What you should know:
Study of Air Quality in Salinas/Guayama

EPA basics of particulate matter (PM)

What We Did and What We Found

Community members in Puente Jobos and nearby areas were worried about their air quality and the frequent dust in the air. They wanted to know how much PM_{10} (dust) was in the air and what it was made up of. To find out, we used air sensors measuring particulate matter and sited a sampler to collect air filters for laboratory analysis of PM_{10} and its chemical components.

Here's what we learned

1. **Air quality is mostly good**: From June 2023 to March 2024, the air at the locations we sampled was usually in the "good" range, as measured by the Air Quality Index (AQI) standard ("*air pollution poses little or no risk*"), meaning the air was safe to breathe most of the time, for everyone. There were only two days when the air quality was not in the "good" range.

2. **The permanent DNER air quality monitor is located appropriately and accurately represents community air quality:** The Puerto Rico Department of Natural and Environmental Resources (DNER) monitor recorded slightly higher levels of PM_{10} (dust) throughout the study compared to all other sites which confirms the DNER monitor is appropriately located to capture the highest dust impacts in the community.

3. **Moderate dust levels recorded at times**: The highest dust levels found on two days, were in the "moderate" category, which is the next category above "good." The "moderate" category means the air was generally okay, but there might be a small risk for people who are unusually sensitive to air pollution. These levels of dust and other particulates are something that sensitive individuals and their families can manage by changing their outdoor activities and using indoor strategies, like low-cost air filters.

4. **PM_{10} chemical composition analysis**: We collected air samples from the monitor located at the school (Escuela Adela Brenes Texidor) to see what the PM_{10} is made of. PM_{10} is the size of particulate matter generally called "dust." When we analyzed the dust samples, we found that the amounts of different chemicals were very low. Even though the levels are low, this information helps us learn where the dust is coming from. We found several sources at the school that potentially contribute to PM_{10} including elements associated with sea salt, coal ash and emissions, and crustal material (sand or soil).

Use This Information to Keep your Community Safe

1. **Stay aware of information on local air quality:** DNER is working to install an additional permanent particulate matter monitor that will provide real-time data publicly – please contact aire@drna.pr.gov to learn more. In the meantime, quarterly reported data are available for PM_{10} on the EPA's Air Data website (QR code).

EPA's Air Data Website

2. **Learn how to reduce your exposure to particulate matter:** The EPA's AirNow website has many resources that can be used to help reduce your exposure to pollution (QR code) The Air Quality Guide to Particle Pollution provides suggested actions to take based on the air quality. Air purifiers can also be used to help reduce particles indoor.

For more information on this project, please contact Sarah Pender (Pender.Sarah@epa.gov)

Air Now – Spanish Resources