

Abstract

To alleviate some of the environmental and traffic concerns caused by the growth around the Ports of Los Angeles and Long Beach, research has begun on the establishment of a large inland port. An inland port (or dry port) stores cargo, transfers containers from drayage trucks to rail, and largely shifts seaport activities off-site (Roso, Woxenius, and Lumsden 2008). A location-allocation analysis has been conducted for the Los Angeles region to determine potential sites for an inland port in terms of distance from the seaports and reduction in vehicle miles traveled (truck VMTs) (Rahimi, Asef-Vaziri, and Harrison 2008). This study builds on this research by conducting a site suitability analysis (SSA). First, the study pre-screens numerous parcels for size and rail line proximity to limit the analysis to viable sites. Next the study investigates key siting decision variables in greater detail. These include rail line feasibility, parcel acreage, distance from schools, population density, and total truck VMT reduction. Using Arc GIS, the data were analyzed and transformed into scores to sum site desirability based on an even weighting of these criteria. Data for this study were obtained from multiple geographic information system (GIS) data warehouses including, Census.gov, egis3.lacounty.gov, ArcGIS Online, and the State of California Geoportal website. This study reaches three main conclusions. First, a site suitability analysis is needed when it comes to analyzing a multitude of variables and selecting a proper site for an inland port in an urban setting. Secondly, there are possible sites where an inland port can be placed and connected via rail that will minimize overall truck VMTs in the region. Lastly, although many sites scored high on some of the criteria, no one site stands out as optimal, according to the criteria chosen, for a heavy industrial facility, such as an inland port, in the Southern California region.