

Climate change could deliver more sediment and pollution to the San Francisco Bay-Delta

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Climate change could deliver more silt, sand and pollution to the San Francisco Bay-Delta, along with a mixed bag of other potential consequences and benefits, according to a new study in the AGU journal

Water Resources Research, which publishes research articles and commentaries providing a broad understanding of the role of water in Earth's natural systems.

By running models of future [climate change](#) scenarios, researchers with the U.S. Geological Survey found that as air temperatures increase by 1.6 to 5.3 degrees Celsius by the end of the 21st century, with varying changes in rainfall, streams and rivers draining through the Sacramento Valley may see higher peak streamflows. Future storms will not necessarily bring more [water](#) overall, just more water during shorter time periods. Those higher streamflows will carry 39% to 69% more sediment down to the Bay-Delta by the end of the century, according to the researchers' models.

The study, published by AGU, a global organization supporting 130,000 Earth and space science enthusiasts and experts, concludes that one of the possible negative impacts of this change is that more pollution could be carried from the Sacramento Valley into the Bay-Delta. The researchers also found that there was an upside to the added sediment: It could help raise the Bay-Delta as sea level rises, and support wetland habitats and native species.

More information: Michelle A. Stern et al, The Future of Sediment Transport and Streamflow Under a Changing Climate and the Implications for Long-Term Resilience of the San Francisco Bay-Delta, *Water Resources Research* (2020). [DOI: 10.1029/2019WR026245](https://doi.org/10.1029/2019WR026245)

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