to *Tamarix* on the Lower Colorado River: A Threshold Hypothesis," *Restoration Ecology* 16(1):155–167.

van Riper, C., III., J.R. Hatten, J.T. Giermakowski, D. Mattson, J.A. Holmes, M.J. Johnson, E.M. Nowak, K. Ironside, M. Peters, P. Heinrich, K.L. Cole, C. Truettner, and C.R. Schwalbe, 2014, *Projecting Climate Effects on Birds and Reptiles of the Southwestern United States*, U.S. Geological Survey Open-File Report 2014–1050. Available at http://dx.doi.org/10.3133/ ofr20141050.

Vatland, S., and P. Budy, 2007, "Predicting the Invasion Success of an Introduced Omnivore in a Large, Heterogeneous Reservoir," *Canadian Journal of Fisheries and Aquatic Sciences* 64:1329–1345.

Vermeyen, T.B., 2008, *The Glen Canyon Dam Temperature Control Device: Restoring Downstream Habitat for Endangered Fish Recovery*, presented at the 2008 EWRI Environmental and Water Resources Congress, Honolulu, Hawaii.

Vernieu, W.S., 2010, *Effects of the 2008 High-Flow Experiment on Water Quality in Lake Powell and Glen Canyon Dam Releases, Utah-Arizona*, U.S. Geological Survey Open-File Report 2010-1159. Available at http://pubs.usgs.gov/of/2010/1159. Accessed Feb. 26, 2015.

Vernieu, W.S., and C.R. Anderson, 2013, *Water Temperatures in Select Nearshore Environments of the Colorado River in Grand Canyon, Arizona, during the Low Steady Summer Flow Experiment of 2000*, U.S. Geological Survey Open-File Report 2013–1066. Available at http://pubs.usgs.gov/of/2013/1066/. Accessed June 1, 2015.

Vernieu, W.S., and S.J. Hueftle, 1998, Assessment of Impacts of Glen Canyon Dam Operations on Water Quality Resources in Lake Powell and the Colorado River in Grand Canyon: Draft, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz. Vernieu, W.S., S.J. Hueftle, and S.P. Gloss, 2005, Chapter 4, "Water Quality in Lake Powell and the Colorado River," in *The State of the Colorado River Ecosystem in Grand Canyon*, J.E. Lovich and T.S. Melis (eds.), U.S. Geological Survey Circular 1282, U.S. Geological Survey, Reston, Va. Available at http://pubs.usgs.gov/circ/1282/c1282.pdf. Accessed Feb. 24, 2015.

Veselka, T.D., L.A. Poch, C.S. Palmer, S. Loftin, and B. Osiek, 2010, *Ex Post Power Economic Analysis of Record of Decision Operational Restrictions at Glen Canyon Dam*, Technical Memorandum ANL/DIS-10-6, Argonne National Laboratory, Argonne, Ill., July.

Vinson, M.R., 2001, "Long-Term Dynamics of an Invertebrate Assemblage Downstream from a Large Dam," *Ecological Applications* 11(3):711–730.

Vinson, M.R., and M.A. Baker, 2008, "Poor Growth of Rainbow Trout Fed New Zealand Mud Snails *Potamopyrgus antipodarum*," *North American Journal of Fisheries Management* 28:701–709.

Voichick, N., 2008, Specific Conductance in the Colorado River between Glen Canyon Dam and Diamond Creek, Northern Arizona, 1988–2007, Date Series 364, U.S. Geological Survey, Reston, Va.

Voichick, N., and D.J. Topping, 2010, *Comparison of Turbidity to Multi-Frequency Sideways-Looking Acoustic-Doppler Data and Suspended-Sediment Data in the Colorado River in Grand Canyon*, 2nd Joint Federal Interagency Conference, Las Vegas, Nev., June 27–July 1.

Voichick, N., and S.A. Wright, 2007, *Water-Temperature Data for the Colorado River and Tributaries between Glen Canyon Dam and Spencer Canyon, Northern Arizona, 1988–2005*, U.S. Geological Survey Data Survey Series 251. Available at http://pubs.usgs.gov/ds/2007/251. Accessed Feb. 26, 2015.

Walkoviak, L., 2012, personal communication from Walkoviak (Regional Director, Bureau of Reclamation) to W. Honga (Gran Canyon Resort Corporation), Nov. 1.

Walters, C., J. Korman, L.E. Stevens, and B. Gold, 2000, "Ecosystem Modeling for Evaluation of Adaptive Management Policies in the Grand Canyon," *Conservation Ecology* 4(2):1. Available at http://www.consecol.org/vol4/iss2/art1.

Walters, C.J., B.T. van Poorten, and L.G. Coggins, 2012, "Bioenergetics and Population Dynamics of Flannelmouth Sucker and Bluehead Sucker in Grand Canyon as Evidenced by Tag Recapture Observations," *Transactions of the American Fisheries Society* 141:158–173.

Walters, J., 1979, "Bighorn Sheep Population Estimate for the South Tonto Plateau – Grand Canyon," *Desert Bighorn Council Transactions* 24:96–106.

Ward, D., and S.A. Bonar, 2003, "Effects of Cold Water on Susceptibility of Age-0 Flannelmouth Sucker to Predation by Rainbow Trout," *The Southwestern Naturalist* 48(1): 43–46.

Ward, D., and W. Persons, 2006, *Little Colorado River Fish Monitoring, 2005 Annual Report, Revised Version*, Arizona Game and Fish Department, Research Branch, submitted to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Ward, D.L., 2011, "How Does Temperature Affect Fish?" Knowledge Assessment II: 2nd Synthesis Workshop with the Grand Canyon Technical Workgroup – Aquatic Resources, October 18–19, U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz. Available at http://www.gcmrc.gov/about/ka/KA%202%20-%2010-19-11/PM%20Talks/Ward%20-%20Effects%20of%20temperature%20on%20native%20fish.pdf. Accessed April 11, 2014.

Ward, D.L., and R. Morton-Starner, 2015, "Effects of Water Temperature and Fish Size on Predation Vulnerability of Juvenile Humpback Chub to Rainbow Trout and Brown Trout," *Transactions of the American Fisheries Society* 144:1184–1191.

Ward, D.L., and R.S. Rogers, 2006, *Grand Canyon Long-Term Non-Native Fish Monitoring, 2005 Annual Report*, Arizona Game and Fish Department, Research Branch, submitted to U.S. Geological Survey, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz.

Waring, G.L., 1995, *Current and Historical Riparian Vegetation Trends in Grand Canyon, Using Multitemporal Remote Sensing Analyses of GIS Sites–Final Report*, National Park Service, submitted to Bureau of Reclamation, Glen Canyon Environmental Studies, and Northern Arizona University, Cooperative Agreement No. CA 8000-8-0002.

Warren, P.L., and C.R. Schwalbe, 1985, "Herpetofauna in Riparian Habitats along the Colorado River in Grand Canyon," pp. 347–354 in *Riparian Ecosystems and Their Management: Reconciling Conflicting Uses*, R.R. Johnson, C.D. Ziebell, D.R. Patton, P.F. Folliott, and R.H. Hamre (tech. coords.), First North American Riparian Conference, April 16–18, 1985, Tucson, Ariz., General Technical Report RM-GTR-120, U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station.

Wasowicz, A., and H. Yard, 1993, "Predation by Osprey on Endangered Humpback Chub," *Great Basin Naturalist* 53(3):314–315.

WCWCD (Washington County Water Conservancy District), 2012, "Powell Pipeline Project Technical Reports." Available at http://www.wcwcd.org/projects/current-projects/lpp-lake-powell-pipeline/. Accessed May 2013.

Webb, R., T.S. Melis, and R.A. Valdez, 2002, *Observations of Environmental Change in Grand Canyon, Arizona*, Water Resources Investigations Report 02-4080, U.S. Geological Survey in cooperation with Grand Canyon Monitoring and Research Center, Tucson, Ariz.

Webb, R.H., and P.G. Griffiths, 2001, *Monitoring of Coarse Sediment Inputs to the Colorado River in Grand Canyon*, U.S. Geological Survey Fact Sheet 019-01, Feb. Available at http://pubs.usgs.gov/fs/FS-019-01/pdf/fs-019-01.pdf. Accessed Feb. 19, 2015.

Webb, R.H., and T.S. Melis, 1996, *Observations of Environmental Change in Grand Canyon*, report to Glen Canyon Environmental Studies Program, Bureau of Reclamation, Flagstaff, Ariz., U.S. Geological Survey, Tucson, Ariz.

Webb, R.H., J. Belnap, M.L. Scott, and T.C. Esque, 2011, "Long-term Change in Perennial Vegetation along the Colorado River in Grand Canyon National Park (1889–2010)," *Park Science*, Vol. 28, No. 2, Summer 2011, National Park Service, Natural Resource Stewardship and Science Office of Education and Outreach, Lakewood, Colo.

Webb, R.H., P.R. Griffiths, T.S. Melis, and D.R. Hartley, 2000, *Sediment Delivery by Ungaged Tributaries of the Colorado River in Grand Canyon, Arizona*, U.S. Geological Survey Water-Resources Investigations Report 00-4055.

Webb, R.H., R. Hereford, and G.J. McCabe, 2005, "Climatic Fluctuations, Drought, and Flow in the Colorado River," Chapter 3 in *The State of the Colorado River Ecosystem in Grand Canyon*, S.P. Gloss et al. (eds.), U.S. Geological Survey Circular 1282, U.S. Geological Survey, Reston, Va.

Webb, R.H., P.T. Pringle, S.L. Reneau, and G.R. Rink, 1988, "Monument Creek Debris Flow, 1984: Implications for Formation of Rapids on the Colorado River in Grand Canyon National Park," *Geology* 16:50–54.

Weiss, S.J., 1993, "Spawning, Movement, and Population Structure of Flannelmouth Sucker in the Paria River," M.S. thesis, University of Arizona, Tucson, Ariz.

Weiss, S.J., E.O. Otis, and O.E. Maughan, 1998, "Spawning Ecology of Flannelmouth Sucker, *Catostomus latipinnis* (Catostomidae), in Two Small Tributaries on the Lower Colorado River," *Environmental Biology of Fishes* 52:419–433.

Wellard Kelly, H.A., E.J. Rosi-Marshall, T.A. Kennedy, R.O. Hall, Jr., W.F. Cross, and C.V. Baxter, 2013, "Macroinvertebrate Diets Reflect Tributary Inputs and Turbidity-Driven Changes in Food Availability in the Colorado River Downstream of Glen Canyon Dam," *Freshwater Science* 32(2):397–410.

Welsh, M.P., R.C. Bishop, M.L. Phillips, and R.M. Baumgartner, 1995, *Glen Canyon Dam, Colorado River Storage Project, Arizona-Nonuse Value Study Final Report, Hagler Bailly Consulting, Madison, Wisc.*

Westhoff, J.T., C. Paukert, S. Ettinger-Dietzel, H. Dodd, and M. Siepker, 2014, "Behavioural Thermoregulation and Bioenergetics of Riverine Smallmouth Bass Associated with Ambient Cold-Period Thermal Refuge," *Ecology of Freshwater Fish*. DOI:10.1111/eff.12192.

Whatoname, W., Sr., 2010, Letter of Testimony to the Natural Resources Committee Joint Oversight Field Hearing, "On the Edge: Challenges Facing Grand Canyon National Park," April 8. Available at http://hualapai.org/resources/Aministration/WhatonameTestimony 04.08.10.pdf. Accessed March 8, 2012.

Whiting, D., C. Paukert, B. Healy, and J. Spurgeon, 2014, "Macroinvertebrate Prey Availability and Food Web Dynamics of Nonnative Trout in a Colorado River Tributary, Grand Canyon," *Freshwater Science* 33:872–884.

Wiele, S., and M. Torizzo, 2005, "Modeling of Sand Deposition in Archaeologically Significant Reaches of the Colorado River in Grand Canyon, USA," pp. 357–394 in *Computational Fluid Dynamics: Applications in Environmental Hydraulics*, P.D. Bates, S.N. Lane, and R.I. Ferguson (eds.), Wiley and Sons, Chichester, United Kingdom.

Wildman, R.A., Jr., L.F. Pratson, M. DeLeon, and J.G. Hering, 2011, "Physical, Chemical, and Mineralogical Characteristics of a Reservoir Sediment Delta (Lake Powell, USA) and Implications for Water Quality during Low Water Level," *Journal of Environmental Quality* 40(2):575–586.

Williams, B.K., R.C. Szaro, and C.D. Shapiro, 2009, *Adaptive Management: The U.S. Department of the Interior Technical Guide*, Adaptive Management Working Group, U.S. Department of the Interior, Washington, D.C. Available at http://www.doi.gov/initiatives/ AdaptiveManagement/TechGuide.pdf. Accessed May 2013.

Wilson, L.O., 1976, "Biases in Bighorn Research Relating to Food Preferences and Determining Competition between Bighorn and Other Herbivores," *Transactions of the Desert Bighorn Council* 20:46–48.

Wilson, L.O., J. Blaisdell, G. Walsh, R. Weaver, R. Brigham, W. Kelly, J. Yoakum, M. Hinks, J. Turner, and J. DeForge, 1980, "Desert Bighorn Habitat Requirements and Management Recommendations," *Desert Bighorn Council Transactions* 24:1–7.

Winters, L., B. Stewart, D. Rogowski, R. Osterhouldt, P. Wolters, and K. Manuell, 2016, *Long-Term Monitoring of the Lees Ferry Fishery: Update*, Glen Canyon Dam Adaptive Management Program, Technical Work Group Public Meeting, January 27. Available at http://www.usbr.gov/uc/rm/amp/twg/mtgs/16jan26/documents/AR14_Winters.pdf. Accessed July 1, 2016.

Woodbury, A.M., 1959, *An Ecological Study of the Colorado River in Glen Canyon*, pp. 149–176 in *Ecological Studies of the Flora and Fauna in Glen Canyon*, Woodbury, A.M., S. Flowers, D.W. Lindsay, S.D. Durrant, N.K. Dean, A.W. Grundman, J.R. Crook, W.H. Behle, H.G. Higgens, G.R. Smitt, G.G. Hauser, and D.B. McDonald, University of Utah Anthropological Papers 40:1–229. Woodbury, A.M., S. Flowers, D.W. Lindsay, S.D. Durrant, N.K. Dean, A.W. Grundman, J.R. Crook, W.H. Behle, H.G. Higgens, G.R. Smitt, G.G. Hauser, and D.B. McDonald, 1959, "Ecological Studies of the Flora and Fauna in Glen Canyon," *University of Utah Anthropological Papers* 40:1–229.

Woods, A.J., D.A. Lammers, S.A. Bryce, J.M. Omernik, R.L. Denton, M. Domeier, and J.A. Comstock, 2001, *Ecoregions of Utah* (color poster with map, descriptive text, summary tables, and photographs), U.S. Geological Survey Reston, Va.

Woodward, G., J.B. Dybkjer. J.S. Ólafsson, G.M. Gíslason, E.R. Hannesdóttir, and N. Friberg, 2010, "Sentinel Systems on the Razor's Edge: Effects of Warming on Arctic Geothermal Stream Ecosystems," *Global Change Biology* 16:1979–1991.

World Meteorological Organization, 2014, 2001–2010: A Decade of Climate Extremes, WMO-No. 1103.

Wright, R.G., 1992, *Wildlife Research and Management in the National Parks*, University of Illinois Press, Urbana and Chicago, Ill.

Wright, S.A., and P.E. Grams, 2010, *Evaluation of Water Year 2011 Glen Canyon Dam Flow Release Scenarios on Downstream Sand Storage along the Colorado River in Arizona*, U.S. Geological Survey Open-File Report 2010-1133.

Wright, S.A., and T.A. Kennedy, 2011, "Science-Based Strategies for Future High-Flow Experiments at Glen Canyon Dam," in *Effects of Three High-Flow Experiments on the Colorado River Ecosystem Downstream from Glen Canyon Dam, Arizona*, U.S. Geological Survey Circular 1366.

Wright, S.A., C.R. Anderson, and N. Voichick, 2008, "A Simplified Water Temperature Model for the Colorado River below Glen Canyon Dam," *River Research and Applications* 25(6):675–686. Available at http://dx.doi.org/10.1002/rra.1179. Accessed Aug. 19, 2011.

Wright, S.A., T.S. Melis, D.J. Topping, and D.M. Rubin, 2005, "Influence of Glen Canyon Dam Operations on Downstream Sand Resources of the Colorado River in Grand Canyon," in *The State of the Colorado River Ecosystem in Grand Canyon: A Report of the Grand Canyon Monitoring and Research Center 1991–2004*, S.P. Gloss et al. (eds.), U.S. Geological Survey Circular 1282, Southwest Biological Science Center, Reston, Va.

Wright, S.A., J.C. Schmidt, T.S. Melis, D.J. Topping, and D.M. Rubin, 2008, "Is There Enough Sand? Evaluating the Rate of Grand Canyon Sandbars," *GSA Today* 18(8):4–10.

Wright, S.A., D.J. Topping, D.M. Rubin, and T.S. Melis, 2010, "An Approach for Modeling Sediment Budgets in Supply-Limited Rivers," *Water Resources Res*earch 46(10):W10538. DOI:10.1029/2009WR008600.

Wrona, F.J., T.D. Prowse, J.D. Reist, J.E. Hobbie, L.C. Lévesque, and W.F. Vincent, 2006, "Climate Change Effects on Aquatic Biota, Ecosystem Structure and Function," *Ambio* 35(7):359–369.

Wyoming Department of Administration and Information, 2013, "Population for Wyoming, Counties, Cities and Towns: 2010 to 2030." Available at http://eadiv.state.wy.us/pop/wyc&sc30.htm. Accessed Jan. 13, 2015.

Yackulic, C.B., M.D. Ward, J. Korman, and D.R. Van Haverbeke, 2014, "A Quantitative Life History of Endangered Humpback Chub that Spawn in the Little Colorado River: Variation in Movement, Growth, and Survival," *Ecology and Evolution* 4(7):1006–1018. DOI:10.1002/ece3.990 Epub.

Yanites, B.J., R.H. Webb, P.G. Griffiths, and C.S. Magirl, 2006, "Debris Flow Deposition and Reworking by the Colorado River in Grand Canyon, Arizona," *Water Resources Research* 42:W11411. DOI:10.1029/2005WR004847.

Yard, H.K., C. Van Riper, III, B.T. Brown, and M.J. Kearsley, 2004, "Diets of Insectivorous Birds along the Colorado River in Grand Canyon, Arizona," *The Condor* 106:106–115.

Yard, M.D., and D.W. Blinn, 2001, *Algal Colonization and Recolonization Response Rates during Experimental Low Summer Steady Flows*, Grand Canyon Monitoring and Research Center, Flagstaff, Ariz., June 25.

Yard, M.D., Bennett, G.E., Mietz, S.N., Coggins, L.G., Jr., Stevens, L.E., Hueftle, S.J., and Blinn, D.W., 2005, "Influence of Topographic Complexity on Solar Insolation Estimates for the Colorado River, Grand Canyon, AZ," *Ecological Modelling* 183(2-3):157–172. Available at http://www.sciencedirect.com/science/article/pii/S0304380004004375. Accessed July 19, 2011.

Yard, M.D., L.G. Coggins Jr., C.V. Baxter, G.E. Bennett, and J. Korman, 2011, "Trout Piscivory in the Colorado River, Grand Canyon: Effects of Turbidity, Temperature, and Prey Availability," *Transactions of the American Fisheries Society* 140(2):471–486.

Yeatts, M., 2013, personal communication from Yeatts (Tribal Archaeologist, Hopi Tribe, Kykotsmovi, Ariz.) to B. Verhaaren (Environmental Science Division, Argonne National Laboratory, Argonne, Ill.), Dec. 13.

Yeatts, M., and C. Brod, 1996, *High Elevation Sand Deposition and Retention from the 1996 Spike Flow: An Assessment for Cultural Resources Stabilization, Final Report, Glen Canyon* Environmental Studies, Bureau of Reclamation, Flagstaff, Ariz.

Yeatts, M., and K. Huisinga, 2003, Soosoy Himu Naanamiwiwyungwa: An Analysis of the Grand Canyon Monitoring and Research Center's Terrestrial Monitoring Program and the Development of a Hopi Long-term Plan, Final Report, June, on file at Grand Canyon Research Monitoring Center, Flagstaff, Ariz.

Yeatts, M., and K. Huisinga, 2006, *A Hopi Long-Term Monitoring Program for Öngtupqa (the Grand Canyon)*, prepared for Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, May.

Yeatts, M., and K. Huisinga, 2009, *A Hopi Long-Term Monitoring Program for Öngtupqa (the Grand Canyon)*, prepared for Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, May.

Yeatts, M., and K. Huisinga, 2010, *A Hopi Long-Term Monitoring Program for Öngtupqa (the Grand Canyon)*, prepared for Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, April.

Yeatts, M., and K. Huisinga, 2011, *A Hopi Long-Term Monitoring Program for Öngtupqa (the Grand Canyon)*, prepared for Bureau of Reclamation, Upper Colorado Region, Salt Lake City, Utah, Feb.

Yeatts, M., and K. Huisinga, 2012, 2012 Report of the Hopi Long-Term Monitoring Program for Ö012 Rep (the Grand Canyon), prepared for the Grand Canyon Dam Adaptive Management Program by the Hopi Cultural Preservation Office, Kykotsmovi, Ariz., Dec.

Yeatts, M., and K. Huisinga, 2013, 2013 Report of the Hopi Long-Term Monitoring Program for Öngtupqa (the Grand Canyon), prepared for Grand Canyon Dam Adaptive Management Program by Hopi Cultural Preservation Office, Kykotsmovi, Ariz., Dec.

Zachmann, L.J., V. Horncastle, and B.G. Dickson, 2013, *Colorado River Plan — Research, Monitoring, and Mitigation Program Data Analyses*, Laboratory of Landscape Ecology and Conservation Biology, School of Earth Sciences and Environmental Sustainability, Northern Arizona University, Flagstaff, Ariz.

Zagona, E., T. Fulp, R. Shane, T. Magee, and H. Goranflo, 2001, "RiverWareTM: A Generalized Tool for Complex Reservoir Systems Modeling," *Journal of the American Water Resources Association* 37(4):913–929.

Zuni Tribal Council, 2010, Zuni Tribal Council Resolution No. M70-2010-C-086, Zuni Tribe, Zuni, N.Mex., Sept. 21.