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A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology

(Supercedes EPA/600/R-99/006, 1/99)

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PREFACE TO THE SECOND EDITION

Release of the first edition of this lexicon was well received and resulted in two printings. The first edition is again in short supply, but rather than going through a third printing, an updated edition was deemed appropriate. Since the release of the first edition, additional definitions related to biospeleology, courtesy of Dr. William R. Elliott of the Natural History Division of the Missouri Department of Conservation, have been added. Additional definitions obtained from the Australian Speleological Federation also have been added.

Researchers and the general public alike will find these additions useful as they work their way through the published literature. For this second edition, the literature search is current to 2002. To be sure, this updated lexicon is far from complete and will more than likely be updated in a few years.

PREFACE TO THE FIRST EDITION

The National Center for Environmental Assessment–Washington Office (NCEA–W) has prepared this document for the benefit of the regional offices and public in general due to the need to understand the terminology common to the field of karst. It is a glossary of most terms that have some relationship to the field of environmental karst as well as specific karst terms. It includes many foreign terms because much of the karst research is conducted in foreign countries and published using local terminology. In many instances, common environmental terms are defined in such a way as to specifically reference karstic phenomena.

The purpose of this document is to serve as a technical guide to regional offices and the public in general who must read the karst literature or who must hold discussions with karst researchers. It is intended that this document remove much of the confusion surrounding many of the karst terms.

The literature search supporting this lexicon is current to 1998.

AUTHOR AND REVIEWERS

The National Center for Environmental Assessment–Washington Office within the Office of Research and Development was responsible for the preparation of this document and provided overall direction and coordination during the production effort.

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INTRODUCTION

Several attempts to classify karst terminology in an organized manner have been attempted in the past. The last few glossaries of karst terminology were organized in the late 1960s and published in the early 1970s. Since that time, many new terms related to karst in general have come into use throughout the world while other older karst terms are seldom used nowadays. In the mid 1990s the British Cave Research Association (BCRA) published and updated a dictionary that covers the general area of karst and caves, but did not focus on environmental issues.

Many of the more recent karst terms are related to the upsurge in environmentalism and the recognition among karst cognoscenti that karst terranes are much more sensitive to man-induced effects on the environment than are other types of landscapes. In an attempt to be as broad as possible in this glossary, terms related to general hydrology and hydrogeology, common karst rock and mineral types, and many of the descriptive terms used in speleology even where they relate to specific localities, have been included. No attempt was made to exclude foreign karst terms although many are no doubt, missing. This has led to a much larger manuscript than was originally intended when this project was initiated, but it has provided for a more comprehensive document.

Because many non-karst professionals, whether working on basic research or on environmental problems, need to have a general working knowledge of karst terminology, this glossary was developed to provide an up-to-date reference for more modern definitions of karst terms both currently in usage and now defunct. As with any undertaking of this sort, numerous omissions will be shown to be evident. In other instances, disagreements regarding definitions will arise. In the event that readers of this glossary find various omissions or incorrect definitions, it would be greatly appreciated if the necessary corrections be forwarded to the author so that the glossary may be updated in the future.

As a final note, it should be pointed out that a list of references for the definitions are included at the back of this glossary and citations are provided when appropriate. In many instances, duplication of definitions from previous glossaries were employed to avoid changing the original definitions. However, efforts were not always attempted to cite the exact source for each definition as this would have greatly lengthened this already excessively long manuscript; secondary citations have

been provided. Exact citations would also have resulted in confusion where several definitions were utilized in the writing of a single clear definition for any particular term. In no instance was it intended that the work of others be appropriated, only that this glossary be as comprehensive and clear as possible while avoiding excessive clutter. Also, where definitions were deemed to be incorrect or poorly worded, alternatives have been written.