Dwindling water levels of Lake Powell seen from space
11 April 2022

Credit: Chart: ESA, Source: USBR

The area pictured below shows the surface area changes of the reservoir near Bullfrog Marina, approximately 90 km north from Glen Canyon Dam, between March 2018 and March 2022. Dry conditions and falling water levels are unmistakable in the image captured on 18 March 2022, compared to the 2018 shoreline outlined in the image in yellow.

The drop in water levels comes as hotter temperatures and falling water levels left a smaller amount of water flowing through the Colorado River. The peak inflow to Lake Powell occurs in mid-to-late spring, as the winter snow in the Rocky Mountains melts.

The line graph shows the drastic drop in average water levels in March since 2000, when Lake Powell was at around 1,120 meters elevation. The current elevation is just a few meters from what is considered the “minimum power pool”—the level at which Glen Canyon Dam is able to generate hydroelectric power. If Lake Powell drops even more, it could soon hit a "deadpool" where water will likely fail to flow through the dam and onto the nearby Lake Mead.

According to a report compiled by the U.S. Geological Survey in cooperation with the Bureau of Reclamation, Lake Powell's storage capacity has lost nearly 7% of its potential storage capacity from 1963 to 2018, when the diversion tunnels of Glen Canyon Dam closed and the reservoir began to fill.

The capacity of the reservoir is said to be shrinking because of sediments transported by the Colorado and San Juan Rivers. These sediments settle at the bottom of the reservoir and decrease the total amount of water the reservoir can hold.

Climate change is expected to make droughts more severe in the future. According to the National Oceanic and Atmospheric Administration (NOAA) Spring Outlook for the U.S., nearly 60% of the...
continental U.S. is experiencing drought.

These conditions are likely to continue across more than half of the continental United States through at least June, straining water supplies and increasing the risk of wildfires. While these conditions are not new, the agency expects them to potentially worsen in the coming months.

Provided by European Space Agency

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