[Graphics have been corrupted]
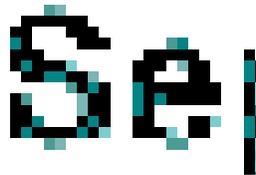
Users Manual for Versions 1.0 and 1E.0

November 1997

SepTrack *is a septic system tracking program jointly developed by the Buzzards Bay Project, a unit of the Massachusetts Coastal Zone Management Office, and Kyran Research Associates Inc. of Newport, Rhode Island through a contract with Massachusetts Coastal Zone Management.*

This software package was developed for municipalities within the Buzzards Bay watershed, and elsewhere in Massachusetts, to assist Boards of Health in tracking the operation, maintenance and permitting of septic systems and other Board of Health related issues.

Acknowledgments

Welcome to SepTrack!

Tracking the permitting, design, installation, performance, and inspection of onsite waste water septic systems is a challenge for municipal Board of Health offices in Massachusetts. These Health Boards, which are typically unpaid elected officials or volunteers, are delegated by the Commonwealth the authority and responsibility to oversee and to implement Chapter 111 of the General Laws, and in particular the regulations associated with Title 5. To many municipalities, especially smaller towns that may lack professional or full time staff, keeping track of activities on many thousands of individual parcels can be demanding.

To address this problem, the Buzzards Bay Project National Estuary Program hired a contractor, Kyran Research Associates Inc. of Newport, Rhode Island, to develop an easy-to-use software package to help municipalities to track septic systems and other information used by Boards of Health. Because the Buzzards Bay Project had eight years of experience in guiding municipalities on Title 5 issues, we had a clear vision of what was needed to help the towns. Consequently we could identify for Kyran Research the conceptual structure, content, and format for this software application. Thanks to the expert programming skills of Kyran Research Associates Inc., we were able to develop an easy-to-use yet sophisticated Windows application that runs under FoxPro for Windows 2.6, which we have dubbed SepTrack.

Initially our aim was to assist the municipalities surrounding Buzzards Bay to implement the goals identified in the Buzzards Bay Comprehensive Conservation and Management Plan. To this end, the Buzzards Bay Project provided computers, software, and technical assistance to get our communities "up and running." However, as we began the process, we recognized a widespread interest by municipalities elsewhere in the Commonwealth in the use of this software application. It is for this reason, that the Buzzards Bay Project began offering SepTrack free to any municipality in Massachusetts.
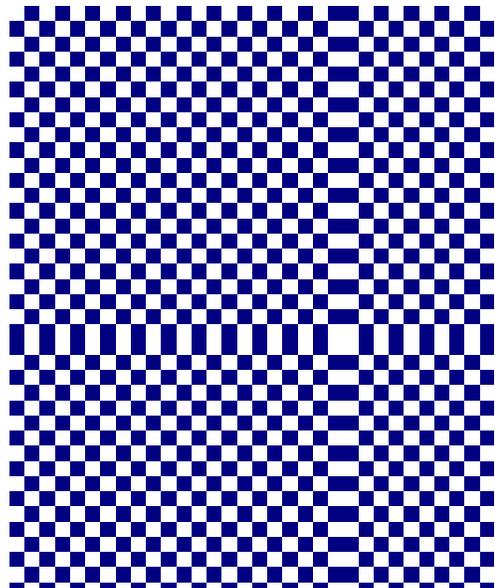
Chapter 2. Getting started

What you will need:

1) A 386 computer or better

2) 4 MB of Ram or better

3) 100 MB hard disk or better

4) Windows 3.1 or better

> 5) FoxPro for Windows 2.6 for SepTrack V 1.0,
> *(Warning: This version of SepTrack will not run
> under later versions of FoxPro.)* V 1E.1 does not
> require FoxPro.

> 6) Data from your Assessors office to insert into
> the SepTrack database (see **Appendix A** for more information). *Demo files are included
> so you can evaluate **SepTrack** without the effort of obtaining your town's data. These
> demo files can also be altered with new information and new records, but we do not*

Because of the recent limited availability of FoxPro[TM] , the Buzzards Bay Project made available the compiled stand-alone version of **SepTrack Version 1.0** that can run in Windows [TM] even when FoxPro for Windows installed. SepTrack Version 1.0 (1 installation disk) runs under FoxPro [TM] 2.6 whereas **SepTrack Version 1E.1** (3 installation disks) does not require FoxPro. While both versions operate identically, Version 1E.1 is not able to run certain advanced features that would be available if you have FoxPro. For example, if FoxPro is installed on your computer, it is relatively easy to create mailing labels or send out form letters for selected properties in your town with the FoxPro "Wizards" routines (see Chapter 8). If you do not have FoxPro, you will only be able to do these tasks if you have some other database manager on your computer (e.g. Microsoft Access TM) and are familiar with the operation of that program.

If you install SepTrack Version 1E, all files will be installed in a directory called C:\Septic instead of C:\Buzzbay. If you have already installed Version 1.0, this is no advantage to install and use Version 1E.1. If you do install version 1E on a computer, run the batch file UPGRADE.BAT on disk 3 of the installation disk set to automatically copy all the data and graphics files to the C:\buzzbay Directory.

For more information about the differences between the two versions, contact the Buzzards Bay Project at (508) 748-3600. Both versions require Windows[TM].

> *recommend reentering large amounts of assessors data manually.*

Which should you install, V1.0 or V1E.1?

Both versions operate identically. If you own FoxPro we recommend that you install version 1.0 because you can take advantage of FoxPro for design your own special reports and other advanced FoxPro features. If you do not own FoxPro, install version 1E.1.

Chapter 3. Installing SepTrack

NOTE: SepTrack requires Windows 3.1 or Windows 95. We recommend Installing SepTrack on Drive C. Version 1.0 installs SepTrack in the directory C:\Buzzbay. Version 1E.1 installs SepTrack in the directory C:\Septic.

WARNING: Reinstalling SepTrack destroys all previous versions of the data tables on your computer!!! See the chapter *Trouble Shooting & Frequently Asked Questions* for guidance when problems arise.

To install SepTrack V1.0:

1) Install FoxPro™ for Windows™, version 2.6. Follow the installation directions on the FoxPro diskettes. Go to the Windows 3.1 Program Manager or Windows 95 start button and RUN 'a:setup'.

2) After FoxPro is installed, insert the Buzzards Bay Project's **SepTrack** installation disk and from Windows Program Manager or Tab Works, RUN 'a:installa' if installing from drive A: or RUN b:installb if installing from drive B:

3a) In Windows 3.1, after both FoxPro and **SepTrack** are installed, open the FoxPro window create a SepTrack Icon from the Program Manager as follows. First click on the FoxPro icon **once**. Second, click on FILE, COPY, and the current or new file group name you wish to have SepTrack loaded. (If you choose the FoxPro group to copy to, you will have two identical FoxPro icons in the FoxPro file group window!) Third, Click **once** on one of these FoxPro icons. Then click on the Windows menu FILE, then Properties. In this properties box, enter the working directory as 'C:\BUZZBAY'. Type in the Command line as 'C:\FPW26\FOXPROW .EXE -T C:\BUZZBAY\SEPTIC. APP'. Program description should be listed as "**BuzzBay Project's SepTrack**".
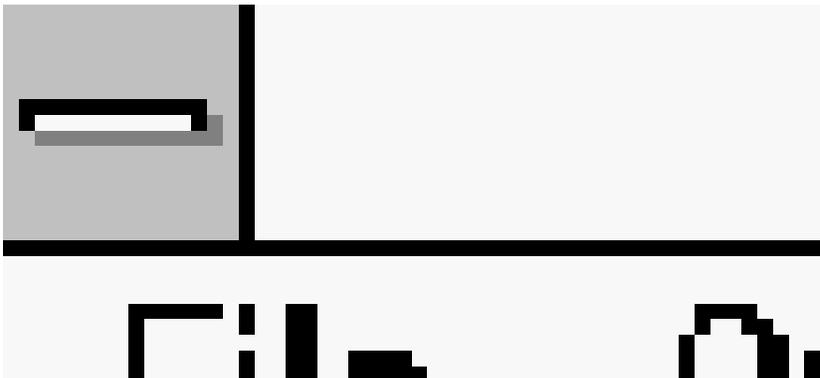
3b) After installation in Windows 95, create a shortcut icon by opening Windows Explorer. Find the FoxPro program in the \FPW26 directory. Click on FPW26.exe

program once (you may not see the "exe" extension listed in Explorer depending upon how you have set the Windows Explorer defaults). Click on create shortcut. Move the shortcut to the Windows 95 main screen. Click on the shortcut icon with your mouse's right button and click on "Rename" and name the icon "SepTrack," then click on the "properties" button and make sure that the startup directory is "C:\septic" and that the "target" is listed as 'C:\FPW26\FOXPROW.EXE -T C:\BUZZBAY\SEPTIC.APP.

To install SepTrack V1E.1:

1) Insert disk 1 and from Windows 3.1 Program Manager or Windows 95 START button RUN 'a:setup'.

2a) After installation in Windows 3.1, create a SepTrack Icon from the Program Manager as follows. Click on **New**, then **Browse**, then navigate to the \Septic directory and click on Septic.exe. Rename this icon SepTrack.

2b) After installation in Windows 95, create a shortcut icon by opening Windows Explorer. Go to the \Septic directory and click **once** on the Septic.exe file (you may not see the "exe" extension listed in explorer depending upon how you have set the Windows Explorer defaults). Click on create shortcut. Move the shortcut to the Windows 95 main screen. Click on the shortcut icon with your mouse's right button and click on "Rename" and name the icon "SepTrack," then click on the "properties" button and make sure that the startup directory is "C:\septic."

Chapter 4. Using SepTrack

Starting SepTrack from Windows™

1) Click on the SepTrack icon that you created in the previous section. The KYRAN Inc. logo appears for a few seconds, then the Buzzards Bay Project logo will appear.

2) At the **Buzzards Bay Project** logo, click on the **Entry** button, and drag down the mouse to the **Septic System Update** and release the mouse button

3) The **General System Information** screen will appear with the first record (lot) in the database. You may either edit this record or find a specific lot by system id number, street address, or property owner. The database can also be scrolled upon by clicking on the **FIRST, PRIOR, NEXT,** and **LAST** buttons. You are now ready to roll!

Chapter 5. The Basics

Once you have started SepTrack from Windows, most likely you will be doing so to either update the database, look up information on a lot, or generate a report. The specifics of these procedures are described on the following pages, but in all cases exiting the program is important before you turn off your computer. For example, if you are updating the database, you will edit a record (a particular lot), and then leave the record by clicking on either **SAVE** or CANCEL the changes that you made. Alternatively, you can print a report instead. When all changes and updates have been made to the data base, the program should be closed by clicking on the CLOSE button **to exit. Then go to FILE/CLOSE/EXIT FoxPro.**

If you are looking for a specific property, you can also do a search or the database can be scrolled through by clicking on the Database Browse button. In this mode the database MAP-LOT ID, Owner, and Address can also be examined and edited in tabular form like a spreadsheet. If you click on a specific record (lot), that record will be displayed on the General System Information Screen. When you are done with viewing the database remember to close down the database and exit FoxPro

Using the Find feature to locate a property

Click on the Find button and use the pull down screen to identify whether you will search the database by **Street Address, Owner Name, or System ID.** Move to the Search For box and type in the item you wish to search for, then press enter or click on the **OK** box. If the item is found, a **message** screen will appear that the lot has been found and, click on Yes. The **General System Information** screen for that parcel will then be displayed. If you have typed in an address or name, make sure you select address or name in the search menu. If your search comes up empty, try typing part of your search string (e.g. try a search on "Shore" if a "Shore Rd, 85" search is not successful, and scroll through the database with the NEXT button). We do not recommend the extended search option because the procedure is very slow and will generally be unsuccessful if the quick search was unsuccessful. *Note: IF YOUR TOWNS DATABASE IS WRITTEN IN ALL CAPITALS, YOUR SEARCH WORDS MUST ALSO BE CAPITALIZED.*

Editing a record

On the **General System Information** screen you will note that the screen is lightened and you cannot edit any of the fields. To make changes to this record, you must first click on the **EDIT** button which will cause the letters on the screen to darken indicating that the screen is now active. On this page, only fields with gray entry boxes can be edited. Other
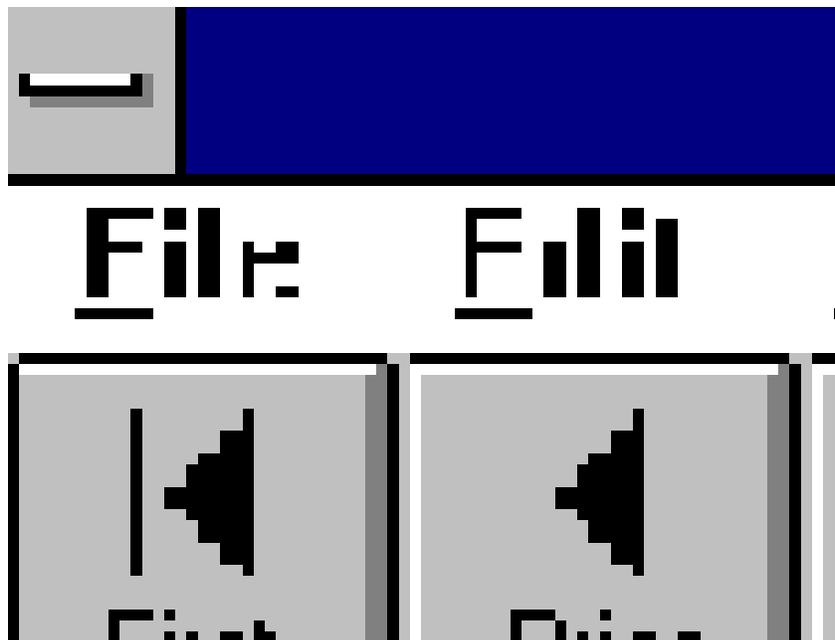
information on the **General System Information** screen represents summary data from other entry pages associated with this property. These other pages can be accessed by clicking on the **Districts**, **Pumpouts**, **Design**, **Soil Eval, Inspect, Subdiv**, **Repairs,** and **Betterment** buttons. To exit any of these screens, click on the **OK** button.

Screen Jump Buttons

A summary of these other pages accessible by clicking on the labeled buttons are as follows:

Clicking on the **Districts** button calls up the **Special Information District** screen. This screen enables special districts to be identified with a property. Any of the fields may be entered by clicking on the field with the mouse.

Clicking on the **Pumpouts** button calls up the **Update Pumpout Information** screen. To enter or update the data you must press the **F2** key (**New Entry**) on your keyboard, then use you mouse and click on the appropriate field.

Clicking on the **Design** button calls up the **System Design Information** screen, any of the fields may be entered by clicking on the field with the mouse.

Clicking on the **Soil Eval** button calls up the **Soil Evaluation Information** screen.
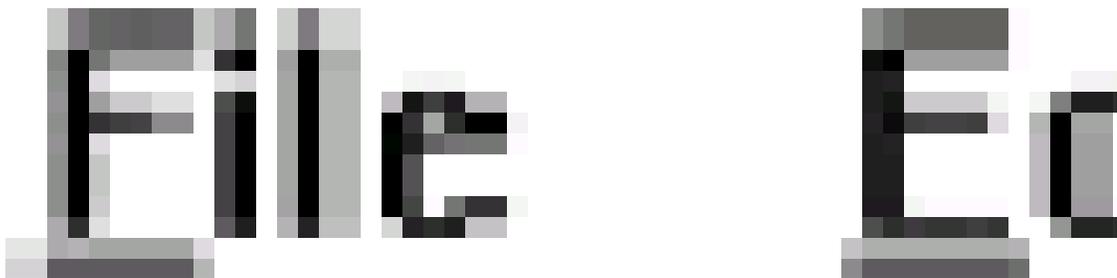
Clicking on the **Inspection** button calls up both the **Inspection Information** and **Complaint Information** screens. Click on the appropriate window, then click on the F2 button.

Clicking on the **Subdiv** button calls up the **Subdivision and Permit tracking information** entry Screen. Clicking on the **Repairs** button calls up both the **Repair/Upgrade Information** screen.

Clicking on the **Betterment** button calls up the **Betterment Information** entry Screen.

The Special Information District screen.

This screen enables up to 15 special districts to be identified with a property. Any of the fields may be entered by clicking on the field with the mouse. Valid entries are **Y**, **N**, and **U** (Yes, No, Unknown). One special district is user defined. This "other" field can be described in the comment field, or other special notations may be added. Forty characters are allowed in the other description box. When you are finished with the changes, drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where the Special Districts box will show a Y if any special districts were tagged.

The Update Pumpout Information screen.

To enter or update the data you must press the **F2** key (**New Entry**) on your keyboard, then use you mouse and click on the appropriate field. Under the **Source** section, allowable entries are **C**

for Cesspool, **T** for Tank, **G** for grease trap, and **U** for unknown. For the Reason field, valid entries are (**S**)cheduled maintenance, unscheduled (**M**)aintenance, (**I**)nspection, (**O**)verflow, (**B**)ackup, and (**U**)nknown. Valid entries for **Action Req?** are Y, **N**, and **U** (Yes, No, Unknown). If you type in the wrong information the computer gives an error message identifying the allowable responses. *If you decide you do not want to add an entry, press F3 then F4 (note the special keys highlighted at the bottom of the screen).* Some fields can be left blank, but a date is mandatory. After you have entered the appropriate data, press the **F4** key then click on the **OK**. This will bring you back to the **General System Information** screen where a summary of key information you have entered appears in the area showing recent pumpout statistics.
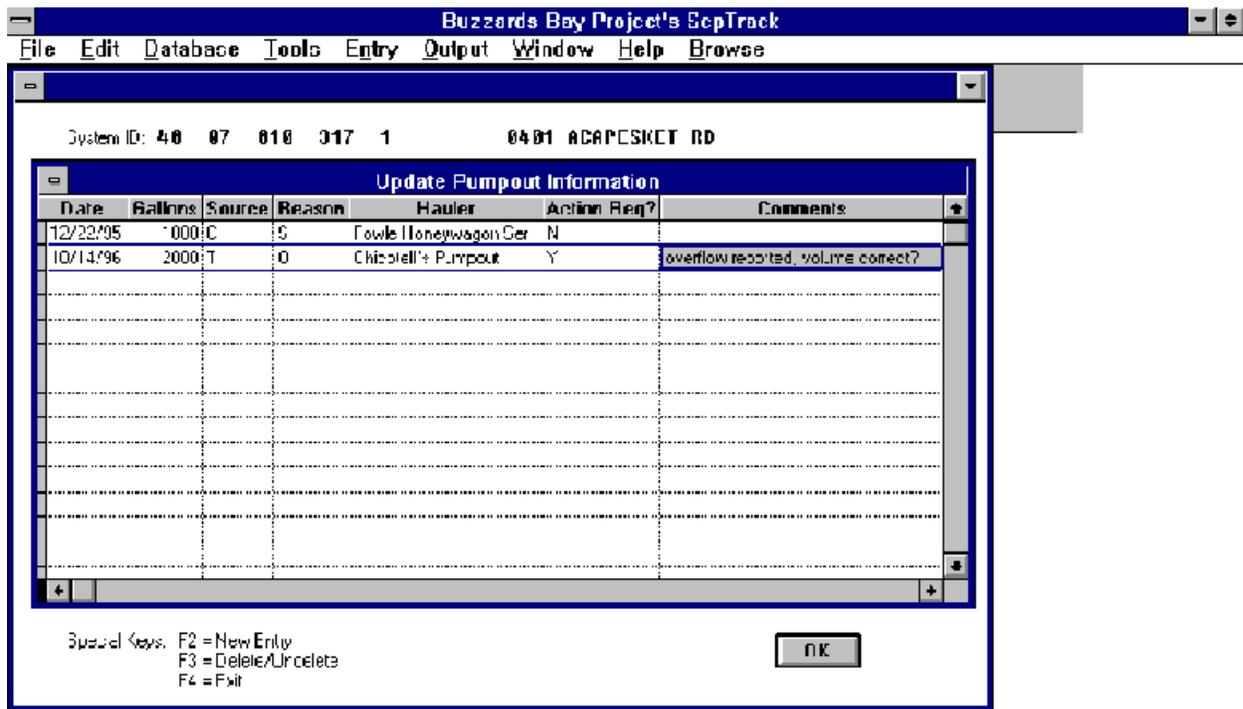
The System Design Information screen

Any of the fields on this screen may be entered by clicking on the field with the mouse and entering the data from the keyboard. For the **System Type**, **Leachfield Type**, **Tank Composition**, and **Waste Source** fields, click on the down arrow to get the drop down menu and make the appropriate selection. In the view button entry fields, add the name of a valid TIF file in the field. These files must be placed in the directory c:\buzzbay\graphics for SepTrack version 1.0 and c:\septic\graphics for version 1E.1. See **Chapter 8** for more information and guidelines for creating and using view files.

When you are finished with the changes, drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

The Soil Evaluation Information screen

Any of the fields on this screen may be entered by clicking on the field with the mouse and entering the data from the keyboard. For the **System Type**, **Leachfield Type**, **Tank Composition**, and **Waste Source** fields, click on the down arrow to get the drop down menu and make the appropriate selection. An 80 character comment field is provided on this screen for any special related information. Valid soil class entries are **1**, **2, 3, 4** and **5**. When you are finished with the changes, drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

The Inspection Information and Complaint Information screens

In the **Inspection Information** screen, click on the appropriate window, then press on the F2 button to edit the information. *If you decide you do not want to add an entry, press **F3** then **F4**.* Some fields can be left blank, but a date and P/F/C are mandatory. You must enter **P**(ass), **F**(ail) or **C**(onditional) in the **P/F/C** column. If you type in an invalid response, the program will give you an error message and a gray box above the **Inspection Information** screen will appear with the correct codes. Press any key to remove the message box and return to data entry. The **Complaint Information** screen operates in the same manner. **NON date** stands for the date of the Notice of Non-compliance. **COC date** stands for the date of the Certificate of Compliance, as noted on the screen.

In the **Action Req?** field specify **Y**, **N**, or **U**. After all the appropriate information has been entered, click on the **OK** box in the lower right hand side of the screen to return to the **General Information Screen**. When you are finished with the changes , press **F4** and click on the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

File   Ed

The Subdivision and Permit entry screen

This screen lets the user enter Planning Board and Conservation Commission permit information. The Board of Health permit field cannot be edited on this screen and reflects information entered on the **Repair/Upgrade Information** screen. When you are finished with the changes drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

The System Repairs and Permit screen

Any of the fields on this screen may be entered by clicking on the field with the mouse and entering the data from the keyboard. More space is available in the **Comment** section than shown on the screen, holding 40 characters total.

When you are finished with the changes, drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

BUZZARDS BAY SEPTIC INFORMATION						▼ ▲

File   Edit   Database   Tools   Entry   Output   Window   Help   Browse

System ID: 005.A-0000-0074.0-1   17.00 BEACH ST

Repair/Upgrade Information

Date	Type	Reason	Permit	Comments
06/19/96	D-box repair	causing overflows in yard	96-26	

Special Keys: F2 = New Entry
F3 = Delete/Undelete
F4 = Exit

OK

Ins

The Betterment Information screen.

This screen enables the user to track any of three Betterments that may be administered by a municipal Board of Health. In 1993, the Massachusetts Legislature authorized municipal Boards of Health to enter into Betterment Agreements with homeowners to minimize the potential financial impacts of lead paint removal, oil tank removal, and septic system upgrades. Generally these betterments are spread over 20 or 30 years.

Any of the fields on this screen may be entered by clicking on the field with the mouse and entering the data from the keyboard. More space is available in the **Comment** section than shown on the screen, holding 40 characters total. When you are finished with the changes, drag the mouse down to the **OK** box on the bottom left hand side of the screen. This will bring you to the **General System Information** screen where key information you have entered appears.

File   Ed

Chapter 6. Report Generation and Printing

Whether you are on the **Buzzards Bay Project** screen with the **SepTrack** logo or the **General System Information** screen, you can print the information from 8 built-in reports. Just click on the **Output** button (directly below the **Buzzbay Project** menu) screen, then choose from the following reports:
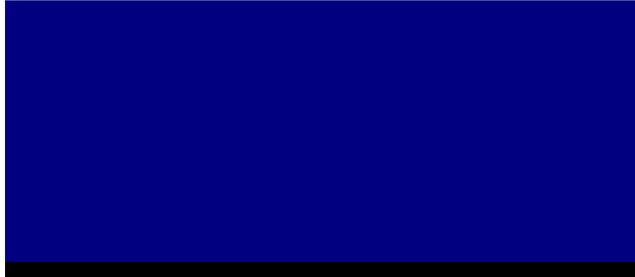
Special District Systems - This generator lists all properties with any special districts identified.

Pumpout Frequencies - This generator lists all properties that have had more than a specified number of pumpouts since a certain date. Note: the # of pumpouts must be at least one, and a date must be specified, otherwise an error message will be generated.

Pumpouts Requiring Action - Lists properties where enforcement or other action was mandated by a Health Board but not yet implemented by the property owner.

Grease Traps Needing Pumping- Lists properties where grease traps have not been pumped according to a prescribed frequency since the specified date.

Entire Data Set for a property- Nearly all data maintained by municipal Boards of Health is public information. By clicking on this option, all information on a property can be printed.

O&M Maintenance Agreement Expired- Operation and Maintenance agreements must be kept in place for certain kinds of systems. This report generator lists properties where no documentation of continued O&M agreements have been provided to the Health Boards.

O&M Test Due-Owners of certain kinds of alternative systems may be required to submit periodic monitoring reports of system performance. This report lists properties where the testing reports are overdue.

Required Inspections-Septic Systems must be inspected within 6 months before and 9 months after the last property transfer.

Once a report is selected, you must choose to direct the output either **To Screen**, **To Printer,** or **To File**. When Printing to report to a screen, or when printing to a printer that has not been set up in Landscape mode with a small font, your entire report may not be visible. Before you direct the output to a printer, make sure the correct printer is identified within Windows. It will usually be necessary to setup the printer with a small non proportional (e.g courier) with the printer in landscape mode to fit the width of the reports.

We strongly recommend however, that reports be written to a file and that file be opened up with your wordprocessor, Windows Write Program, or other software. In this way your report can be formatted with greater flexibility. To ensure alignment of data columns of the text output files in your word processing program, choose a `courier` or other non-proportional

spaced font and print in landscape mode. Windows Write™ program is an easy to use word processor for printing these output files. The names of text files are predetermined by SepTrack which automatically creates ASCII files with a .TXT extension in the C:\Buzzbay directory for version 1.0, and C:\Septic for version 1E.1. For example, frequent pumpouts are directed to a file called **NUMPUMPS.TXT.** For some reports, if you had previously printed one of the prebuilt special reports, a new file name will be created with a sequential number added to the name. For example, the first instance of the entire report output text file is titled **ENTRPT1.TXT**, the second instance is **ENTRPT2.TXT**, etc. up to **ENTRPT6.TXT**.

Chapter 7. Creating and Using Graphic Files

A useful feature of SepTrack is its ability to call up graphic images specific to a particular lot. You will find this feature useful when you want easy access to site plans, alternative system designs, or even photographs associated with a property. Graphic files must be stored in a subdirectory called C:\buzzbay\graphics. (If you are using SepTrack Version 1E, the subdirectory will be C:\septic\graphics.) Graphic files can be stored in several graphics formats including .TIF, .BMP, and PCX. To take advantage of the view feature in SepTrack, you will need:

> to own or have access to a full page scanner
> have adequate hard disk space

With regards to disk space, to store 100 graphics files (e.g., black and white plans) at a readable resolution you will need to have only about 20 megabytes of hard disk space free. If your town has 5,000 built lots and you plan on systematically storing 2 graphics file associated with every lot, you would need about 2 GB hard disk space. In the latter case it would take a full time employee working exclusively on this task for more than a year to accomplish this feat, so obviously you will want to be selective about what images you choose to scan.

Most scanners will include software that will allow you to select image format type and resolution. You will find it desirable to reduce on a photocopier large engineering plans so that they fit on your flatbed scanner. The scanner software will likely let you choose a scanning resolution. The higher the resolution, the better the image quality, but the greater the file size. Seventy-five dots per inch (dpi) will usually result in readable graphics files and save your hard disk space. Always store engineering plans and line drawings in 1-bit black and white graphics mode. An 8 1/2" by 11" image scanned in full true color at 350 dpi would occupy more than 40,000,000 bytes of hard disk space. The same file at 75 dpi and 1 bit B&W might occupy only 100,000 bytes, 400 times smaller! After you have created the graphics file, move the file to the "Graphics" subdirectory

Chapter 8.Backing up & other Housekeeping

Backing up is an important computer "housekeeping" task that should be followed. Included with SepTrack are two backup batch files that can be accessed through either Windows or DOS. An icon for these batch files should be included in the program group where SepTrack is installed. One file is called **backseph.bat**. This batch file backs up all relevant files to a directory called C:\buzzbay\backups (for Version 1.0) or C:\septic\backups. This batch file should be run at the end of every day that the database has been updated. The batch file **backsepf.bat** zips down and backs up the relevant data files to one or more floppies. This batch file should be run on a weekly basis.

Because the **backsepf.bat**, batch file compresses the file with a zip program, your data will generally fit on one to several disks depending on how much data you have entered. It is a good idea to rotate between two sets of floppy disk backup copies. One copy of the files should be kept in a safe location off site, the other copy should be kept near the computer.

A critically important housekeeping task is to periodically reindex the data. You will know it is time to reindex the data set when the programs begins to act sluggishly or erratically. In general, after every several days of heavy data entry you should reindex the data. To reindex from your SepTrack menu select **Database Reindex** and choose all tables. Answer **Yes** then **Cancel** after the reindexing is complete (the program will stop accessing the hard disk). Reindexing make take as long as 10 minutes depending on database size and speed of computer.

Other housekeeping tasks that should be conducted by all computer users is to **Exit Windows** and run the SCANDISK.EXE and MSAV.EXE DOS programs at the DOS C:> prompt to periodically check for hard disk and virus problems respectively.

Chapter 9. Advanced features & database manipulation

1. Building a Database from Scratch vs. Importing

SepTrack comes shipped with a sample database containing about 100 records. The database was included for demonstration purposes, but this sample database could be modified and built upon to create a database from scratch. For larger municipalities, this would be an unwise approach because it would be far more cost effective to obtain data files from your Assessors Office and to hire a programmer for a typical cost of $200 to $600 (depending upon the size and complexity of the Assessors database) than to pay a staff member for reentering tens of thousands of data fields.

On the other hand, for a very small town with ample volunteer assistance, creating a database from scratch is feasible. Follow the procedures on this page for modifying the various data tables. The primary data table that you need to modify is TOWNCTL.DBF. You do not need FoxPro to modify this file and it can be manipulated with a wide range of database management programs.

Some users of **SepTrack** have reported success in appending assessors data onto the sample database file. This is the approach most consultants will use for importing Assessors data. For this effort to be successful, each column in the data set must be labeled with the correct **SepTrack** field identifier (see Appendix A).

Updating Assessors office data into a **SepTrack** database is a somewhat more complex task best left to a consultant.

2. Tailoring the database to your town

Every town has its own system of zoning codes and other features to which this program must be adapted. Often your programmer will make these changes for you, but it is simple for anyone to make these changes. To change these default codes, exit SepTrack by clicking on **exiting to FoxPro.** You need not have FoxPro, and users of **SepTrack Version 1.0E** would use some other database manager installed on their computer to make these changes (also see box to the right).

When you enter FoxPro, close down the command box that appears, and load the database titled TOWNCTL.DBF in the **C:\BUZZBAY** directory (use the **File** menu then **Open**). To view and edit this database file, click on **Database** then **Browse**, and the file will appear on your screen. Change, if necessary, the fields with the name of the municipality (column titled *Ctownname*) and municipality number (column titled *Ntownid*, a code created by the state Department of Revenue for each town). It is not essential to change the field *Ntownid*. Make sure the column titled *Cprindev* shows the correct port hooked up to your printer. (On most computers, this field should say LPT1.) The Field titled *Cidformat* defines how your assessors offices codes each property in your town. Some towns track properties by Map and Lot. In one town we discovered that 5 fields were used —Map, Section, Plot, Lot, and Suffix! To ensure maximum flexibility of SepTrack, you can define the format of these five fields by changing the numbers in the five columns next to the field titled *Cidformat*. Setting one of these fields to zero omits that column

from the **SepTrack** Database. Thus if your town Assessors tracks properties with three fields- Map, Section, and Lot, **SepTrack** can easily accommodate that format.

After you have made the appropriate changes to the file TOWNCTL.DBF, click again on FILE and OPEN, and open the file titled FLDCODES. This file contains many of the drop down menu options such as zoning codes, system types, and so forth. Change the zoning codes so that they match those of your town (a couple of zoning codes may be shown in the first two records of the database with additional codes about 25 records (lines) down. It is acceptable to delete or insert additional zoning codes into the database. Usually we do not recommend modifying other fields in this database file, but we have found that some Boards have a preferred certain other usages in describing certain leach field or system types. It is acceptable to either overwite records with new information, delete records, or insert records. To delete a record, click on **RECORD** then **DELETE.** Note that the record remains there and will not "disappear" until you click on **DATABASE,** then **PACK**. To insert a new record, click on **DATABASE,** then **APPEND**. It is important that *Cdatafield* entry precisely match the usage in this database, however *Ccodevalue* and *Cdesc* are user defined.

After you are done modifying these files, Click on **FILE, CLOSE,** then **EXIT** and your changes will be saved. These manipulations can be done with a variety of spreadsheet and data base management programs that can read .DBF files but extreme care must be made not to change the fundamental structure of the .DBF file.

3. Keeping up with your Assessors Office

Your Assessors office likely updates it lot data either once or twice a year with the changes in lot numbers, addresses, and corrections of errors. How should you keep up with these changes? If your town is small, making all these changes yourself is relatively easy. For example, if a large parcel is subdivided into 10 buildable lots, you would first delete the large parcel from the database, then insert 10 new records with Map and Lot numbers that correspond to the new lots. These would be entered in the System ID field, which of course must be in the same format as other records in your database. You would then have to enter all the other relevant property data. For larger communities, or those with rapid growth, a more efficient approach would be to obtain a new download of the assessors data each year and to have a professional programmer merge the new data with existing information in the SepTrack database. The effort and expense of this approach will vary greatly depending on the format of the Assessors data provided and you should obtain bids for these services to obtain the most competitive vendor.

4. Global replacing of a data field in your database

When setting up your database, suppose you discover that the number of buildings on a parcel is not listed, and this data was not exported from your Assessors office. When you view a property, you see the number of bedrooms, or a year built, but the number of structures is always zero. One way to address this problem is to manually correct the oversight every time you open the **General Information Screen** on a particular parcel. However, the easier solution is to globally replace the incorrect data. For example, you can assume that if there if there is a year built value, there must be at least one structure present (check with your assessors office about identifying parcels with multiple structures). To make the global replacement, follow these steps: **Exit to Fox Pro**, **open Septcsys.dbf**, click on **Record**, click on the *nnumstruct* field, put **1** at the **replace WITH** box, for scope choose **all**, click the **for** button, tag the *nyrbuilt* field then add

"<<>>0", then execute. Allternatively, in the FoxPro Command Box type "**Replace all septcsys.numstruct with 1 for septcsys.nyrbuilt<<>>0**."

5. Printing Labels

The current version of **SepTrack** does not have a built-in label generator or built in form letters, but these tasks are relatively easy to accomplish if you have FoxPro installed on your computer. For example, suppose you wanted to create labels for all properties with septic systems. From SepTrack, **Exit to FoxPro**. Click on **File, Open**, and select **Septcsys.dbf**. Click on **Run**, then **New Query**. This step will allow you to create a temporary database with just the records you want (houses with septic systems). You will want to select the following fields as part of your query: *Cownername*, *Cmailaddr1, Cmailaddr2, cmailcity, cmailsate, cmailzip*. Sort by Cownername, then for Selection Criteria choose the field *csewered* **NOT** Y (if you want all homes with septic system). If the csewered field is blank in your database you could use *csystype* **not "SEWERED/ABANDONED"** to find homes with septic systems. If your town is not sewered, you could identify homes with septic systems wherever the field *Nyearbuilt* is not 0. Once you have created the temporary database (titled **Query)**, Click on **Run**, **Wizard**, **Labels**. Click the **Next** button, choose your **label size**, then select your fields, then click on **Next**. The first line should be *Cownername*, second line is *Cmailaddr1*, third line is *Cmailaddr2*, and forth will have *cmailcity***[comma]***cmailsate***[space]***cmailzip***[enter]**.

This process sounds a bit complicated, but with the help screens a novice can make their way through this task. Moreover, both the query and label steps can be saved to files so you never have to repeat this process to generate new labels as you update your database.
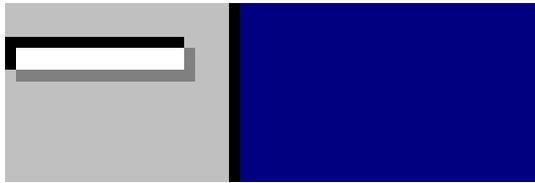
File

Chapter 10. Trouble shooting & frequently asked questions

1) If the program screen button icons are compressed and the software does not operate properly, how do I correct this problem?

A. This application is designed to operate in VGA modes of 480x640 or 800x600. Higher pixel resolutions may conflict with the operation of the program. This problem can be solved by selecting the Windows setup icon and changing windows VGA mode to a lower resolution. This can be reset after you are done working with SepTrack.

2) When I click on the SepTrack icon, I get a message "files not found" and a command box appears on my screen. How do I correct this problem?

A. This problem may arise if your computer loses power or you turn off your computer without closing the software application. These actions can cause the loss or corruption of important data files. This problem may also arise if files are accidentally deleted through the Windows File Manager or within DOS. Do not backup your data at this point because you will overwrite your last uncorrupted last backed up data with the corrupted data.

To recover your previous backup, run the **Srestore.bat** batch file that can be found in your SepTrack directory. In DOS, you may also wish to run MSAV and SCANDISK to see if viruses or hard disk problems are occurring on your computer. See Chapter 8 for more information on backing up. **Always Exit SepTrack and FoxPro before turning off your computer.**

3) Is SepTrack GIS (Geographic Information System) compatible?

A. Partially. GPS coordinates can be entered into the General Information screen, presumably of septic system location. These coordinates can be obtained using a GPS unit, or interpolated from good quality orthographic maps. With GPS coordinates in place, the SepTrack .DBF files could be exported into a GIS application, to show for example the location of failed systems in a town. You should discuss your towns GIS capabilities with your towns computer consultant.

4) In the Betterment Information screen, why is there not a section for asbestos removal?

A. Boards of Health may only enter into betterment agreements for residential buried oil tank removal, lead paint removal, and septic system upgrade. If a site has an asbestos

removal problem, this could be included in the other description field on the General Information screen.

5) When creating a new record, must I always have a map and parcel id number?
A. Yes. The database is organized by this field and a new record cannot be created without entering this data. Extreme care should be taken to avoid any duplication in this field.

6) If I accidentally delete the map and parcel ID number, how do I correct this?
A. Click on cancel, and the map and lot ID code will reappear.

7) What do I do if the program gets hung on the Kyran logo screen and does not open up the database?
A. Close down all FoxPro windows and Windows. One possibility is that files have been accidentally deleted or files have been corrupted. From the DOS prompt, first run SCANDISK to check for hard disk problems (correct any). Second, run MSAV to test for viruses. If the program still does not operate you may need to recover backed up files (see response to question 2 above)..

8) SepTrack has been slowing down and sometimes freezing on a particular record. How can I correct this problem?
A. You may have to reindex the database. This must be done periodically after making additions or corrections to the database (weekly for routine data base maintenance). To reindex, on the SepTrack main screen, click on **Database**, **Reindex**, tag **All Tables**, click on **Index**, answer **yes**, then **cancel** when the computer is done. Refer to Chapter 6.

APpendix A: Data Element Definitions

Field Name	Type	Length	Dec.	Description
Database Name: COMPLNTS				
CCOMMENT	C	40	0	Comments
CID	C 9		0	System Internal ID
CREPORTBY	C	25	0	Reported By
DCOMPLAINT	D	8	0	Date of Complaint
NTOWNID	N	3	0	Town ID Number
Database Name: FLDCODES				
CCODEVALUE	C	3	0	Coded Value or Blank
CDATAFIELD	C	10	0	Name of Data Field
CDESC	C 20		0	Description
Database Name: INSPECTS				
CCOMMENT	C	40	0	Comments
CID	C 9		0	System Internal ID
CINSPECTOR	C	15	0	Inspector Name
CPASSFAIL	C	1	0	Pass or Fail
CSYSTEMDAT		0	0	CID+Date,descending
DCERTCOMP	D	8	0	Certif of Compliance Date
DINSPDATE	D	8	0	Date of Inspection
DNCNOTICE	D	8	0	Non-Compliance Notice Date
NTOWNID	N	3	0	Town ID Number
Database Name: PUMPOUTS				
CACTIONREQ	C	1	0	Action Required?
CCOMMENT	C	40	0	Comments
CHAULER	C	20	0	Name of Hauler
CID	C 9		0	System Internal ID
CREASON	C	1	0	Reason Code
CSOURCE	C	1	0	Source Code
CSYSTEMDAT		0	0	CID+Date,descending
DPUMPED	D	8	0	Date of Pumpout
NGALLONS	N	5	0	Gallons Pumped
NTOWNID	N	3	0	Town ID Number
Database Name: REPAIRS				
CCOMMENT	C	40	0	Comments
CID	C 10		0	System Internal ID
CFNSTALLER	C	25	0	Name of Installer
CPERMITID	C	5	0	Permit ID Number
CREASON	C	25	0	Reason for Repair
CSYSIDDATE		0	0	CID+Date
CTYPE	C 40		0	Type of Repair
DREPAIR	D	8	0	Date of Repair
NTOWNID	N	3	0	Town ID Number
Database Name: TOWNCTRL				
CIDFORMAT	C	27	0	System ID Format
CPRINTDEV	C	4	0	Default Print Device
CRECID	C 10		0	Record ID
CTOWNNAME	C	35	0	Name of Town
LREADONLY	L	1	0	Read-Only Access?
NDINSPXFER	N	3	0	Insp Req Days B4 Xfer
NIDPCILEN	N	1	0	Length, I st pc of ID
NIDPC2LEN	N	1	0	Length, 2nd pc of ID
NIDPC3LEN	N	1	0	Length, 3rd pc of ID
NIDPC4LEN	N	1	0	Length, 4th pc of ID
NIDPC5LEN	N	1	0	Length, 5th pc of ID
NTOWNLD	N	3	0	Town Number
Database Name: SEPTCSYS				
C2COMPTANK	C	1	0	2-Compartment Tank?
CALTSPECS	C	50	0	Alternative Specs

This information is included to assist programmers import Assessors Office data into this application.

The SepTrack database includes 7 files with .DBF files and similarly named ones with .CDX or .FPT extensions. Generally all these files must be present for SepTrack to run properly.

Note that each .DBF file is cross referenced with other .DBF files by the CID reference field. The CID string may include (but does not require) high order ASCII characters.

The fields most likely to be found at your Assessors Office include:

Map and Lot
COWNERNAME
CCOWNER (co-owner)
CLOTSTNUMBER (st. Number)
CLOTZIP
CMAILADDR1
CMAILADDR2
CMAILCITY
CMAILST
CMAILZIP
CZONECODE
CUSECODE
NNUMBBDRMS
NNUMSTRUCT
NSIZEACRES
NSIZESQFT
NYRBUILT
DLASTXFER

Field Name	Type	Length	Dec.	Description
CASBLTPLAN	C	1	0	As-Built Plan Filed?
CBOD	C	1	0	BOD?
CCOOWNER	C	50	0	Co-Owner
CDESIGNER	C	35	0	Designer/Company
CELEVTANK	C	1	0	Elevated Tank?
CEVALCMNT	C	60	0	Evaluation Comment
CEVALUATOR	C	25	0	Evaluator
CGRAPHFILI	C	12	0	Graphics Filename #1
CGRAPHFIL2	C	12	0	Graphics Filename #2
CGREASTRAP	C	1	0	Grease Trap Present?
CGRINDER	C	1	0	Garbage Grinder?
CHIGHFLOW	C	1	0	High Flow?
CID	C	9	0	internal ID Number
CINSTALLER	C	25	0	Installer
CINSTOWNER	C	25	0	Owner @ Installation
CLASTUPD	C	9	0	Internal Last Update
CLEACHTYPE	C	1	0	Leachfield Type
CLOTSTNBR	C	10	0	Lot Street Number
CLOTSTREET	C	30	0	Lot Street Name
CLOTZIP	C	10	0	Lot Zip Code
CLOWFLOW	C	1	0	Low Flow Devices?
CMAILADDRI	C	30	0	Mail Addr Line I
CMAILADDR2	C	30	0	Mail Addr Line 2
CMAILCITY	C	20	0	Mail Addr City
CMAILSTATE	C	2	0	Mail Addr State
CMAILZIP	C	10	0	Mail Addr Zip Code
COMCOMMENT	C	25	0	O&M Comment
COMCONNAME	C	25	0	O&M Contractor Name
COMREQ	C	1	0	O&M Required?
COTHERDESC	C	60	0	Other Description
COWNERNAME	C	50	0	Owner's Name
CPERMITID	C	5	0	Permit ID
CPLANFNAME	C	12	0	Plan Filename
CRENTPROP	C	1	0	Rental Property?
CRESERVED	C	40	0	Special Field - TBD
CSBCOMMENT	C	30	0	Setback Prob Comment
CSBOTHWELL	C	1	0	SB Prob-Other Well
CSBPROPLIN	C	1	0	SB Problem-Property Line
CSBPVTWELL	C	1	0	Setback Prob-PvtWell
CSBSURFWTR	C	1	0	SB Prob-SurfaceWater
CSBWETLAND	C	1	0	SB Prob-Wetland
CSDACEC	C	1	0	Spec Dist - ACEC
CSDAPR	C	1	0	Spec Dist - APR
CSDAZONE	C	1	0	Spec Dist - A Zone
CSDBEACH	C	1	0	SD - Barrier Beach
CSDCH61	C	1	0	SD - Chap 61/61A/61B
CSDCSTBANK	C	1	0	SD - Coastal Banks
CSDEASEMNT	C	1	0	SD - Conserv. Easement
CSDENDSPEC	C	1	0	SD - Endang. Species
CSDNITRO	C	1	0	SD - Nitrogen Sen.
CSDOTHDESC	C	40	0	SD - Other Type Descr
CSDOTHER	C	1	0	SD - Other Type
CSDPVTWELL	C	1	0	SD - Private Wells
CSDVRNPOOL	C	1	0	SD - Vernal Pools
CSDVZONE	C	1	0	Spec Dist - V Zone
CSDWETLAND	C	1	0	Spec Dist - Wetlands
CSDZONE2	C	1	0	Spec Dist - Zone 2
CSEASONYR	C	1	0	Seasonal or Yr Round
CSEWERED	C	1	0	Sewered?
CSOILCLASS	C	1	0	Soil Class
CSPECDISTS	C	1	0	Special Districts?
CSTRADDR	C	40	0	Street Name and Nbr
CSUBCONREQ	C	1	0	Conserv. Filing Req?
CSUBFILED	C	1	0	Subdiv. Plan Filed?
CSYSIDPCI	C	9	0	1st pc of System ID
CSYSIDPC2	C	9	0	2nd pc of System ID
CSYSIDPC3	C	9	0	3rd pc of System ID
CSYSIDPC4	C	9	0	4th pc of System ID

Tips for dealing with Assessors Offices

Generally town departments are enthusiastic about working with other town departments in sharing data. However, sometimes because Assessors Office staff may not be throughly familiar with the data export functions of the software that they use, or hardware incompatibilities, this may seem like a difficult barrier to overcome. In such a situation you may need to consult with other municipal technical staff or a private consultant.

Another problem frequently encountered is that the data may not be archived at town hall, or the data is maintained by a private data processing firm under contract with the town. In these cases, a formal request must be submitted to the consultant.

Remember to be very specific in the data that you are seeking (all of which is public information incidentally). Also ensure that you request data on every parcel, not just those with existing structures or residential parcels.

On the next page is a sample letter of request.

Field Name	Type	Length	Dec.	Description
CSYSIDPC5	C	9	0	5th pc of System ID
CSYSSHARED	C	1	0	Shared System?
CSYSTEMID	C	27	0	System ID
CSYSTEMLOC	C	40	0	System Location
CSYSTYPE	C	1	0	System Type
Field Name	Type	Length	Dec.	Description
CTANKMATRL	C	1	0	Tank Material
CTOWNINSP	C	25	0	Town Inspector
CTOWNWATER	C	1	0	Town Water?
CTOXINS	C	1	0	Toxic Waste?
CUNDERTANK	C	1	0	Underground Tank?
CUSECODE	C	4	0	Land Use Code
CVARCOND	C	60	0	Conditions to Var.
CVARIANCES	C	60	0	Variances Granted
CVILLAGE	C	3	0	Village
CWASTETYPE	C	1	0	Waste Source/Type
CZONECODE	C	10	0	Zoning Code
DBLPRSTART	D	8	0	Lead Paint Remove Start
DBOTRSTART	D	8	0	OilTankRemoval Start
DBSSUSTART	D	8	0	Septic Sys Upgrade Strt
DEVALUATED	D	8	0	Date of Evaluation
DINSTALL	D	8	0	Date Installed
DLASTINSP	D	8	0	Last Inspection Date
DLASTPUMP	D	8	0	Last Pumpout Date
DLASTREPR	D	8	0	Last Repair Date
DLASTXFER	D	8	0	Last Transfer Date
DOMCONEXP	D	8	0	O&M Contract Expire
DOMCONSTRT	D	8	0	O&M Contract Start
DOMLASTRPT	D	8	0	O&M Last Report Date
DPERMIT	D	8	0	Permit Date
DSUBCONCRT	D	8	0	Conserv. Cert. Date
DSUBCONFIL	D	8	0	Conserv. File Date
DSUBPBFILE	D	8	0	Plan Board File Date
DSUBPBOK	D	8	0	PB Endorsement Date
MBLPRCMNT	M	10	0	LPR Comment
MBOTRCMNT	M	10	0	OTR Comment
MBSSUCMNT	M	10	0	SSU Comment
NBLPRAMT	N	6	0	LPR Amount
NBLPRANN	N	6	0	LPR Annual Amount
NBLPRTERM	N	2	0	LPR Term (yrs)
NBOTRAMT	N	6	0	OTR Amount
NBOTRANN	N	6	0	OTR Annual Amount
NBOTRTERM	N	2	0	OTR Term (yrs)
NBSSUAMT	N	6	0	SSU Amount
NBSSUANN	N	6	0	SSU Annual Amount

Joe Smith
My Computer Center
Falmouth, MA 02555

Dear Mr. Smith,

The Falmouth Board of Health would like to request a copy of portions of the Assessors Office database that you manage for the town.

Please send the data on DOS readable diskettes. The data fields in our database that we would like to download are as follows (of course omit those fields for which you lack information):
___ map #
___ Lot
___ any other parcel identifiers
___ parcel location (street, #)
___ property owner 1
___ property owner 2
___ mailing address fields

___ (street, town, state, zip)
___ parcel size (sq. ft. or acres)
___ owner
___ number of bedrooms
___ # of structures
___ areas of structures
___ date of last transfer
___ land use code
___ structure year built
___ # of full bathrooms
___ # of half bathrooms
___ zoning
___ sewered
___ town water
___ conservation easements, APRs, etc.
___ date of last property transfer

This data may be sent to us on either 5 1/4" or 3 1/2" floppy disks as ASCII files with comma delimitation. Please call Wendy Hendricks at our Board of Health office should you have any questions regarding this request.

Sincerely,
Your Agent

NBSSUTERM	N	2	0	SSU Tenn (yrs)
NDESGWELEV	N	5	1	Design GW Elevation
NDESGWSEP	N	5	1	Design Separation To GW
NDESIGNFLO	N	5	0	Design Flow (gpd.)
NFULLBATHS	N	4	0	# Full Bathrooms
NGPSCOORI	N	7	0	GPS Coordinate #1
NGPSCOOR2	N	7	0	GPS Coordinate 92
NGWADJTJST	N	4	1	GW Adjustment
NHALFBATHS	N	4	0	# Half Bathrooms
NNUMBDRM	N	4	0	Number of Bedrooms
NNUMSTRUCT	N	2	0	Number of Structures
NOBSRVHIGW	N	5	1	Observed Hi GW Elev.
NOMTESTFRQ	N	4	0	O&M Test Freq (mos.)
NPERCRATE	N	3	0	Perc Rate (min/inch)
NSIZEACRES	N	7	2	Lot Size, Acres
NSIZESQFT	N	8	0	Lot Size, Square Ft.
NSOILHIGW	N	5	1	Soil High GW Elev.
NTANKISIZE	N	5	0	Tank I Size (gal.)
NTANK2SIZE	N	5	0	Tank 2 Size (gal.)
NTOWNID	N	3	0	Town ID Number
NYRBUILT	N	4	0	Year Built
TOWNSYSID		0	0	Town + System ID