Habitat Conservation Planning: A Model for Comprehensive Resource Management in Karst

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Abstract

Habitat conservation plans (HCPs) are effective tools, increasingly used in managing rare and endangered species. The principles in developing Habitat conservation plans can be applied to managing resources in karst areas. First, define the resource, its critical areas, features, and aspects as they naturally occur. Second, define impacts on the resource and assess them by Geographic Information System analyses. Third, set resource management goals. These will vary according to the resource, and may require compromises for unavoidable economic, political, and logistical realities. Fourth, delimit resource protection areas. These areas must meet the goals of resource preservation, assuming the areas are properly managed and even if all other areas are impacted. In some cases, protection areas may need restoration if existing conditions are too degraded. Fifth, a long-term, adequately funded, and effective organization or agency is needed to manage and maintain the resource, and enforce regulations of the resource management plan.

Examples will be given from the central Texas area showing how HCP-style management of rare and endangered cave-dwelling species is compatible with karst groundwater research and protection. Further, such planning can be used to guide the occurrence of traditionally harmful activities to locations that are sound for resource management and often economically advantageous. Sustainable access to caves, karst features, and springs for education, conservation, exploration, and recreation will usually be possible and may be encouraged to certain degrees. how HCP-style resource management does not avoid difficult questions, but it provides the foundation for making sound, long-term decisions.