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# Citizen Scientists Learn To Document El Niño's Impacts

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By Susan Murphy





PHOTO BY [SUSAN MURPHY](#)

A group of citizen scientists, along with researchers from Scripps Institution of Oceanography and USC, walk along La Jolla Shores to document the effects of El Niño's high tides and strong waves, Jan. 20, 2016.

## KPBS Radio News

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With help from researchers at Scripps Institution of Oceanography and USC, citizen scientists in San Diego County are being trained to help document the effects of El Niño's high tides and strong waves.

### How To Become A Citizen Scientist

1. Go to <https://getliquid.io> to join the Urban Tides database. To set up an account, create a username and password. Then sign into the account.
2. On the site's homepage, select and join the Urban Tides Community Science Initiative dataset.
3. Using an iPhone: Go to the App store to download and install the "liquid mobile data collection" application. Open and log in to the app. Because you joined the dataset on your computer, the Urban Tides dataset will open when you log in. (The app is not yet available on Android phones. Android users may still upload images via computer.)
4. Select "new record." You will take each photo using the camera icon in this form. Fill in all required data in the form, then press "submit."
5. If you have taken photos using an Android phone or camera, you will need to use a computer to upload the photos into the Urban Tides dataset. It is important that you use this form to collect data on location. Then enter the Urban Tides dataset on the Liquid website. Click on "add record." Use the camera icon to upload each photo from your desktop. Fill in all required data in the form, then press "submit."

On a morning this week at La Jolla Shores, the tide was high and so was the enthusiasm of 20 citizen scientists who were [training to help document the impact of El Niño](#) along the coast.

The group of volunteers was learning to capture images of beach erosion and coastal flooding in a way that would be useful to researchers. It's part of what the real scientists are calling the Urban Tides Community Science Initiative.

“If we actually get folks taking pictures from the same locations, pointed in the same direction, repeatedly — so say, every day or every week — that’s actually the most valuable data for us,” said [Sarah Giddings](#), a researcher and professor at the [Scripps Institution of Oceanography](#).

Giddings, one of the project leaders, said El Niño’s effects have already been substantial.

“The beaches have become significantly eroded. They’ve lost a lot of sand,” Giddings said. “Meanwhile, the estuaries have actually gained sand, and so we’re seeing that sand is being brought into the estuaries and it’s reducing the amount of flushing that the estuaries get with the ocean.”

The record of photos from the public will help simulate the effects of longer-term sea-level rise, projected at 12 to 18 inches over the next 30 to 40 years, Giddings said.

El Niño’s warm water causes the ocean to expand. Water along San Diego’s coastline has been measuring up to a foot above normal.

“With the tidal influence, it goes up higher onto the shoreline,” said [Linda Chilton](#), a researcher with the [University of Southern California’s Sea Grant program](#), which has teamed up with Scripps on the project.

Chilton said smartphone users provide a wealth of data because their photos are time-stamped and provide the GPS location of where they were taken. She wants participants in the Urban Tides initiative to take pictures right along the waterline.

“Where the water comes sweeping up onto the beach,” she said. “Take about two steps inland and then face up or down the beach and capture an image of the beach, if you can, with a structure in the background.”

Chilton has another request for the citizen scientists, too.

“We’re also looking for images of estuaries, bays, lagoons and anywhere on streets you know there’s flooding, because this is going to help with that planning process and it’s going to help modelers make sure their models match what we’re seeing happen,” she said.

Brie Iatarola, a doctoral candidate at UC San Diego, was among the trainees on Wednesday at La Jolla Shores.

“Being able to basically inform scientists through the click of your phone makes it a lot easier to participate,” Iatarola said. “This data informs my own research, but I’m also personally vested in the ocean because I love to surf.”

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