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Stormwater Information Management Systems (SIMS)

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With the advent of Internet capabilities, it is now possible to develop a Master Plan of drainage and environmental systems for an entire city, and provide access of the Master Plan to the engineering community via the agency's homepage (which may be stored at an Internet provider). Using a local provider service, the Master Plan data base, as well as the computer software necessary to edit and re-analyze the Master Plan, can be provided to the engineering community via the internet at a small fraction of the cost typically charged in the usual development project review. Using the Internet, a local engineering firm can download a copy of the latest version of the Master Plan. Using a SCENARIO option, the firm next makes changes, re-analyzes the entire Master Plan system for it's changes (in hydrology, hydraulics, sediment transport, wetlands impacts, water quality pollutant loadings, cost impacts, and system prioritization), and submits the "SCENARIO" to the city or flood control agency for review. The agency, in turn, can either use the software in-house or also access the Internet to evaluate all changes to the current status of the Master Plan.

If the "SCENARIO" is approved, the agency can update their Master Plan to reflect the changes by simply adopting the "SCENARIO", and storing the changes in the HISTORIAN option of the software. In this way, the Master Plan becomes a "living" document, reducing the need to update on a regular interval. Each "SCENARIO" is being subjected to an analysis equal to the total effort invested in developing the original version of the Master Plan. Environmental impact assessments can now be accomplished at a level of quantification and uniformity not before available. And the cost to the engineering community is the cost of accessing an Internet server.

This new approach for maintaining Master Plans of drainage has been adopted by several cities in southern California and is currently under implementation for several other cities. This paper will detail the SIMS approach available from Advanced Engineering Software (AES©). The AES SIMS© is not only unique in its approach, but has the advantage that it is available for use by the engineering community.