

Inventory of Onsite Sewage System Data in Virginia

Wastewater Treatment Workgroup (WWTWG) Conference Call

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Brief History of Onsite Sewage System Data in Virginia

- Virginia Environmental Information Systems (VENIS) was brought online in 2003.
- Records previously stored as paper and individual electronic databases in the local health districts.
- Effort under way to bring the large volume of information from paper records prior to 2003 (i.e. Legacy Documents) into VENIS.
- Majority of counties in Virginia are represented in VENIS; working on developing a protocol to capture data from the remaining one or two counties that utilize a different electronic storage system.

What Onsite Data We Track

- Records consist of three main categories of systems:
 - 1] Conventional Onsite,
 - 2] Alternative Onsite, and
 - 3] Alternative Discharge.
- Ability to document:
 - 1] New construction,
 - 2] Repairs, and
 - 3] Modifications/expansions to existing systems.

We can also document the status of the permit (i.e. application phase or installed), dates for this status, and whether it's a residential system or not.
- Location data:
 - 1] Latitude/Longitude (map directly), or
 - 2] 911-Address (can be geocoded).

Information populated for a small percentage of records (primarily alternative systems); default is the county name.
- System Make and Model - recently revised VENIS to collect this information, but this will take some time to populate; migrated some data from old fields where this information was available (mostly newer records in the database).
- Design Flow

Sampling Data

- Less than or equal to 1,000 gpd Alternative Onsite Sewage System (AOSS):
 - Operation and maintenance inspection required annually used as indicator of maintenance of BMP for nitrogen removal.
- Larger facilities:
 - BMPS not applicable and will rely on discharge data
 - O&M requirements scale up as the design flow increases with sampling requirements ranging from annual up to daily
 - Data required on TN plus standard parameters (BOD, TSS, pH, disinfection)
 - Data not in a searchable format
 - Currently capturing flow and concentration so we may be able to estimate an annual load.
 - Need to work on being able to access the data by facility

How Data Relates to the Existing BMPs in the Bay TMDL

1] 50%-Nitrogen reducing systems:

- Records marked as 'Alternative Onsite' systems in the database and are deemed to be installed in the fiscal year of interest,
- Use a look-up table of National Sanitation Foundation (NSF) 245 standard systems to determine subset of records, and
- Geocode the results in ArcGIS using the 911-address and join the watershed (12-digit HUC) information to the table.

2] Septic tank pump-outs:

- Use data from a Virginia DCR program in the Chesapeake Bay Preservation Act (CBPA) Area, and
- We add an estimate of the number of pump-outs outside the CBPA Area and still within the Bay watershed that are associated with repairs in VENIS.

3] Sewer connections:

- We recently added a new field for collecting data as to whether the onsite system has connected to a public sewer system. This will take some renewed coordination with other agencies/stakeholders to get better data on this subject. What do other jurisdiction do?