

CLIMATE, DATA AND SCIENCE FROM THE WEATHER CHANNEL

Far From Pure

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Altagracia Polanco emerges from the river below in her sheer white robe. A devout Christian, she has been waiting her entire life to visit the Holy Land and be baptized in the same waters where John the Baptist is said to have baptized Jesus two millennia ago.

Qasr el Yahud, a place traditionally held to be the site of that baptism, sits on the west bank of the Jordan River in the Palestinian Territories. The current iteration of the site, with a new deck and tourist infrastructure, opened to the public in 2011. That year, it saw 109,559 international visitors. The number has ballooned since then, up to 567,006 visitors in 2017.

While pilgrims come for a ritual cleansing, the quality of the water “is anything but holy in nature,” explained Gidon Bromberg the Israeli director of [EcoPeace Middle East](#), an Israeli-Jordanian-Palestinian environmental organization. “The water quality (in the Lower Jordan River) is a mixture of untreated and partly treated sewage, agricultural runoff, fish pond waste and saline waters from springs to reduce salinity of Sea of Galilee.”

Due to a



A sign at the entrance of Qaser el Yahud erected by the Nature & National Park Protection Authority of Israel reading “The river water is not potable.” (Sharon Avraham)

combination of climate change-exacerbated drought, water mismanagement and sewage dumping, the water levels of the Jordan River are a fraction of what they once were. The water no longer flows, so between the Jordanian soldiers guarding one side of the site and the Israeli soldiers guarding the site’s western bank, there’s less than 20 feet of sludge.

There’s an unpleasant smell along the riverbank, a byproduct of pollutants and bacteria like E. coli. Black flies buzz above what remains of the river and the deck where pilgrims ready themselves for baptism.

Government officials in Israel and Jordan are aware of the issue. On the west bank of the river, the only indication of the water’s questionable health standards is a line on a small sign near the parking lot that reads, among other rules and regulations for the site, that “the water isn’t potable.” Bromberg [noted](#) this “shows how economic interests trump public health.”

Qaser el Yahud also holds significance for Jews, as it is where tradition holds the ancient Israelites crossed into the Holy Land as recounted in the Book of Joshua, and also the place where the prophet Elijah ascended to heaven, as recounted in the second book of Kings.

“I thought it would be clear,” Polanco says, laughing, still dripping from her spiritual plunge. “That’s okay. Even though it’s not clear, you feel something inside of you,” she said. “It feels incredible,” she said, touching her heart.

Polanco wasn’t the only one surprised by the river’s appearance.

A pilgrim visiting the site as part of American group from Michigan asked her guide why the water was “that color.” The guide, Osama, told her it was sand.

Another pilgrim, Sylvia Fierros, felt differently. “I think it’s contaminated,” she said swatting away flies. “I don’t think it’s clean.” She visited the site a decade ago, and the water was cleaner then than now. The state of the river didn’t stop her from submerging herself in the water, though.



A woman from a Michigan church group is baptized in the Jordan River in November 2018. (Sharon Avraham)

The baptism spot is in a unique geopolitical position: Israel has full authority over this area of the West Bank, but the closest major city is Jericho, one of the largest in the Palestinian territories. Qasr el Yahud is managed by an Israeli government body, the Israel Nature and Parks Authority, and their responsibilities to the site include sanitation checks of the water, cleaning the site and security.

From the Israeli side, the water is sampled every bimonthly according to the guidelines set forth by the Ministry of Health, and, according to Yaniv Cohen, a spokesperson for the Israel Nature and Parks Authority, they confirm that the “quality of the water allows baptism.”

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A woman takes water samples from the Jordan River in November 2018. The samples, she sent, would be sent to a lab to be tested for E. Coli, among other things. (Sharon Avraham)

standards to which they adhere. Both test for fecal coliform, a bacteria which originates in human and animal feces. The normal range for fecal coliform at the site is between 40 to 200 fecal coliform units per 100 milliliters of water, according to Saar Kfir, director of the Qasr el Yahud site. The range seen in the testing may not indicate mass amount of fecal coliform in the water, he said. It “could literally be from bird poop over the exact area of water that’s being tested or certain bacteria left by people who went in to be baptized.” Those sorts of samples can skew the results and that is accounted for in a decision on whether or not to temporarily close the site.

In 1995, the Jordanian standard was 1000 fecal coliform units per 100 milliliters of water. In contrast, Israeli standards in 2002 were 200 fecal coliform units per 100 milliliters of water. When explaining the factors on deciding when to close the site due to health concerns, Kfir explained that they don’t have a specific fecal coliform count at which they close the site, because it depends on other factors including sewage dumps farther up the river and rain. “If there’s a wave of sewage that’s disposed into the river, that could spike the (count) to 700-1500 at least,” he said. “At the end of January, the count was at 650 and we closed the site for a day.” But, he said, there can be other days when the count is higher and the site remains open.

In October 2009, during [a period of extended regional drought](#), the water near the Baptism site measured at 750 fecal coliform units per 100 milliliters of water, well above Israeli standards, but below Jordanian ones. A 2010 report by EcoPeace, co-researched by Israeli, Jordanian and Palestinian scientists indicates “fecal coliform levels in the Lower Jordan River indicate that the (area) is not suitable for recreation, fishing, or boating from Israeli National Parks Authority standards.”

There is no magical barrier in the river, so if one country is keeping a lower standard, then that will inevitably seep into the entire water source. This was not lost on officials and in 2015, Israel and Jordan aligned their water standards for the Jordan River to 200 fecal coliform units per 100 milliliters of water.

The



The border between Jordan and Israel as seen in November 2018. (Sharon Avraham)

Jordanians and Israelis do not coordinate their water testing, according to Kfir. “We do these measurements ourselves through the Ministry of Health. It works.”

During a visit in November 2018, weather.com observed a woman from the Parks Authority coming to take water samples for this testing. She said that someone comes to check the water every six to eight weeks. When asked where it goes, she admitted she did not know and that she simply took the samples and put them in a transport. She had no idea what was in the water or if it was hazardous.

On that same visit, a weather.com reporter saw at least three pilgrims swallow water when fully immersing themselves during their baptism.

“This isn’t a death issue,” Bromberg explained of the sanitation levels in the river, which is wrought with fecal coliform. “No one will die. But water borne diseases (with symptoms like) nausea, stomach issues” can arise. There are no figures indicating how widespread these occurrences are. As Bromberg explained, “we don’t know (the extent of illness that happens) because the pilgrims leave the region days later, and they won’t necessarily associate that they’re having a stomachache (or diarrhea) with their baptism.”

The Jordanian tourism board and National Agriculture Research Center did not respond to multiple requests for comment.

Government officials in both Israel and Jordan have blamed climate change and 15 years of record-breaking drought for the river's degradation. However, Bromberg along with scientists studying the area argue that it is not so straightforward. "Climate change is an issue that's been impacting the efforts to rehabilitate the river." The depletion of the river is due to a combination of factors including dams, diversion of the water to tributaries for farming purposes and drought. The Environmental Protection Ministry estimates that 95 percent of the diverted water serves domestic and agricultural uses by Jordan, Syria and Israel.

A large portion of the damage is deeply rooted in government negligence. "This isn't global climate change," Bromberg explained when discussing the current state of the river and the surrounding Jordan Valley. "It is government-licensed exploitation of our valuable resources."

In late afternoon, just as the site was closing for the day, a group of Brazilian pilgrims walked back to their tour bus, many of them carrying water bottles they had filled with river water to bring back to family and friends.



Pilgrims descend the stairs into the Jordan River to be baptized in November 2018. (Sharon Avraham)

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