

The Colorado River: Past, Present and Future

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Class meets 1:00PM – 3:00 PM, Jan. 31, Feb. 7, Feb. 14, Feb. 21 and Feb. 28

Rubel Room at the University of Arizona's Poetry Center, 1508 E Helen St, Tucson, AZ

Syllabus and Reading List, as of November 16, 2022. Subject to change, especially Week 5 readings.

All readings or videos will be posted or linked.

You are not required to purchase any book. If you want **one** book, the classic is Marc Reisner's *Cadillac Desert* (1986). It is on the bookshelf of every water manager, water attorney, water scholar and water junkie in the western United States. It covers water in the western United States, not just the Colorado River. One chapter is on your reading list, available via the course website. *Cadillac Desert* is thorough, well-written and now out-of-date. A lot has happened in the past 35 years.

A more focused treatment of the Colorado River is Philip Fradkins' *A River No More* (1996 for the expanded and updated edition). It is also out-of-date, but that's to be expected. A lot is still happening.

All water-wonks in the West take a regular look at [John Fleck's website](#) for updates, history, editorial comments and gossip about the Colorado and the Rio Grande.

My bookshelves are sagging with newer and older books relevant to the Colorado River. If there is popular demand, I can provide an annotated list.

Some of you may wish to purchase Ed Abbey's *Monkey Wrench Gang* and/or Paolo Bacigalupi's *The Water Knife* (both fiction) for the Week 2 discussion. Again, not required: excerpts are provided on the course's website.

A word about buying these and other books: Try local first, used or new, at [Bookman's](#), [Mostly Books](#), [Antigone's](#) or any local bookstore. If that fails, or if you can't leave the house, there's always you-know-who for instantaneous satisfaction via your Kindle or next-day satisfaction via their delivery truck.

Week 1. January 31, 2023. Geologic time includes now. Geography, geology, climate and hydrology of the Colorado River Basin.

1. Australian Broadcasting Corporation 2022. The Vanishing River: USA's Megadrought. <https://www.youtube.com/watch?v=ooGeK4hP0NQ>
2. Sign up for Google News Alert "Colorado River" <https://support.google.com/websearch/answer/4815696?hl=en>
3. Ten volunteers needed for Week 2: Five to read and discuss/report on [The Monkey Wrench Gang](#); Five needed to discuss and report on [The Water Knife](#).
4. Colorado River Basin Quick Reference Guide (to be posted)
5. p 3-4 *from*: Lukas, J. and Payton, E., 2020. Chapter 2. Current understanding of Colorado River Basin climate and hydrology, Map and Executive Summary, in Colorado River Basin Climate and Hydrology. State of the Science. Western Water Assessment, Denver, CO. https://www.colorado.edu/sites/default/files/2021-06/ColoRiver_StateOfScience_WWA_2020_FullReport_low-res.pdf

6. Optional: Woodhouse, C., Lukas, J. and Brice, B., no date, Colorado River Streamflow: A paleo perspective. <https://www.treeflow.info/perspective>
7. Optional – **Just For Fun**. John Oliver on water in the West and the Colorado River in particular: <https://www.youtube.com/watch?v=jtxew5XUVbQ> (25 minutes)

Week 2. February 7. Encounters: Indigenous peoples, Spanish expeditions, American expeditions (Ives, Powell), Naturalists (Leopold), river-running poets, Ed Abbey and the Monkey Wrench Gang, dystopian visions.

1. The Voices of Grand Canyon. Jim Enote (Zuni), Nikki Cooley (Navajo), Leigh Kuwanwisiwma (Hopi), Coleen Kaska, (Havasupai), and Loretta Jackson-Kelly (Hualapai) share what the Grand Canyon means to them and what they know in their hearts to be true.
<https://storymaps.arcgis.com/stories/b22a6a09bb2344ff845d9efd3e4152f7>
2. p. 4-37 *from*: Ives, J.C., 1861. Report upon the Colorado River of the West, Explored in 1857 and 1858 by Lieutenant Joseph C. Ives, Corps of Topographical Engineers, Under the Direction of the Office of Explorations and Surveys, A. A. Humphreys, Captain Topographical Engineers, in Charge. Washington, D. C.: Government Printing Office.
3. p. 83-109 (Chapter 7) *from*: Powell. J.W. 1895. The Exploration of the Colorado River and its Canyons. Dover and many publishers since.
4. p. 150-158 *from*: Leopold, A. 1949. The Green Lagoons, pp. 150-158 in A Sand County Almanac. Oxford University Press.
http://eebweb.arizona.edu/faculty/Bonine/Leopold1949_GreenLagoons-150-158.pdf
5. p. 1-7 *from*: Abbey, E., 1975. The Monkey Wrench Gang. Lippincott.
6. p. 20-47 *from*: Bacigalupi, P. 2015. The Water Knife. Orbit.
7. Optional - **Just For Fun**: *The Winning of Barbara Worth* (1926). While building an irrigation system for California's Imperial Valley, an engineer vies with a local cowboy for the affections of a rancher's daughter. Gary Cooper's first major role. Silent film that also depicts the Colorado River's flooding and the creation of the Salton Sea in 1905. Special effects! (90 minutes)
<https://www.dailymotion.com/video/x245vt4>

Week 3. February 14. Dam the consequences: The Colorado River Compact and the Law of the River, the dam-building era, allocations, Arizona vs. California, the Central Arizona Project, cities and farms, Arizona groundwater.

1. The Colorado River Compact, 1922.
<https://www.usbr.gov/lc/region/g1000/pdffiles/crcompct.pdf>
2. p. 1-4. *from*: Boulder Canyon Project Act, 1928.
<https://www.usbr.gov/lc/region/g1000/pdffiles/bcpact.pdf>
3. Chapter 4 (p. 120-144) *from* Reisner, M., 1986. An American Nile (1), in *Cadillac Desert*, Viking. - OR –
Public Broadcasting System, 1997. Cadillac Desert. Program 2. An American Nile (55 minutes)
<https://www.youtube.com/watch?v=ENDBXOTLb-k>
4. The Law of the River. <https://www.usbr.gov/lc/region/g1000/lawofrvr.html> (one page summary, with links)

5. Background for the 1963 Supreme Court Decision
https://www.usbr.gov/lc/phoenix/AZ100/1960/background_us_supreme_court_decision.html
6. Central Arizona Project Story Map.
<https://storymaps.arcgis.com/stories/b7b28dd4c36a413e8d533ba540f998cb>

Week 4. February 21. Reclaiming the River: Native American rights, adjudication and quantification, David Brower’s bargain and regrets, endangered species, protecting the Grand Canyon, restoration beyond the border.

1. McCool, W.C. and McCool, D.C., 2020. “We must either protect him or destroy him”. p. 201-219, in Robison, J., McCool, D. and Minckley, T., eds. *Vision and Place. John Wesley Powell & Reimagining the Colorado River Basin.* University of California Press.
2. p. 158-190 *from:* McPhee, J., 1971. *Encounters with the Archdruid.* Farrar, Straus and Giroux.
3. p. 11-24 (“Water for the Environment...”) *from:* International Boundary and Water Commission, 2012. *Interim International Cooperative Measures in the Colorado River Basin through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California.*
https://www.ibwc.gov/Files/Minutes/Minute_319.pdf
4. Pitt, J., Kendy, E., Schlatter, K., Hinojosa-Huerta, O., Flessa, K., Shafroth, P.B., Ramirez-Hernandez, J., Nagler, P., and Glenn, E.P., 2017. It takes more than water: Restoring the Colorado River delta. *Ecological Engineering* 106B: 629-632.

Week 5. February 28. Beyond the Compact’s centennial: Demand exceeds supply, nature and the efficiency paradox, climate change and aridification, prospects for augmentation, Can the river have legal standing?, 2026 interim guidelines- who is at the table?

1. p. SR-36, Fig 12, in: U.S. Bureau of Reclamation, 2012. *Colorado River Basin Water Supply and Demand Study. Study Report.*
https://usbr.gov/lc/region/programs/crbstudy/finalreport/Study%20Report/StudyReport_FINAL_Dec2012.pdf
2. Colorado River Research Group, 2018. *When is a drought not a drought?*
https://www.usu.edu/colorado-river-research-group/files/crrg_aridity_report.pdf
3. Fleck, J. and Udall, B., 2021. *Managing Colorado River risk.* *Science* 372: 885.
<https://www.science.org/doi/10.1126/science.abj5498>
4. McCool, D., 2021. *As climate change parches the Southwest, here’s a better way to share water from the shrinking Colorado River.* *The Conversation.* <https://theconversation.com/as-climate-change-parches-the-southwest-heres-a-better-way-to-share-water-from-the-shrinking-colorado-river-168723>
5. Berggren, J., Fleck, J., Kenney, D. and Rivera-Torres, M., 2022. *A Pie No More? Building a more equitable Colorado River governance structure.* Pp. 207-233. In Robison, J.A., ed. *Cornerstone at the Confluence. Navigating the Colorado River Compact’s Next Century.* University of Arizona Press.
6. Benöhr, J. and Lynch, P.J., 2018. *Should rivers have rights? A growing movement says it’s about time.* <https://e360.yale.edu/features/should-rivers-have-rights-a-growing-movement-says-its-about-time>