

## **Saving the Colorado River Delta**

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Hello everyone and welcome back to yet another Waterbytes podcast. Let's start this podcast off with a simple question. What body of water does the Colorado River drain into? The Mississippi River flows into the Gulf of Mexico, the Nile drains into the Mediterranean, but what about the Colorado? Sorry but it does not flow into the Pacific Ocean. If you guessed the Gulf of California, you would have been right 50 years ago and there lies the problem. Sadly, what is known as "America's Nile" hasn't reached the Gulf of California regularly since Arizona built the Glen Canyon Dam in 1963.<sup>1</sup> There has only been a few times since '63 that the river reconnected but this was only because of huge amounts of snowfall in the Rockies. This may seem like an easy fix for most people- get rid of the dam that stopped the water flow- but there is a lot of history that goes along with the Colorado River.

To really understand how bad the problem is, we are going to have to go back to 1944 when a treaty was signed between the United States and Mexico. It stated that Mexico would be guaranteed 500 billion gallons of water a year from the Colorado River.<sup>2</sup> At the time the treaty was signed, this was more than enough water for Mexico but as their population has grown more water is necessary. The United States' population in the southwest has also been growing, and just like Mexico, their water usage has gone up. This means that there is simply no excess water to give to the delta. Both Mexico and the United States are using more and more water for farming and drinking water, leaving little water for the River Delta. Although the situation seems dire, there is hope on the horizon. In November 2012, a monumental agreement was signed between Mexico and the United States called Minute 319. This agreement allows for Mexico to store water in the United States, both countries will split the

benefits of water surpluses and burdens when there is shortages and a pulse flow of about 130 million cubic meters of water.<sup>3</sup>

Beginning on March 23, 2014, the gates of the Morelos Dam which sits on the border of these two countries opened, allowing for the flow of water to enter the final 70 miles of the delta. The water continued to be released for two more months until May 18.<sup>4</sup> Releasing this water had a very high risk because there was no way of knowing what would actually happen downstream of the release. There were fears of flooding of towns, that water would not take the right path or that there would not be enough water to work effectively. The International Boundary and Water Commission, a United States government body that works with Mexico on water treaties, released a report in December 2014 to show that this pulse flow was indeed successful. The report was filled with a lot of numbers and figures but there are a few that are important to mention. In the areas that the water flowed, the amount of vegetation increased by 43 percent. Also one of the main aquifers in the area was recharged within the first 37 miles of the release point. Pam Nagler, a U.S geological survey physical scientist, stated that the pulse flow reversed 13 years of vegetation loss along the river.<sup>5</sup> However, loss of vegetation is hardly the only problem that faces this part of Mexico.

Another part of the delta ecosystem, besides vegetation, that is effected by water shortage is humans. We, as humans, live next to the river, work with it and on it, and need the river to survive. Look at a map of every big city and you will see that there is most likely some body of water right next door to it and 100 years ago there were dozens of towns and civilizations on the Colorado River that were thriving. Now a study released by San Diego State University says that the production of fruits and vegetables in the area will drop by more than half in the next 20 years, and it will only get worse. With the crop production dropping by so much there is a chance that over 7,000 farmers will lose everything.<sup>6</sup> All of the water that the Colorado River produces is being used within the United States and the

California drought is not helping. And the worst part is that, as of right now, there is very little that can be done. This may seem awful but there is something that you can do to help out. There is a group called Change the Course who is working to bring one billion gallons of water back to the delta region. The group wants to lease water from farmers from around the area to give back to the delta. Change the Course is not looking for money but, instead, a pledge that states that you will conserve water in your everyday life. With each pledge, they will return 1,000 gallons of water to the delta and, to date, there has been over 130,000 pledges made from all 50 states and 113 countries.<sup>7</sup> All that needs to be done is go to [changethecourse.us](http://changethecourse.us) to make the pledge and help save the Colorado River Delta.

The depletion of the Colorado River Delta is one of the biggest problems that faces the Southwest United States and Mexico. Hopefully none of the predictions about job loss and crop production failing will come true in the future. Thank you for sticking around to hear about this current issue facing millions of people and please visit Change the Course's website, again which is [changethecourse.us](http://changethecourse.us), and make the pledge.

Works Cited

- [1, 6] Clifford, F. In Colorado River Delta, waters -- and prospects -- are drying up. Retrieved October 9, 2015, from <http://www.latimes.com/science/la-me-newcolorado25-2008may25-story.html>
- [2] Fountain, H. (2013, April 15). Optimism Builds for Effort to Relieve a Parched Delta in Mexico. *The New York Times*. Retrieved from <http://www.nytimes.com/2013/04/16/science/earth/optimism-builds-for-effort-to-relieve-a-parched-delta-in-mexico.html>
- [3] Howard, B. C. (n.d.-a). Historic “Pulse Flow” Brings Water to Parched Colorado River Delta. Retrieved September 19, 2015, from <http://news.nationalgeographic.com/news/2014/03/140322-colorado-river-delta-pulse-flow-morelos-dam-minute-319-water/>
- [4, 5] Davis, T. (n.d.-a). Colorado River Delta water release worked, scientists say. Retrieved October 9, 2015, from [http://tucson.com/news/colorado-river-delta-water-release-worked-scientists-say/article\\_b201a135-d7ec-57b6-9358-ba07d5e90783.html](http://tucson.com/news/colorado-river-delta-water-release-worked-scientists-say/article_b201a135-d7ec-57b6-9358-ba07d5e90783.html)
- [7] Change the Course to restore one billion gallons of water to Colorado River Delta. (n.d.). Retrieved from <http://phys.org/news/2014-03-billion-gallons-colorado-river-delta.html>