Construction Water Management: Stagnation Control, Flushing, Disinfectant & Recommissioning

Field Sheet — Renovation Water Shutdowns, Dead-Leg Removal, Weekly Flushing & Return-to-Service Verification

Direct Answer (Practitioner Reference): Renovation shutdowns, main breaks, and capped branch lines destabilize hospital water systems by increasing water age, depleting disinfectant residuals, and dislodging biofilm. Under CMS QSO-17-30, ASHRAE Standard 188, and the CDC Legionella Control Toolkit, facilities must control stagnation through at least weekly flushing of low-flow/out-of-service lines, physically eliminate dead legs back to active recirculation mains, monitor disinfectant and temperature control limits (avoiding the 77 F - 113 F / 25 C - 45 C Legionella growth range), and execute a documented recommissioning check before patient occupancy.

Control Domain	Renovation / Shutdown Requirement	Verification / Frequency	Governing Authority
Stagnation & Water Age	Map low-use, capped, or shut-down wings; prevent water from sitting in 77 F - 113 F (25 C - 45 C) growth zone	Track shutdown duration & distal temperatures per WMP	CDC Legionella Toolkit; ASHRAE 188
Flushing Protocols	Flush low-flow runs, closed rooms, eyewashes, and safety showers; schedule when vulnerable patients are absent	At least weekly during inactivity + pre-recommissioning	CDC Toolkit; CDC LEAF
Disinfectant Management	Verify free chlorine or monochloramine residual and pH meet facility Water Management Program control limits	Measure at distal outlets; apply corrective action if out of range	ASHRAE 188; CMS QSO-17-30
Dead-Leg Removal	Cut back capped/unused branch piping to active recirculation main; prohibit new dead legs in renovation design	As-built plumbing inspection; weekly flush if removal deferred	CDC Toolkit; FGI / Plumbing Code

Renovation Shutdown & Recommissioning Sign-Off Checklist

Step	Required Action Before Return to Patient Care	Owner
1. Pre-Shutdown Isolation	[ ] Document affected risers, branches, and patient-care zones; notify WMP team (Facilities + IP)	Facilities / Plumbing
2. Dead-Leg & Tie-In Audit	[ ] Confirm all temporary caps/unused branches are removed back to active mains; inspect pressure-drop zones for sediment	Engineering / Contractor
3. System Flush & Disinfection	[ ] Execute full directional flush of cold and hot loops; perform supplemental/shock disinfection if triggered by WMP	Facilities / Water Vendor
4. Residual & Temp Verification	[ ] Log stabilized disinfectant residual, pH, and hot/cold temperatures at representative distal fixtures (per WMP limits)	WMP Team
5. Clinical Release	[ ] Complete targeted Legionella sampling if required by WMP/CDC post-construction trigger; obtain IP sign-off	Infection Preventionist

Practitioner prep/reference tool based on CDC Legionella Control Toolkit, ASHRAE Standard 188, and CMS QSO-17-30-Hospital/CAH/NH. Exact numeric disinfectant/temperature control limits are set by the facility Water Management Program.