

August 18, 2022

Carly Jerla
Senior Water Resources Program Manager
Bureau of Reclamation

Via email: CRB-info@usbr.gov, cjerla@usbr.gov

RE: Federal Action to Protect Volumes at Lake Powell and Lake Mead

Dear Ms. Jerla,

I write to recommend a federal action in response to Reclamation Commissioner Touton's June 14 call for an additional two to four million acre-feet of Colorado River conservation and to supplement the federal actions announced on August 16. Pursuant to the President's August 4, 2022 "Notice on the Continuation of The National Emergency With Respect To Export Control Regulations," the President could and should exercise his legal authority to control certain U.S. exports, as described below, for reasons of "short supply."¹

As the Commissioner made abundantly clear on June 14 and as Reclamation further described on an August 16 webinar about the Colorado River August 24-month study, Colorado River system storage could fall below critical elevations next year. In short, Colorado River water – which supports some 40 million people – is in very short supply, demanding extraordinary actions.

And yet, despite the ongoing 23-year drought in the Colorado River basin, irrigators continue to apply a significant proportion of Colorado River water to grow forage crops for export, both directly and indirectly as feed to create dairy products for export. According to a recent article,² "hay exports make up about 41% of the grass hay production and 17% of the total alfalfa production in" "Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington." Assuming those percentages are constant across these states suggests that at least 600,000 acre-feet of Colorado River water irrigate alfalfa and other grass hay exported from the U.S.³ An article in 2017 detailed thousands of acres of agricultural lands in Arizona and California exporting most or all of their alfalfa production overseas, including to Saudi Arabia and the United Arab Emirates, where the irrigation of alfalfa is discouraged.⁴

Deputy Secretary Tommy Beaudreau said, "The Biden-Harris administration is taking an all-of-government approach to mitigating the drought." The Administration should expand this all-of-

¹ See <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/08/04/notice-on-the-continuation-of-the-national-emergency-with-respect-to-export-control-regulations-2/>. The Export Administration Act (EAA) of 1979 referenced and extended by this notice provides legal authority to the President to control U.S. exports for reasons of short supply, among other reasons.

² Mike Rankin, 2021, "Thank China for record alfalfa hay exports," *Hay & Forage Grower*, Feb. 16. Available at <https://hayandforage.com/article-3388-thank-china-for-record-alfalfa-hay-exports.html>.

³ Assuming 5 to 5.5 feet of Colorado River water applied to roughly 600,000 acres of alfalfa and grass hay in Arizona and southeastern California, including some 19,000 acres where most or all of the crop is exported. These acreages and the estimated volume do not include irrigated acreage in Colorado, Nevada, or Utah.

⁴ Ian James, 2017, "[Booming demand for hay in Asia, Middle East driving agribusiness in the California desert](#)," *Desert Sun*, September 28.

government approach to issue an executive order – under the authorities referenced above – prohibiting the export of alfalfa and other grass hay from any California port until such time as an August 24-month study projects total Colorado River system storage to exceed 50% of capacity at the end of that calendar year. Such an export control would enable farm water to continue to feed the nation and would not restrict exports from other states with more dependable water supplies. Presumably, such an export control would depress prices for alfalfa and other grass hays in California and Arizona, making federal and/or state financial incentives to shift to other crops, limit production through deficit irrigation or other methods, or temporarily fallow such acreage, more attractive to growers, resulting in less water consumption. Limiting such exports from California ports would provide additional water supply benefits to the state as a whole, while minimizing impacts to growers in Oregon and Washington and Idaho.

There is very limited information on the amount of alfalfa irrigated with Colorado River water and subsequently purchased by dairies. Nonetheless, dairy production requires significant volumes of water. An old reference states that the production of one gallon of milk in California requires 768 gallons of water.⁵ According to the USDA, California produced about 4.9 billion gallons of milk in 2021. If the water requirement is still accurate, that much milk required about 11.5 million acre-feet of water (a small fraction of which would have been Colorado River water) to produce. The data are not clear, but it appears that a small percentage of California’s dairy production is exported, though even five percent of dairy production would represent more than half a million acre-feet of water.

To ensure that Californians and the West have sufficient water (and dairy), the Administration could also control exports of dairy products (or some specific types of dairy products, such as cheese) from California ports, until the Colorado River system recovers. Presumably, this would be more politically contentious than controlling exports of alfalfa, though the argument that “Farm Water Feeds the Nation” could be raised to suggest that farm water need not feed other nations while the Colorado River system and California endure catastrophic drought and while 20% of families in California and the West occasionally or regularly lack access to healthy foods.

Protecting the people and economy of the West requires an “all-of-the-above” approach. Given the “short supply” of Colorado River water and the significant curtailments facing water users in Arizona and Nevada (as well as in Mexico) next year, as well as the Commissioner’s call for an additional two to four million acre-feet of reductions, it is entirely appropriate to limit the use of an increasingly scarce resource by controlling exports of specific crops and products produced with that water. Please encourage the Administration to prohibit the export of dairy products, alfalfa, and other grass hay from any California port until the Colorado River system recovers to at least 50% of storage capacity.

Thank you for your consideration of this recommended federal action.

Sincerely,

Marc Silverman

⁵ Water Education Foundation, “[Food Facts: How Much Water Does It Take to Produce](#),” citing Marcia Kreith, 1991, *Water Inputs in California Food Production*, Water Education Foundation.