

Genevieve (2020)

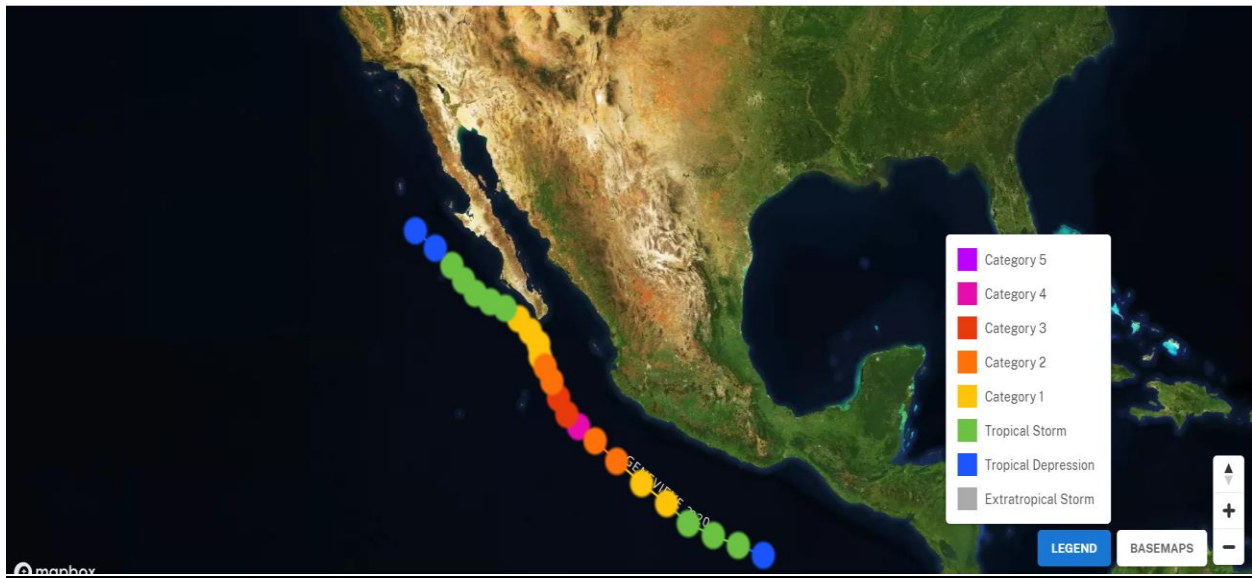
Dates: 16 August – 21 August 2020

Peak Intensity: Category 4

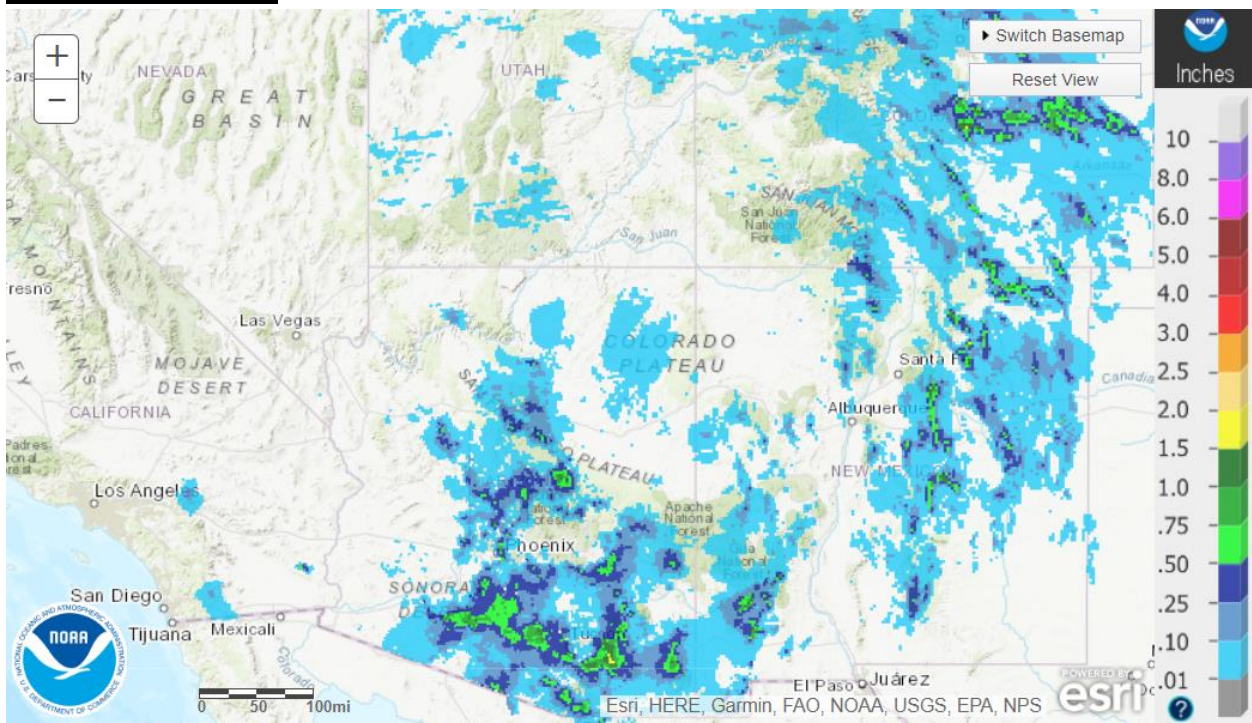
On 13 August 2020, a tropical wave crossed Central America. After interacting with a low-level trough west of Costa Rica that same day, it intensified and moved west of Central America. As the deep convection moved, it eventually became a tropical depression on 16 August about 260 n mi south of Puerto Angel in Mexico. About 6 hours later, the depression strengthened into a tropical storm due to weak shear and warm sea surface temperatures. Then, it moved northwestward towards the coast of Mexico and rapidly intensified to become Hurricane Genevieve on 17 August. Rapid intensification continued and on 18 August Genevieve went from a category 2 hurricane to a category 4 in just 6 hours. This category 4 storm only lasted about 6 hours before it began to weaken and turn north northwest. On 19 August, Genevieve weakened to a category 3 and then a category 2 later that day. This weakening is likely due to tropical storm Elida, which had cooled the waters about a week earlier. In turn, Genevieve turned northwards towards the Baja Californian peninsula. It did not make landfall but brought near hurricane force winds and heavy rain to Cabo San Lucas on 20 August. Then, it moved northwestward towards cooler waters that same day. On 21 August, Genevieve became a post tropical cyclone, then a remnant low 6 hours later until finally dissipating another 12 hours later (22 August).

Genevieve brought some moisture and activity to Arizona as it passed near the Baja Peninsula on 20 August. Arizona managed to hang on to the moisture for a few more days, but ultimately the most activity was reported on 20 August. Santa Cruz, Cochise, Pima and Pinal counties all experienced severe thunderstorm warnings. In Tubac, thunderstorm winds reached at least 60 mph and downed a large tree within the town. Cascabel in Cochise County had hail up to 0.75 in. in magnitude. In Tucson and at Tucson International Airport, several large tree limbs were blown down by 60 mph thunderstorm winds and caused a power outage in Drexel Heights for 6000 customers, causing about \$2k worth of property damage. Drexel Heights also received between 1 and 2 in. of rain that caused flash flooding. Magma and Stanfield in Pinal County also received extremely strong thunderstorm winds. Both areas had winds that reached 70 mph. In Magma, \$90k of damage was reported due to multiple downed power poles and downed trees. Stanfield had about \$50k worth of property damage from roof and tree damage.

Storm Track



Precipitation Totals



References:

- https://www.nhc.noaa.gov/data/tcr/EP122020_Genevieve.pdf
- <https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDTWC&e=202008191017>
- <https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=919564>
- <https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=919565>
- <https://bit.ly/49wOQuJ>
- <https://water.weather.gov/precip/>