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

Brandon K. Lavelle
Primary Advisor: Jaqueline Curtis
Department of Geography
College of Arts & Sciences

**Abstract**

Problem: The Lobos CO2 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.