

# Filter Backwash Recycling Rule (FBRR) – Quick Reference

Regulation: 40 CFR 141.76; CA Title 22 CCR §64653.5

T-5 Exam Focus: Short rule, few numbers, but the concept matters. Know why recycle location matters.

---

## Key Numbers & Thresholds

Metric	Value	Notes
Recycle return point	Head of treatment plant	Before coagulation, or State Board-approved alternative
Covered filtration types	Conventional and direct	DE and slow sand are not covered
Covered recycle flows	3 types	Spent filter backwash, thickener supernatant, dewatering liquids

## Why This Rule Exists

Filters concentrate the pathogens they remove. A single backwash cycle can carry *Cryptosporidium* oocysts at concentrations far higher than the raw source water. If that backwash returns downstream of coagulation, those oocysts bypass the very processes designed to remove them. That's the problem the FBRR solves.

## Required Actions

1. **Return all recycle flows to the headworks** (before coagulation). If that's not feasible, the State Board must approve the alternative return point.
2. **Notify the State Board** with a plant schematic showing the origin, path, and return point of every recycle flow.
3. **Report flow data** including typical recycle flow rate (gpm), highest observed plant flow in the previous year, design flow, and approved operating capacity.
4. **Maintain records** of backwash flow rates, durations, filter run lengths, recycle frequency, treatment unit specifications, and loading rates.

## What to Watch on the Exam

---

- The FBRR only applies to systems that actually recycle. If a plant discharges backwash water instead of recycling it, the rule does not apply.
- The rule does not set a numeric standard or MCL. It is a treatment technique rule focused on where recycle flows go, not on a concentration limit.
- Know the three covered flow types. Spent filter backwash water is the obvious one, but thickener supernatant and dewatering liquids are also covered. I've seen exam questions that test whether you know all three.
- The FBRR works hand-in-hand with the Enhanced SWTRs. Returning recycle flows to the headworks ensures the full coagulation-flocculation-sedimentation-filtration process treats those concentrated pathogens before they reach the distribution system.

## California Implementation Note

---

California implements the FBRR through §64653.5 within the Surface Water Treatment chapter (Chapter 17). The requirements mirror the federal rule. Systems must maintain all recycle flow records and make them available to the State Board upon request.

---

*Source: 40 CFR 141.76 & CA Title 22 CCR §64653.5 | H2oCareerPro.com*