


Number: ONST.12.POL.853
Title: Requirements for Rebuilding Mounds and Intermittent Sand Filters

Related:

Approved: 
Environmental Health Director
Date: 9/12/12

Cancels: New

RCW/Code: Article IV, Sections 4, 8 and 17
Recommended Standards & Guidance
Documents Adopted by Reference

This policy describes the conditions when a mound or intermittent sand filter may be rebuilt in an attempt to restore it to its originally approved condition.

1. Only mounds and sand filters designed and constructed after September 1993 can be rebuilt.

Only Wisconsin style mounds and sand filters designed and constructed in accordance with the September 1993 or subsequent State of Washington Technical Review Committee Guidelines For Mound Systems or Intermittent Sand Filters can be rebuilt. All others shall be replaced in a different location.

2. A complete failure analysis required before on-site sewage systems (OSS) are rebuilt or repaired.

The design proposal must assess and address the factors that contributed to the failure. The proposal shall include the results of a diagnostic evaluation. At a minimum diagnostics must evaluate:

- a. Leaking plumbing fixtures
- b. Ground water intrusion to any OSS Component
- c. Daily flows not to exceed design parameters
- d. Biomat buildup in the mound / sand filter
- e. Waste strength - Completed by a County-Certified Monitoring Specialist, Licensed Sewage System Designer, or Professional Engineer. Analysis of effluent samples used to evaluate waste strength must be performed by a Washington Department of Ecology certified laboratory.

The strength of the septic tank effluent must be at or below the following values:

- TSS: ~ 80 mg/L
- BOD5: ~ 150 mg/L
- O&G: ~ 20 mg/L

3. Complete OSS replacement is required if the failure of a mound is at the sand-native soil interface.

4. **A licensed sewage system designer, engineer, or certified installer must submit a complete rebuild or repair proposal.**

- A complete sewage system rebuild proposal must be submitted with a scaled site plan that includes the component (s) being rebuilt or replaced (mound bed, sand filter, etc.) a construction plan, and the applicable fees and repair application.
- The original design may be used to rebuild the OSS if there is no need to change to the original design. The written proposal must be based on the original approved design or the accepted record drawing.

5. **A proposal to completely relocate a mound or sand filter requires a full repair design prepared by a licensed designer or engineer, and a complete permit application and fees.**

6. **A new record drawing and pressure test results are required when mound and sand filters are rebuilt or repaired.**

Record drawings and pressure test results are required for any system rebuild or repair, including when:

- a. The sewage tank or pump chamber is relocated,
- b. Unplanned relocation or replacement of a system component occurs during the repair or rebuild

7. **The existing pump chamber serving the mound or sand filter must have or be retrofitted for timer controlled dosing and the minimum pump chamber sizing as per the current pressure distribution guidelines.**

8. **Gravelless chambers can be used to replace drainrock in the existing mound or sand filter provided that the originally required square footage is installed.**

If the cause of failure is suspected to be due to loading rate, the bed can be widened to facilitate the common width of gravelless chambers if the soil depth supports it. For example, in a 5-foot wide gravel bed, a 6-foot wide gravelless bed is allowed. Alternatively, in a 7.5-foot wide gravel bed, an 8-foot wide gravelless bed is allowed. In no case shall the bed be widened more than one foot.

9. **If a proprietary device is added to the on-site sewage system, a Certified Monitoring Specialist will be required as per policy ONST.07.POL.605.**