

LTEMP Resource Goal 6. Recreational Experience

“Maintain and improve the quality of recreational experiences for the users of the Colorado River Ecosystem. Recreation includes, but is not limited to, flatwater and whitewater boating, river corridor camping, and angling in Glen Canyon” (U.S. Department of the Interior [DOI], 2016).

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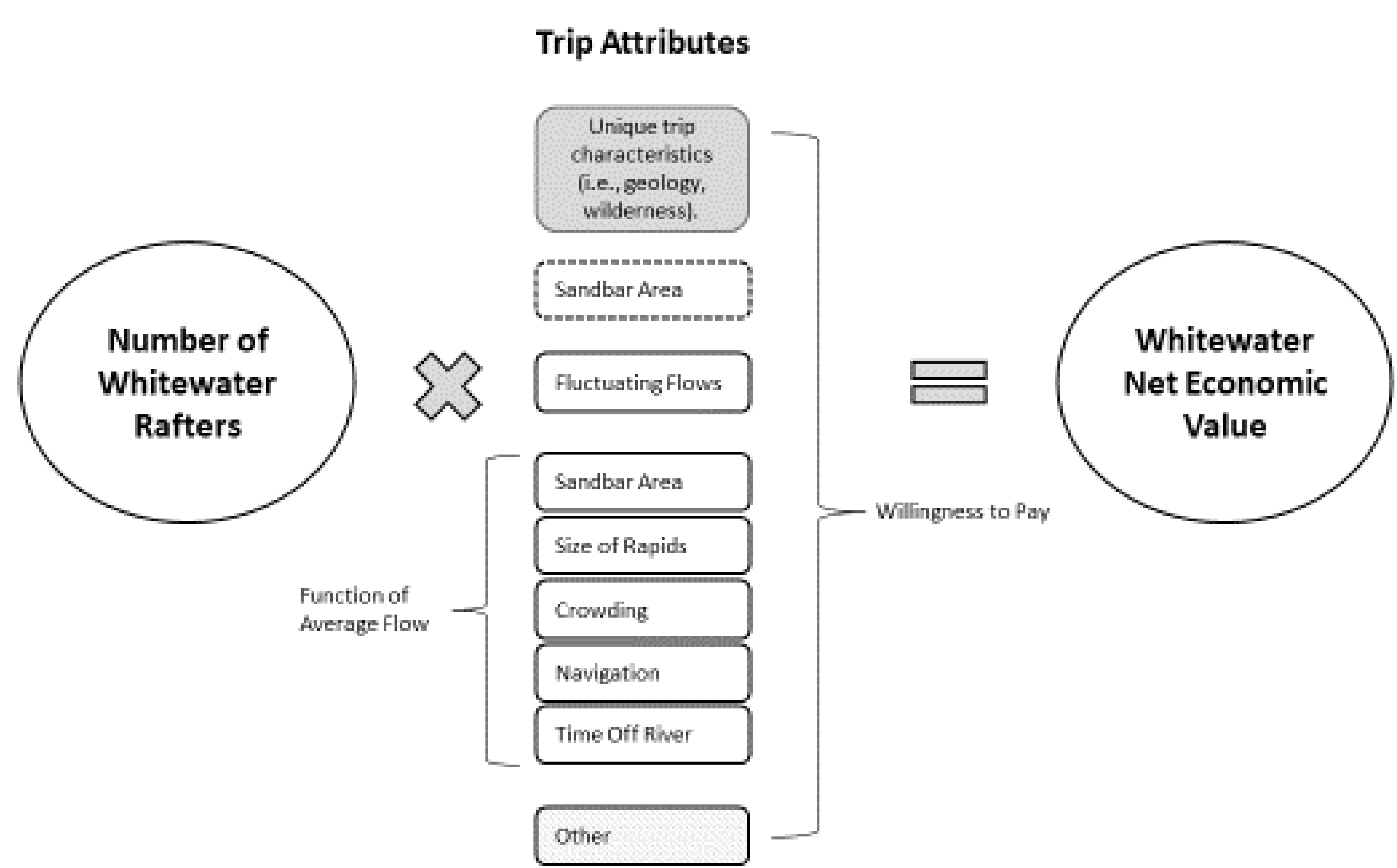


Figure 6.1. Conceptual model of drivers influencing the recreational experience or economic value of whitewater rafting in Grand Canyon National Park. Economic value is determined by the annual number of whitewater rafters and the individual economic value of a trip that is influenced by attributes that depend on dam operations (e.g., sandbar area, daily flow fluctuation, and average daily flow) as well as attributes independent of dam operations. Dashed lines for the sandbar attribute indicate that its importance is not accounted for in the existing function used to estimate the economic value of recreational experience of whitewater rafting trips.

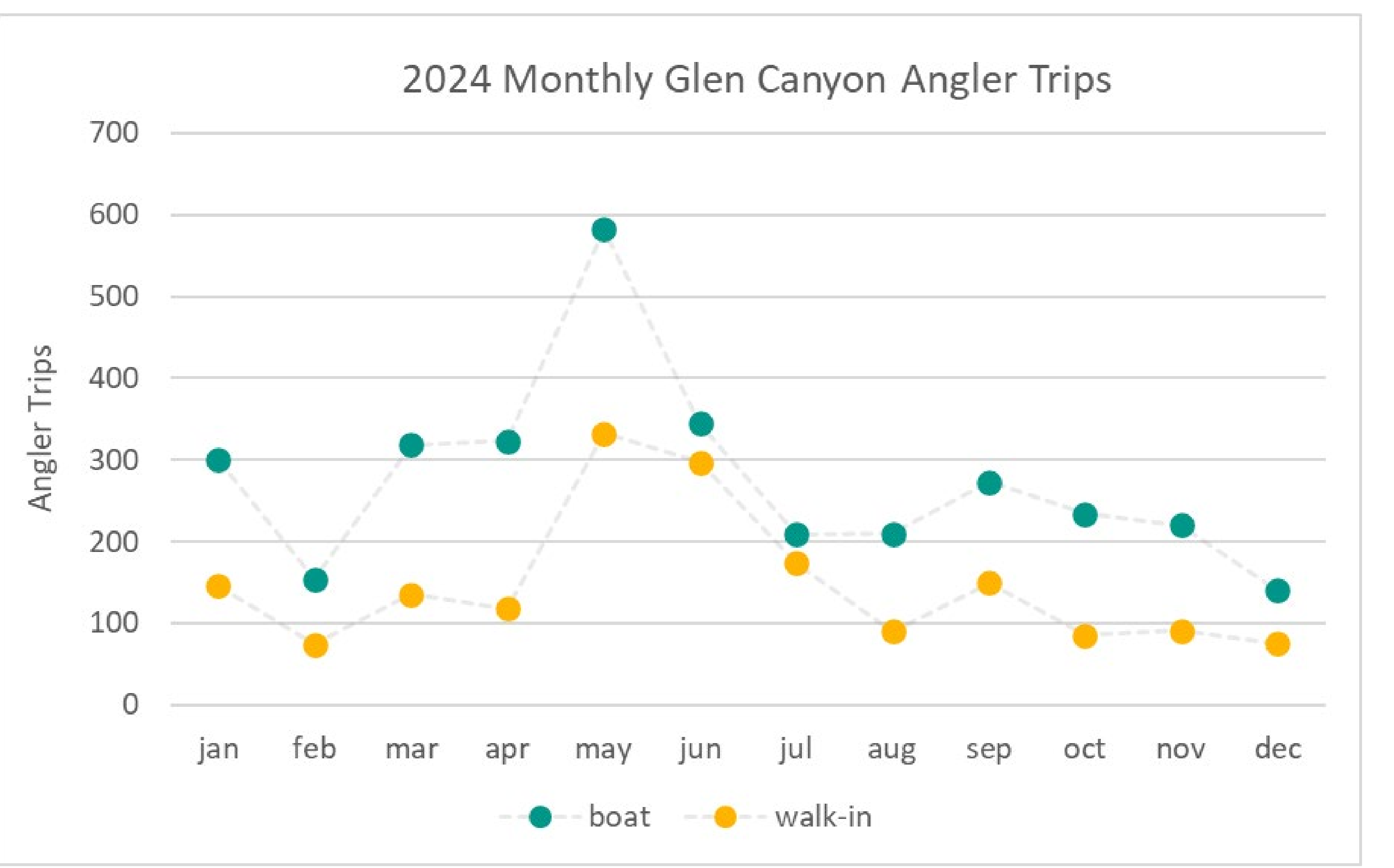


Figure 6.2. Estimated 2024 monthly angler trips to Lees Ferry in Glen Canyon National Recreation Area. Given that flow characteristics and angler experience vary by month, identifying monthly trip patterns is used to analyze the economic value of angling at Lees Ferry. Provisional data, subject to change.

References Cited

Bair, L.S., Rogowski, D.L., and Neher, C., 2016, Economic value of angling on the Colorado River at Lees Ferry—Using secondary data to estimate the influence of seasonality: North American Journal of Fisheries Management, v. 36, no. 6, p. 1229-1239, <https://doi.org/10.1080/02755947.2016.1204388>.

Bishop, R.C., Boyle, K.J., Welsh, M.P., Baumgartner, R.M., and Rathbun, P.R., 1987, Glen Canyon Dam releases and downstream recreation—An analysis of user preferences and economic values: Madison, Wisc., Huberlein-Baumgartner Research Service, submitted to Bureau of Reclamation, Upper Colorado Region, Glen Canyon Environmental Studies report no. GCES/27/87, 188 p. <https://gcdamhistory.org/key-reading/1987-bishop-et-al-glen-canyon-dam-releases-and-downstream-recreation-an-analysis-of-user-preferences-and-economic-values/>.

Neher, C., Duffield, J., Bair, L.S., Patterson, D., and Neher, K., 2017, Testing the limits of temporal stability—Willingness to pay values among Grand Canyon whitewater boaters across decades: Water Resource Research, v. 53, no. 12, p. 10108-10120, <https://doi.org/10.1002/2017WR020729>.

Neher, C., Bair, L.S., Duffield, J., Patterson, D., and Neher, K., 2019, Convergent validity between willingness to pay elicitation methods—An application to Grand Canyon whitewater boaters: Journal of Environmental Planning and Management, v. 62, no. 4, p. 611-625, <https://doi.org/10.1080/09640568.2018.1435411>.

U.S. Department of the Interior (DOI), 2016, Glen Canyon Dam Long-Term Experimental and Management Plan Final Environmental Impact Statement (LTEMP FEIS): U.S. Department of the Interior, Bureau of Reclamation, Upper Colorado Region, National Park Service, Intermountain Region, online, <http://ltempeis.anl.gov/documents/final-eis/>.

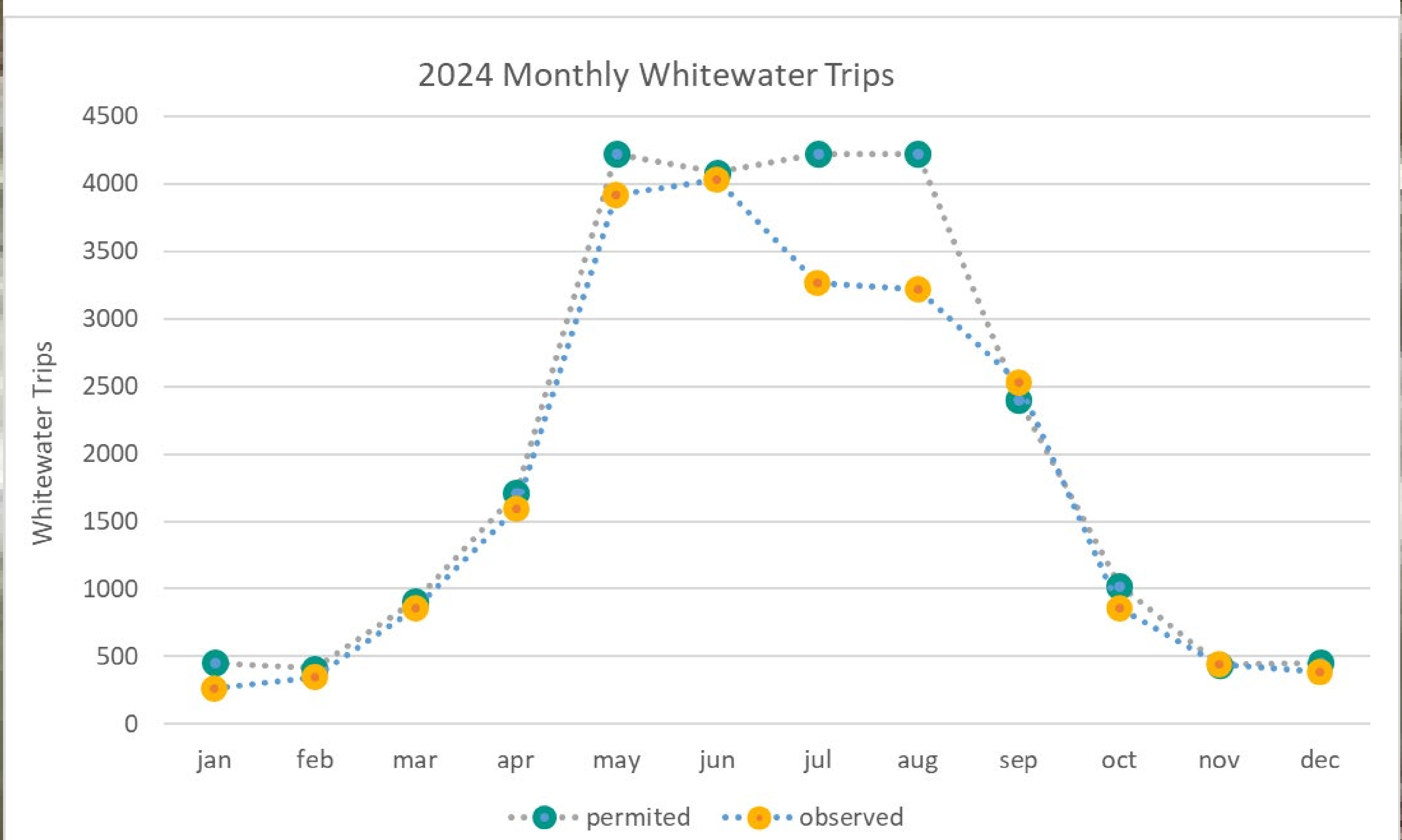


Figure 6.3. Estimated 2024 monthly whitewater trips in Grand Canyon National Park compared to permitted whitewater trips. Provisional data, subject to change.

FROM Glen Canyon Dam Adaptive Management Program, 2025, Status report on the Long-term Experimental and Management Plan metrics for the Glen Canyon Dam Adaptive Management Program—December 11, 2025: Flagstaff, Ariz., U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, 114 p., <https://www.usbr.gov/uc/progact/amp/twg/2025-12-11-twg-meeting/uc-gcdamp-twg-ltempeis-statusreport-508-20251211.pdf>

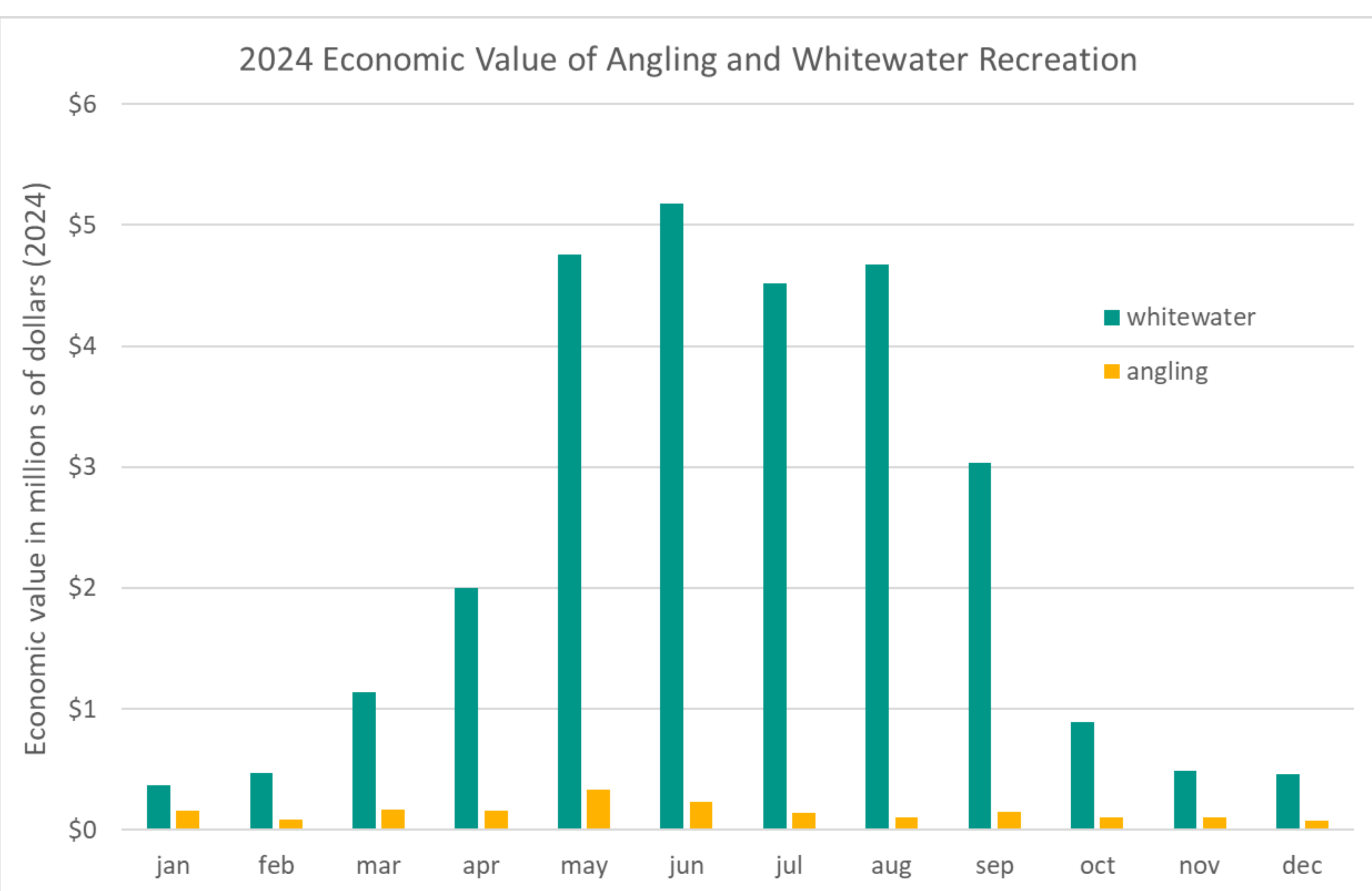


Figure 6.4. Monthly economic value of recreational angling and whitewater trips in 2024. Provisional data, subject to change.