

**Applying Geospatial Technologies to Visualize Health and Cultural  
Concerns in Underrepresented Populations:  
Investigation of CO2 Pipeline Construction**

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## **Abstract**

**Problem:** The Lobos CO<sub>2</sub> pipeline has been proposed to traverse land owned primarily by Native Americans and land grant heirs. The health and cultural well-being of this population is at risk and their voices are largely underrepresented. This project tests an innovative geospatial approach to visualize concerns expressed by these residents.

**Methods:** Through collaboration with Human Impact Partners, a four-step geospatial approach was created: 1) Focus group participants placed stickers on maps as areas of health concern and culturally significant locations in the vicinity of the proposed route, 2) data was digitized into a Geographic Information System (GIS), 3) hot spots were calculated and mapped, 4) reasons for concern were analyzed in GIS based off of content analysis performed on focus group transcripts.

**Results:** Health concerns associated with the proposal overlap greatly with areas of cultural significance. This study will allow residents to authoritatively represent their beliefs to policy-makers.