COMMONWEALTH of VIRGINIA

Department of Health

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MEMORANDUM

TO: District Health Directors
District Environmental Health Managers

GMP #2015-02

THROUGH: Robert W. Hicks, Deputy Commissioner
Community Health Services

THROUGH: Allen Knapp, Director
Office of Environmental Health Services

FROM: Dwayne Roadcap, Director
Division of Onsite Sewage and Water Services, Environmental Engineering and Marina Programs

SUBJECT: Guidance Memorandum and Policy 2015-02: Collection of Global Positioning System (GPS) Data for Onsite Sewage Disposal Systems, Alternative Discharge Systems, and Private Wells

Scope: All onsite sewage disposal systems, alternative discharge systems and private wells either currently in use or approved for use by the Virginia Department of Health (VDH).

Policy: The local health department will obtain and record, in VENIS, GPS coordinates for all onsite sewage disposal systems, alternative discharge systems and private wells that are in use or are approved for use. "Approved for use" in this context means that an Operation Permit has been issued for a sewage disposal system or the private well has been approved for use. The policy also applies to any onsite sewage disposal system, alternative discharge system, and private well that is currently being used.

Procedures:

1. Data collection

   The local health department is responsible for ensuring that data meeting the minimum requirements listed below is collected for each sewage disposal system and/or private well approved for use by that department. The data should be collected after installation, to ensure that the coordinates accurately reflect the installed, rather than the permitted, location. Local health departments are encouraged to work with private sector professionals to obtain the data with completion statements and records of inspection.

   Local health departments will begin collecting the required coordinates for any sewage disposal system or private well (including all class IV wells) approved on or after the effective date of this memorandum. For sewage systems and private wells already in existence, for which no data is available in VENIS, local health departments will collect the coordinates at the time of the next visit to the property where the system and/or well is located. For example, if the local health department makes a visit to a property for a "safe, adequate and proper" determination, the coordinates of the sewage system and/or well should be collected during that visit. The use of computer mapping websites (e.g., GetLatLong, iTouchMap, Google) is permissible for temporarily identifying the location of sewage systems and private wells already in existence (including Legacy Systems) when staff know a site visit is not planned for the foreseeable future. **Coordinates identified in this manner should be field-verified with a GPS unit at the next site visit.** Field-verified data should be used to over-write previously collected data; do not keep both sets of coordinates. Keep in mind that the aerial imagery used by mapping websites may not be current and the resolution may not provide adequate detail to clearly identify the points of interest.

   As a ***minimum***, coordinates for the following points will be collected and recorded in VENIS:

   a. For an onsite sewage disposal system, the center of the absorption area.
   b. For an alternative discharge system, the outfall of the discharge.
   c. For a private well, the well head.

2. Data quality and accuracy

   At a minimum, the data shall be collected with a GPS unit that has a Wide Area Augmentation System (WAAS) enabled receiver. The WAAS signal is a type of real-time correction with fixed reference stations/satellites that helps improve the accuracy of your location. It should be available in most locations in Virginia, and GPS units should receive this signal automatically. However, if the particular GPS unit in use does not read this signal by default, make sure this feature is turned on in the option settings.

Most GPS units contain at least a 12-channel receiver. A GPS unit with more channels is not necessarily more accurate, but it may obtain a quicker fix on your location and hold satellite signals better. If data collection is to be done in hilly terrain or under tree canopy, a GPS unit with a protruding or external antenna may improve satellite reception. The horizontal reference datum (or simply 'datum') should be set to NAD83 when collecting data. Verify the datum setting of the GPS unit prior to collecting data. Some GPS units may default to another setting when powered-down or when batteries are replaced. Data should be collected in the decimal degree format (e.g. dd.ddddd or 76.12345) and must include at least five decimal places for latitude and longitude. It is acceptable to collect more than five decimal places if the GPS unit can accurately make the determination, or if the district chooses to perform post-processing differential correction of the data.

3. Data recordation

The GPS coordinates identified in item 1 above shall be entered into VENIS on the appropriate sewage component (for absorption area or discharge point) or on the design tab for a private well. Enter the data in an un-projected, decimal-degree latitude and longitude format. Only numbers will be permitted in the data fields, and the position relative to the Equator and Prime Meridian will be handled internally by VENIS (e.g. N, W, "-", etc.). Check the "verified" box when the data has been field verified (as opposed to having been collected using a web-based program). The data entered here will be used by the Office of Environmental Health Services (OEHS) for mapping data, and will be shared with other users both inside and outside of the agency.

If local health departments wish to obtain additional GPS coordinates (e.g. for a treatment unit, absorption area corners, etc.) they may do so. These additional coordinates can be recorded in VENIS for the applicable component shown on the "installed" tab. An additional set of coordinates to locate the property can also be entered on the physical location.