Many beautiful cliff and shore locations are being lost to never-ending wind and wave action while, at the same time, millions of dollars are being spent to prevent that outcome. With climate change, sea levels continue to rise and erode the California coastline; events like El Niño only work to exacerbate the situation. This research explores efficient ways to decelerate the loss of coastline, suggesting areas that are more likely to be affected by these events and processes, such that effective measures and properly allocated money can ensure the safety of the shoreline and surrounding areas.

The effects of the failed Fundão Dam (Minas Gerais, Brazil), which released the tailings from an open-pit iron mine and flooded nearby cities, will likely remain for decades and affect the food chain, while riverine, estuarine, and marine ecosystems will likely lose diversity and functionality. The expansion of the sediment plume is shown in this poster, indicating the coastal areas and biological reserves that are threatened.
**ESRI Story Map Use in the National Weather Service**

**Jayme L. Laber**
NOAA, National Weather Service Los Angeles/Oxnard, CA

ESRI Story maps are lightweight, open-source web apps that combine web maps created using ESRI’s ArcGIS Online (AGOL) with content such as text, photos, video, and audio that tell stories about the world. They are simple to create and are an extremely effective tool to convey the National Weather Service’s (NWS) stories of weather, water, and climate. Within the National Weather Service they are being used as a tool for internal training and research, for sharing geographically-based information with external National Weather Service partners and users, and to tell the story of recent or historic weather events. Story Maps also lend themselves perfectly for use by the National Weather Service as a post-storm survey and documentation tool in conjunction with currently in-place methodologies.

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**Exploring the spatial-temporal relations between burglary and socioeconomic factors using GIS**

**Rafael G. Ramos, Keith Clarke, Bráulio F. A. da Silva**
Department of Geography, University of California, Santa Barbara
Universidade de Federal de Minas Gerais

The effects of the failed Fundão Dam (Minas Gerais, Brazil), which released the tailings from an open-pit iron mine and flooded nearby cities, will likely remain for decades and affect the food chain, while riverine, estuarine, and marine ecosystems will likely lose diversity and functionality. The expansion of the sediment plume is shown in this poster, indicating the coastal areas and biological reserves that are threatened.
Where are different types of music most prevalent in America and what correlations are there between the different types of music and the demographics of the places they belong to?
The authors specifically looked at electronic, hip hop, pop, and rock concerts in America from 2000–2010, finding that there are subtle differences in counties that host more music events. The highest correlations were found to be with chlamydia and violent crimes, most likely due to the fact that live music tends to occur in midsize to large urban areas.

Quantifying Marine Debris using Readily Accessible Imagery from Space
Shirley Ng, University of California, Santa Barbara

Every year millions of metric tons of trash enter the oceans as a result of our heavy reliance of plastic products and poor waste management systems. This plastic debris ends up in remote places and has a significant effect on the local wildlife. In order to develop efficient programs to clean up the plastic, the amount of plastic in an area must be quantified. This project sought to use satellite imagery available on Google Earth Pro to quantify the amount of debris accumulated on Laysan Island.
Spatial and Temporal Trends of Crimes in UCSB
Hanzhou Chen, Cole McLaughlin, and Meilin Shi
Department of Geography, University of California, Santa Barbara

Using two years of crime data, a time slider was used to generate a 3-D visualization and examine how crime is distributed spatially throughout a duration of time. From this it was concluded that several types of crime favor certain times of day, suggesting when police patrol should be increased.

Evaluation of a 16-year Model-Simulated Climatology over High Asia
Natalie Mills, Forest Cannon, and Leila M. V. Carvalho
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