

# ISF and RSF (Supplemental Treatment)

## OWTS OM&M MAINTENANCE and REPORTING REQUIREMENTS

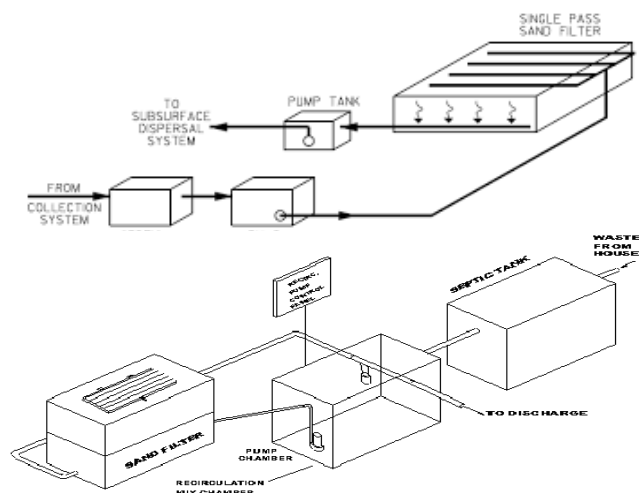
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### What is an Intermittent or Recirculating Sand Filter OWTS/Septic System?

An Intermittent Sand Filter (ISF) is a type of supplemental treatment unit, using packed-bed filter of medium-grained sand for effluent to pass-through prior to dispersal. A Recirculating Sand Filter (RSF) is a type of supplemental treatment unit, using coarse-grained sand and a recirculation system that causes the effluent to pass through the sand media several times prior to dispersal. An ISF and a RSF are designed to provide higher quality effluent standards. ISF and RSF can discharge treated effluent to any type of dispersal field, as site restrictions dictate. ISF and RSF require an annual Operating Permit.

### ISF and RSF OWTS Management Requirements:

	<b>Work</b> <i>This work to be done by an approved Service Provider ONLY.</i>	<b>Frequency</b>
<b>Inspection</b>	<ul style="list-style-type: none"> <li>• Observe surface conditions on and around filter for Effluent leakage, ponding, drainage/infiltration, erosion or other problems.</li> <li>• Area verified free from road, structures, vehicular traffic, surface drainage properly diverted, etc.</li> <li>• Inspection ports are accessible</li> <li>• Check/measure water level in inspection ports in filter bed.</li> <li>• Check for equal distribution by measuring distal end orifice residual pressure head.</li> <li>• Condition of orifices and verification of hydro-flush</li> <li>• Perform all inspection work as recommended by Qualified System Designer or equipment manufacturer.</li> <li>• Perform inspection protocol for pump systems</li> <li>• Record observations.</li> </ul>	<p>According to Operating Permit conditions, but typically:</p> <ul style="list-style-type: none"> <li>• First 3 months, and</li> <li>• As recommended by the System Designer or Service Provider, but at least once every 12 months, depending on system size, usage, and history.</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>• Purge laterals.</li> <li>• Perform squirt and balance laterals. Exercise valves to ensure functionality.</li> <li>• Perform all maintenance work as recommended by Qualified System Designer or equipment manufacturer.</li> <li>• Record work done.</li> </ul>	<ul style="list-style-type: none"> <li>• As recommended by the System Designer or Service Provider, but at least once every 12 months, depending on system size, usage, and history.</li> <li>• Responsive maintenance as necessary.</li> </ul>
<b>Water Monitoring &amp; Sampling</b>	<ul style="list-style-type: none"> <li>• Report observation findings and maintenance actions, including notation of problems and corrective actions.</li> <li>• Record dose counter and elapsed time meter readings from control panel.</li> <li>• See Effluent Monitoring below.</li> </ul>	<ul style="list-style-type: none"> <li>• Annually or as per Operating Permit conditions.</li> </ul>

<b>Dispersal Trench</b>	<ul style="list-style-type: none"> <li>Refer to the YCEH OWTS Manual for management requirements based on the type of dispersal trench: standard trench, PD system, or Sub-surface drip dispersal system.</li> </ul>	<ul style="list-style-type: none"> <li>Annually or as per Operating Permit conditions.</li> </ul>
<b>Reporting</b>	<ul style="list-style-type: none"> <li>Report findings to YCEH per Permit requirements.</li> <li>Standard report to describe findings, analyze performance, and detail actions taken.</li> <li>Report emergency or failure conditions to YCEH immediately.</li> </ul>	<ul style="list-style-type: none"> <li>Annually or as per Operating Permit conditions.</li> </ul>

### Annual Operating Permit Report Minimum Requirements:

1. Septic Tank:
  - a. Inspection frequency should be once every 3-7 years.
  - b. Scum and sludge measurements (pumped by registered septage pumper, as needed).
  - c. Water intrusion (*dissolved oxygen measured by the service provider only, if needed*).
  - d. Integrity of tank, including observation for: cracks or indications of structural deterioration; condition of inlet and outlet T's; condition of lids and risers; indication of leaks in risers.
  - e. Presence and condition of effluent filter.
2. Pump and Dosing Chamber:
  - a. Scum and sludge measurements, pumping as needed.
  - b. Indication of water intrusion (dissolved oxygen measured by the service provider only).
  - c. Integrity of tank, including observation for: cracks or indications of structural deterioration; condition of inlet and outlet T's; condition of lids and risers; indication of leaks in risers.
  - d. Condition of and correct operation of all floats.
  - e. Orderly wrap of float cords.
  - f. Condition of pump intake screen.
  - g. Verification of pump cycle.
  - h. Siphon sitter functioning, if applicable.
3. Control panel in good working order based on checking the following components:
  - a. Timer and digital counter readings recorded by the service provider during the inspection. For control panels that record pump activity electronically, manual recordings are not necessary.
  - b. Pump cycle counter operation verified by the service provider in the field by manual operation of the pump. For control panels that record pump activity electronically, counter operation can be verified remotely.
  - c. Audible and visual alarms functioning.
  - d. Run time appropriate, if demand dose.
  - e. Electrical box free from moisture and secure connections.
4. Dispersal/Leach Field:
  - a. Depth of effluent ponding within trenches, if applicable.
  - b. Indication of effluent breakout or discharge to surface of the ground.
  - c. Upkeep and accessibility of observation port and inspection ports.
  - d. Area verified as free from road, structures, vehicular traffic, surface water drainage with downspouts and landscape drainage properly diverted
  - e. Results of hydraulic loading test, if test is needed.
5. Effluent Monitoring Results (see below)

### Effluent Monitoring:

1. Supplemental Unit only: Treated effluent and, where applicable, untreated effluent will be sampled and tested at least annually for total and fecal coliform, BOD, and TSS.
2. Supplemental Unit requiring Nitrogen Reduction: Influent and effluent of systems with operating permits requiring nitrogen reduction shall also be tested for total nitrogen.
3. Disinfection Units (e.g., UV filters): Wastewater treated by disinfection units shall be tested for total fecal coliform.