A Strategy for Improved Karst Management in the Tongass National Forest, Alaska

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Abstract

Fifty years of industrial timber harvest in the Tongass National Forest, Alaska, have heavily impacted the region's karst and cave resources. Regional scale timber harvest on karst appears likely to continue in the Tongass for at least another decade. Current USDA Forest Service karst management practices in the Tongass have become outdated in light of new ideas and new information gathered within the last few years. Over the last decade, cavers of the Tongass Cave Project and Glacier Grotto have undertaken numerous cave exploration and inventory projects throughout the Tongass, often with USDA Forest Service support. The cooperative projects have improved the understanding of karst systems in the Tongass and the effects of timber harvest on those systems. USDA Forest Service karst management strategies currently in place were designed when the understanding of the effects of surface management practices on deep cave resources were poorly understood and without benefit of the wealth of information available today. By incorporating new data and concepts into an improved karst management strategy the USDA Forest Service could better protect fragile cave resources while avoiding possible future violations of the Federal Cave Resources Protection Act of 1988. New management strategies will need to be resource specific, focus on the deep cave environment as well as the epikarst zone, and develop balanced protective measures for entire karst hydrologic systems rather than just individual karst features.