

Washington State Dept. of Health
Office of Shellfish & Water Protection
Wastewater Management Program

PUBLIC HEALTH
ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON

Technical Subcommittee Report 6-26-08

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Report to LOSS Rule Committee

LOSS TECHNICAL SUB COMMITTEE

Summary of recommendations at meetings
on **5-19-08** & **6-20-08**

Topics discussed:

- 8A – Residential Design Flows
- 8B – Non-Residential Design Flows
- 12A – Hydraulic (Soil) Loading Rates
- 12B – Organic (Soil) Loading Rates
- 12C – Linear (Soil) Loading Rates
- 14A – Minimum Sewage Tank Volume (residential)
- 14B - Minimum Sewage Tank Volume (other)
- 18 – 150% Drainfield Construction Requirement

Recommendations

8A – Residential Design Flows

- For systems **3500 – 14, 500 GPD**:
 - 120 GPD / bedroom with minimum design flow of 240 GPD per residence;
 - DOH may consider reductions with engineering justification
- For systems **14,500 – 100,000 GPD**
 - Minimum design flow 270 GPD/ residence
 - DOH may consider reductions with engineering justification

8B – Non-residential Design Flows

- Use Design Flow Table from LOSS Foundation Document
- Allow “comparable use” data from at least 3 similar facilities; *or* design flows referenced in other reputable sources (e.g. Ecology Orange Book, EPA Onsite Manual, etc.)

12A – Hydraulic Loading Rates

- Adopt soil loading rates table from WAC 246-272A
- Allow drainfield size reductions with pretreatment consistent with 272A
- Require 100% primary & reserve area based on sizing without advanced pretreatment
- No additional reductions for use of gravelless distribution technology
- Research and consider at later date
 - Greater reductions for very high quality effluent
 - Type 6 soil might be suitable for LOSS

Recommendations (cont.)

12B – Organic Loading Rates

- Do not include/reference organic loading rates in rule
- State in rule that effluent waste strength (applied to soil) must be equal to or better quality than typical residential septic tank effluent (“Treatment Level E”)

12C – Linear Loading Rates

- Linear loading should be addressed in the hydrogeology report where appropriate
- It's probably not an issue for every project
- Specific requirements could be addressed in guidance rather than rule

14A – Septic Tank Sizing

Residential

- Minimum 1,000 gallons capacity per ERU for a community sewage tank
- Refer to sizing requirements in 272A for:
 - individual tanks on community (STEP) system, or where
 - multiple dwellings on a single tank produce less than 3500 GPD

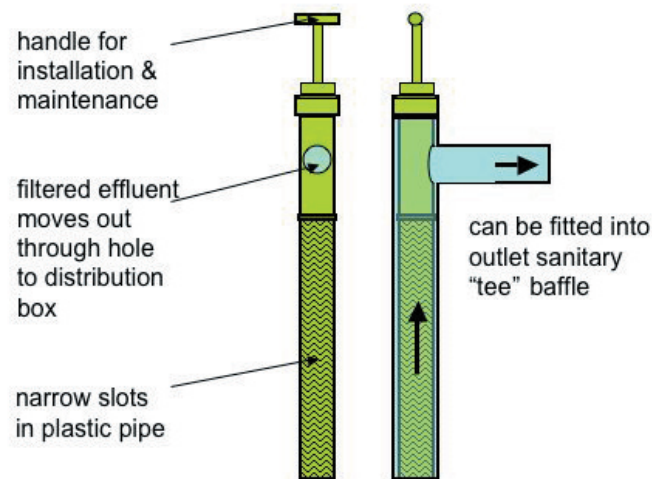
Non Residential

- Minimum tank size = 3 times daily design flow, regardless of waste strength

Recommendations (cont.)

14A – Septic Tanks – misc. requirements

- Where septic tank is used primary treatment an effluent filter is required at tank outlet or last point before pump chamber
- Maximum mesh/opening size is 1/8 inch



14B – Other Tank Requirements

- Require pressure distribution with timed dosing for all LOSS
- For flows 3500 – 14,500 GPD: Require 24 hour reserve capacity
- For flows 14,500 – 100,000 GPD: Require 12 hour reserve capacity
- No reduction in reserve capacity allowed for back-up power
- For ≤ 3 feet cover: minimum 24 inch access riser
- For > 3 feet cover: minimum 30 inch access riser

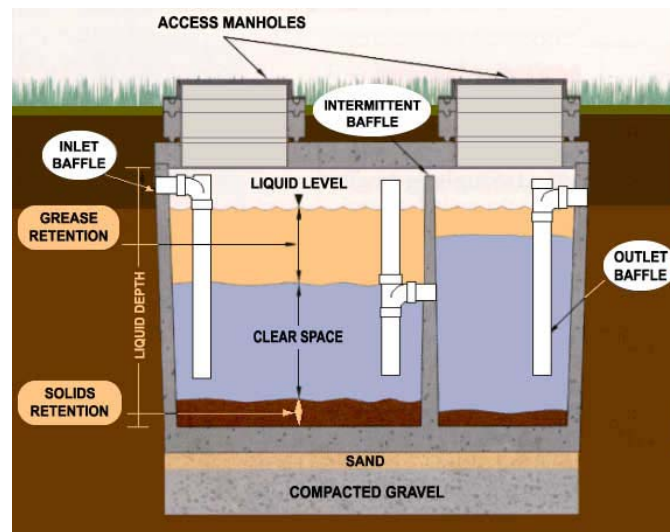
14B – Other Tank Requirements

- Access opening every 8 feet in a compartment
- Must be field tested for water tightness
 - Fill with water 2 inches into riser or
 - Vacuum test
- Design engineer must certify for water tightness
- Always require duplex pumps for redundancy

14B – Other Tank Requirements (cont.)

Grease Interceptors

- Minimum capacity: 3 times daily flow
- Minimum size: 1000 gallons

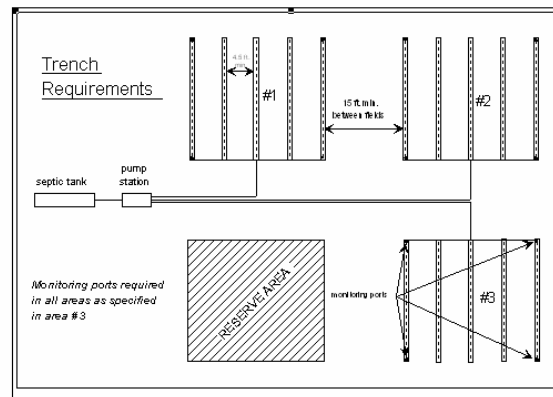


Recommendations (cont.)

Topic 18 – 150% drainfield construction

- Continue to require *construction* of 150% drainfield capacity with Treatment level E
- Eliminate requirement for higher levels of treatment or with use of subsurface drip
- Retain set-aside for reserve area

Figure 1: Drainfield Area Requirements



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