FREE PREVIEW

PATROL REFERENCE PRESS

Critical Infrastructure Recognition: Water Systems

Volume 3 — A Recognition Reference for Public Safety, Security & First Responders

OBSERVE · ASSESS · DECIDE · TEACH

undefined

First Edition — 2026

patrolreferencepress.com

Free sample — not for resale

About This Free Preview

This preview gives you the complete opening of Critical Infrastructure Recognition: Water Systems (Volume 3) — the How to Use this Guide and the full first chapter, *Understanding Water Infrastructure*. You'll see the guide's real format: the recognition-first field pages, the safety callouts, and the incident-management connection that carry through the full volume. If this preview helps, the full 54-page manual continues with the chapters listed on the closing page.

How to use this guide

A responder rarely gets a convenient label on an unfamiliar facility. You get a fence line, an open basin, a leaking pipe, a flooded intersection, a chlorine odor, a tank on stilts, a manhole, or a call from dispatch about discolored water. Start with the observation, not the theory. Ask: **What am I looking at? What does it do? Why is it important? What hazards and weather impacts matter? What should I observe, report, or avoid?**

Each entry is designed as a stand-alone field page. The repeated format is deliberate. It builds recognition under stress without asking a patrol officer to become a water utility engineer. Treatment processes, pipe materials, pressures, tank designs, and response zones vary by system and jurisdiction; items marked **SME VERIFY** require confirmation from the operator, AHJ, or qualified engineer before publication.

> 💡 **OFFICER NOTE**
>
> **Officer note — the first report:** Give dispatch your location, what you can see, hear, or smell, whether anyone is exposed, wind and weather conditions, visible markings or signs, any public health concern (such as people drinking or swimming in the water), and the utility/emergency number if posted. Do not approach a suspected chemical release, enter an open basin, or taste or sample water to read a sign or make an assessment.

Chapter 1 — Understanding Water Infrastructure

Why recognition matters on patrol

A patrol officer is often the first trained observer at a water or wastewater event. A routine alarm, suspicious vehicle, odor complaint, hydrant leak, excavation, flooding call, or storm patrol can place you beside infrastructure that quietly moves water, waste, and storm flows for an entire community. Recognition changes the quality of the first five minutes. It helps you choose a safe position, protect the public, describe the problem accurately, locate the responsible utility or agency, and preserve an incident scene without creating a second emergency.

Water systems are life-support infrastructure: they deliver drinking water, fire-suppression flow, and the water hospitals and industry require hourly. Wastewater and stormwater systems remove what people flush and what storms wash away. A failure can produce a public-health emergency, a flood, a road collapse, or a contamination event that outlasts the repair. The goal is to recognize consequences and get the right agency moving early.

The five-minute patrol habit

1. **Observe:** Stop short. Scan for people, vehicles, signs, leaks, pooling or flowing water, discoloration, odors, open hatches or basins, and changing conditions. Use binoculars rather than trespass.
2. **Assess:** Is there a chemical release, flooding, a sinkhole, an electrical hazard, a drowning risk, a confined-space opening, or an immediate life threat? Is anyone drinking, swimming, or wading in the water? What is the weather doing?
3. **Decide:** Use training, agency policy, and incident command. Request fire/HazMat, the utility, public works, and the health department early when contamination, release, or flooding is possible.
4. **Teach:** Give a plain-language briefing to incoming responders. Explain what is known, what is uncertain, and what you did not touch.

> ⚠️ **PITFALL**
>
> **Red line:** Never treat a quiet site as a safe site. Water infrastructure can look harmless and still be deadly — chlorine gas can be present without a visible cloud, a wet well can contain hydrogen sulfide, and an open basin can be deeper and colder than it appears. Odor and appearance are not clearance tests.

Federal critical-infrastructure framework

The Department of Homeland Security and CISA coordinate national critical-infrastructure protection across 16 sectors, including Energy; Communications; Transportation Systems; **Water and Wastewater Systems**; Emergency Services; and Chemical. Drinking water and wastewater utilities fall principally in the **Water and Wastewater Systems Sector**, while their dependencies reach across nearly every sector: a treatment plant needs power, chemicals, and communications; a hospital needs water pressure; a fire response needs hydrant flow.

CRITICAL INFRASTRUCTURE RECOGNITION: WATER SYSTEMS: FREE PREVIEW

The sector model is a coordination framework, not a patrol classification system. Officers should use it to identify partners and consequences: the owner/operator, emergency management, the fire service, public works, the health department, the environmental agency, and the relevant fusion or information-sharing channel. EPA implements the Safe Drinking Water Act (drinking water quality) and the Clean Water Act (discharges and water quality); the America's Water Infrastructure Act requires many community water systems to conduct risk and resilience assessments and maintain emergency response plans. CISA guidance, the National Infrastructure Protection Plan, EPA water-sector materials, and FEMA's Emergency Support Function #3 (Public Works and Engineering) provide public reference points. Current federal and state guidance must be checked before publication.

Public safety and private security: different roles, shared objective

Local law enforcement protects life, establishes lawful control of public space, manages traffic and access under authority, supports evacuation or shelter decisions, investigates crimes, and preserves evidence. Officers generally do not determine water pressure, declare water safe to drink, or direct utility repairs.

Private security controls access within the authority granted by the owner, observes and reports, maintains visitor/contractor procedures, protects employees and assets, and activates the facility emergency plan. Security should not physically confront an unknown person near a suspected release or contamination event unless policy and immediate safety require it; preserve distance, notify the control center and public safety, and record objective observations.

The utility knows the system, the treatment process, the chemicals on site, pressure and flow status, and affected customers. **Fire/HazMat** leads atmospheric monitoring, chemical incident control, rescue, and decontamination within its authority. **Emergency management** coordinates resources, public information, and recovery; **the health department** coordinates public-health messaging such as boil-water advisories. No officer should promise the public that water is safe without qualified confirmation.

> 💡 **OFFICER NOTE**
>
> “The utility has been called” is not a complete law-enforcement plan. Confirm who has command, who is protecting the public, what area is controlled, whether a boil-water advisory has been considered, and how updates will be shared.

Incident management connection

Use NIMS/ICS principles even on a small call: establish command, name an incident location, identify hazards, set an objective, assign perimeter and traffic functions, and communicate a common operating picture. Unified command is appropriate when public safety, a utility, and a health or environmental

CRITICAL INFRASTRUCTURE RECOGNITION: WATER SYSTEMS: FREE PREVIEW

agency share authority. Document times, weather, observations, notifications, and instructions received; these records support later safety review and investigations.

Get the Full 54-Page Manual

Chapter 1 framed water infrastructure. The full volume walks supply, treatment, and distribution asset by asset.

- **Chapter 2: Utility Infrastructure: Quick Recognition** — distinguishing water and wastewater from gas, electric, communications, and more.
- **Chapter 3: Water Supply & Sources** — intakes, elevated storage tanks and water towers, and well fields.
- **Chapter 4: Water Treatment** — treatment-plant exteriors, aeration and sedimentation, filtration, and chemical feed systems.
- **Chapter 5: Pumping & Distribution** — the pump-and-distribution backbone of a public water system.
- **Chapters 6–7: Wastewater & Stormwater** — collection, treatment, and flood-control infrastructure.
- **Chapter 8 & Drills:** portable & emergency equipment, plus field recognition drills and response cards.

$19.99

Instant digital download — carry it on your phone, tablet, or print for your duty bag

GET THE FULL MANUAL

https://buy.stripe.com/cNicN6cVt3Ut1A9agogrS0a

Patrol Reference Press — First Edition, 2026

This manual is a recognition and response reference for public safety, security, and emergency-response professionals. It is not an operations manual. Consult your agency's policies and the owning operator/utility for jurisdiction-specific guidance.