

# The Public Lands Survey Team Individual Projects

## Megan O'Brien, '25

Megan is interested in predicting possible future light pollution if development continues. She is focused on the towns Blanding, Monticello, and Moab near Bears Ears. She is also the Dark Skies team Artist in Residence: in addition to collecting light pollution data, she has been interviewing people she encounters around Bears Ears about the meaning of the stars to them, and taking their photo. She looks to combine data and art with her project.

Megan is creating a grid of data points in the biggest developments/towns near Bears Ears, and taking photos and light measurements at those points. She scheduled meetings at local libraries searching for historic photos in the towns of Blanding, Monticello, and Moab. She is then comparing the current photos she takes and the historic ones she finds in order to get an idea of the changes in development around Bears Ears.



Megan O'Brien in Moab, July 2024, during a reconnaissance trip. Photo by Cyndy Hines.

Megan pored through VIIRS (Visible Infrared Imaging Radiometer Suite) data to find the brightest artificially lit sites

near Bears Ears as seen via satellite. She is investigating the biggest threats to Bears Ears' dark skies.



Flares at Elk Petroleum South, Montezuma Creek, Utah, Photo by Megan O'Brien, '25



Natasha, Mustafa, and Alice driving Southwest in Colorado on a research trip.  
Photo by Natasha Thomas, '24.

**Natasha Thomas, '24**

The Bears Ears Inter-Tribal Coalition wants to understand how their community outreach is doing in terms of the new co-management plan; how many people knew about it around Bears Ears. Natasha undertook this project, and surveyed people near the monument. She asked them if they have a tribal affiliation, if they know about the changes in size of the Monument, and if they participated in the meetings held for public input on managing the area.

Natasha traveled to Bluff and Blanding right next to the Monument, as well as more towards the Four Corners. She surveyed on the Southern Ute, Mountain Ute, and Navajo reservations. Natasha interviewed people in and outside grocery stores, at gas stations, in trading posts, and outside on the street. She has talked to many Native people, but also Mormons and other residents of the Southeast Utah region.

The theme of the complexity in identities and interests in the area became apparent

to her through her interviews. Oil companies looking to profit off the land, native people looking to protect it, yet other native people looking for a job (with the oil companies if needed), Mormons looking to make use of the land they believe is there for their use, ATV enthusiasts looking for exhilarating rides on the rocky land. Natasha has heard it all this summer. She wrote a long-form journalism story about all these different perspectives coming together in one place, the fight for the varied resources Bears Ears offers.

**Mustafa Sameen, '26**

Mustafa initially wanted to study the impact of light pollution on people around the Bears Ears National Monument. He is interested in the cultural practices of indigenous people centered around the stars. After his first trip in the field his research shifted, and he spent the summer surveying Native people on reservations as well as tourists

visiting semi-close to the monument.

His survey focused on peoples' connection to the stars. He asked if respondents observe the night sky frequently, if they have seen a change in the night sky visibility, and if light pollution has impacted their activities, among other questions. Additionally, he asked for demographic information as he looks to analyze differences in how varying age groups think about the night sky. It came to his attention that a lot of people did not realize night sky visibility has changed in many areas and there could be more change in the future.

Mustafa is also working on a Dark Skies website as a place to compile all the research State of the Rockies conducts on light pollution.



Natasha and Mustafa wading in the Animas River, near Durango, CO on a research trip. Photo by Alice O'Neal-Freeman, '27.