

MEMORANDUM

TO: Dr. Estaville
601 University Drive
San Marcos, TX 78666
Texas State University-San Marcos
Department of Geography

CC: Dr. Lu

FROM: T.R.E.E.S. (Texas Resource Environmental Engineering Services)

SUBJECT: Progress of the assessing biodiversity concerns of urban sprawl and projecting smart growth in Hays County, Texas.

DATE: November 2, 2005

This memo serves to describe the progress the group has made to date on the project of assessing biodiversity concerns of urban sprawl and projecting smart growth in Hays County, Texas. In this memorandum, we will revisit the project purpose and scope. In addition, we will describe the work we have completed and describe work that is in progress, future work and obstacles that have emerged. The end product, as described in our proposal, will consist of a detailed and comprehensive report that analyzes the environmental effects of urban sprawl in Hays County, with recommendations for areas where sprawl would be least harmful.

Purpose

The purpose of this study is threefold. First, we will identify where urban sprawl is occurring in Hays County. Secondly, we will identify habitat requirements for concerned species in Hays County and map out distribution of suitable habitats. Thirdly, we will project an area for smart growth. Smart growth is defined as an area that has the least adverse impact on the concerned species habitats.

Scope

The extent of our study will focus on urban sprawl located in Hays County, Texas. Hays County, as stated in our proposal, is a county in Texas with a population of 114,193 and a total area of 693.5 square miles. The county is located on the border between the Edwards Plateau and the southern Black Prairie region. The study will be over a 5-year period.

Project Progress Chart T.R.E.E.S.		
		<u>Status</u>
Literature Review	70% Completed	On-going
Webpage	Site established	On-going
Data Collection	Base Line Data	Obtained
	Aquifer Data	Obtained
	Hydrology	Obtained
	Soils	Obtained
	Species	Obtained
	Land Use / Land Cover	Obtained
	Vegetation	Obtained
	Building Permits	Obtained
	Population	Obtained
Data Processing	Geocoding Building Permits	In-Progress
	Species habitat requirements maps	In-Progress
	Model of primary habitats	In-Progress
Analysis	Georectification	In-Progress
	Buffers	In-Progress
	Vector analysis	In-Progress
	Raster Calculator	In-Progress
	Raster reclassification	In-Progress
	Slope definition	In-Progress
	Smart Growth projection	To be done
Data Interpretation		To be done

Work in Progress

The analysis is in an early stage at this time. Georectification of all layers is matching up as planned. There have been no problems with projections. Buffers will be done on rivers, habitat requirements and roads. Vector analysis will be done on all layers to show areas of growth and areas of habitat sensitivity with a final projection of smart growth to avoid these sensitive habitat areas. Raster reclassification will be done on the vegetation layer and soils layer. Slope definition will be done on 30 meter DEM data based on habitat requirements. Smart growth for new development will then be projected by using the growth layer and the habitat sensitive layer.

Work Planned

Our group is divided into 2 groups. One group will begin data analysis on Oct 24th, while our other group will continue to work on the data processing. Data analysis will then continue until Nov. 20th. Our analysis will be dedicated into creating maps, writing a report, and generating a model. Future work will entail our data interpretation, which will take place beginning November 7th. T.R.E.E.S. will interpret the material and work on the poster and final presentation and report.

Obstacles

One of the obstacles we have encountered so far has been obtaining the building permit data. This data is very hard to obtain and moreover, it is very abundant. We have obtained 800 pages for the City of San Marcos alone. The group has come to a decision to include 5 years of data (2000 – 2005) due to the fact that this data is so vast. Additionally, another obstacle has come up concerning undeveloped incorporated data for cities. We will evaluate this data as analysis is completed on the unincorporated areas of the county to see if it is warranted and relevant to a total developed land area of the county. After the evaluation of the unincorporated data we will determine if incorporated data for cities will be necessary. This will not affect our project because we will still be able to get an idea for where this growth is taking place.

Conclusion

As of this date, the proposal tasks listed have been completed in a timely fashion with few difficulties. We surmise that the report will be completed on the date as stated in our proposal and with few problems anticipated. To conclude, we will have a professional and accurate end product to submit.