FINAL REPORT: Advancing the Spatial Data Infrastructure of Bannock County, Idaho 2022

Per the statement of work (SOW) this brief end-of-year report is being provided to describe the project, the methodologies and technologies used to complete the project, and the tasks and milestones completed throughout the project.

Description of the Project

The Bannock Spatial Data Infrastructure (SDI) project was designed to leverage the capabilities of Idaho State University's GIS Training and Research Center (GIS TReC) to enhance the SDI of partners at Bannock Transportation Planning Organization (BTPO) and the cities of Pocatello and Chubbuck, Idaho. In turn, these enhancements are anticipated to aid in the decision processes within the partner organizations.

Methodologies and Technologies

The principal investigator (PI, Keith Weber) and student GIS Technician (Danielle Huerta) used a variety of geospatial capabilities to complete this project. Geospatial data development was completed using Esri's ArcGIS Pro. In addition, ArcGIS Online (AGOL) was also used as a platform to support field data collection and sharing spatial data with partners through the formalized collaboration created earlier in AGOL.

To complete the bus stop service areas study, we created a network dataset for the sidewalks feature class using ArcGIS Pro and file geodatabase. Using the completed sidewalks network dataset, service areas were identified relative to bus stop points. The resulting service area polygons were merged into a single polygon using the *dissolve* geoprocessing tool. This produced the Inside Service Areas (ISA) layer. An outside service areas (OSA) layer was needed to enable demographic comparisons. To create the OSA layer, the spatial extent of the ISA layer was removed from the overall study area layer (the `BTPO_PlanningArea` polygon layer) using the *erase* geoprocessing tool. The ISA and OSA layers were shared to AGOL as hosted feature layers and used in Esri's Community Analyst Online to extract and compare demographics of the residents in each of these service areas. A report detailing the results of this study is available from the project webpage at https://giscenter.isu.edu/research/Techpg/BannockGIS/pdf/ServiceAreasReport_final.pdf

To complete the curb ramp update study, we followed the same protocol developed in the spring of 2021. During the spring and summer of 2022 Danielle Huerta used the Field Maps for ArcGIS smartphone app and a Trimble R1 GNSS receiver to evaluate and update the ADA status of 1,498 curb ramps in Pocatello and Chubbuck. A report detailing the results of this study is available from the project webpage at https://giscenter.isu.edu/research/Techpg/BannockGIS/pdf/2022Report.pdf

Following the summer field season, a copy of all data collected or updated was downloaded from AGOL and used to produce the BannockSDI2022_final geodatabase. This geodatabase is available for download by visiting https://giscenter.isu.edu/research/Techpg/BannockGIS/results.htm

Tasks and Milestones

- The bus stop service areas evaluation study was completed providing a wealth of information regarding the residents within the ISA and OSA study areas.
- Nearly 1,500 curb ramps were evaluated for ADA compliance

Conclusions

The 2022 Bannock SDI project was successful and provides our partners with geospatial data and analytical results to help support well information management decisions for the communities within the BTPO planning area. This project also supported one student at Idaho State University, Danielle Huerta, allowing her to gain practical experience in geographic information systems thus better preparing her for a career in this field. Idaho State Universities GIS TReC thanks you for your support and we look forward to working with you again in 2023.