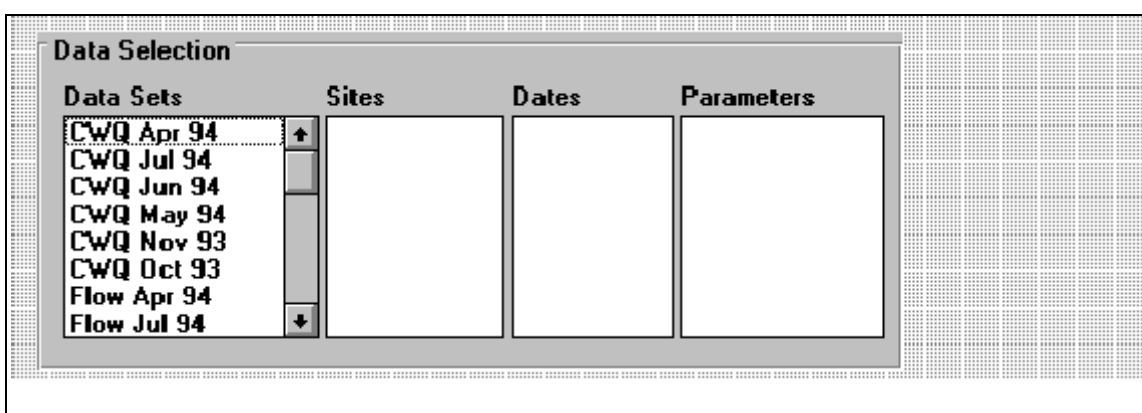


ABSTRACT

Data Access and Analysis Using RPO DataView

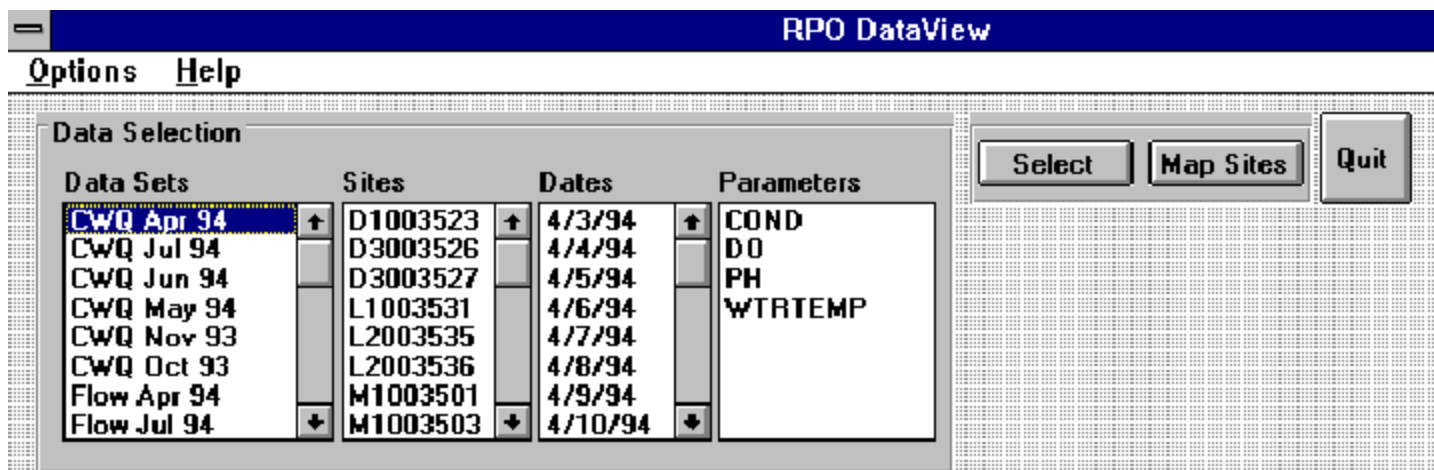
By: Stephen Rood, Ken Koleda
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The Rouge River National Wet Weather Demonstration Project is a comprehensive program to restore the water quality of the Rouge River. To this end, an extensive sampling and data collection effort has been established to define water quality in the river. Currently 23 rain

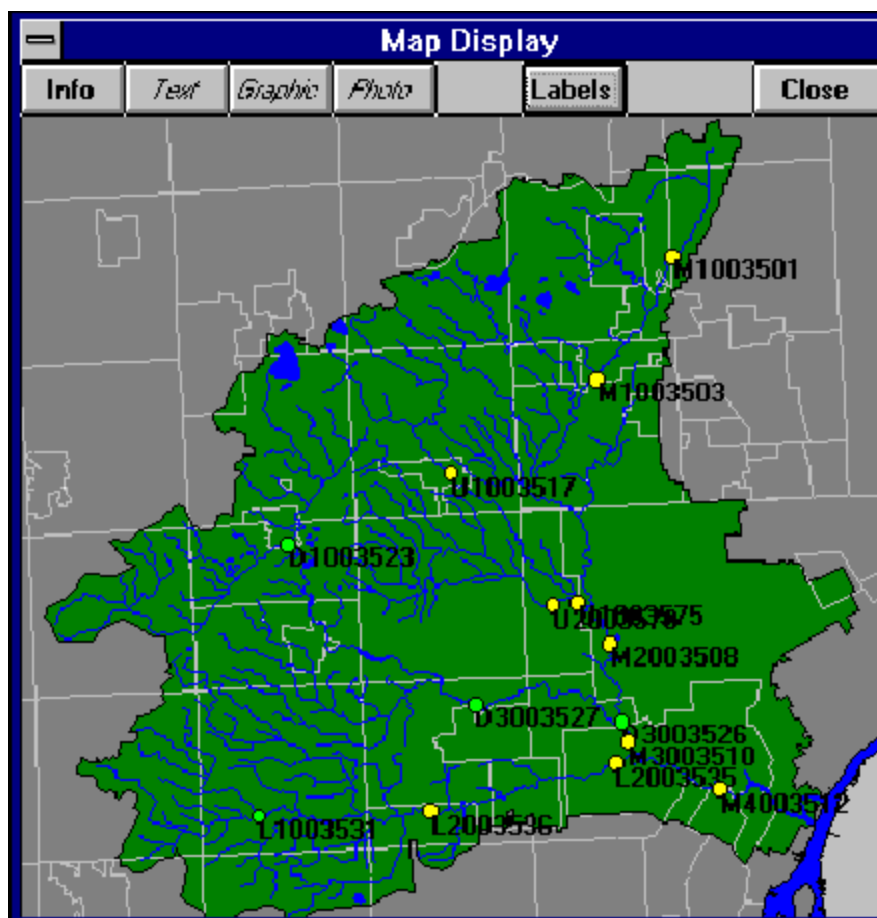


gauges, 17 continuous water quality monitors (conductivity, dissolved oxygen, pH and temperature) and 17 flow gauges collect data at 15 minute intervals. In addition, analytical lab data from automatic collectors and numerous sampling surveys is compiled along with USGS flow information, at hourly intervals, from 7 sites. Each month more than one hundred thousand data records are added to the Rouge Program Office (RPO) database. In an effort to help users work with this large quantity of data, RPO DataView was developed.

RPO DataView is an easy to use data viewing tool which is designed to work with prestructured data sets. Each data set comprises a months worth of information for a particular data type (e.g. all rainfall data for July, 1994). Once initiated, RPO DataView, presents the user with a list of possible data sets from which to choose.



Upon selection of a data set, all sites, dates and parameters available for the selected data set are presented to the user in a series of lists.



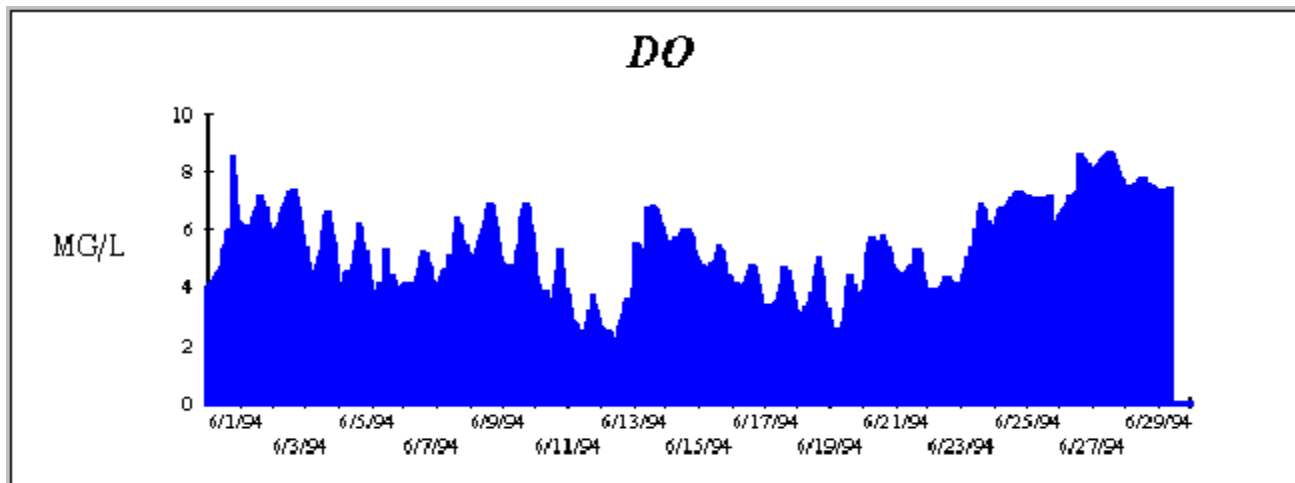
The user then selects the sites, dates and parameters of interest. To assist the user in site selection, an option exists to display the site locations on a map.

Once sites, dates and parameters are chosen, the user is presented with a variety of options to work with the selected data.

- Table View
- Data Plot
- Create File
- Exceedance
- Print
- Sort
- Statistics
- Query

SITE_ID	DATE	TIME	COND	DO	PH	
D1003523	4/3/94	12:00:00 AM	674.9	10.32	8.05	↑
D1003523	4/3/94	1:00:00 AM	674.3	10.28	8.04	
D1003523	4/3/94	2:00:00 AM	685.9	10.02	8.03	
D1003523	4/3/94	3:00:00 AM	678.6	10.01	8.02	
D1003523	4/3/94	4:00:00 AM	679.4	10.22	8.02	
D1003523	4/3/94	5:00:00 AM	675.5	10.44	8.02	
D1003523	4/3/94	6:00:00 AM	671.9	10.42	8.02	
D1003523	4/3/94	7:00:00 AM	673.6	10.83	8.03	
D1003523	4/3/94	8:00:00 AM	675.1	11.41	8.05	
D1003523	4/3/94	9:00:00 AM	673.8	12.17	8.1	
D1003523	4/3/94	10:00:00 AM	675.2	13.32	8.18	↓

Table View displays the data in a scrollable spreadsheet like grid.



Data plot, displays a plot of the selected data (where appropriate).

Create File, allows the user to create an ASCII text file by which data can be moved to other software programs such as databases, spreadsheets or wordprocessors.

The dialog box 'Text File Output Criteria' contains the following settings:

- File Layout:** regular, cross tab
- Field Length:** variable, fixed
- Text Qualifier:** none, double quotes
- Delimiter:** comma, space
- Add field names to file

Buttons: OK, Cancel

	COND	DO	PH
Avg	809.743	5.17	7.68
Min	332.3	1.84	7.4
Max	1075.3	8.56	7.92
Count	703	703	703
Sum	569249.1000	3634.55	5399.37
StDev	124.777	1.52	0.09
Variance	15569.339	2.311	0.008

Statistics displays summary statistics for the selected data.

Exceedance Criteria

Parameter: Value:

> <

Exceedance Instances

Site	No.
D 3003526	15
L 2003535	44
M 1003501	14
M 1003503	8
M 2003508	28
M 3003510	29
M 4003512	76
U 2003570	9

Exceedance displays where and how often a selected parameter has exceeded a specified value and allows the user to display those sites on a map.

Query

Query Criteria

Parameter: Value:

= > < >= <= <>

Query Statement

Query allows for the creation of a subset of the selected data based upon user supplied criteria.

RPO Dataview was developed using MS Visual Basic® and runs under MS Windows® 3.1 or greater. System requirements are: IBM®-compatible 80386 or higher PC, hard disk with 3 megabytes of free space for program files plus additional space as needed for data, 3½" floppy drive, VGA display, mouse and one megabyte or more of memory.

Conclusion

RPO DataView has proved to be a valuable tool in viewing and assessing data. By combining many of the commonly desired functions; tabular viewing, data plotting, summary statistics and spatial display, in a user friendly package, RPO DataView allows users to review data quickly without the need for multiple software packages (e.g. database, spreadsheet, mapping). RPO DataView requires no licensing or royalty fees and as part of the national demonstration, the RPO DataView approach will be easily transferrable to other large data bases, especially for watershed management.