WHAT ARE CUMULATIVE IMPACTS?
SYNOPSIS OF THE U. S. COUNCIL ON ENVIRONMENTAL QUALITY
1997 CUMULATIVE EFFECTS REPORT

1. **Cumulative impacts** (effects) are not some nebulous, new concept that defies comprehensive, evaluation, or quantification. In fact, the large-scale, wide-spread damage to the environment from cumulative impacts was recognized at least by 1969, when the term was defined by **40 CFR § 1508.7** as follows:

> **"the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."**

2. An excellent example of cumulative effects, as incremental impacts from past, present and reasonably foreseeable future actions, can be found in the current state of the Floridan aquifer system. Adverse impacts from an individual residential well may be insignificant. The adverse cumulative impacts from many individual residential wells; groundwater mining at municipal well fields; industrial groundwater mining; and agricultural groundwater mining; added to mining of the structural component of the aquifer system (sand, rock); and covering large expanses of natural recharge areas with impervious surfaces; however, has resulted in a water crisis throughout much of the regional Floridan aquifer system. This concept of cumulative impacts also can be seen by looking at a single permit issued by a local, state, or federal agency, then considering all of the impacts from all of the projects permitted by all of those agencies. For example, see the summary of permits evaluated (and permitted) by the U. S. Army Corps of Engineers for Nationwide General projects that was summarized in the January 27, 2001 Daytona Beach News-Journal article by Catron (see **http://www.n-jcenter.com/2002/Jan/27/ENV1.htm**). The cumulative impacts of all of those NWP projects have not been considered, but when combined with each other, and other projects permitted by that agency and other agencies, they are significant and adverse.

3. The U. S. Council on Environmental Quality, Executive Office of the President published a report in January 1997 entitled, **"Considering Cumulative Effects Under The National Environmental Policy Act"** (Cumulative Effects Report). Some of the information in the Cumulative Effects Report particularly is useful in illustrating the types of things that must be considered for a scientifically-valid evaluation of the actual impacts of projects routinely authorized and/or permitted under the CWA by the COE in Florida. Table E-1 of the Cumulative Effects Report summarizes the basic principles of a cumulative effects analysis. The Executive Summary of that Cumulative Effects Report expands on these basic principles, stating, in relevant part:

> ".....The handbook presents practical methods for addressing coincident effects (adverse or beneficial) on specific resources, ecosystems, and human communities of all related activities, not just the proposed project or alternatives that initiate the assessment process." [page v]

> "The process of analyzing cumulative effects can be thought of as enhancing the traditional components of an environmental impact assessment: (1) scoping, (2) describing the affected environment, and (3) determining the environmental consequences. Generally it is also critical to incorporate cumulative effects analysis into the development of alternatives for an EA or EIS. **Only by reevaluating and modifying alternatives in light of the projected cumulative effects can adverse consequences be effectively avoided or minimized.** Considering cumulative effects is also essential to developing appropriate mitigation and monitoring its effectiveness." [page v, emphasis added]

> ".....By evaluating resource impact zones and the life cycle of effects rather than projects, the analyst can properly bound the cumulative effects analysis." [page v]