

## Appendix 4. FoxDB Data Loader & Viewer Program

A Visual Basic program was created for data entry to the Microsoft (MS) Access database, FoxDB. There are options to view selected tables in the FoxDB, primarily to aid with data entry, but they also provide a means for persons not familiar with MS Access to view the data. The program is called FoxDB Data Loader & Viewer and may be downloaded from the Fox River Watershed Investigation Web site (<http://ilrdss.sws.uiuc.edu/fox>). The **readme** file that accompanies the program files describes how to install the program and how to link to the FoxDB MS Access file. It is strongly recommended that the reader be familiar with the structure of the FoxDB before using the program. The FoxDB is described in Chapter 4, and the data dictionary for the tables is provided in Appendix 2.

When the Data Loader & Viewer program is run, there are viewing screens for project, station, sample, and results records. Data entry screens are used to add sample records and results records. The program includes screens to export the information from the database in a way that can be easily imported into another (master) copy of the database.

When the program is started, the user must click on *Data* on the upper task bar and then may choose to *View or Add Data* or *Export*. When *View or Add Data* is selected the **Sample** screen is displayed automatically. Tabs displayed at the top of the screen can be selected to access other screens. Other screens may be activated by clicking on the tab at the top of the screen. Four screen options for viewing data in the FoxDB are:

- View Projects
- View Stations
- View Samples
- View Results

Data is entered by first creating a sample from the **Sample** screen. Results are entered individually for each parameter from the **Results** screen. Tabs for these screens are labeled

- Sample
- Results

### Viewing Data

Screens are available for viewing data. The user must select the corresponding tab to enable screens for viewing of projects, stations, samples and results.

Projects cannot be added or changed through the Loader & Viewer program. They are preloaded and may be viewed under the View Projects tab shown in Figure A4.1.

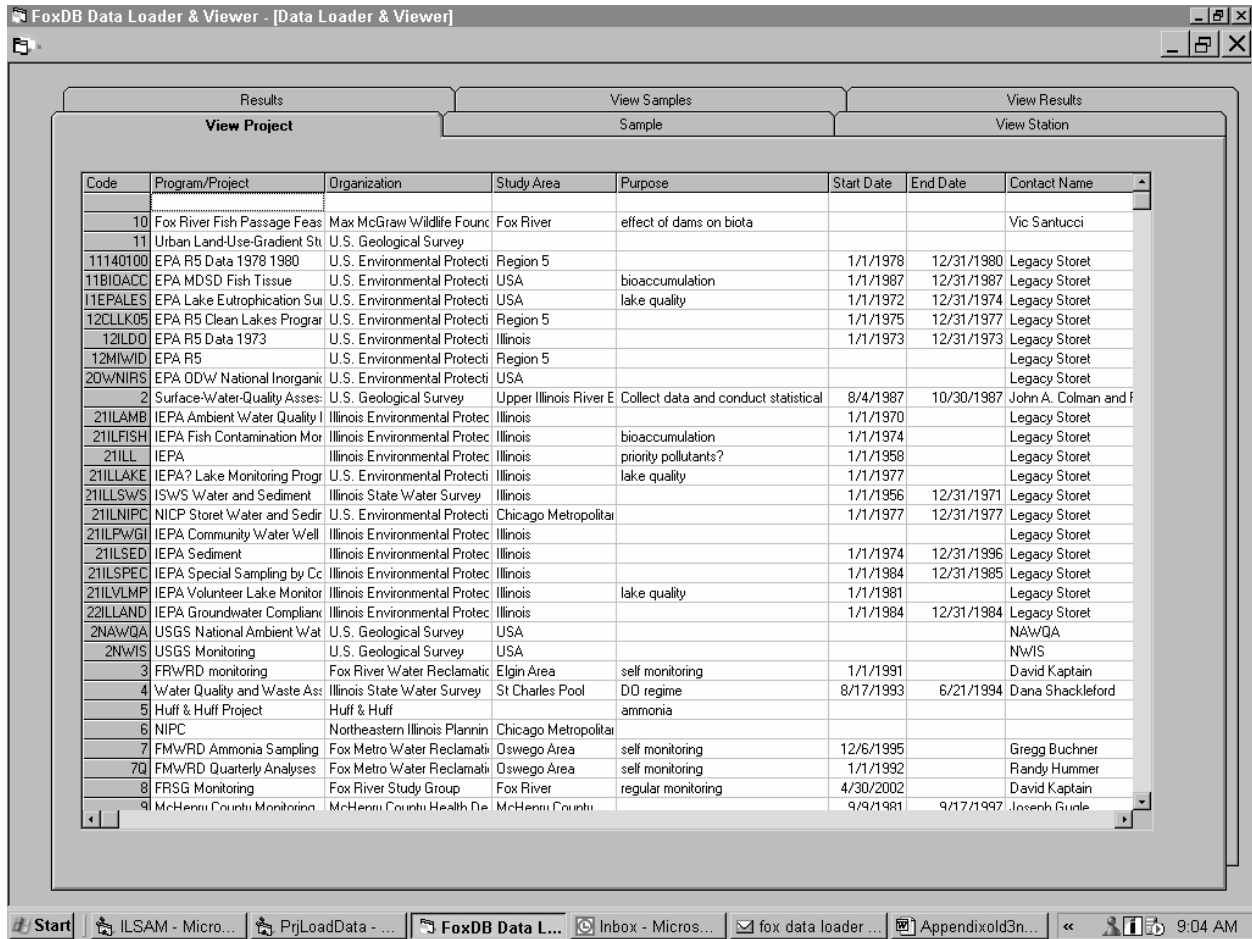


Figure A4.1. View project screen

The View Station screen is shown in Figure A4.2. The user can search for a station by *Project*, *Location*, or *Water Body* name by checking the box next to the search category. The *Location* search uses the “place\_name\_description” field in the database. For example, by entering *Poplar*, the user finds all the stations with Poplar in the place name description field.

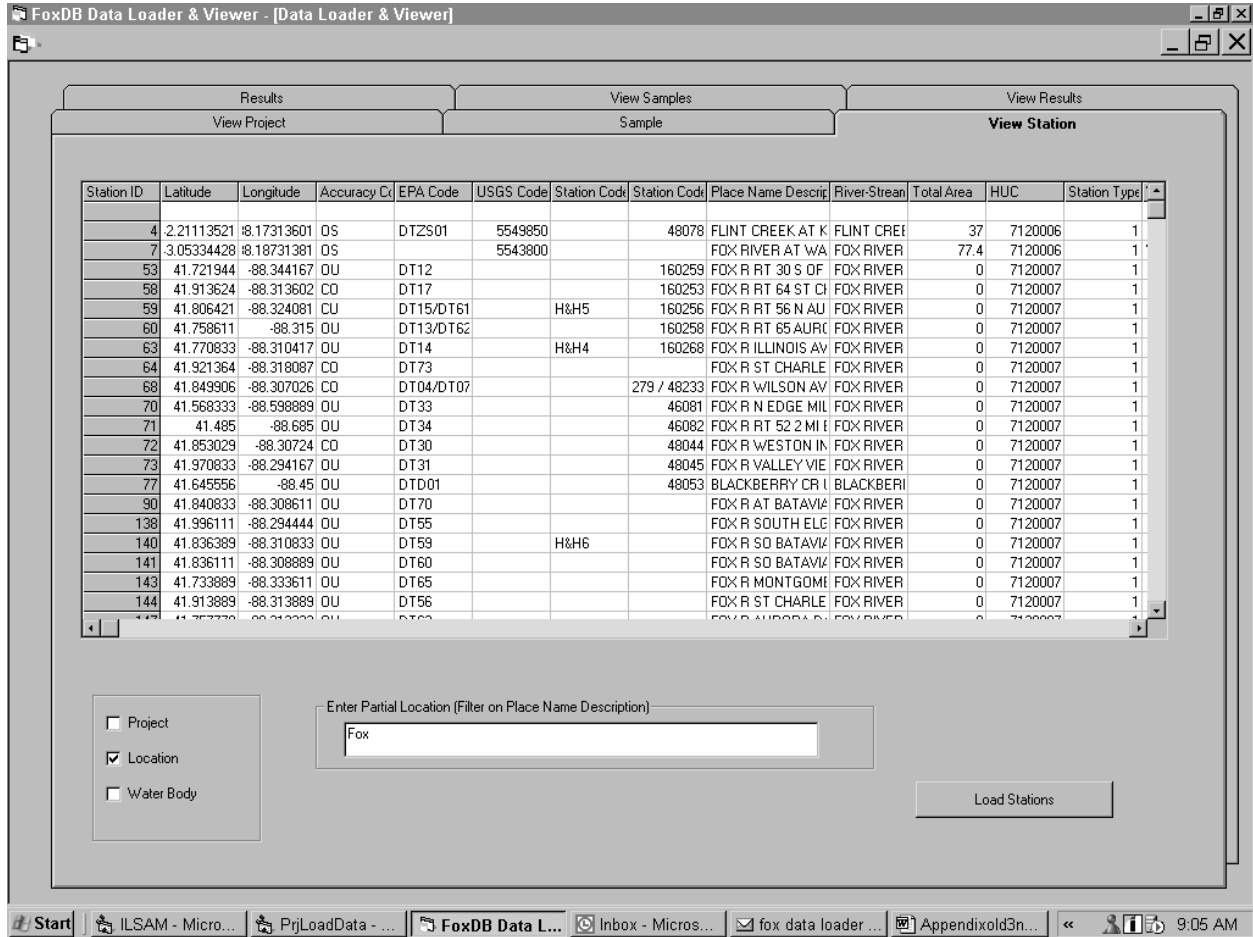


Figure A4.2. View station screen

Information about samples may be viewed by selecting View Samples. The user can select samples to view by *Date*, *Station*, or *Project* (Figure A4.3).

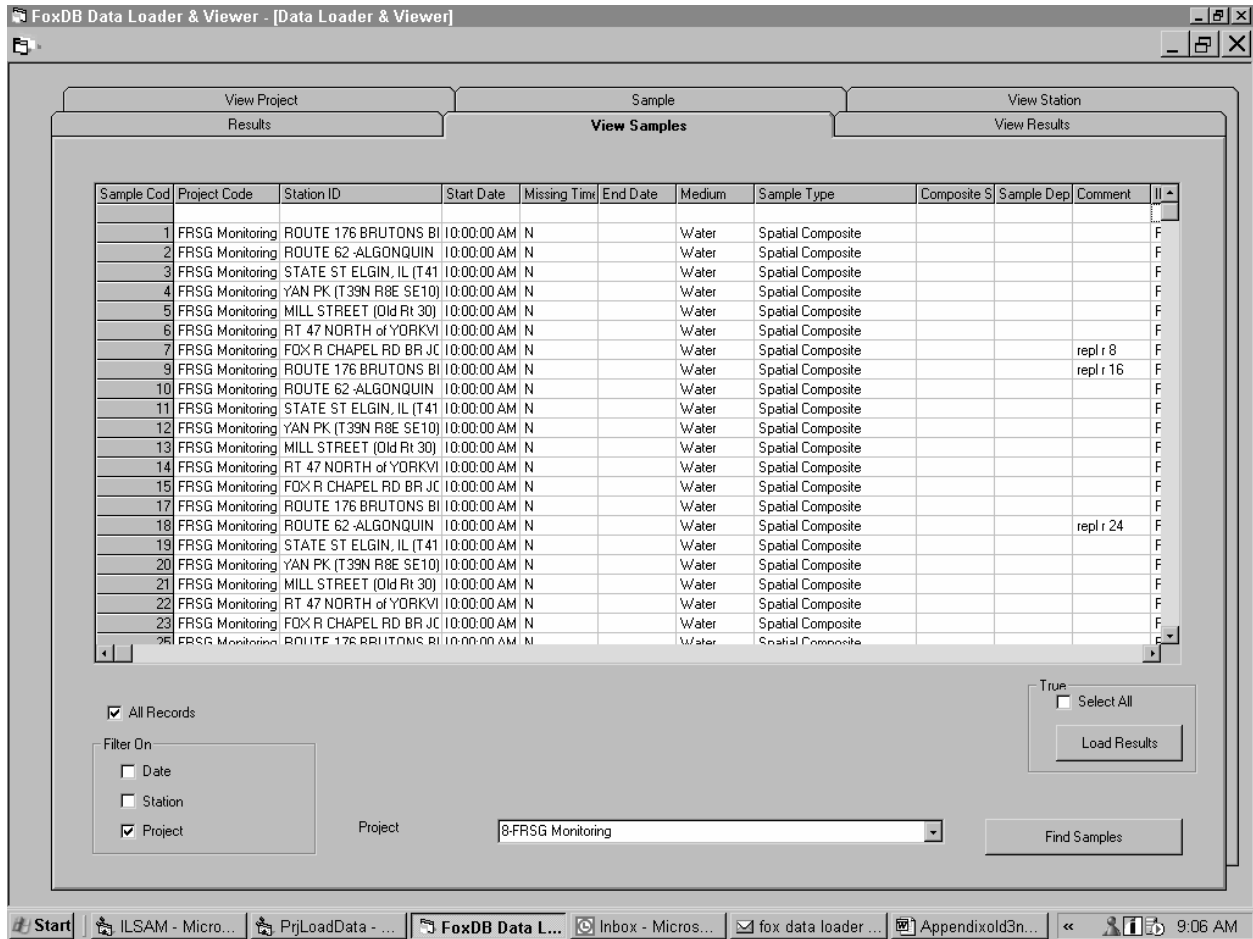


Figure A4.3. View sample screen

Results for a particular sample can be displayed. At the View Results screen (Figure A4.4), the user enters the sample number, and clicks on the *Load Results* button.

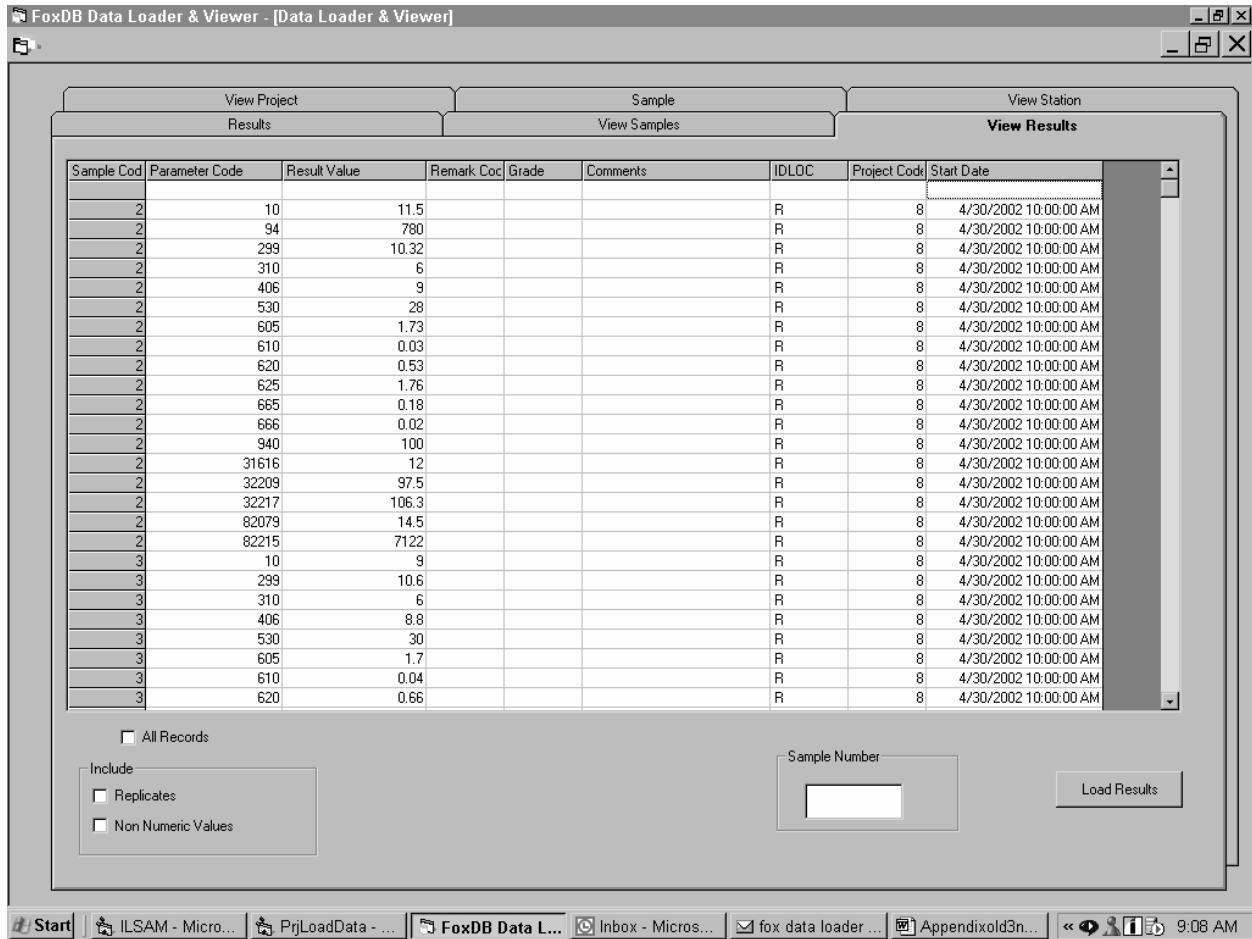


Figure A4.4. View results screen

## Entering Data

The following images show the screens to enter new samples and results. Pull-down menus are available for fields that are looked up from other tables. A sample must be established in the FoxDB before results are entered.

## Sample Entry Screen

Through the **Sample** screen, (Figure A4.5) the user specifies the *Station*, *Project*, *Sample Type*, *Composite Statistic*, and *Medium*, and then enters the *Start Date* and *Time*. If the time is not known, the user checks *Missing Time*. When the *Update* button is selected, the “new” sample is created in the FoxDB and the **Results** screen opens.

Entries also may be edited from this screen. The sample may be located by selecting the project or station of interest from the *Project* and *Station* pull-down menus, then clicking on the *Load Results* button. Arrow keys may be used to move from sample to sample. When the sample is located, the user presses the *Update* button to select the sample. An entire sample can be deleted, or the user can go to the **Results** screen to add additional data or correct entries.

The screenshot displays the 'Sample Entry' screen within the 'FoxDB Data Loader & Viewer' application. The window title is 'FoxDB Data Loader & Viewer - [Data Loader & Viewer]'. The interface is organized into three main sections: 'Results View Project', 'View Samples Sample', and 'View Results View Station'. The 'View Samples Sample' section is the primary focus, containing the following elements:

- Start Date:** A date field showing '6/26/2003' and a time field showing '12:00:00 AM'. A 'Missing Time' checkbox is present.
- End Date:** A checkbox labeled 'End Date'.
- Sample Depth:** A text input field.
- Comment:** A large text area for entering notes.
- Edit Sample:** A section with navigation buttons (left arrow, right arrow, delete 'X'), a 'Locate Records' button, and a small text field with the value '13'.
- Right-side Fields:** Five pull-down menus for 'Project', 'Station', 'Sample Type', 'Composite Statistic', and 'Medium'. A 'Clear' button is located at the top right of this section.
- Bottom Buttons:** 'Update' and 'Exit' buttons.

The Windows taskbar at the bottom shows the Start button, several open applications (Eudora - [In], C:\MyFiles\FRS..., Appendix3Data..., FoxDB Data L...), and the system clock indicating 4:24 PM.

Figure A4.5. Sample screen

## Results Entry Screen

Results may be entered on the next screen (Figure A4.6). When a sample is selected, the descriptive information appears on the left part of the screen. A “sample” must exist in the database before results can be entered. If a sample was just entered, the information automatically will be entered on the left part of the screen. The user also may search for a sample to enter additional results. A date must be chosen within the box on the left, and then the *Find Sample* button will search for all samples with that date. Arrows allow the user to page through the samples listed.

To enter a value for a parameter, the parameter is selected and the result value entered. There are several ways to select a parameter. A parameter can be selected from the pull-down menu under Parameter Code, or a search may be done using the *Partial Parameter Name* button to find all parameters containing the text entered in the adjacent field. For example, to find all parameters containing the word “oxygen” in the parameter name, the user enters “oxygen” in the blank field and clicks on the *Partial Parameter Name* button. This will search the *Parameter Full Name* field of the FoxDB, and parameters found will be listed in the pull-down menu. The user can enter the five-digit parameter code in the Parameter code field, and then use the pull-down menu to select the parameter. If the “Replicates” box is checked, the value will be added to the table (*TBLReplicates*).

Figure A4.6. Results screen

## Data Export

The purpose of this option is to permit data entry at multiple sites. These data can be exported to a master database. Exported data is written to four comma-delimited files (Figure A4.7). Files created during Export are:

- Sample File
- Results File
- Nonnumeric Results File
- Replicates File

When the user selects the export option from the opening screen of the program, there are two options for selection of data to export. One option is to export all data entered by the user. The user selects all records to exercise this option. Alternatively, the user may enter a date, and all data with that sample date or a later date will be exported. Data is entered in the box next to the *From* prompt. For example, all Fox River Study Group records then will be written to the files. If *All Records* is not selected, the user must select a date from the pull-down menu to export all records from the specified date.

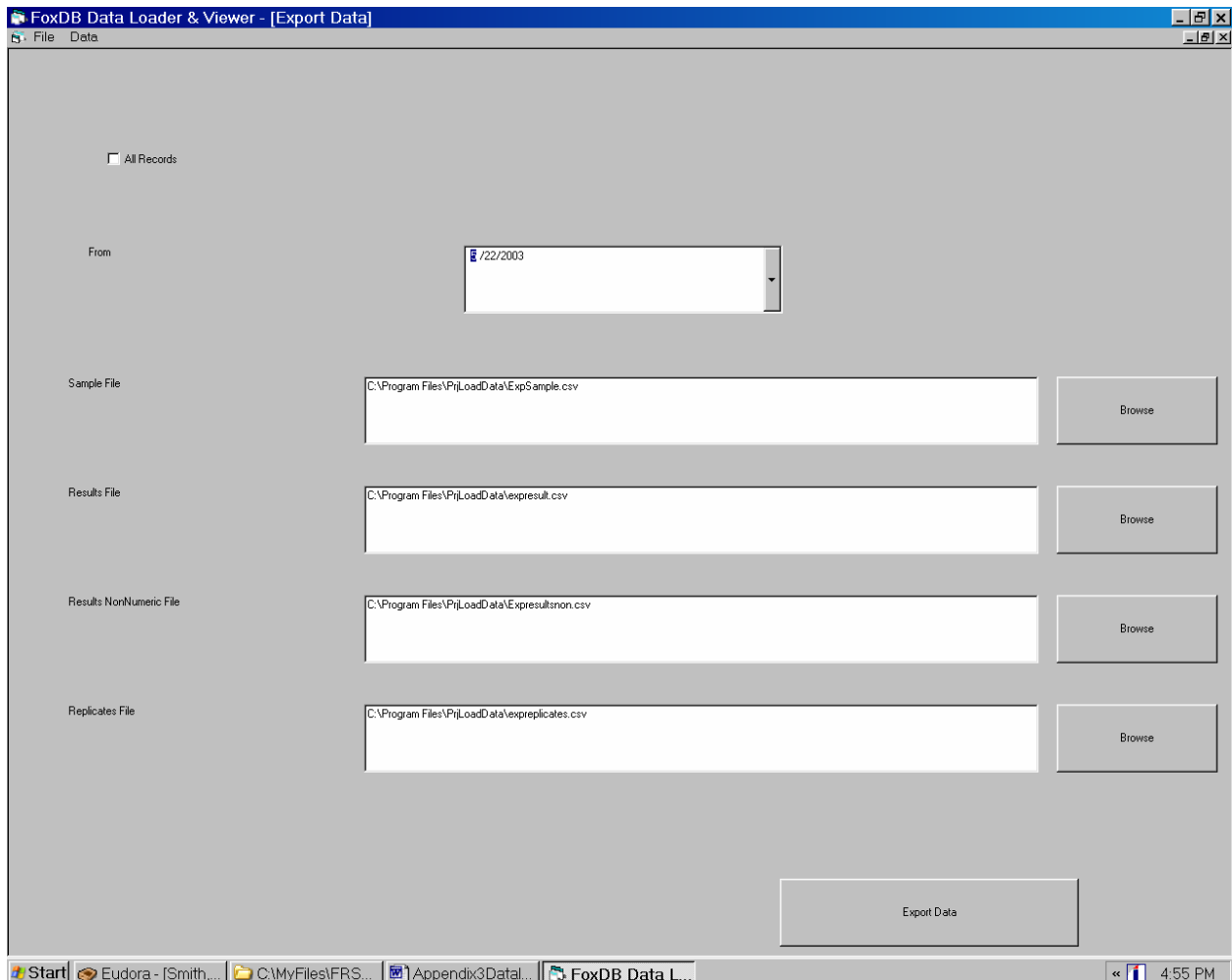


Figure A4.7. Export data screen