



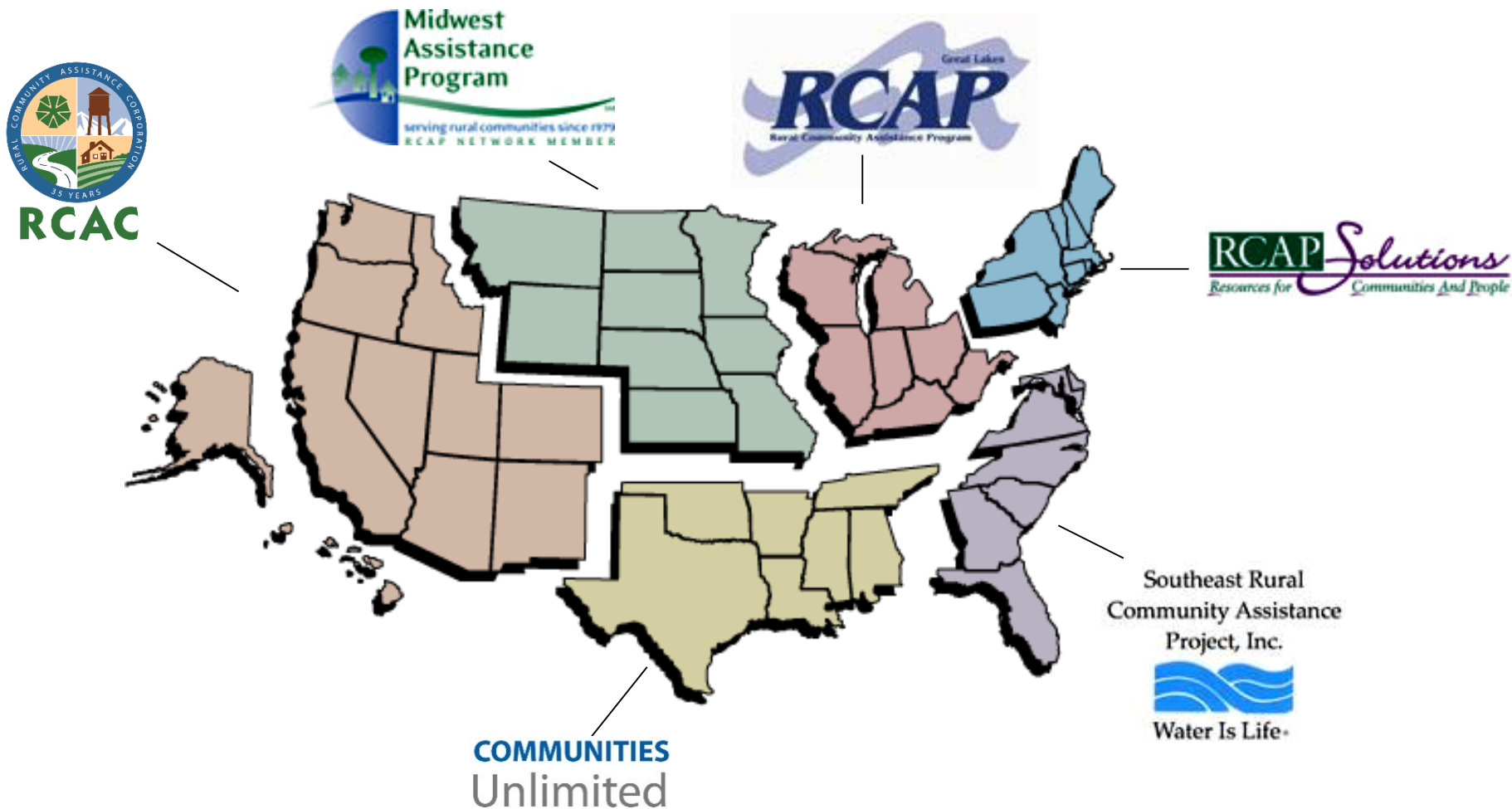
RCAC

How Can RCAC Help Your Small Water System?

**Developing Emergency Response and
Standard Operations Plans**

WELCOME!

The Rural Community Assistance Partnership



RCAC Programs

- Affordable housing
- Community facilities
- Water and wastewater infrastructure financing (Loan Fund)
- Classroom and online training
- On-site technical assistance
- Median Household Income (MHI) surveys

What is Capacity Development?

- Acquiring and maintaining technical, managerial and financial capabilities (TMF) to consistently provide safe drinking water
- TMF assessment process
 - ▶ Mandatory – New systems
 - ▶ Mandatory – Change of ownership
 - ▶ Mandatory - To obtain SRF funding
 - ▶ Optional – Enforcement action (DDW or LPA)

The 13 TMF Elements

TECHNICAL ELEMENTS

- Consolidation Feasibility
- System Description
- Certified Operators
- Source Capacity
- Operations Plan
- Training



The 13 TMF Elements

MANAGERIAL ELEMENTS

- Ownership
- Water Rights
- Organization
- Emergency Response Plan (ERP)
- Policies



The 13 TMF Elements

FINANCIAL ELEMENTS

- Budget/Capital Improvement Plan
- Budget Controls



Standard Operating Procedures

Why do we need to write it down?

- ✓ Retirement
- ✓ Operator takes a vacation or has an emergency
- ✓ What standards will you hold your staff accountable to?

Standard Operating Procedures

Monitoring and Reporting



- ✓ **Bacteriological Sample Siting Plan**
- ✓ **Chemical Monitoring**

Standard Operating Procedures

Response to Violations (Public Notices)

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este aviso contiene información muy importante sobre su agua potable. Para una copia en español, favor de llamar al sistema de agua (xxx) xxx-xxxx.

[Water System Name]

XX/XX/XXXX

BOIL WATER NOTICE

Boil Your Water Before Drinking or Food Preparation to Avoid Illness

Due to the recent [event (e.g., water outage, power outage, flood, fire, earthquake or other emergency)], which occurred on [date], the State Water Resources Control Board, Division of Drinking Water, the [County Name] County Health Department, and the [Water System name] Water System are advising residents of [City, Town, System] to only use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution to avoid stomach or intestinal illness. The affected area includes: [INSERT GEOGRAPHICAL DESCRIPTION, STREET BOUNDARIES, ETC.]

We will inform you when tests show that water is safe to drink and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

If you have questions about other uses of tap water, such as bathing and dish washing, please call your water system or read this guidance: <https://www.cdc.gov/healthywater/emergency/dwa-comm-toolbox/before/tools/What-to-Do-During-a-Boil-Water-Advisory.docx>

Optional: Potable water is available at the following locations: [List locations]

Please bring a clean water container (5 gallons maximum capacity).

Do not drink the water without boiling it first



- Boil all water for one (1) minute (rolling boil).
- Let water cool before drinking.
- Use boiled or bottled water for drinking, brushing teeth, and food preparation until further notice.
- Boiling water kills bacteria and other organisms in the water.

If you are unable to boil your water:

Household unscented liquid bleach



- For clear water, use 8 drops (1/8 tspn.) of bleach for 1 gallon of water. For cloudy water, filter through a clean cloth and use 16 drops (1/4 tspn.) of bleach for 1 gallon of water.
- Mix well. Allow to stand for 30 minutes before using.
- Water may taste or smell like chlorine. This means disinfection has occurred.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

DRINKING WATER WARNING

[System] water has high levels of nitrate

DO NOT GIVE THE WATER TO
INFANTS UNDER 6 MONTHS OLD OR PREGNANT WOMEN
OR USE IT TO MAKE INFANT FORMULA

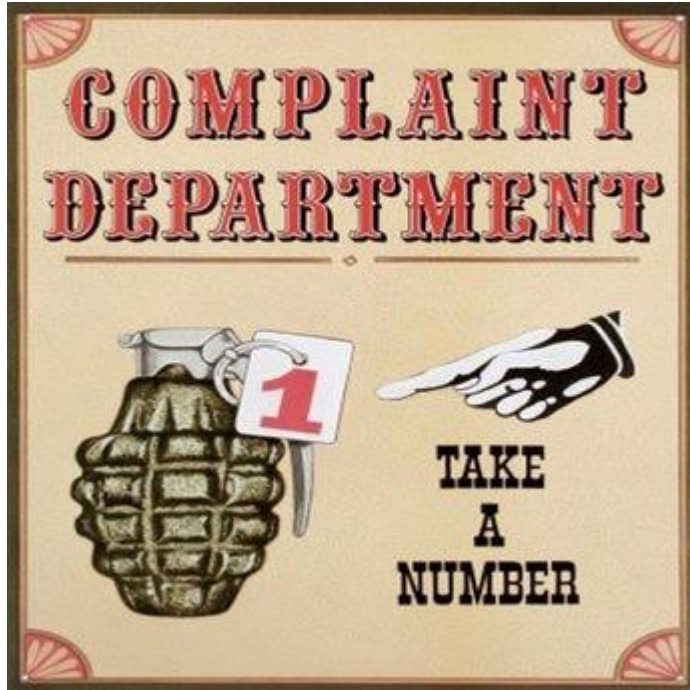
Water sample results received [date] showed nitrate levels of [level and units]. This is above the nitrate standard, or maximum contaminant level (MCL), of 10 milligrams per liter. Nitrate in drinking water is a serious health concern for infants less than six months old.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.*

Standard Operating Procedures

Customer Complaint Policies



- ✓ Log to record
- ✓ Investigate
- ✓ Verify or dismiss
- ✓ Record steps taken
- ✓ Notify complainant of action taken

Standard Operating Procedures

Employee Policies



- ✓ **Sick / vacation time**
- ✓ **Uniform requirements**
- ✓ **Vehicle use**
- ✓ **Purchase power**
- ✓ **Overtime**
- ✓ **Computers / tools**

Standard Operating Procedures

Financial Policies



- ✓ **Payment methods credit cards?**
- ✓ **Late payments**
- ✓ **Cash handling**
- ✓ **Reporting cash / budgets**

Standard Operating Procedures

Emergency Operational Procedures



✓ **Emergency
Response Plan**

Emergency Response Plan – Why?

- Preparing the plan prepares you to take action in response to a major event.
- It's required by law for systems serving greater than 3,300 population; Public Health Security and Bioterrorism Act of 2002

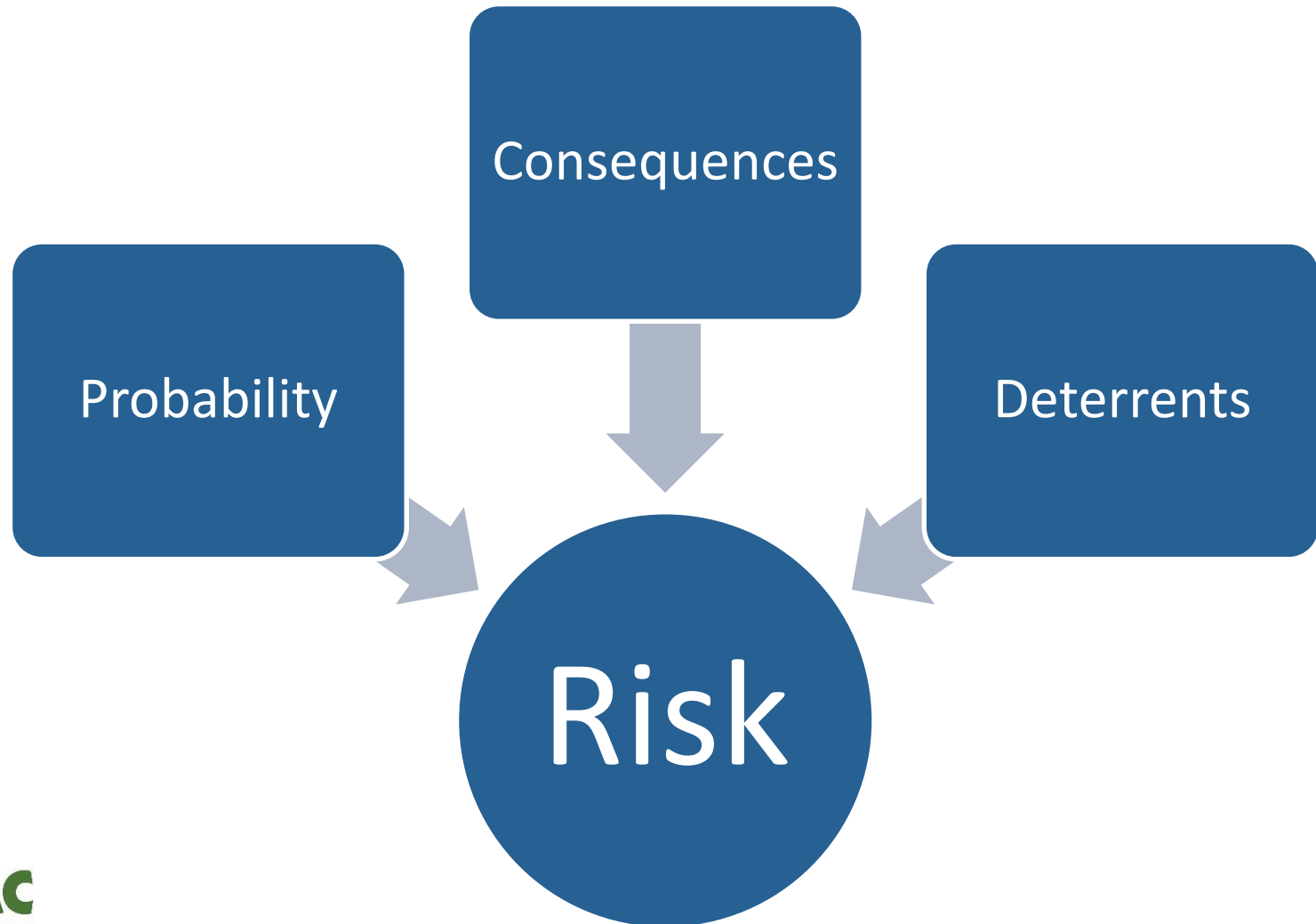
Emergency Response Plan – What?

- Credible threats, indications of terrorism or acts of terrorism.
- Major disasters or emergencies
- Catastrophic incidents that lead to mass casualties, damage and disruption affecting the population, infrastructure, environment, economy, and/or government functions.

Vulnerability Assessment

- Inventory of Critical Components
 - Source Water Type
 - Treatment Plant
 - Storage
 - Power
 - Distribution System
 - Offices
 - Communications
 - Critical Facilities Served

Vulnerability – Risk Determination



Vulnerability – Identify Threats

Man-Made

- ✓ Vandalism
- ✓ Sabotage
- ✓ Terrorism
- ✓ Spill
- ✓ Power Loss

Natural

- ✓ Severe Storm
- ✓ Flooding
- ✓ Earthquake
- ✓ Wildfire
- ✓ Drought

Vulnerability – Probability of Occurrence

Assign Probability Factor

Threat	Factor
Threat exists – but not probable; target unknown <ul style="list-style-type: none">• Vandal, saboteur or terrorist <i>could</i> threaten✓ Tornados, floods or earthquakes <i>could</i> take place in the area	1
Threat exists – probable, but target not identified <ul style="list-style-type: none">• Authorities know of threat, but no specific target• Tornados, floods or earthquakes have taken place in the area	3
Threat exists – probable and target identified <ul style="list-style-type: none">• Authorities know of threat and target	5

Vulnerability – Severity of Consequences

Decreased Quality? Decreased Quantity?

Consequence	Factor
Normal supply of safe water – all demands met	1
Adequate supply of safe water –all <i>emergency</i> demands met	2
Inadequate supply of safe water - parts of system without water	3
No supply of safe water - only contaminated water available for fire fighting and sanitary needs	4
No water available - system shut down	5

Vulnerability – Identify Deterrents

Delay

- Lighting
- Fencing
- Locks
- Gates

Detection

- Cameras
- Motion Sensors
- Door or window sensors

Response

- Utility Staff
- Law Enforcement
- Security Company

Redundancy

- Pumps
- Power
- Spare Parts

Vulnerability – Effectiveness of Deterrents

Effectiveness of Deterrents	Factor
Highly effective deterrents <ul style="list-style-type: none">• Physical means to detect, delay and respond to threat in place• Additional source of supply readily available	1
Moderately effective deterrents <ul style="list-style-type: none">• Physical means to delay vandals in place• Key spare parts available	3
Ineffective deterrents <ul style="list-style-type: none">• No physical means to detect, delay and respond to threat in place• No alternate source of supply or key spare parts available.	5

How Do They Rank?



Emergency Response Plan – Core Elements

- Water System Information
- Roles & Responsibilities
- Communication Procedures
- Personnel Safety
- Identify Alternate Water Sources
- Replacement Equipment & Chemical Supply Sources
- Property Protection
- Water Sampling & Monitoring

Emergency Response Plan – Action Plans

- Develop action plans according to Vulnerability Assessment findings
- Consider highly probable events as well as events of very high consequence
- Step by step instruction of how to proceed in each scenario.

References

- SWRCB Website
 - https://www.waterboards.ca.gov/drinking_water/programs/
- Templates
 - https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Notices.shtml

References

- RCAC Trainings
 - <https://www.rcac.org/trainings/>
- RCAC Request for Assistance
 - <https://www.rcac.org/contact-us/request-for-assistance/>

Questions?



For more information, please contact
Katrina Hoitt, Rural Development Specialist
khoitt@rcac.org
(916) 447-9832, ext. 1088