General Overview of WRDB



The Water Resources Database (WRDB) is a comprehensive data storage system capable of handling a vast amount of data, accommodating a wide variety of data types and diverse information, and presenting data conveniently and efficiently. WRDB was originally developed by the Georgia Environmental Protection Division (EPD) in association with EPA Region 4 to address the imposing data management challenges presented by the Chattahoochee River Modeling Project. Since its inception, WRDB has been enhanced a number of times and applied to numerous projects in Region 4. A main goal of the system has been to provide data management and analysis tools to users possessing an assortment of professional specialties and a variety of software skill levels.

Key WRDB Features

The following features help make WRDB an outstanding tool for water quality data analysis and modeling:

- Database structures allow a thorough description of collected environmental data.
- Databases that use the industry-standard Paradox file format providing very fast access to large databases on IBMcompatible personal computers; large

tables may also be stored on SQL database servers such as Oracle, MS SQL Server, and MySQL, and WRDB's administrative functions used to control access.

- The user interface was developed using the Paradox Application Language (PAL), taking full advantage of the Microsoft Windows graphical user interface.
- Databases can be imported and exported to a wide variety of alternative spreadsheet, database, and text file formats.
- All associated databases can be created, edited, and printed using spreadsheet-type on-screen data forms.
- Data entry and validation are done in batches, maintaining strict quality control.
- Data can be entered manually, using user-defined data entry forms, or electronically, using an intelligent data conversion program developed specifically for this software.
- Subsets of data can be extracted with an easy-to-use filtering form, or advanced queries can be used to capitalize on the strength of the underlying Paradox engine.
- Report-quality tables, graphs, and pictures can be generated on-screen for instantaneous review and analysis or printed on any standard device or to a disk file.
- Data analysis includes a variety of regression, frequency analysis, and curve fitting tools.
- A GIS tool is included which can display AutoCAD and ArcView data with thematic mapping of water resources data.
- Data security is enhanced by password-protection of selected program functions.
- An on-line help system provides context-sensitive information to the user, supplementing the User's Manual.





United States Environmental Protection Agency Water resources data are stored in one or more tables that are linked to Project Support tables that include information for Stations, Station Groups, Branches, Parameter Codes (PCodes), PCode Groups, Compositing Codes (CCodes), Quality Codes (QCodes), and Data Batch Tracking.

Program-specific Features

In addition to WRDB's water resources data storage and analysis capabilities, an additional module is available to perform 305(b) reporting and TMDL tracking. This module has the following features:

- Forms for editing twelve relational tables that comprise the 305(b) database
- Analysis of observed data to determine compliance with water quality criteria
- Data selection using SQL queries on any of the linked tables
- Ability to print detail and summary reports
- GIS tool to display and query reach information interactively.



WRDB is available for download at http://www.WRDB.com



