



GIS Applications in Optimum Site Selection for Tourist Sites: Texas State as a Case Study

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Outline

- **Introduction**
- **Objectives**
- **Study Area**
- **Data Source and Analysis Tool**
- **Methodology**
- **Findings**



Introduction

- **Growing tourism industry lead to increasing need for development of tourism-related facilities.**
- **Selection of suitable sites for tourism involves management of huge volume of information.**
- **GIS is an excellent tool for locating optimum sites for tourist resorts.**

Objectives

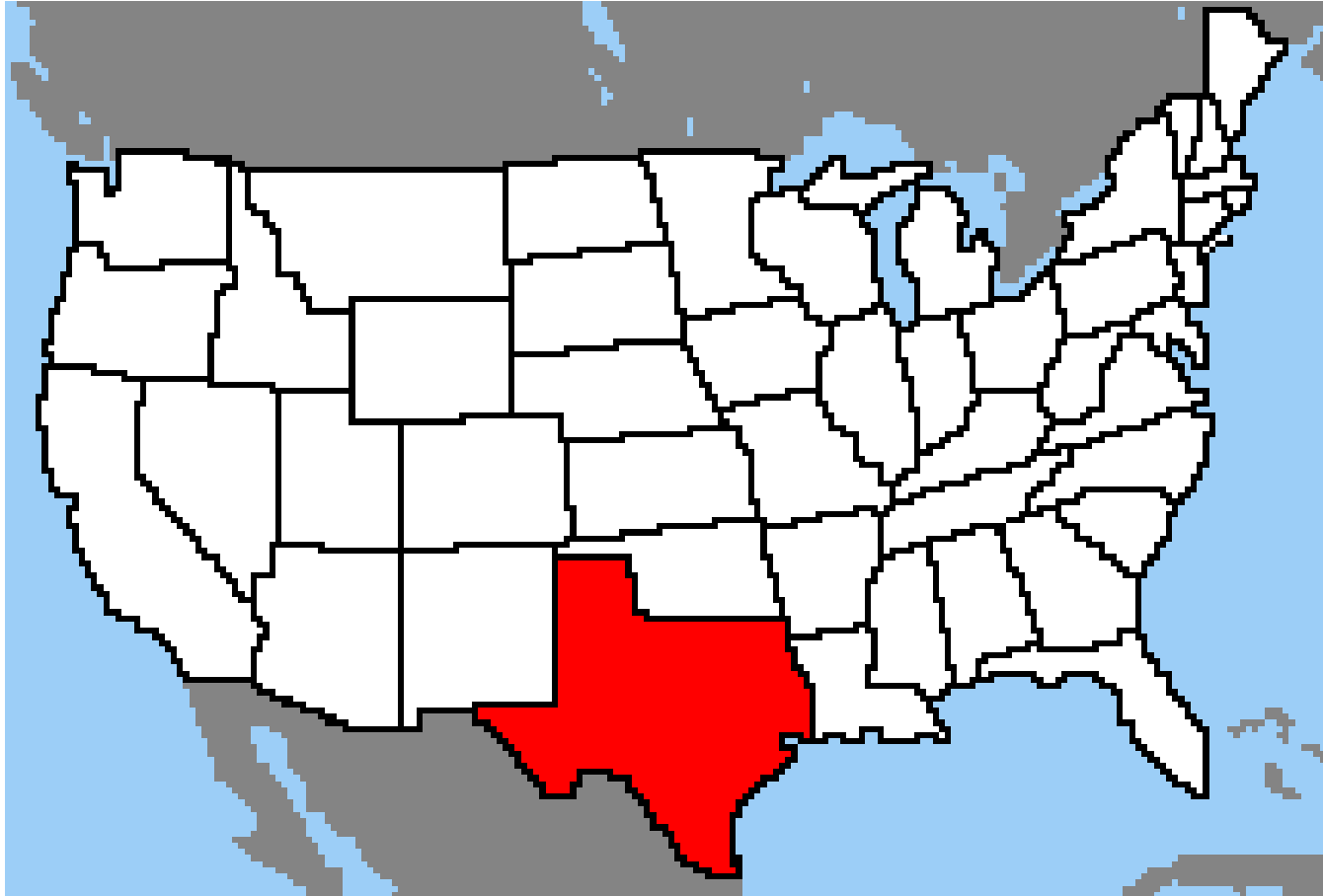
- **objectives of study:**
 - **Identify suitable criteria for siting suitable tourist sites**
 - **Apply this set of criteria using GIS to locate such sites**
 - **Identify potential tourist sites accordingly**



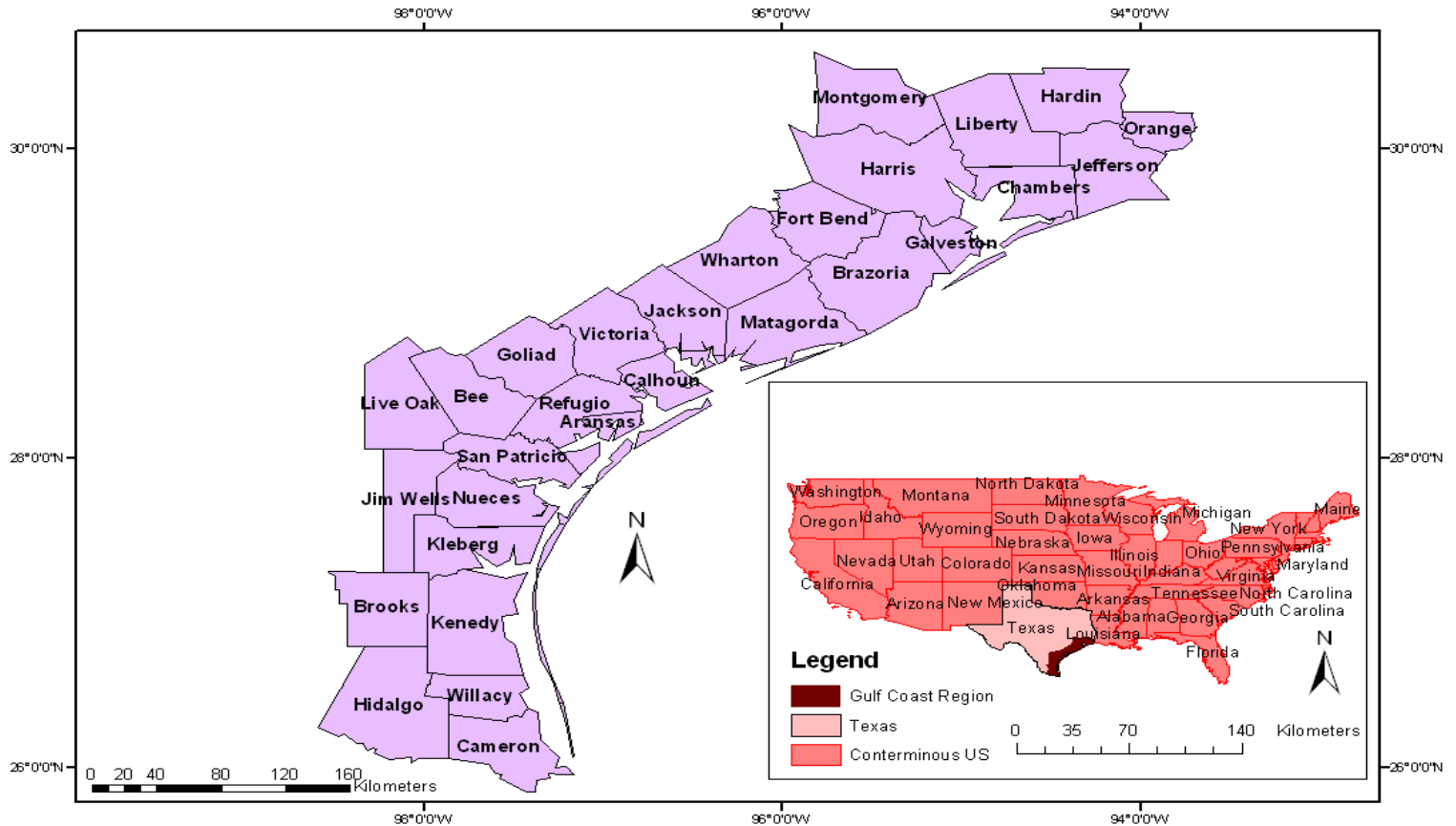
Study Area

- **Coastal Counties of Texas State on Mexico Gulf Coast**
- **Coast line about 700 km in length**

Texas State



Study Area





Data Source and Analysis Tool

- **Data Source:**
 - ESRI and
 - US Census Bureau

- **Analysis Tool: ArcGIS version 8.3**



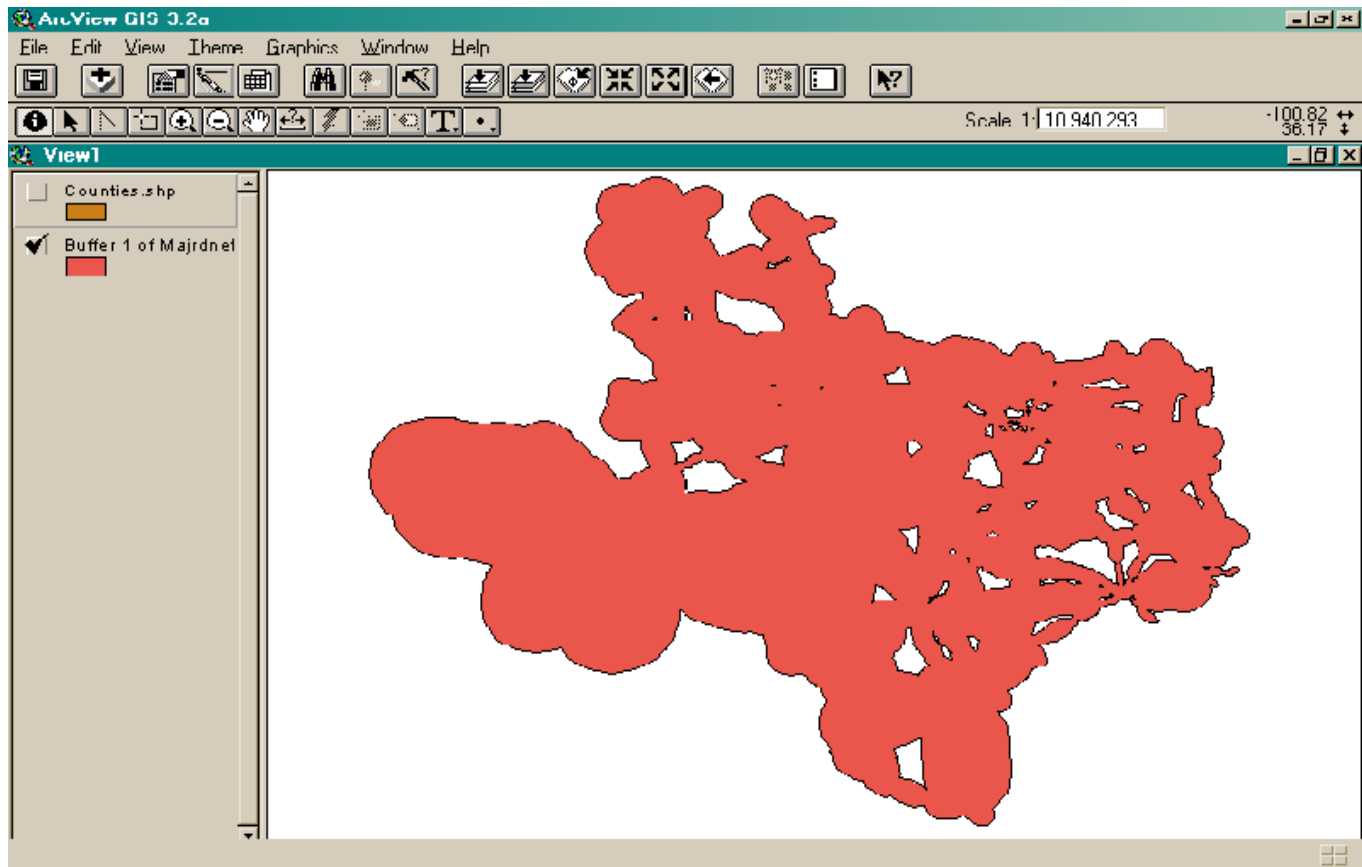
Selection Criteria

Factor	Criteria
Accessibility	Within 5km from a major road
Crime rate	Less than 4000 crime/100,000 people
Proximity to existing recreation/historic sites	Within 1km from an existing park
Proximity to airports	Within 10km from an existing airport

Factor	Site Selection Criteria
Proximity to water bodies	Within 2km from an existing water body
Distance from urbanized areas	Minimum 3km from Any urbanized area
Site Area	Site area not less than 1 sq. km

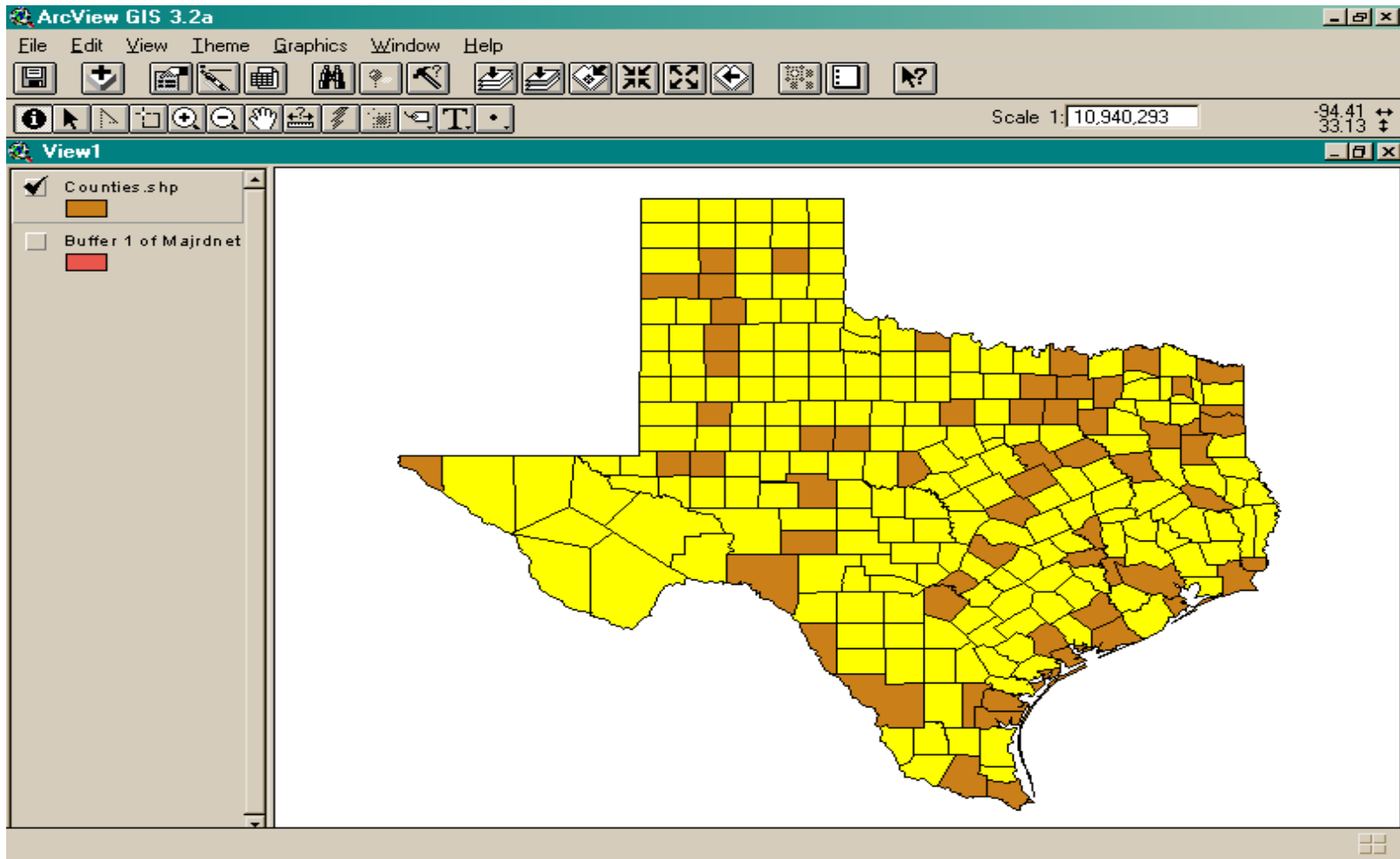
Result: There are 32 sites that meet all of the above criteria

5-km buffer of Major roads

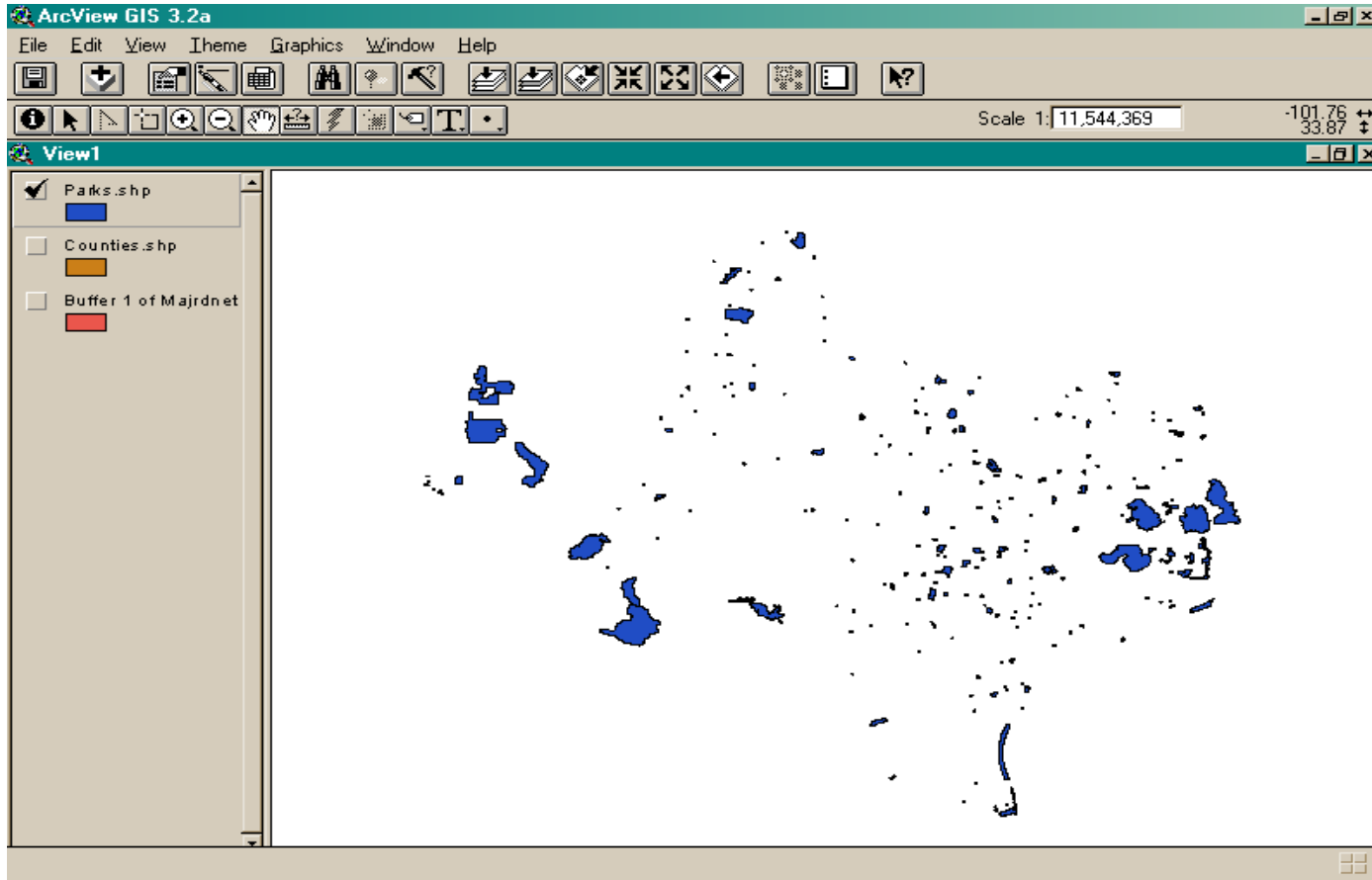


Counties with low Crime rate

(yellow color)

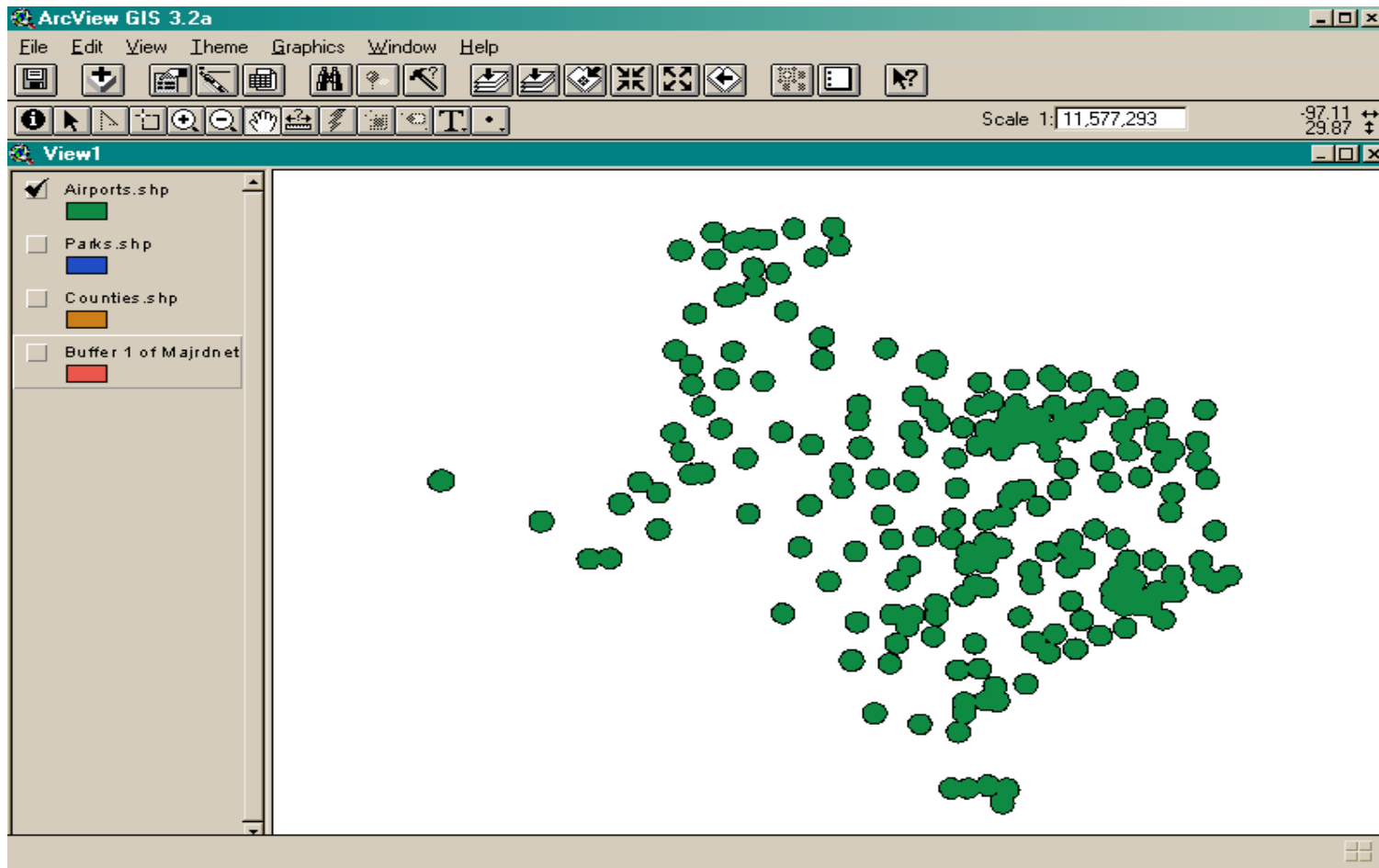


1-km buffer of Parks

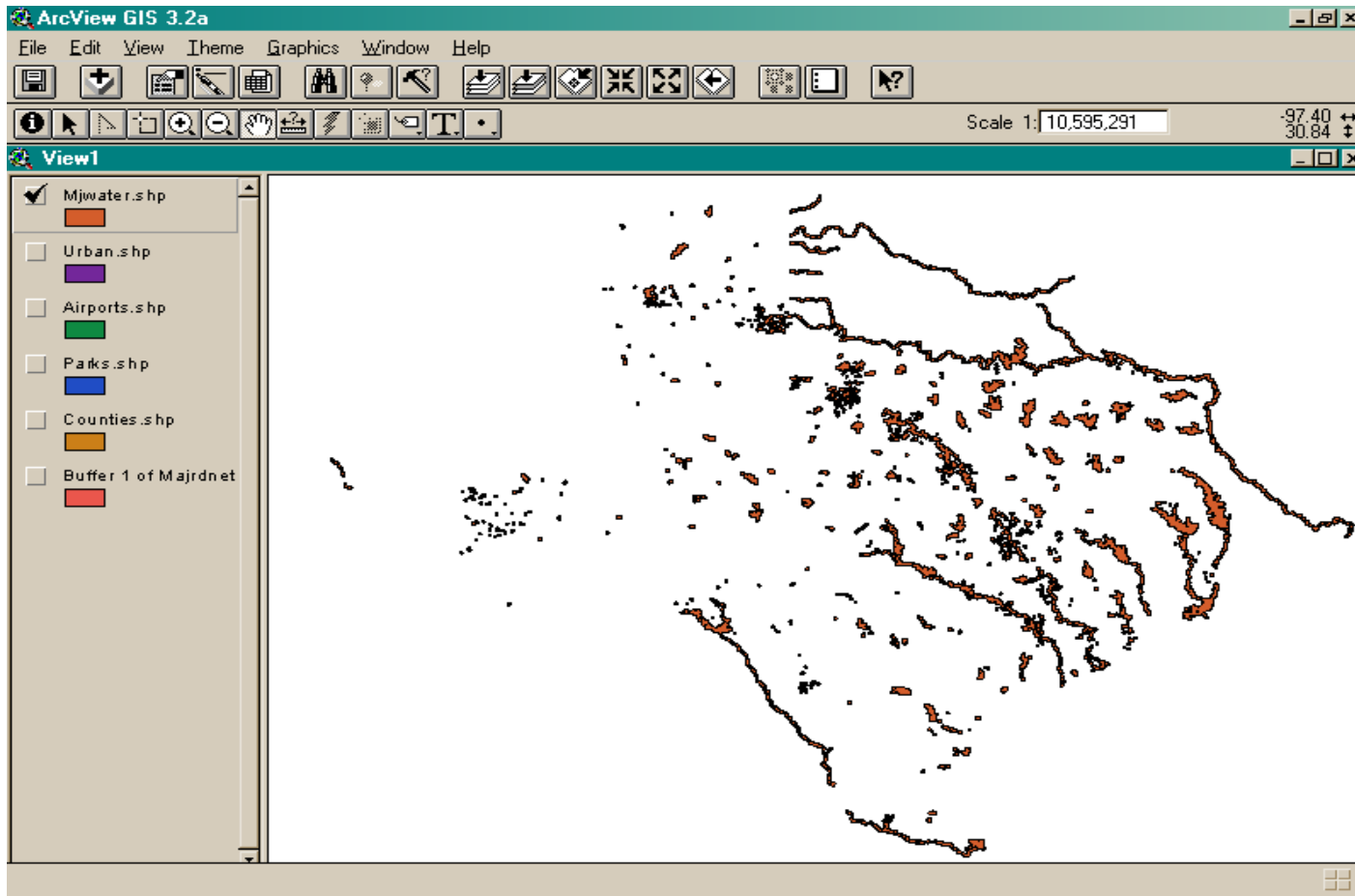




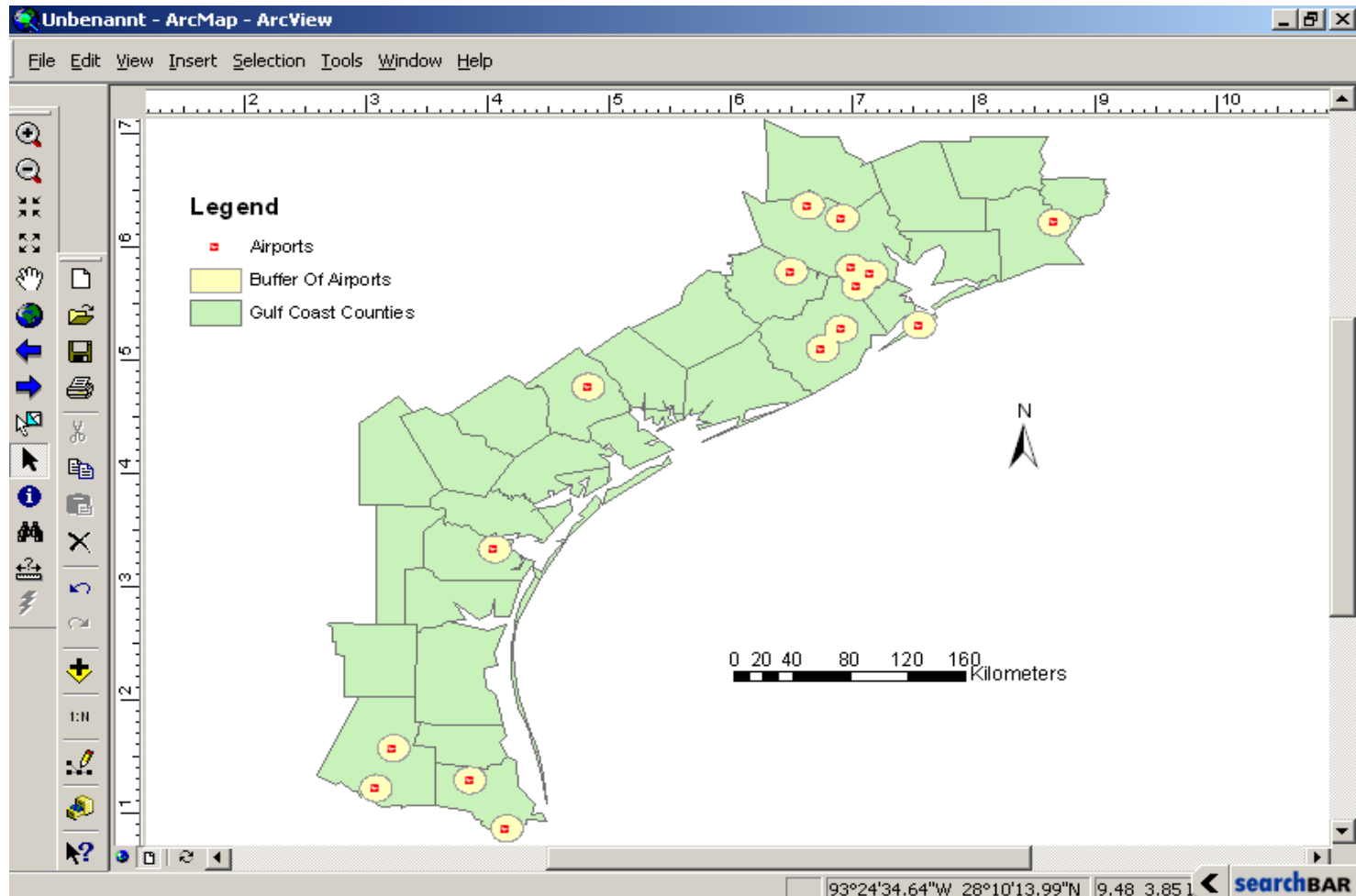
10-km buffer to Airports



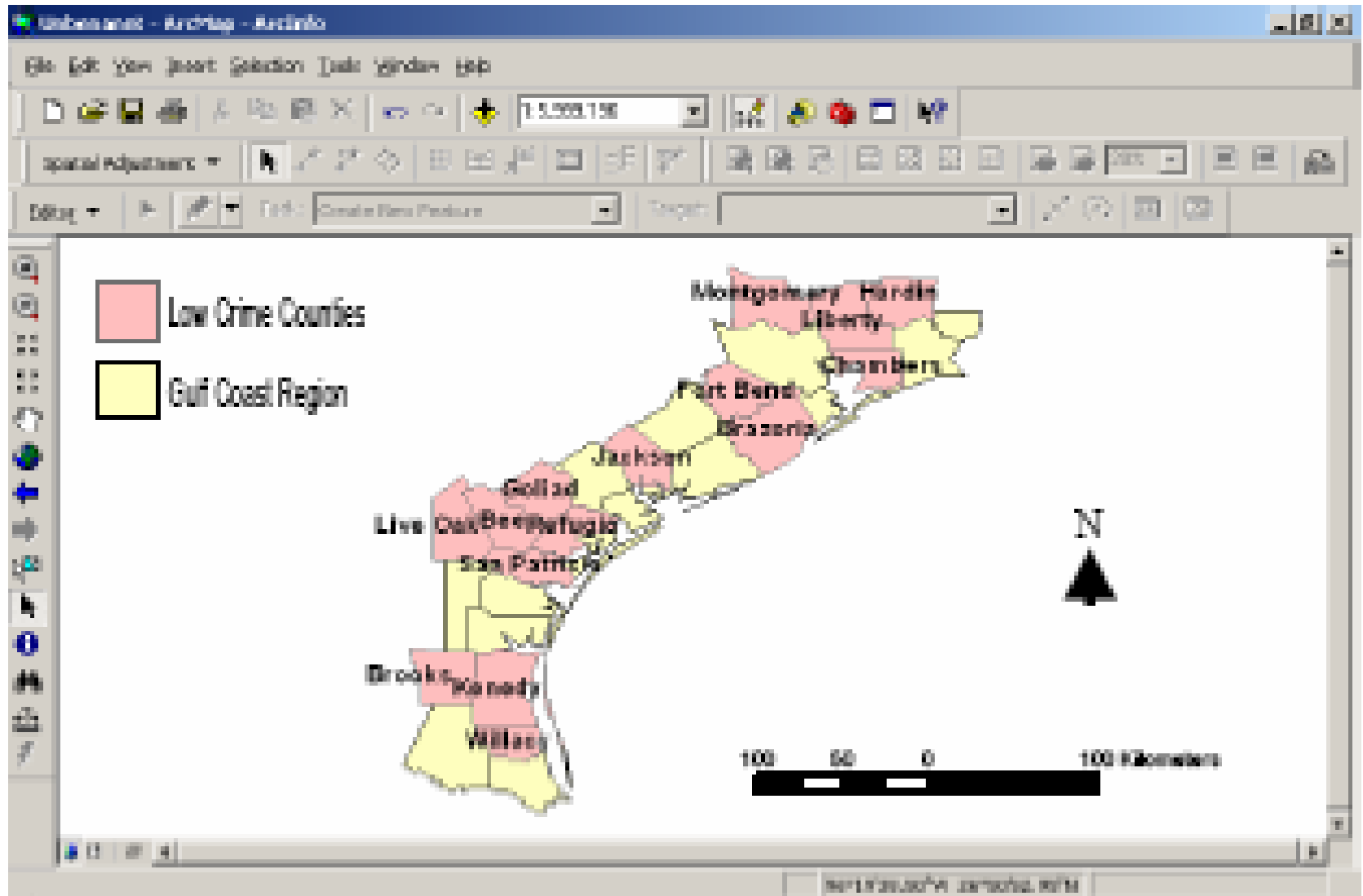
2-km buffer of water bodies



Buffer of Airports

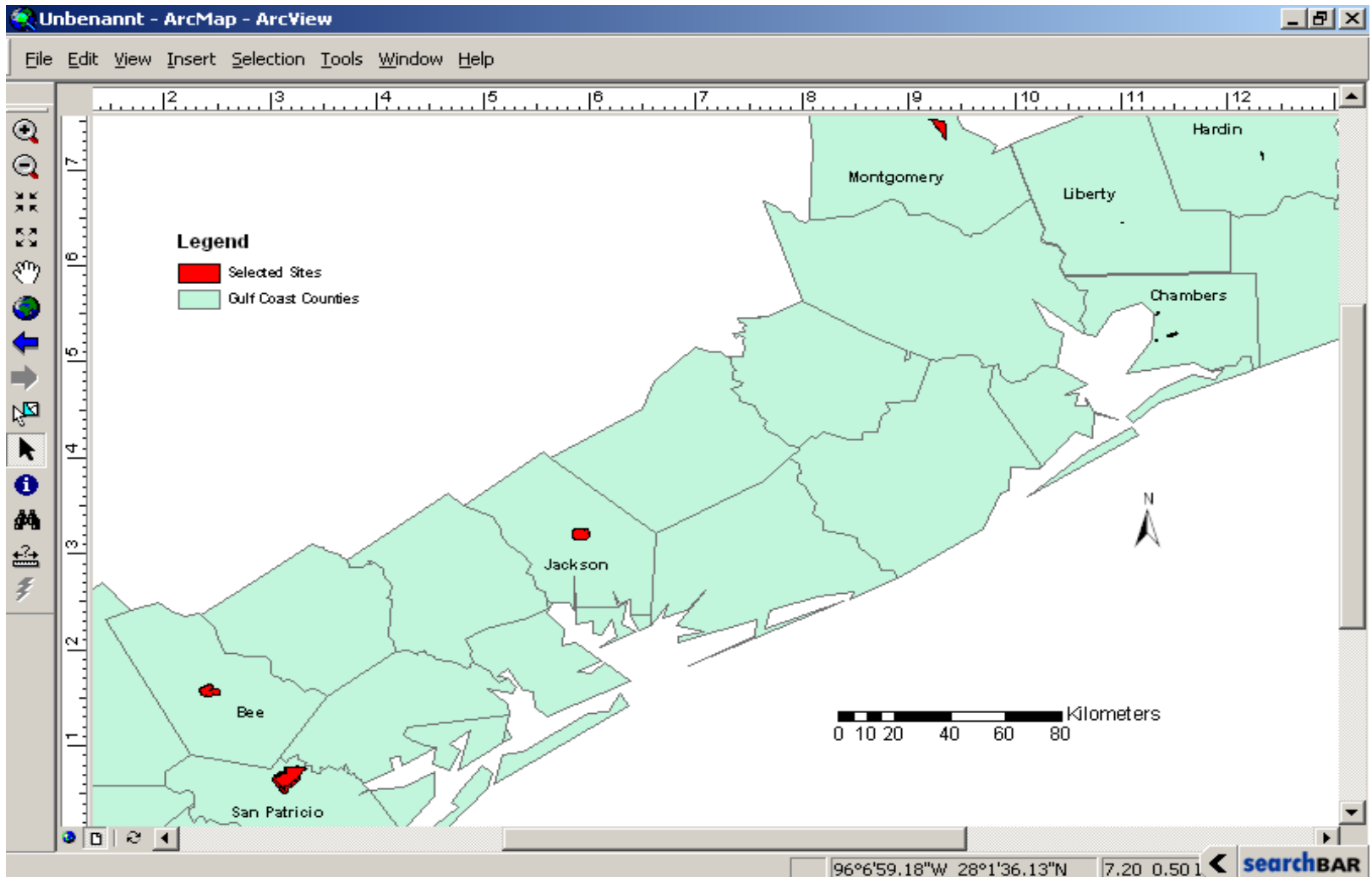


Low Crime Counties





Selected Tourists Sites



Findings

- **GIS in site selection is very quick and outputs good results that can be viewed and understood**
- **Availability of data dictates the level of detail of site selection analysis**

- **Further analysis can be carried out if necessary data are available in the right format and standard.**
- **More criteria can be added easily as more information becomes available**

Thank You

