

Appendix C. Technical Criteria for Non-LID Treatment Facilities

Non-LID Treatment Facilities may be either tree-box-type high-flowrate biofilters or vault-based high-flowrate media filters.

General

- Design inflow rate is that generated by a continuous rainfall intensity of 0.2 inches per hour.
- Landscape and non-impervious surfaces should be made self-treating or self-retaining and not drain to treatment facilities, if feasible.
- Use the runoff factors in Table 4-1 (on p. 4-4) of the *Stormwater Technical Guide*.
- The applicant's Stormwater Control Plan (Plan) must include, as an attachment, a letter from the manufacturer stating the manufacturer has reviewed the Plan, the proposed device meets these technical criteria, and the manufacturer will provide a warranty for two years following activation of the facility.

High-Flowrate Tree-Box-Type Biofilters

- Maximum design surface loading rate of 50 inches per hour.
- Precast concrete construction.
- Inlet design to capture flows at least up to the maximum design surface loading rate and to bypass high flows.
- Minimum media depth of 1.8 feet (may be reduced, but maintaining the same media volume, if required because of inadequate head to discharge point).
- Media and facility configuration supports a healthy tree or other vegetation.

Vault-Based High-Flowrate Media Filters

- Replaceable cartridge filters.
- Maximum design filter surface loading rate (to cartridge filters) of 1 gpm/ft²
- Storage volume detains runoff and allows settling of coarse solids prior to filtration.
- Flow through the cartridge filters is controlled by an orifice or other device so that the design surface loading rate is not exceeded.

Alternatively, applicants may specify treatment systems that have received a General Use Level Designation (GULD) for Basic Treatment from the Washington State Department of Ecology based on independently verified field testing following the Technical Assessment Protocol – Ecology (TAPE). Treatment systems must be sized to treat the water quality flow rate at the design operating rate for which they received TAPE GULD certification for Basic Treatment.

Media filters and high flow rate tree well filters currently holding this certification can be found at the following link:

<http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html>