

1.2.3 GIS Technology and Tools for Long Range Transportation Planning in the National Park Service

Presenter

Nell Blodgett
GIS Program Lead
NPS Denver Service Center Planning
Division
nell_j_blodgett@nps.gov

Co-Presenter

Laura Pernice and Jordan
Hoaglund
GIS Specialist; Student Intern
NPS Denver Service Center
Planning Division
laura_pernice@nps.gov
Jordan_Hoaglund@nps.gov

Analyzing National Park Service transportation networks for long range transportation planning presents many challenges. A variety of needs must be met including alleviating congestion, addressing safety concerns, and providing for a variety of modal options, while protecting natural and cultural resources. Because planning is often completed from afar, collaboration with on-site park staff and other internal and external partners is crucial to plan success and implementation. GIS technology provides an avenue to facilitate that collaboration as well as a means to spatially analyze systems in relation to congestion, safety, alternative transportation, visitor use, sensitive habitats, cultural sites, and climate change variables. The Golden Gate National Recreation Area (NRA) Long Range Transportation Plan (LRTP) is utilizing a variety of GIS tools to facilitate and enhance this planning process. We will demonstrate web mapping applications that are being used to encourage collaboration and provide QA/QC of geographic data from project team members and park staff experts. The Golden Gate NRA LRTP also presents a variety of challenges in terms of its urban setting, natural and cultural resources, visitor experience, and vulnerability to sea level rise. Using spatial representations of these variables overlay and network analysis techniques are being used to determine areas of concern and facilitate scenario planning in relation to Golden Gate NRA's transportation network. Discovering these areas of concern also enables planners to identify and visualize transportation "hot spots" to help focus planning efforts and resources.