RESTORATION INTEL • FIRST-HOUR FIELD CARD (FREE)

Storm Water Intrusion Protocol: S500 Classification & Safety Go/No-Go Gate

Current version — Oct 31, 2026
Update history: restorationintel.com/storm-flood-water-intrusion-extraction-drying-protocol/

CRITICAL POSITION STATEMENT • IICRC S500 CONSENSUS BODY (FEB 10, 2026)

Wind-driven rain and top-down ingress are NOT automatically Category 3. Overland flood, rising groundwater, and sewage backups remain Category 3, but roof breaches and window leaks begin as clean rainwater. Inspect source, pathway, and dwell time, then make your preliminary determination. *The burden of proof for a lower category rests on the contractor.*

1 ANSI/IICRC S500 Water Classification Matrix (Before Touching Anything)

MANDATORY FIELD GATE

Category	Storm Intrusion Source & Path	Contamination Thresholds & Degradation Rule	Required Mitigation Action
Category 1 (Clean Water)	Clean rainwater entering through fresh roof breaches, flashing failures, or broken windows.	Contacts **clean non-contaminated surfaces only** (bare decking, paint, clean insulation). Dwell time **under 24–48 hours** before biological activity initiates.	Rapid emergency extraction; dry structural assemblies in place; salvage porous materials if extracted within 24 hrs.
Category 2 (Gray Water)	Rainwater contacting organic building materials, attic debris, or roof-surface contaminants during transit.	Water passing through soiled insulation or dirty roof assemblies. **Degradation Rule:** Any Cat 1 water standing in wet assemblies **>24–48 hours** reclassifies to Cat 2.	Remove non-salvageable saturated materials; apply EPA-registered antimicrobial; deploy HEPA air filtration during demo.
Category 3 (Black Water)	Overland stormwater runoff, rising groundwater, storm surge, or municipal collection backflow entering at/below grade.	Grossly contaminated with pathogenic agents, sewage, agricultural runoff, heavy metals, or soil microorganisms. *Automatic Category 3.*	Aggressive remediation: remove all porous materials in contact zone; antimicrobial treatment of framing; clearance testing required.

2 Pre-Entry Safety Go / No-Go Verification Card

LIFE SAFETY FIRST

Utility & Structural Safety Checks

[ ] **Electrical Disconnect:** Confirm power OFF at the *electric meter* (not just breaker panel). Tag & lock.
[ ] **Gas Service Shutoff:** Shut gas supply at the meter if any appliances or heating units were submerged/contacted.
[ ] **Structural Stability:** Inspect for ceiling sag, saturated drywall collapse hazards, and roof framing deflection.
[ ] **Slip/Fall & Overhead:** Secure loose wet insulation, compromised ceilings, and trip hazards.

Mandatory PPE by Intrusion Category

Category 1 / 2 Protocol:
• Safety footwear (steel/composite toe, puncture resistant)
• Nitrile/leather work gloves, eye protection, hard hat.
Category 3 & Microbial Protocol (OSHA Compliant):
• **Respirator:** NIOSH-approved N95 or P100 half-mask.
• **Body Protection:** Disposable impermeable coveralls (Tyvek).
• **Gloves & Eyes:** Chemical-resistant heavy nitrile + sealed goggles.
• OSHA Bloodborne Pathogens standard applies to all Cat 3 sewage/flood work.

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Emergency Extraction Protocol, Equipment Benchmarks & Salvage Logic

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3 Rapid Extraction Sequence & Equipment Benchmarks

IMMEDIATE ACTION

Standing water must be extracted immediately once safe entry is established. Every hour of standing water increases moisture penetration depth into framing/subfloor, destroys material salvageability, and escalates microbial proliferation. **Complete extraction of standing water is required**—partial extraction followed by evaporation is prohibited under S500.

Extraction Equipment	Field Capacity Benchmark	Deployment Protocol & Site Application
Truck-Mounted Extraction	**80 – 150 Gallons Per Hour (GPH)** under field conditions	Primary workhorse for open, accessible floor areas and deep water pools. Deploy multiple units in parallel on large-loss storm events to collapse dwell time.
Portable Extractors / Wet Vacs	40 – 70 GPH; high-mobility suction units	Mandatory for tight/inaccessible areas: closets, bathrooms, beneath fixed cabinetry, stairwells, and mechanical rooms.
Crawl Space Crawler Equipment	Dedicated submersible pumps + crawl vacs	Confined space water removal. **OSHA 29 CFR 1910.146 Confined Space protocols apply:** continuous mechanical ventilation, atmospheric monitoring, safety attendant.

4 First-Hour Material Salvage vs. Removal Decision Rules

S500 THRESHOLDS

Material Assembly	Salvage Criteria (Keep & Dry)	Removal Criteria (Tear Out & Dispose)
Carpet & Cushion (Pad)	Cat 1 or Cat 2 water **<24–48 hrs dwell time**: Salvageable via deep extraction, sanitization, and accelerated air moving in place.	**Cat 3 water: 100% remove and discard.** Any carpet wet **>48–72 hrs** with potential microbial growth: remove pad immediately, discard carpet.
Gypsum Drywall	Surface dampness only; core pin-meter readings below saturation thresholds in Cat 1 clean intrusion.	**Flood cut 2 feet above highest confirmed wet reading** on saturated drywall. **Cat 2/3 override:** Remove all drywall in direct contact regardless of reading.
Insulation	**Closed-cell spray foam** is waterproof and non-absorbent; can remain in place while drying framing.	**Fiberglass batt and open-cell spray foam:** Once saturated, cannot be dried effectively in cavities. Remove, bag, and discard.
Wood Subfloor (OSB / Ply)	Cat 1 water extracted rapidly; drying initiated **within first 24 hours**. Must ventilate underside from crawl/basement.	OSB wet **>72 hours** exhibiting edge swelling and structural delamination. **Cat 3 water contact: automatic replacement.**

5 First-Hour Field Dispatch & Arrival Sign-Off Log

FIELD VERIFICATION

Property / Claim #: .....
Lead Technician: .....
Date & Arrival Time: .....

Power Verified Meter OFF: [ ] Yes [ ] No
Gas Service Shut Off: [ ] Yes [ ] N/A
Initial Category: [ ] Cat 1 [ ] Cat 2 [ ] Cat 3

Est. Water Volume (Gal): .....
Extraction Method: [ ] Truck [ ] Portable
Tech Signature: .....