

***Charles City County
Septic System Pump Out
Database***

— Summary Report —

November 17, 2008

Town of
Ashland
Counties of
Charles City
Chesterfield
Goochland
Hanover
Henrico
New Kent
Powhatan
City of
Richmond



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Richmond Regional Planning District Commission

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Acknowledgement

Prepared in cooperation with the Virginia Coastal Zone Management Program, Virginia Department of Environmental Quality, and National Oceanographic and Atmospheric Administration.

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Charles City County Septic System Pump Out Database

Introduction

The Richmond Regional Planning District Commission (RRPDC) agreed to create an interactive database for Charles City County, a member locality, to track pump out of septic systems in the County in accordance with the Chesapeake Bay Preservation Act. This database was included as part of the product deliverables for the Coastal Technical Assistance Grant which the RRPDC receives from Virginia's Coastal Zone Management Program. This document describes the creation and functionality of the database.

Data

RRPDC staff worked with Charles City County staff to assemble data from various sources for insertion into the database. Geographic Information System parcel data as well as all 5,790 records in the County's AS400 data and county sewer records were used to create data tables that serve as the basis for all queries and reports that can be performed or generated using the database. What follows is a description of each data table in the Septic Pump-Out Database.

Tables

PUMPOUT ADDRESS LIST RECORDS

This is the main table for the system. This table contains all 5975 records from the Charles City County AS400 system. The following fields from the AS400 system have been imported into the table: PROP CITY, PROP STATE, PROP ZIP 5, PROP ZIP 4, OWNER NAME, ADDRESS 1, ADDRESS 2, ADDRESS 3, ZIP CODE 5, PROP ST NO, PROP ST DI, PROP ST NM, MAP NUM, EFFECTIVE YEAR. Two fields were created which concatenate data found in the AS400 system: ACCT SEQ, and PROP ADDRESS. Additional fields were created to record data specific to the Septic System Pump Out Database: NOTIFICATION DATE, 2ND NOTIFICATION, DATE PUMPED, COMPANY NAME, RECEIPT NUMBER, COMMENTS, SEWER, and UPDATED ADDRESS.

Other tables in alphabetical order are:

ADDRESSES WITH PUMPOUT DATES

This table contains records for properties for which data has been entered into the Septic System Pump Out Database. It will be used when the database is updated with the next version of AS400 data. When the new PUMPOUT ADDRESS LIST RECORDS table is created from the AS 400 system, the previously collected septic systems records will be added to the table when query "K Update pumpout address list record with pumpout info" is run.

CENTRALIZED SEWER

This table contains information on properties which are connected to a centralized sewer. It was created through county sewer bill records.

LANDBOOK WITH ACCT SEQ, PROP ADDRESS, SEWER

This table is a complete copy of the AS400 data with three additional fields. ACCT SEQ: a concatenation of the ACCT NUMBER and SEQ NUMBER fields, PROP ADDRESS: a concatenation of PROP STREET #, PROP STREET DIRECTION and PROP STREET fields, and SEWER which is a new field to record if a property is connected to a centralized sewer. This table is used to show the property information listed on the "Property Info Form".

PUMPOUT ADDRESS LIST STRUCTURE ONLY

This table is used in the process of preparing a new version of AS400 data for use in this system. It should have only fields, no records.

During the creation of this database it was noted that there would need to be included a mechanism to update the address list as development occurs in the future and updated information is received by the county concerning individual septic system pump out. Accordingly, queries were instituted in the database to incorporate new data into the existing database structure. What follows is a descriptive list of these queries and their functions.

Queries

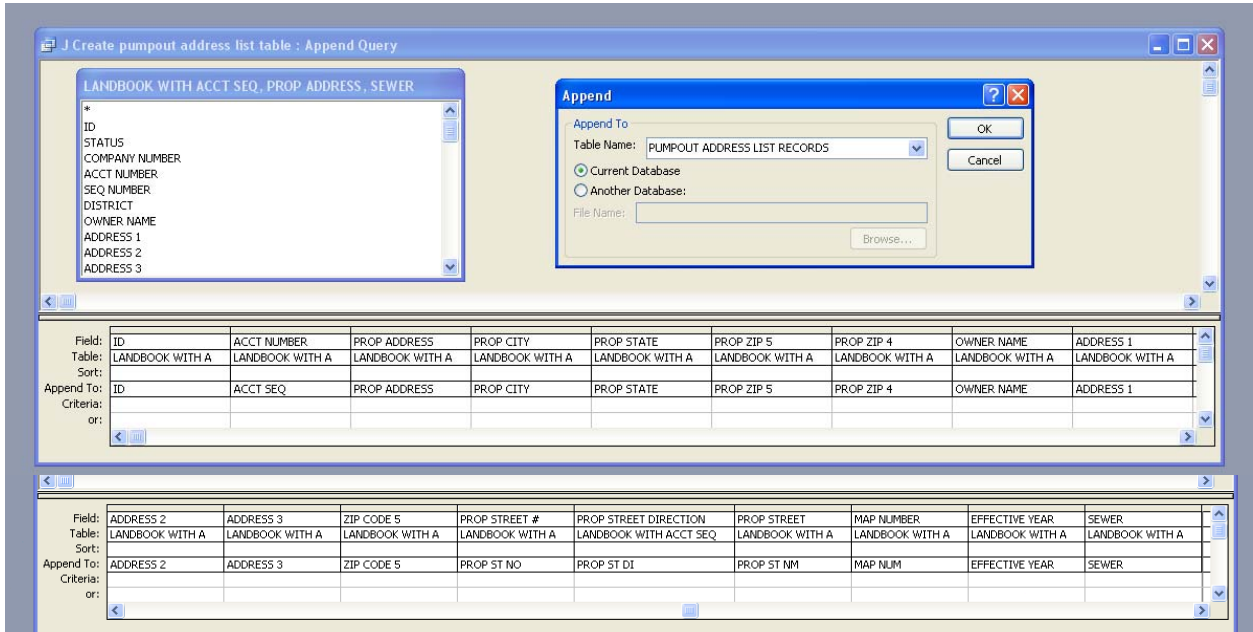
Queries A through K

These queries are used to prepare a new version of AS400 data for use in this system. In order to update the database with the next version of AS400 data the following queries are run in order. Before running the queries, import the AS400 data into the database and name it LANDBOOK (rename the old LANDBOOK by adding a year to its name).

- A Select streets with direction
- B Create a table with street name and dir combined
- C Update Landbook with street names with direction
- D Add acct seq and prop address and field sewer to landbook
- E Clear sewer field created by using central air field
- F Update Centralized Sewer
- G Create table of addresses with pumpout dates
- H Create first table to clear pumpout address llist
- I Create empty pumpout address list table
- J Create pumpout address list table
- K Update pumpuout address list record with pumpout info

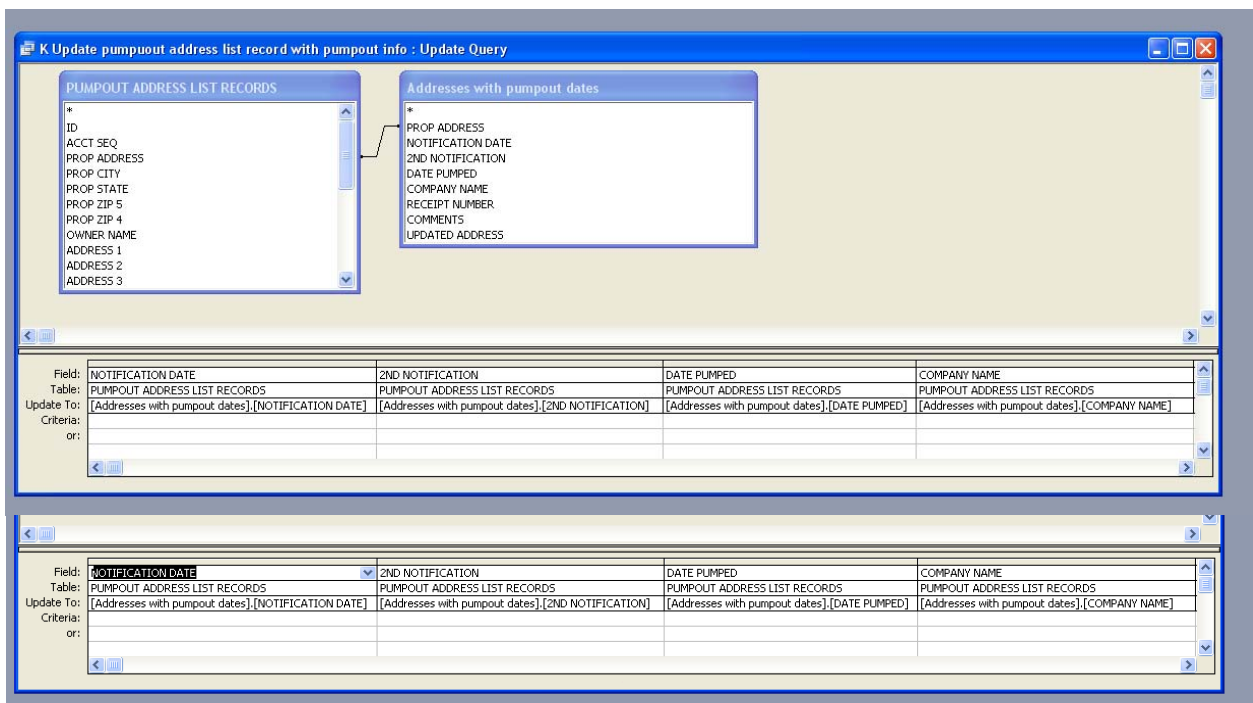
J Create pumpout address list table

This is an Append Query which appends the AS400 data to the PUMPOUT ADDRESS LIST RECORDS table



K Update pumpout address list record with pumpout info

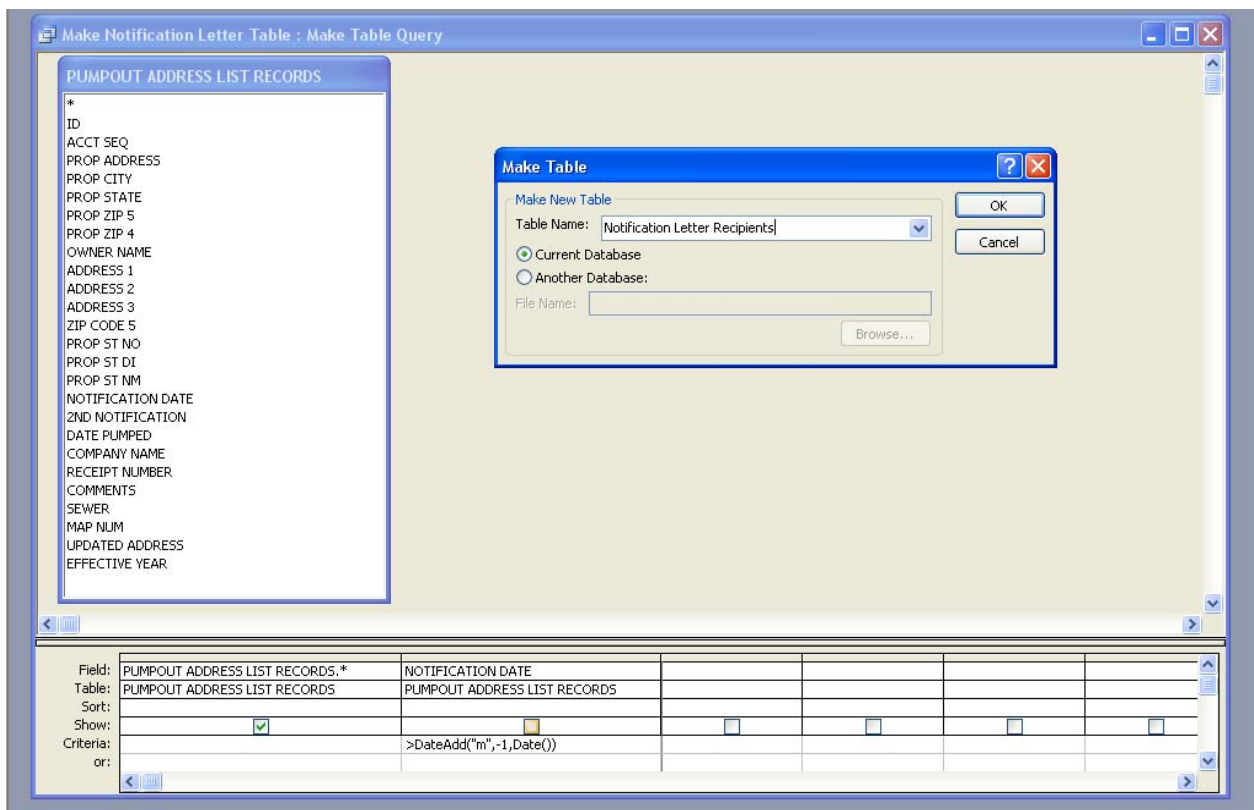
This is an update query which updates the records of those addresses which have pump out information in the system.



As requested by Charles City County staff, the septic pump out database was designed with the ability to determine at which addresses are located septic systems in need of pump out. In order to create a database that was as helpful as possible, RRPDC staff incorporated queries into the database that would produce products that could be exported to other software programs to create form letters and envelope labels for septic system pump out notification mailings. The following describes preprogrammed queries that produce items for such mailings.

Make Notification Letter Table and Make 2nd Notification Letter Table

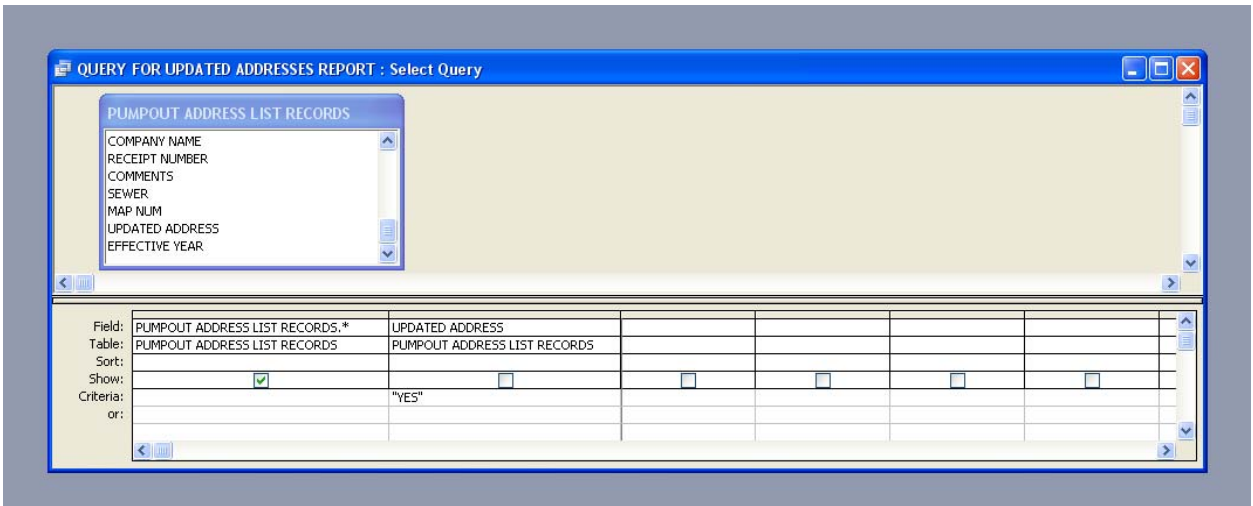
These queries create tables made up of records which have a Notification Date (or 2nd Notification Date) within one month of the current date. These two tables are to be used with a mail merge application to create labels and form letters. These queries are run when the notification dates are set on the Update Notification Date form.



Other queries that were designed into the database include:

QUERY FOR COMMENTS REPORT, and QUERY FOR UPDATED ADDRESSES REPORT

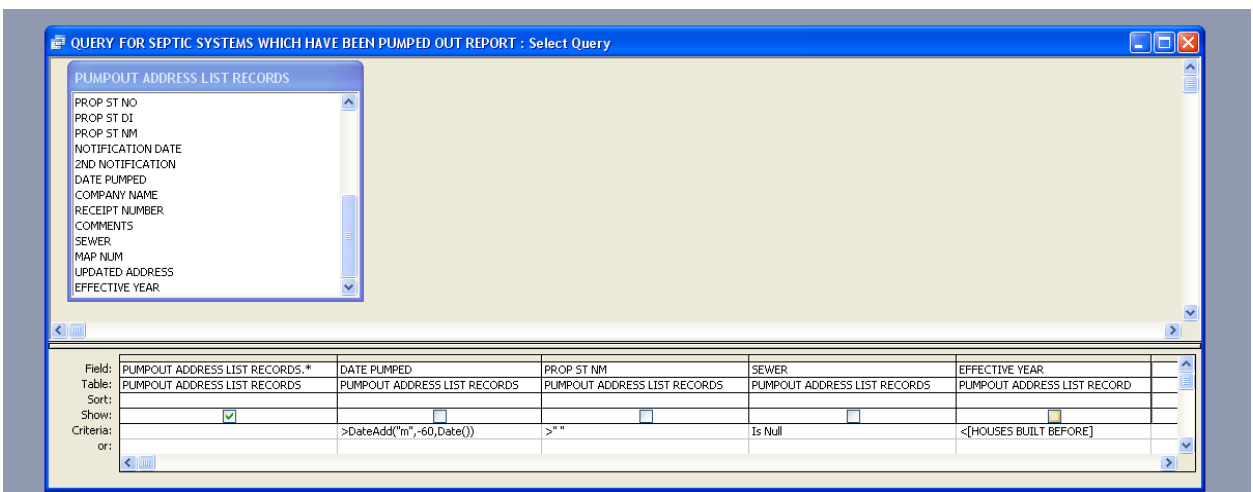
These queries select records from the PUMPOUT ADDRESS LIST RECORDS table based on the presence of either comments or an updated address.



**QUERY FOR PUMPED OVER 5 YEARS AGO REPORT,
 QUERY FOR SEPTIC SYSTEMS WHICH HAVE BEEN PUMPED OUT
 REPORT,**

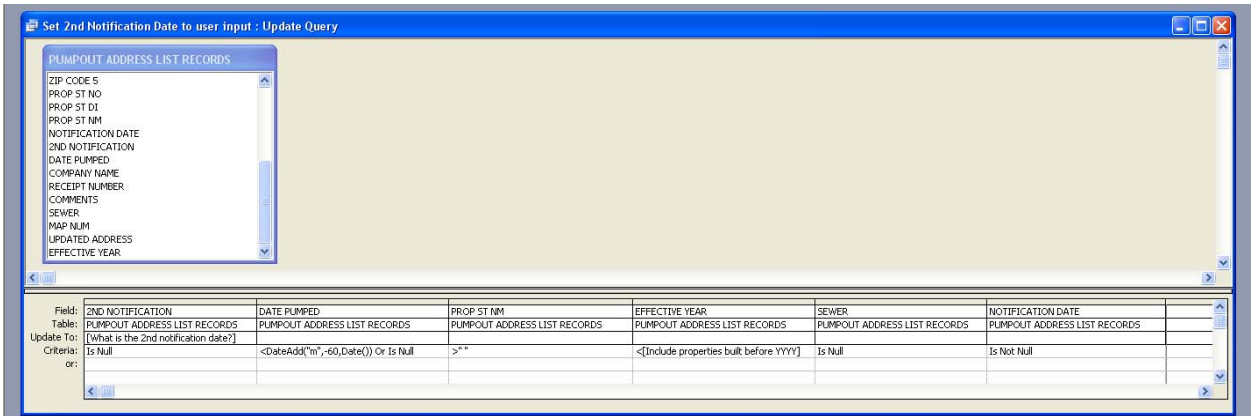
and QUERY FOR PUMPED OUT AFTER USER ENTERED DATE REPORT

These queries select records for the reports which list pump out information for properties based on the date that the septic system was pumped out. They are run each time one of these reports is requested so the information in the report is always the latest information on the **PUMPOUT ADDRESS LIST RECORDS** table. When requesting a report the user will be asked for "HOUSES BUILT BEFORE YYYY". Enter a four digit year in order to filter out new construction. The query **QUERY FOR PUMPED OUT AFTER USER ENTERED DATE REPORT** asks "PUMPED OUT AFTER DD/MM/YY". Enter a date to select records with a pumpout date more recent than the date entered.



**Set First Notification Date,
Set Notification Date to user input,
Set Second Notification Date,
and Set 2nd Notification Date to user input**

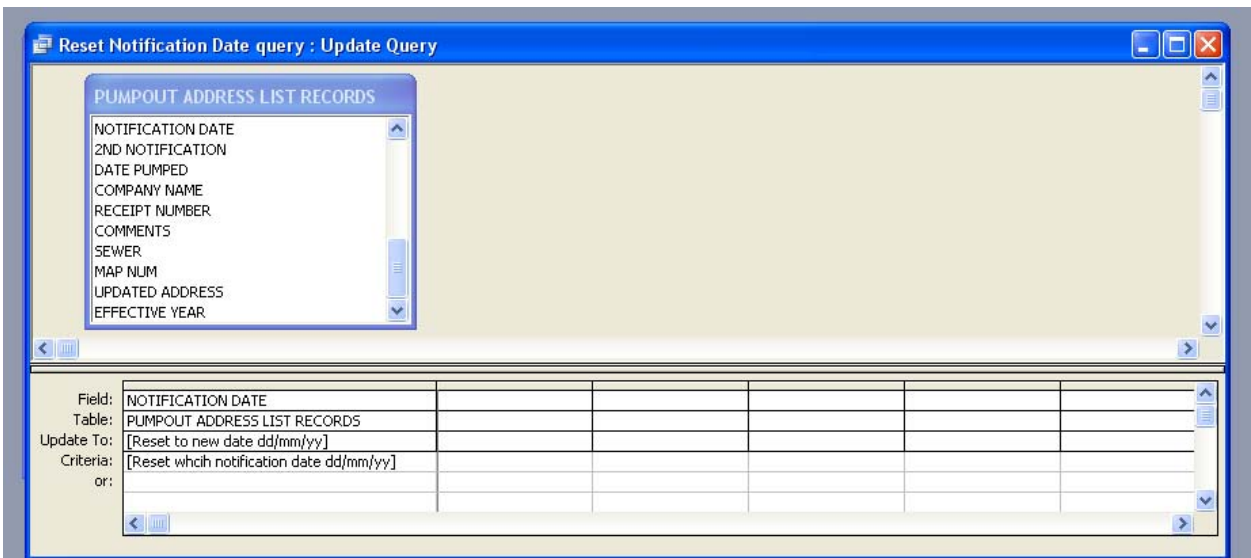
These queries update the Notification Date field or the 2nd Notification field as long as a date has not already been entered. For all of these queries the user will be asked “Include properties built before YYYY”. Enter a four digit year. This will exclude new construction. Two of the queries allow the user to enter a notification date which is different from the current date.



Records selected by the notification queries will have a null SEWER field, an EFFECTIVE YEAR less than the year the user enters, a street name in the PROP ST NM field, a DATE PUMPED which is less than the current date minus 60 months (5 years) or not null, and will not already have a notification (or 2nd notification) date. The notification date is either the current date or a date entered by the user.

Reset Notification Date query and Reset 2nd Notification Date query

These queries allow the user to reset the notification dates if they have been set in error. When the user is prompted “Reset which notification date” enter the date which is incorrect. When the user is prompted “Reset to what,” s/he should enter the correct date.



Database User Interface

The average database user will most frequently interact with forms that have been preprogrammed into the database. These forms instruct the database to produce reports can then be used by Charles City County staff to track septic tank pump out in the County. The reports that users can request are listed below.

Reports

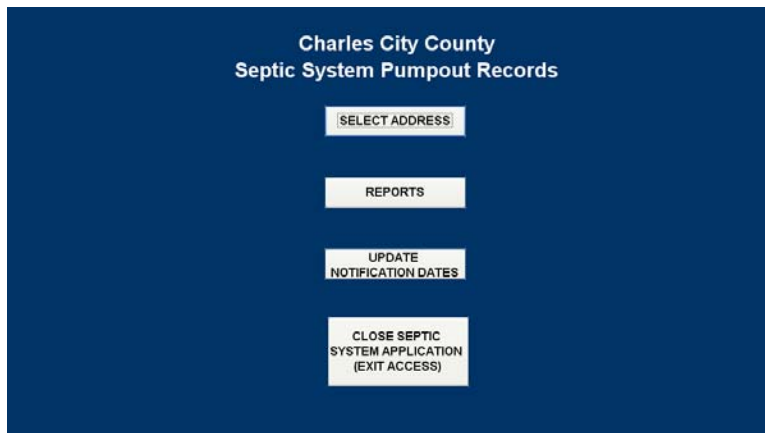
**COMMENTS REPORT
PROPERTIES IN COMPLIANCE
PUMPED OVER 5 YEARS AGO
SEPTIC SYSTEMS PUMPED BEFORE USER INPUT DATE
and UPDATED ADDRESSES**

These are the reports which can be generated by using the REPORT FORM. The queries which are run to select records for these reports were described in the queries section.

As noted, data reports are retrieved and database information can be kept current through the use of various forms. What follows is a description of the various forms that users will encounter beginning with the Main Menu, the first form that users will encounter.

Forms

This is the Main Menu. If the user desires to add data, it is necessary to click on SELECT ADDRESS.



The image shows a screenshot of a web-based interface for Charles City County. The background is a solid dark blue color. At the top center, the text "Charles City County" is displayed in a white, sans-serif font, with "Septic System Pumpout Records" centered below it in a smaller white font. Below the title, there are four white rectangular buttons with black text, arranged vertically and centered. The buttons contain the following text from top to bottom: "SELECT ADDRESS", "REPORTS", "UPDATE NOTIFICATION DATES", and "CLOSE SEPTIC SYSTEM APPLICATION (EXIT ACCESS)".

When the user presses **SELECT ADDRESS** the **SELECT ADDRESS FORM** will appear. First, the user should type in the address that needs updating. As the user begins to type, addresses from the **PUMPOUT ADDRESS LIST RECORDS** table will appear. As soon as the correct address is in the box, the user can click on **GO TO PUMPOUT INFORMATION ENTRY FORM**. The user can also scroll through the addresses by using the arrow on the left of the field.

The screenshot shows a dark blue background with white text and form elements. At the top, it reads "Charles City County Septic System Pumpout Records". Below this is the heading "Enter Property Address". There is a white text input field with a small dropdown arrow on the right. Below the input field are two buttons: "GO TO PUMPOUT INFORMATION ENTRY FORM" and "RETURN TO MAIN MENU".

On this form the user will enter the date which the septic system for that address was pumped out. The user will also enter the company which pumped the system and the receipt number. When the user closes this form the information is automatically added to the **PUMPOUT ADDRESS LIST RECORDS** table. The user can also close the form without entering any data. If the user needs to verify that this is the address s/he is looking for, s/he should click on the **PROPERTY INFORMATION** box.

The screenshot shows a dark blue background with white text and form elements. At the top, it reads "Charles City County Pumpout Record". Below this are several fields with labels and values: "PROPERTY ADDRESS" with "12350 GREEN OAK ROAD", "MAP NUMBER" with "16 34", "1ST NOTIFICATION DATE" with "9/5/2008", "2ND NOTIFICATION DATE" with "9/22/2008", "PUMPOUT DATE" with an empty field, "RECEIPT NUMBER" with an empty field, "COMPANY NAME" with an empty field, "MISSING ADDRESS" with an empty field, and "COMMENTS" with a large empty text area. At the bottom are two buttons: "PROPERTY INFORMATION" and "CLOSE".

**Charles City County
Property Information**

12350 GREEN OAK ROAD

OWNER: EDWARDS, JOSEPH M. &
EDWARDS, MARY E.
12350 GREEN OAK ROAD

MAP NUMBER	16 34	TOTAL ROOMS	6
ACCT SEQ	2292 1	BEDROOMS	3
USE		FULLBATHS	2
YEAR BUILT	1989	HALFBATHS	0
ACRES	11.15		
AS IS VALUE	219500		
IMPR VALUE	15600		

The screen may look like the one below if the user chooses a record with a 0 address. If the map number and other information is correct the user can update the address by clicking UPDATE ADDRESS.

**Charles City County
Property Information**

0

OWNER: HARDING, WILLIAM B. &
HARDING, ANGELA S.
7101 HUGHES ROAD

MAP NUMBER	2 6	TOTAL ROOMS	0
ACCT SEQ	16 1	BEDROOMS	0
USE		FULLBATHS	0
YEAR BUILT	0	HALFBATHS	0
ACRES	13.22		
AS IS VALUE	55900		
IMPR VALUE	0		

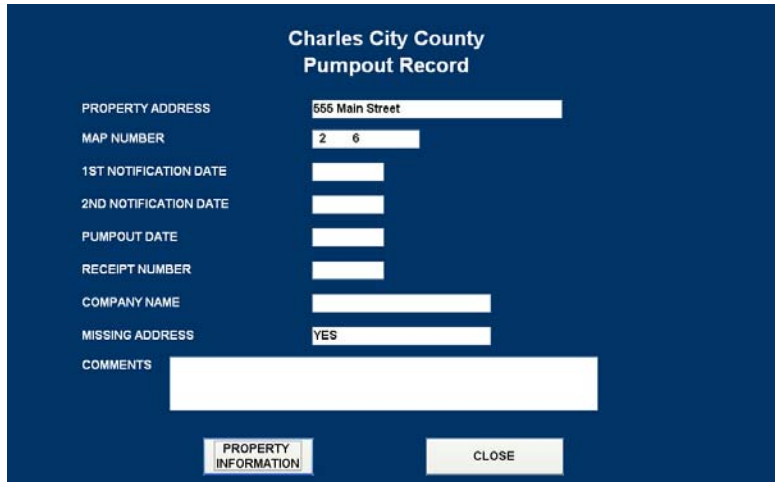
On this Form the user should enter the correct address and select YES from the drop down box then click RETURN TO PUMPOUT ENTRY FORM.

**Charles City County
Update Address Form**

CORRECTED ADDRESS: 555 Main Street

WAS ADDRESS UPDATED?
 YES
 NO

The address will be updated and the MISSING ADDRESS field will read YES. The user must make sure that there is a “YES” in the MISSING ADDRESS field because this is used to generate a report of addresses which have been updated.

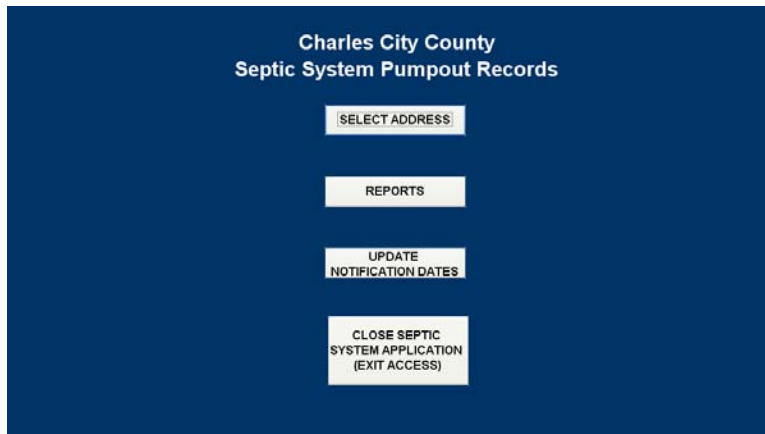


The screenshot shows a form titled "Charles City County Pumpout Record" on a dark blue background. The form contains the following fields and values:

Field	Value
PROPERTY ADDRESS	555 Main Street
MAP NUMBER	2 6
1ST NOTIFICATION DATE	
2ND NOTIFICATION DATE	
PUMPOUT DATE	
RECEIPT NUMBER	
COMPANY NAME	
MISSING ADDRESS	YES
COMMENTS	

At the bottom of the form, there are two buttons: "PROPERTY INFORMATION" and "CLOSE".

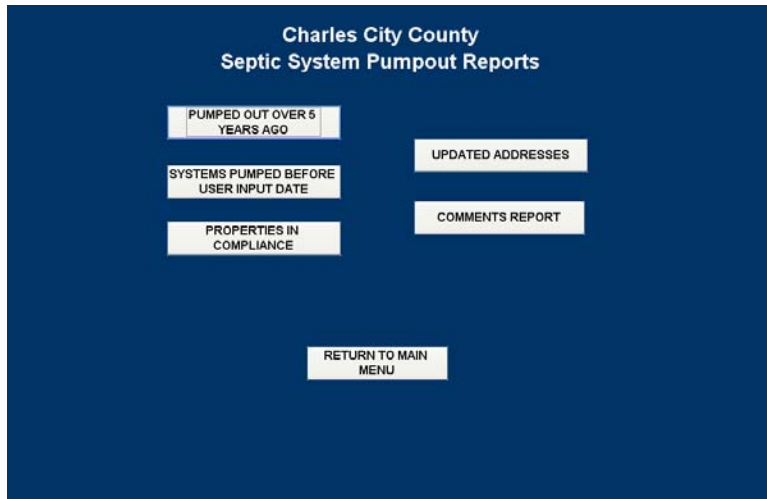
To run reports the user must click on the REPORTS button on the MAIN MENU.



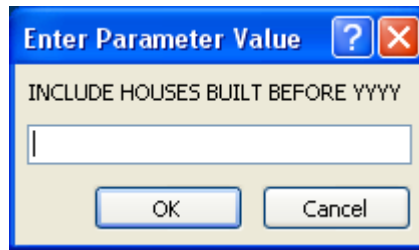
The screenshot shows a menu titled "Charles City County Septic System Pumpout Records" on a dark blue background. The menu contains the following buttons:

- SELECT ADDRESS
- REPORTS
- UPDATE NOTIFICATION DATES
- CLOSE SEPTIC SYSTEM APPLICATION (EXIT ACCESS)

There are five reports to choose from. They are in two basic formats. The compliance type reports list information regarding when the Septic system for a given address was pumped out. The updated addresses and comments reports list only that information for the affected addresses.



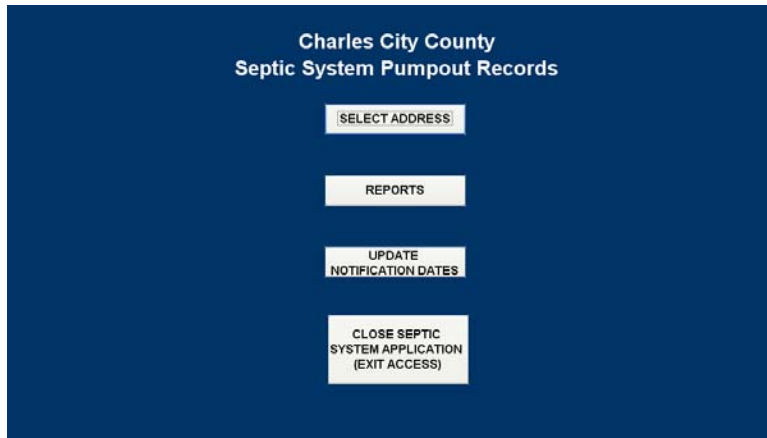
The compliance reports will prompt the user for a date. Addresses with structures built after this date are not required to have their septic systems pumped out because they are under 5 years old. Enter a four digit year i.e. 2004.



The following is a sample page from one of the “compliance” type reports.

PUMPED OUT OVER 5 YEARS AGO

1822 "C C" ROAD		OWNER	
DATE PUMPED		HANEY, CLIFFORD WAYNE	
COMPANY NAME		1822 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			
1820 "C C" ROAD		OWNER	
DATE PUMPED		POPE, LEROY M. & DEBORAH A.	
COMPANY NAME		1820 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			
1900 "C C" ROAD		OWNER	
DATE PUMPED		VAN AALST, HUIBERT T. JR. &	CLARKE, BRENDAM.
COMPANY NAME		1900 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			
1901 "C C" ROAD		OWNER	
DATE PUMPED		PYLES, GEORGE W.	
COMPANY NAME		1901 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			
1902 "C C" ROAD		OWNER	
DATE PUMPED		TAPP, JEREMY A.	
COMPANY NAME		1902 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			
1932 "C C" ROAD		OWNER	
DATE PUMPED		STARKEY, LAWRENCE A. JR. & JOY	
COMPANY NAME		1932 "C C" ROAD	
RECEIPT NUMBER		CHARLES CITY, VA	23030
NOTIFICATION DATE	9/5/2008	2ND NOTIFICATION	9/22/2008
COMMENTS			



To enter a notification date on the **PUMPOUT ADDRESS LIST RECORDS** table, the user must click on the **UPDATE NOTIFICATION DATE BUTTON**. From this form the user can set either the first notification date or the second notification date. These dates can be set to the current date automatically, or through user input to a date the user chooses. The user is able to send out notification letters every month because if an address has already been given a notification date it will not be given a new one. The Notification Letter Recipients and 2nd Notification Letter Recipients tables are created when the notification dates are set. These tables are used to create labels and letters through a mail merge operation.



If either notification date has been set in error, the user can change it through the “Reset First Notification Date” or “Reset Second Notification Date” buttons. The user will be prompted to enter the corrected date. Next the user will be prompted to enter the date which had been entered incorrectly and needs to change.

