

ABSTRACT

In recent years, concerns about fuel costs, environmental degradation and climate change have prompted consideration of alternative methods for electrical power generation. Studies have revealed that solar technology offers an environmentally sensible alternative to traditional electrical generation methods. However, in order for this technology to take effect, rules, regulations, and geospatial requirements must be met. Site selection becomes more problematic and the restrictions regarding land development can delay a project by months or even years. This study demonstrates how a geographic information system can be effectively used to spatially reconcile select prospect facility locations in a given region based on pre-existing geographic constraints. Prior literature, in conjunction with expert opinion, was used to define the appropriate search criteria. Area, slope, location, proximity to utilities, direct insolation, and critical habitat were just a few of the geographic criteria taken into consideration. By using Esri's *Spatial Analyst* and other data driven inquiries, regions of undesired terrain were omitted leaving only the available sites favored for CSP solar development on BLM lands within San Bernardino County, California.