



# County of Chester County Health Department

## Septage Management Monitoring Project Summary

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County of Chester, Chester County Health Department  
Septage Management Monitoring  
Project Summary

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## 1. Project Background

Legislative information.

## 2. Project Overview

Nearly 34% of Chester County's properties (~60,000) are served by on-lot septage systems that dispose of the wastewater flowing from toilets, sinks, and appliances located on the property. An on-lot wastewater system is a three-stage treatment system consisting of a treatment tank (most commonly a septic tank), a distribution system (the pipes), and a soil absorption area. Management of on-lot septage systems is a shared responsibility between the property owner, the Chester County Health Department (CCHD) and each municipality. Property owners are required to install/maintain a system that meets the County of Chester's Rules and Regulations. CCHD is responsible for licensing the on-lot systems for use and licensing liquid waste management companies to include inspections of their trucks. Municipalities are responsible for monitoring and enforcing measures that ensure a property owner maintains the on-lot system in proper working condition and pumps waste using a licensed liquid waste management companies at appropriate time intervals.

## 3. Project Goal

The goal of the Septage Management Monitoring Project is to implement an online system that enables the Chester County Health Department and municipalities to track the frequency and volume of liquid waste being removed for every on-lot system located within Chester County. To accomplish this goal, Chester County Health Department will administer the system to ensure it meets the requirements of:

- liquid waste management companies – record volume of waste pumped from on-lot septage systems
- municipalities – view waste pump volume data and assess which properties have not pumped according to required time intervals, or which properties have been pumped more frequently than time intervals.

## 4. Project Scope

The following identifies the high level requirements that the project must meet in order for the project goal to be satisfied.



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| # | Type                 | Requirement  |
|---|----------------------|--|
| 1 | User Accounts        | All user accounts must be approved by the Chester County Health Department.  |
| 2 | User Accounts        | All user account transactions – creation, deletion, suspense, password reset – must be managed by the system/vendor.   |
| 3 | Access               | The Chester County Health Department must be able to perform all functions with the system to include, but not limited to, edits or deletion of pump activity.   |
| 4 | Access               | Liquid waste haulers licensed by the Chester County Health Department must be able to enter and view pump activity data they have entered; and generate reports or exports of their data. There are approximately 70 licensed haulers.   |
| 5 | Access               | Municipalities must be able view properties and their pump activity; and generate reports or exports for properties <del>within their jurisdiction</del> across the County. There are 73 municipalities.   |
| 6 | Hauler Information   | For each hauler the following information must be maintained: <ul style="list-style-type: none"> <li>- Business Name</li> <li>- Contact Name</li> <li>- Address Line 1</li> <li>- Address Line 2</li> <li>- City</li> <li>- State</li> <li>- Zip</li> <li>- Telephone</li> <li>- Primary Email</li> <li>- Secondary Email</li> <li>- Liquid Waste Pumper type</li> <li>- CCHD Number (not editable by hauler)</li> <li>- License Status (not editable by hauler)</li> <li>- License Expiration Date (not editable by hauler)</li> <li>- Truck 1 – n Information (there are approximately 270 trucks across all licensed haulers)               <ul style="list-style-type: none"> <li>▪ Vehicle Identification Number (not editable by hauler)</li> <li>▪ Truck Number (not editable by hauler)</li> </ul> </li> </ul> |
| 7 | Property Information | For each property the following information must be maintained for any property within the County that has an on-lot septage system: <ul style="list-style-type: none"> <li>- Tax Parcel ID</li> <li>- Municipal Number</li> <li>- Municipal Name</li> </ul>   |



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| #  | Type                      | Requirement  |
|----|---------------------------|--|
|    |                           | <ul style="list-style-type: none"> <li>- Parcel Owner Primary</li> <li>- Parcel Owner Secondary</li> <li>- Parcel Owner Mailing Address Line 1</li> <li>- Parcel Owner Mailing Address Line 2</li> <li>- Parcel Owner Mailing Address Line 3</li> <li>- Parcel Owner Mailing Zip Code</li> <li>- Site Address</li> <li>- Sewer System Type</li> <li>- Sewer System Name</li> <li>- GIS Coordinates</li> <li>- Land Use Type</li> </ul>                           |
| 8  | On-Lot System Information | <p>The following systems types must be supported and associated with a property:</p> <ul style="list-style-type: none"> <li>- Absorption Area</li> <li>- Cesspool</li> <li>- Holding Tank</li> <li>- Stream Discharge</li> </ul>   |
| 9  | Property Information      | No user can edit existing property information.  |
| 10 | Property Information      | Property information must be obtained and maintained from land records data through the data import once a quarter.  |
| 11 | Property Search           | <p>All users must be able to search for a property using:</p> <ul style="list-style-type: none"> <li>- Tax Parcel ID</li> <li>- Owner Name</li> <li>- Site Address</li> <li>- Municipality</li> </ul>  |
| 12 | Property Search           | If a property is not found via the search, the hauler must be able to add the property and enter relevant pump activity.   |
| 13 | Pump Activity             | Historical pump activity must be import (on a one-time basis) prior to the deployment of the system.   |
| 14 | Pump Activity             | <p>Only haulers can add pump activity; haulers must be able to add the following information for each pumping for any property with an on-lot sewage system:</p> <ul style="list-style-type: none"> <li>- Pumping Date</li> <li>- Gallons Pumped</li> <li>- Liquid Waste Truck CCHD Number</li> <li>- Comments (required if gallons pumped = 0)</li> <li>- Manhole Access within 12 Inches of Grade (Y/N)</li> <li>- Tank Lid in Good Condition (Y/N)</li> </ul> |



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| #  | Type          | Requirement   |
|----|---------------|---|
|    |               | <ul style="list-style-type: none"> <li>- Inlet Baffle Intact (Y/N)</li> <li>- Outlet Baffle Intact (Y/N)</li> <li>- Tank Structurally Sound (Y/N)</li> <li>- Backflow into Tank (Y/N)</li> <li>- Dual Compartment Tank (Y/N)</li> <li>- Cesspool (Y/N)</li> <li>- Seepage Pit (Y/N)</li> <li>- Holding Tank (Y/N)</li> </ul>  |
| 15 | Pump Activity | Only system administrators can modify or delete pump activity.  |
| 16 | Pump Activity | The system must maintain an audit trail of edits/deletes to pump activity.  |
| 17 | Pump Activity | <p>All users must be able to look up pump activity for any property with the following limitations:</p> <ul style="list-style-type: none"> <li>- Haulers – Properties they have recorded at least one pump activity during the selected date range</li> <li>- Municipalities – Properties within their jurisdiction</li> <li>- System Administrators – All properties (no limits)</li> </ul>  |
| 18 | Reports       | <p>Haulers, municipalities, and system administrators must be able to generate all reports for a specified date range with the following limitations:</p> <ul style="list-style-type: none"> <li>- Haulers – Properties they have recorded at least one pump activity during the selected date range</li> <li>- Municipalities – Properties within their jurisdiction</li> <li>- System Administrators – All properties (no limits)</li> </ul>  |
| 19 | Reports       | <p>The following reports must be available:</p> <ul style="list-style-type: none"> <li>- Property Pump Activity               <ul style="list-style-type: none"> <li>▪ per property, hauler, or geographic area</li> <li>▪ by date, volume, hauler</li> </ul> </li> <li>- Pump Due               <ul style="list-style-type: none"> <li>▪ per property, hauler, or geographic area</li> <li>▪ by date, hauler</li> </ul> </li> <li>- Compliance               <ul style="list-style-type: none"> <li>▪ per property, geographic area</li> <li>▪ by date, volume</li> </ul> </li> <li>- Reconciliation (only accessible by the System Administrators)               <ul style="list-style-type: none"> <li>▪ addresses not found during property search</li> </ul> </li> </ul> |
| 20 | Reports       | Each report must be generated in a standard report format and a map based output. If map based outputs are not available, an automated export of pump activity with related hauler and  |



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| #  | Type         | Requirement  |
|----|--------------|--|
|    |              | property information must be implemented for use by the Chester County Health Department to generate maps using geographical information systems.  |
| 21 | Data Export  | Haulers, municipalities, and system administrators must be able to export all properties and their pump activity for a specified date range with the following limitations: <ul style="list-style-type: none"> <li>- Haulers – Properties they have recorded at least one pump activity during the selected date range</li> <li>- Municipalities – Properties within their jurisdiction</li> <li>- System Administrators – All properties (no limits)</li> </ul> |
| 22 | Security     | All system and data security are the responsibility of the contracted vendor.  |
| 23 | User Support | All user support, such as how to use the system, system outages, data entry edits/deletes, identification of enhancements, etc., are the responsibility of the contracted vendor.  |

## 5. Project Future Scope

The following identifies the requirements that will be considered in the future enhance the project's goal.

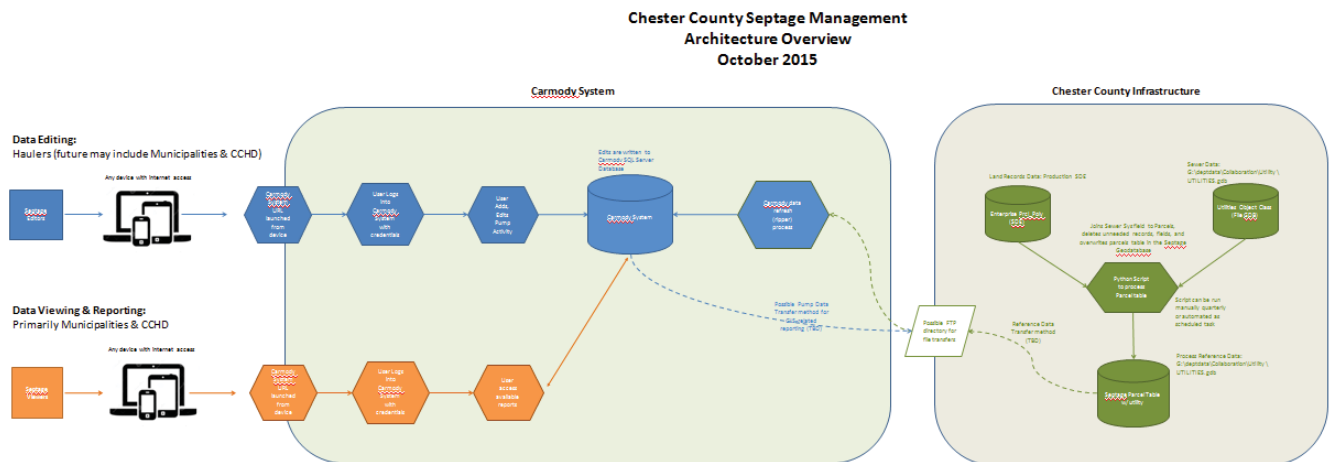
| # | Type    | Requirement   |
|---|---------|---|
| 1 | License | The system must support the licensing process and requirements, to include but not limited to generating a license, for the following type of contractors: <ul style="list-style-type: none"> <li>- Liquid Waste Haulers/Pumpers</li> <li>- Well Drillers</li> <li>- Pump Installers</li> <li>- Geothermal Contractors</li> </ul> |
| 2 | License | Specific information is required to be entered for the following type of contractors: <ul style="list-style-type: none"> <li>- Liquid Waste Haulers/Pumpers</li> <li>- Well Drillers</li> <li>- Pump Installers</li> <li>- Geothermal Contractors</li> </ul>  |



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## 6. Project Implementation Architecture

The following provides a high level view of the architecture required to implement a system that supports the project's goal.



## 7. Implementation Architecture

The following provides a high level view of the architecture required to implement a system that supports the project's goal.

## 8. Project Deliverables

The following identifies the deliverables that support the achievement of the project's goal:

- High Level Implementation Architecture (Chester County)
- Milestone Timeline
- Set-Up Check List
- System Configuration
- User Accounts
- Deployed System
- Training Plan
- Maintenance Plan
- User Support Plan

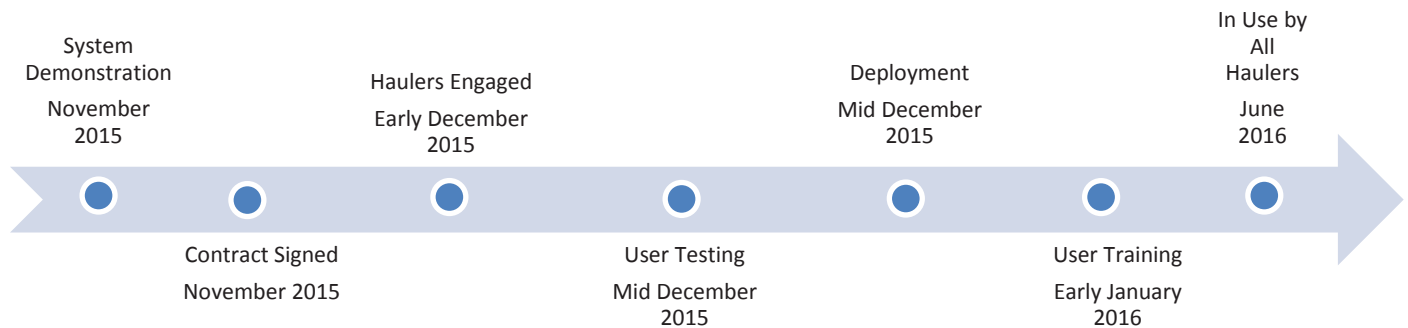
## 9. Project Timeline

The following identifies the desired timeline that supports the achievement of the project's goal:





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### 10. Project Funding

The project will be funded through the Chester County Health Department's budget as approved by the Chester County Board of Commissioners.

### 11. Project Constraints

The following identifies the circumstances and events that may restrict, limit, or regulate the project, must be taken into consideration prior to the initiation of the project, and may or may not be in the control of the project team.

- The need for the system is driven by the Pennsylvania Act 537.
- The system must be deployed and ready for training by January 15, 2016.
- The system must not incur cost to individual users.

### 12. Project Assumptions

The following identifies the circumstances and events that need to occur for the project to be successful, are believed to be true, and may or may not be in the control of the County of Chester.

- The system and data will be hosted offsite.
- The system and data will be accessible seven (7) days a week, 365 days a year, 24 hours a day.
- The standard configuration for a purchase/leased system will support the requirements of the County of Chester.
- The standard user accounts included in a purchased/leased system will be utilized.
- The data import will support all data required for a property, and historical pump activity.



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- Representatives from the Chester County Association of Township Officials and licensed liquid waste haulers have input into the configuration of the system.
- The system does not require any software to be downloaded.
- The system is browser neutral.
- The system is accessible on desktop computers and/or mobile devices.
- The vendor is responsible for user and data security; and database back-up, recovery and redundancy.
- User support, such as how to use the system, communication of system outages, data entry edits/deletes, identification of enhancements, etc. will be provided by the vendor. Enhancements will not be implemented without the approval of the Chester County Health Department.
- The Chester County Health Department will reconcile addresses not found during property searches and be responsible for ensuring quarterly updates include corrected data.
- The Chester County Health Department will partner with Land Records to obtain property data.
- The system does not have to comply with the Federal Risk and Authorization Management Program (FedRAMP).
- The system does not have to authenticate Chester County Health Department users via the County's active directory.
- Property data will be provided to the vendor via a secure FTP site.

### **13. Project Constraints**

The following identifies the circumstances and events that may restrict, limit, or regulate the project, must be taken into consideration prior to the initiation of the project, and may or may not be in the control of the project team.

- The need for the system is driven by the Pennsylvania Act 537.
- The system must be deployed and ready for training by January 15, 2016.
- The system must not incur cost to individual users.

### **14. Project Risks**

The following identifies the risks associated with this project and the mitigation approach.



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| # | Risk  | Mitigation   |
|---|---|--|
| 1 | System cannot be hosted offsite.  | County of Chester will assess the option of purchasing the system for deployment within the County's infrastructure.   |
| 2 | System is not accessible seven (7) days a week, 365 days a year.  | Vendor will notify users in advance when the system is not available.  |
| 3 | Standard configuration for a purchase/leased system does not support the requirements of the County of Chester.   | System enhancements will be estimated and implemented based upon available funding.  |
| 4 | Standard user accounts do not support the requirements of the County of Chester   | Chester County Health Department in collaboration with the vendor will assess the requirements for and impact of different user accounts; obtain estimate; gain approval.  |
| 5 | Data import does not support all data required for a property and historical pump activity.   | Vendor will provide Chester County Health Department with import requirements early in the project; Chester County Health Department will consult with vendor regarding data needs and import format; Chester County Health Department will ensure data complies with standard data import format; vendor will customize import if needed. |
| 6 | Representatives from the Chester County Association of Township Officials and licensed liquid waste haulers are not available during the configuration of the system. | User group members agree to ensure secondary representative from their jurisdiction/company will be present in their absence; Chester County Health Department will facilitate multiple user group sessions at a time convenient for most members.   |
| 7 | System requires software to be downloaded.  | Vendor will communicate any required downloads; County of Chester will notify users of any download requirements.  |
| 8 | System is not accessible through any current browsers.  | Vendor will communicate any browser limitations; County of Chester will notify users of any browser limitations.   |
| 9 | System is not accessible on user desktop and/or mobile device.  | Vendor will communicate any computer/device limitations; County of Chester will notify users of any  |



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| # | Risk | Mitigation                   |
|---|------|------------------------------|
|   |      | computer/device limitations. |

## 15. Project Stakeholders

The internal and external stakeholders of the project include:

- Chester County Board of Commissioners
- Chester County Health Department
- Sewage Enforcement Officers
- Chester County Association of Township Officials
- Municipality Officials
- Liquid Waste Haulers
- Pennsylvania Department of Environmental Protection
- System Vendor