

**MONTANA DEPARTMENT OF ENVIRONMENTAL  
QUALITY**

**NUTRIENT-REDUCING WASTEWATER TREATMENT SYSTEM  
DESIGNATION FORM**

---

**DATE:** April 29, 2014 (Updated March 2019)

**APPLICATION SUBMITTAL DATE(S):** December 9, 2013, March 17, 2014

**SYSTEM MANUFACTURER:** Norweco, Inc.

**SYSTEM NAME(S):** Hydro-Kinetic Model 600 FEU

**DESIGNATED TREATMENT LEVEL<sup>1</sup>:** Level 2 (Can use 24 mg/L for effluent total nitrogen concentration in nitrate sensitivity analysis)

**CONDITIONS:**

A. Due to start-up time lag associated with all biologically mediated nutrient reduction systems, Hydro-Kinetic Model 600 FEU systems may not be suitable for commercial-type systems (for example, campgrounds, RV parks, etc) that are designed to be used seasonally. The applicability of Hydro-Kinetic Model 600 FEU systems for nutrient reduction purposes at seasonal commercial-type systems should be based on a case-by-case analysis.

B. Approval is only for Hydro-Kinetic Model 600 FEU systems that include a separate effluent pumping chamber, which is placed between the Hydro-Kinetic Filter chamber and the final disposal location. The effluent pumping chamber will include a pump that is electronically connected to the aerator in the Hydro-Kinetic aeration chamber. If there is a malfunction with the aerator the effluent pump chamber will not pump any effluent to the disposal location. Systems that siphon or gravity feed to the discharge location are not included in this approval.

C. Approval is valid for residential and non-residential facilities, with a maximum design flow of **500 gallons per day**.

D. The Hydro-Kinetic Model 600 FEU system does not use a separate septic tank. The treatment chambers (pretreatment and anoxic tanks) do not meet Circular DEQ4 chapter 5 requirements for septic tanks. **Multiple deviations may be necessary.** All other applicable laws, rules and design circulars must also be met.

E. Approval is valid for residential and non-residential facilities with residential strength wastewater as defined in section 1.2.72 of DEQ 4 – 2013 edition). For systems accepting high strength wastes (as defined in section 1.2.39 of DEQ 4 - 2013 edition) the level 2 designation is valid with proper pre-treatment in compliance with all applicable rules, design standards and as approved by the Department.

**APPROVED BY:** Barbara Kingery

**NOTES:**

***1 The definitions of level 1a, level 1b, and level 2 are in ARM 17.30.702(9), (10) and (11), respectively.***