

## **Proposal to Review Existing Information Related to Recreational Impacts in the Comal and San Marcos Springs Ecosystems**

### Objectives:

- Collect and synthesize existing information on the following.
  - 1) Relationships between recreational activity and biophysical impacts in riparian ecosystems.
  - 2) Relationships between recreational activity occurring in the Comal and San Marcos springs ecosystems and biophysical impacts specific to those systems.
  - 3) Water quality data associated with recreational activities in riparian systems.
  - 4) State and local policy applicable to recreational use on the Comal and San Marcos Rivers.
  - 5) Interview data collected from representatives of recreational groups identified as stakeholders of the Comal and San Marcos spring systems.
  
- Collect and synthesize existing spatial data to assist with the following related to the Comal and San Marcos springs systems.
  - 1) Understanding locations, concentrations and types of recreational use.
  - 2) Understanding spatial relationships among recreational uses and endangered species habitat.
  - 3) Depiction of key recreational attractions or affordances as well as areas or zones where recreational use is excluded.
  
- Obtain input and feedback on two occasions from a steering group subcommittee.
  
- Prepare draft and final reports that include the following.
  - 1) Background information reviewed in research literature, policy and spatial data resources.
  - 2) Recommendations related to information and data needed on recreational use and its relationship to endangered species habitat in the Comal and San Marcos springs systems.
  - 3) Methodologies that could be useful in examining specific relationships among recreational uses and biophysical impacts to the Comal and San Marcos spring systems.
  - 4) Examples of policy employed in similar riparian systems that address the types of recreational uses present in the Comal and San Marcos springs systems.

### Proposed Study Schedule:

March 1 through April 30	Initial literature review and data search
May 1 through June 15	Conduct interviews with stakeholders
June (date to be determined)	Meet with steering group subcommittee, use feedback to continue collecting and examining available data
July	Analysis and Synthesis of information collected
August (date to be determined)	Meet with steering group subcommittee
August 15 through 30	Draft report prepared for review
September 15 through 30	Incorporate feedback and develop final report document

Personnel:

Dr. Scott Shafer                      Project Manager – Associate Professor and Extension Specialist, Recreation, Park and Tourism Sciences, Texas A&M University. Areas of expertise include planning and design related to natural resource based recreation, urban trails, greenways and recreational carrying capacity. Shafer will act as principle investigator. He will guide the study while sharing in responsibilities related to the collection of background information, spatial data, contact with stakeholders and report writing.

Dr. David Scott                      Senior Scientist – Professor and Extension Specialist, Recreation, Park and Tourism Sciences, Texas A&M University. Areas of expertise include research on recreational use patterns in urban parks and specialized recreation behaviors including wildlife watching. Scott will assist in the collection of recreational use data applicable to the project and will provide guidance on the development of methodological recommendations. He will also serve as a referee for the report.

Dr. Gerard Kyle                      Senior Scientist – Associate Professor, Recreation, Park and Tourism Sciences, Texas A&M University. Areas of expertise include research on relationships between recreationists and natural resource places, place attachment and recreational carrying capacity. Kyle will support data collection related to recreational carrying capacity and the analysis and interpretation of existing data related to recreational use. He will also serve as a referee for the report.

Mr. Nick Turner                      Research Associate – Graduate Student, Recreation, Park and Tourism Sciences, Texas A&M University. Curriculum focuses on examining relationships between recreation and natural resources to support natural resource planning, policy and management. Turner will conduct the search for information (e.g., literature, spatial data, water quality data) and will play a large role in conducting interviews, analyzing spatial data, synthesizing information and report writing.

Proposed Budget:

Personnel

Salary	allotted time	cost
Shafer	1 mo	\$ 7,500
Scott	.5 mo	4,000
Kyle	.5 mo	4,000
Turner	7 mo (20 hrs, wk)	9,800
GIS Technician	.5 mo	<u>3,000</u>
		\$ 28,300

Benefits

Shafer @ 17.1%	\$ 1,280
Scott @ 17.1%	685
Kyle @ 17.1%	685
Turner @ 9.7%	950
GIS Tech @ 9.7%	<u>290</u>
	\$ 3,890

Travel

Rental Car (10 day trips @ \$50 each)	\$ 500
Fuel (10 trips ~2,200 miles, 18 mpg, \$2.79 gallon)	350
Lodging (~ 2 overnight trips @ \$110 night)	<u>220</u>
	\$ 1,070

Supplies & Printing

Purchase of GIS data	500
Report Printing	<u>150</u>
	\$ 650

Total Direct Costs \$ 33,910

Indirect Costs

AgriLife Extension @ 26% \$ 8,816

Total Project Cost \$ 42,726