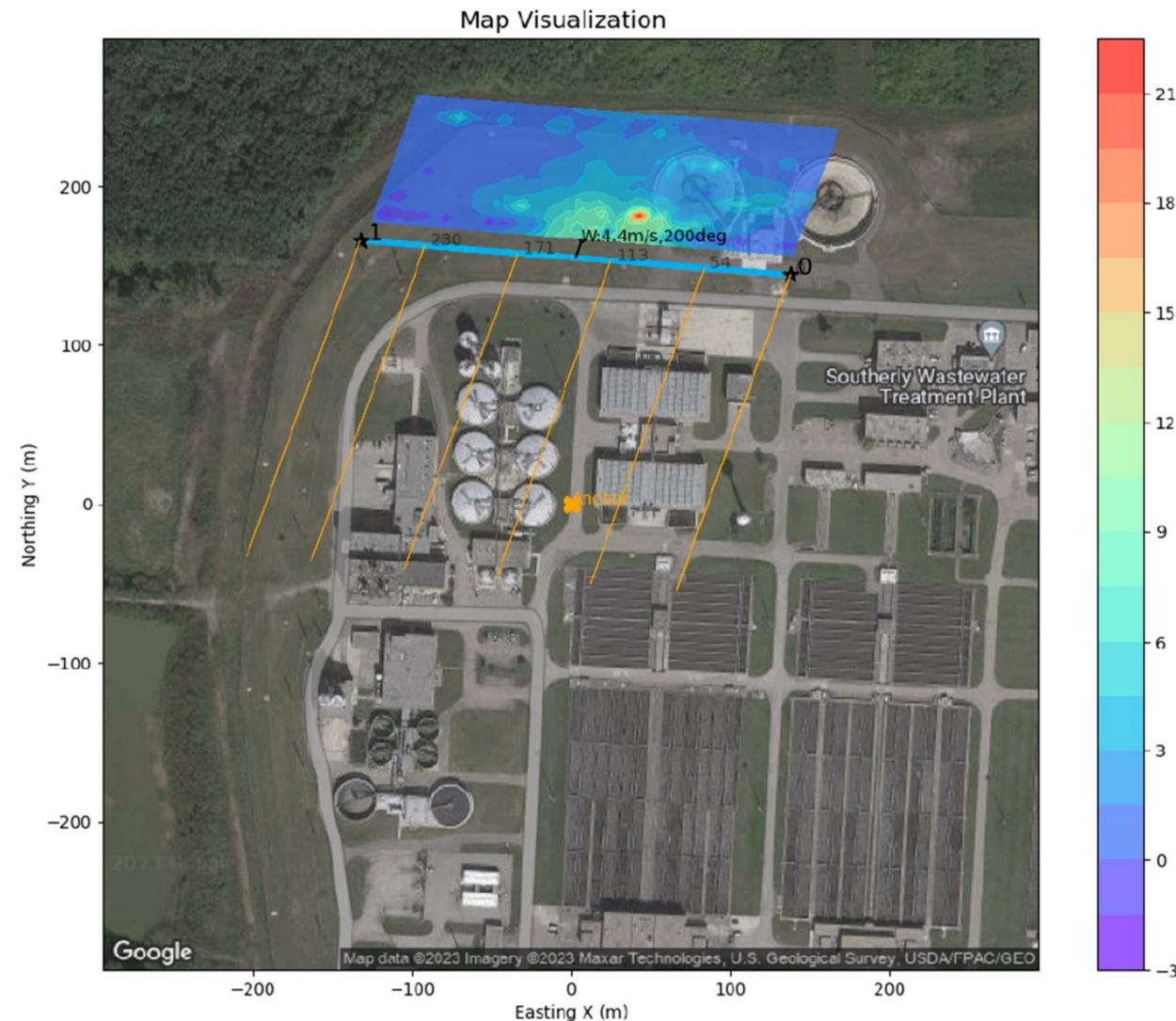


Division of Water Reclamation, Columbus Water and Power Fugitive Methane Investigation

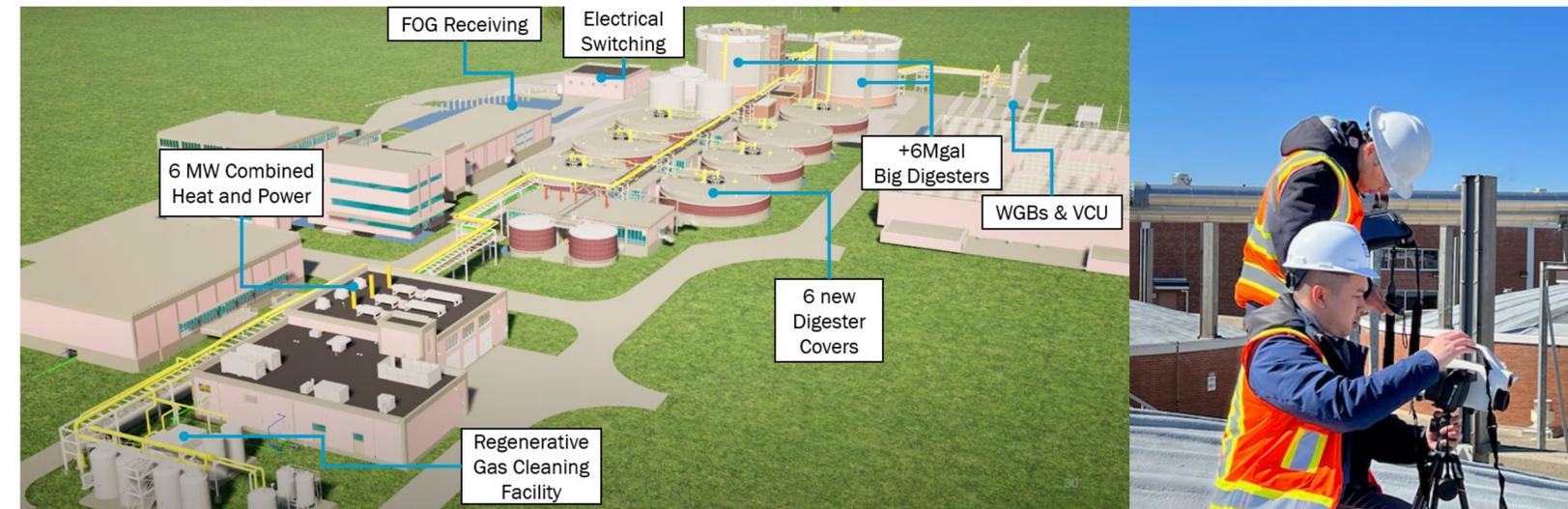
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The investigation identified more than 70 metric tons (CO₂e) per day in fugitive methane emissions. The landmark Southerly Bioenergy project mitigates 91% of the identified fugitive methane sources and is currently under construction.



The City of Columbus, partnered with Brown and Caldwell, performed the **first** multi-sensor fugitive methane investigation in the western hemisphere.



The investigation was the cover article of WE&T September 2023 and a follow up “Catching a Fugitive” was published in September 2024 summarizing the mitigation approach.



MEMBER SPOTLIGHT – COLUMBUS WATER AND POWER FUGITIVE METHANE STUDY

An important part of our mission at the City of Columbus, Division of Water Reclamation, is to educate the public in the work that we do to be an industry leader in the field of water reclamation through word and deed. The City of Columbus views its water reclamation plants as providing a beneficial reuse for water and stabilized biosolids and a sustainable future. We understand great efforts to ensure that our water is safe for reuse and release to local waterways and that residuals are used to beautify our city and increase the production of agricultural crops. These efforts are critical to supporting a circular economy.

In addition, we ensure that our Reclamation Plants are managed and operated as efficiently as is possible. Our plants are large, expensive to build and maintain and are operationally complex. As all plants age, it is at times necessary to reinvest in new equipment. As we all know, newer systems tend to be more efficient and provide immediate benefit to the user.

This study is unique in several ways. It is the first of its kind to perform a multi-sensor study in the Western Hemisphere to identify and quantify fugitive methane gas emissions. Second, it provides new information on floating gas holding covers, which is a commonly used technology in anaerobic stabilization of biosolids. These covers have been in use for decades, and the expected design losses that are typically utilized are far below the reality of what was observed in this study.

This finding is a part of this continuation to identify and remove fugitive methane gas and redirect this resource towards energy reuse. To put this in perspective, this is akin to finding something that we never knew we had. Now that we are aware of these losses, measures can be taken to put this benefit to good use. In conclusion, finding and redirecting fugitive methane gas reduces greenhouse gas emissions, eliminates a safety hazard, and will increase energy production.

Part of finding and removing these sources of fugitive gas is knowing is the willful understanding that this find will translate directly to a gain in energy production, be another positive step in moving towards energy neutrality, and taking a leadership role in addressing the impacts of climate change.