

Hendrick Arnold Nature Park: Flooding



What is a flood?

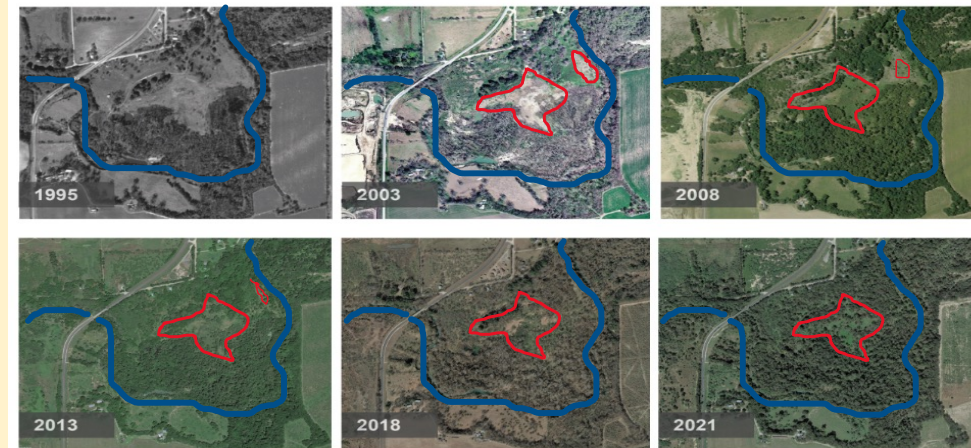
- A flood is an increase in streamflow in a river caused by precipitation and, in some climates, snow or ice melt.
- An overbank flood occurs when the streamflow rate exceeds the capacity of the river channel, causing some of the water to flow over the adjacent land called a floodplain.

How does flooding impact the park?

- In the San Antonio area, flooding is caused by heavy rainfall. If the flood is large enough, it can change the land by removing sediment, which alters the ground, and stripping away vegetation, which leaves the surface barren. This can be beneficial to the river's ecosystem.



Scan this QR code to take you to the River Authority's flood risk map to see the risk in your area!



The floodplain character in Hendrick Arnold Park changed dramatically when livestock grazing ceased, and then the park flooded in 2002. The increase in water in the Medina River (shown by the blue line) caused an overbank flood, causing water to extend over and out into the park. This changed the landscape as silt was deposited across the floodplain (compare the 1995 and 2003 photographs). This is evident by the gray, barren patches of land adjacent to the river located on the inside of the meander bend (represented by the red polygons). However, these newly deposited sediment patches of silt provide nutrients from the river and helped facilitate the growth of new vegetation. From 2008, the sediment deposit appeared to shrink, as more trees and vegetation started to grow. By 2021, the park's forest was established as indicated by the cluster of trees inside the sediment deposit caused by the 2002 flood.