

On-Site Rule Revision Issue:

Add Pump Chamber Sizing to OSS Rule (Sewage tanks #2 of 3)

1. Issue

Currently there is no pump chamber sizing criteria in the rule. Recommended Standards and Guidance (RS&G) documents, published by WA DOH with assistance from the Technical Advisory Group, refer to pump chamber sizing. The most commonly used reference is in the Pressure Distribution (PD) RS&G.

2. Problem statement

As noted above, the most common pump chamber usage in WA relates to PD use. PD OSS has an extensive use in WA State. There are 35 Local Health Jurisdictions (LHJs) in the state. Each LHJ has the option to decide how they will implement the RS&Gs. The potential variation in sizing of pump chambers could be troublesome. A standard found in the rule could help take the variability away.

3. Supporting Research/Evidence

DOH explored only some states in this general geographical area for their pump chamber size requirements in rule. AK and ID had no specific information in rule. OR has specific pump chamber (dosing tanks) sizing criteria:

“Each dosing tank employing one or more pumps must have a minimum liquid capacity equal to the projected daily sewage flow for flows up to 1,200 gallons per day. The department will determine tank sizing for dosing tanks with projected daily sewage flows greater than 1,200 gallons per day. The liquid capacity of dosing tanks must be as measured from the invert elevation of the inlet fitting.”

4. Options

- A. Add specific pump chamber sizing to the rule. This would require research.
- B. Add a general statement to the rule giving high priority to size pump chambers per the associated RS&G.
- C. Leave the pump chamber sizing criteria only in RS&Gs.

5. PROs/CONs

PROs:

- It adds consistency throughout the state.
- It helps designers/installers know what to expect working in multiple LHJs.
- It gives specific parameters to LHJs where uncertainty exists.

CONs:

- It probably would include the addition of definitions for different types of pump chambers.
- It does not allow the option for different sizes of pump chambers for different types of uses. It may be difficult to create one-size-fits-all criteria. For example, pump chambers (basins) in intermittent sand filters, dosing to gravity, lift stations for solids to septic tanks, dosing chambers to proprietary products, etc.
- It takes away some needed LHJ flexibility.

- It takes away easier changes to sizing criteria as new technology dictates.

6. Recommendations

We recommend that references to pump chamber sizing NOT be added to rule and stay in the associated RS&G.

Supporting information

1. On-site Sewage Regulations from AK, ID, OR.