Developing Procedures for Water Quality Reporting for National Parks

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The National Park Service (NPS) Water Resources Division (WRD) has a program that is responsible for reporting on water quality in National Parks. The program has used customized software procedures for efficiently and effectively retrieving water quality data from various federal data sources and building reports. The WRD has already prepared more than 200 of these reports. The reports prepared to date have been developed with procedures that extracted and processed data from legacy data systems. The WRD is updating these procedures based on the evolution of the databases that house the data of interest. New procedures have been developed to retrieve data from EPA's Modernized STORET (National Data Warehouse and Legacy Data Center) database, the USGS National Water Information System (NWIS), and other data sources; perform QA/QC for retrieved data; analyze data with summary statistics, tabular output, and plots, and create customized reports for each National Park. The retrievals: are based on user-defined geographic queries; include ancillary data (e.g., dams, flow gages, permitted dischargers); and support harmonization of parameters, characteristics, and units from the various sources. The resulting procedures, hyperlinked text documents, and database provide an important foundation for integrating monitoring information into water management activities in National Parks. This presentation will describe the procedures employed and present examples of reporting features and assessment activities being pursued in the National Park system, and in doing so, provide an example for those interested in accessing, working with, and reporting on the wealth of data and information housed in federal water related data systems.