

REVISED TOTAL COLIFORM RULE

Planning Ahead

Effective April 1, 2016



Revised Total Coliform Rule

- **Sampling Changes**
 - Specific Sample Siting Plans
 - Number of samples required following TC+
- **Treatment Technique**
 - Assessments, Level 1 and 2
- **Seasonal Systems**
 - Seasonal Start-up Certification

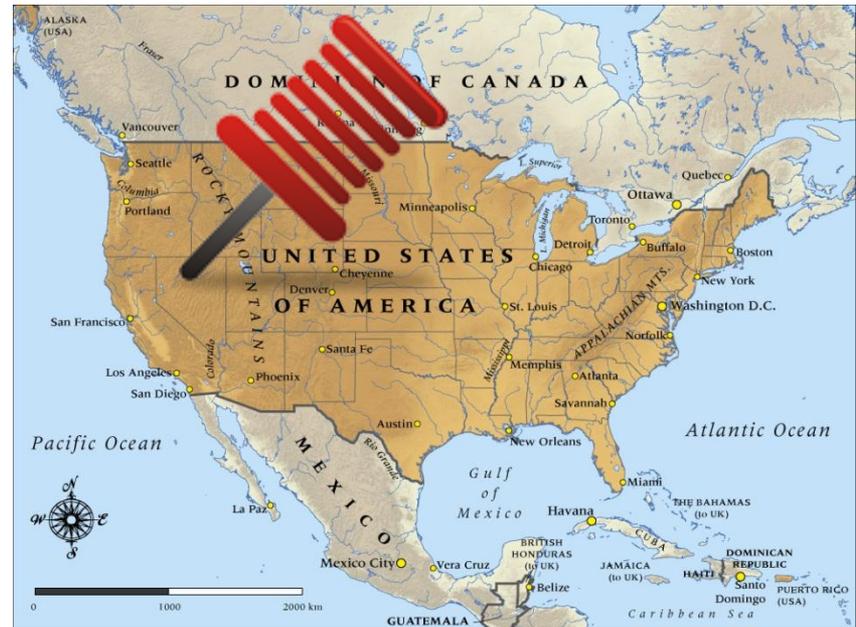
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Revised Total Coliform Rule



Specific Sampling Locations

- Routine
 - *Where*
- Repeat
 - Routine Site
 - Within 5 Upstream
 - Within 5 Downstream



Safe Drinking Water

Jemmy Jo's Country Grub



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Small Non-Community



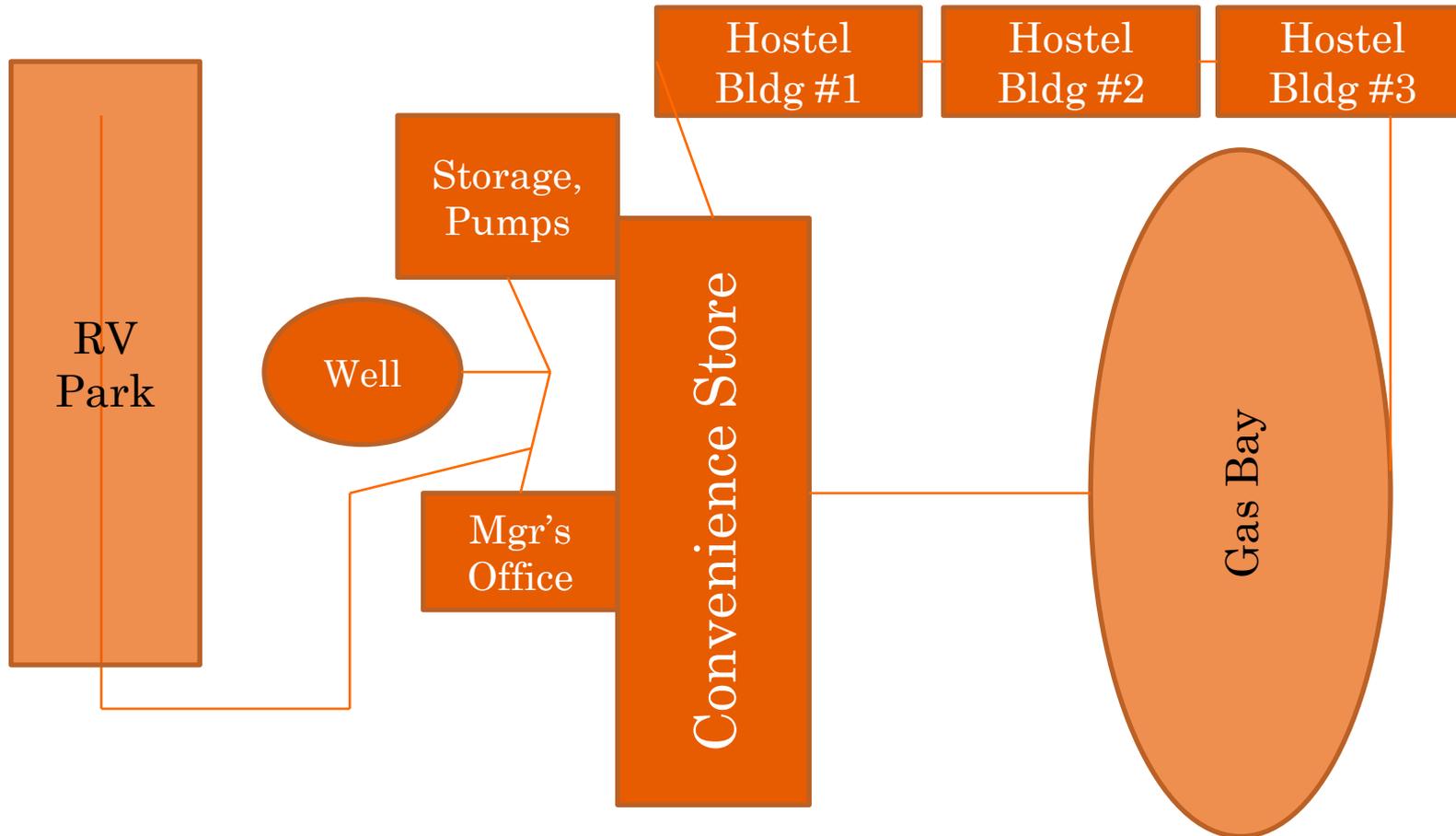
- Jemmy Jo's Country Grub
 - 1 routine sample per quarter
 - Taken at kitchen sink (only 1 sink?)
- 3 Repeat samples per coliform detect
 - Sample taken at SAME sink as above
 - Sample taken at restroom sink
 - Sample taken at janitor closet
- 3 Follow-up samples the following month

Source Water Sample



- Groundwater Rule
 - Well (how many)
 - Spring
 - Consecutive Connection
- Surface Water Rule
 - ZERO

Jemmy Jo's Barnstorming Center



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Large Non-Community



- Jemmy Jo's Barnstorming Center
 - Large hostel, 100/night
 - RV Park, 50/night
 - C-Store, Gas Station, 1200/month
 - 2 routine samples per month

RV Park Site 10

Hostel 3 Kitchen

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Large Non-Community



- Jemmy Jo's Barnstorming Center
 - Large hostel, 100/night
 - RV Park, 50/night
 - C-Store, Gas Station, 1200/month
 - 2 routine samples per month
- 3 Repeat samples per coliform detect

Sample At *RV Site 10*

Sample Site *Hostel 3 Kitchen*

Sample At *RV Site 1*

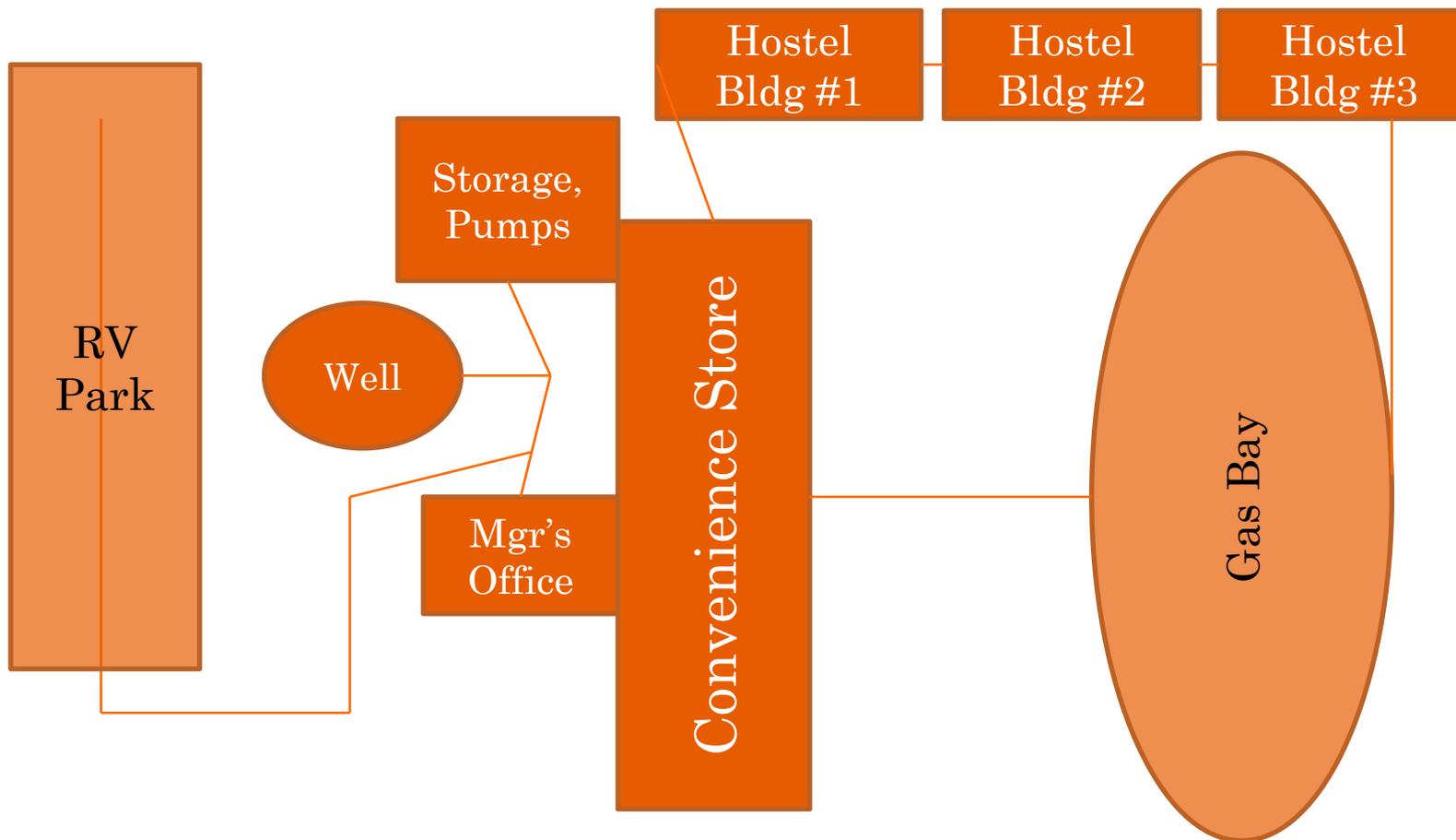
Sample Site *Hostel 2 Kitchen*

Sample At *C-Store*

Sample Site *C-Store*

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What about the well???

Revised Total Coliform Rule



- Sample Siting Plan
 - Where to sample
 - Number of samples
- Following a TC +
 - Where to Repeat
 - How often to Repeat
 - How NOT to Repeat
- What Not to Forget



You CAN Contact Us



- Phone
- E-mail
- Face-to-face

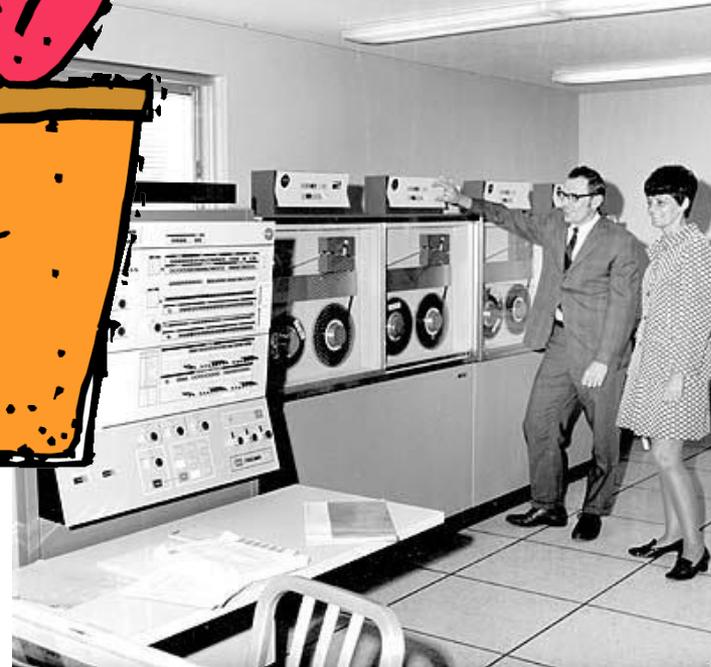
- PWS has responsibility



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Communicate



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YOUR Responsibility



- PWS or Certified Operator Must
 1. Contact State about detect
 2. Know your sample plan and protocol
 3. Consider what may have caused the positive result
 4. DO NOT chlorinate
Only masks the problem

Treatment Technique Triggers



Level 1 Assessment

- Following a confirmed coliform sample
 - Water System Completion Required within 30 days of trigger

PWS ID#:	PWS Name:	City/Town:
Compliance Period (mm/yy)		
INSTRUCTIONS:		
<p>Section A: <u>Review and evaluate</u> the listed elements typically found in a PWS. Check (✓) yes or no on all elements reviewed. Check (✓) "NA" if the section is not applicable to the PWS.</p> <p>Section B: Description of Occurrence: Provide an explanation on any issues identified. Elaborate as needed.</p> <p>Section C: Corrective Action: Provide corrective action(s) and completion dates for all sanitary defects identified.</p> <p>Submit this form within 30 days of triggering a Level 1 Assessment Treatment Technique.</p>		
Section A		
1. GENERAL [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
Have any of the following occurred at sample sites prior to collecting bacteria samples?		
YES/NO	YES/NO	
<input type="checkbox"/> low/inadequate disinfectant residual	<input type="checkbox"/> loss of pressure (<20 psi)	
<input type="checkbox"/> operation/maintenance activities	<input type="checkbox"/> visible indicators of unsanitary conditions	
<input type="checkbox"/> firefighting event/flushing/sheared hydrant	<input type="checkbox"/> water quality parameters out of range	
<input type="checkbox"/> signs of vandalism/forced entry	Other: _____	
2. OPERATIONAL CHANGES [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> potential source of contamination	<input type="checkbox"/> new source added	Other: _____
3. SAMPLING SITES [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> unclean or unsuitable sample tap	<input type="checkbox"/> change in conditions at sample site	
<input type="checkbox"/> hot water intrusion	<input type="checkbox"/> note other sample tap uses:	
4. SAMPLING PROTOCOL [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> improper sample container	<input type="checkbox"/> inadequate tap flushing	
<input type="checkbox"/> aerator was not removed	<input type="checkbox"/> improper hold time/storage temperature	
<input type="checkbox"/> auto sensing faucet/air/wivel-type faucet	<input type="checkbox"/> sampler error	Other: _____
5. TREATMENT PROCESS [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> change in flow rates	<input type="checkbox"/> recent installation/repair	
<input type="checkbox"/> inadequate disinfection	<input type="checkbox"/> O & M procedures not followed	
<input type="checkbox"/> turbidity measurements out of range	<input type="checkbox"/> new source added	
<input type="checkbox"/> treatment added or changed	<input type="checkbox"/> interruption in treatment/power loss	Other: _____
6. DISTRIBUTION SYSTEM [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> power loss	<input type="checkbox"/> operation of isolation valves resulting in breakage	
<input type="checkbox"/> standing water/debris in valve vault	<input type="checkbox"/> flushing of fire hydrants or blow-offs	
<input type="checkbox"/> low disinfection residuals	<input type="checkbox"/> improper operation of air-relief/air-vacuum valves	
<input type="checkbox"/> pump or valve failure	<input type="checkbox"/> installation of new mains or construction activity	
<input type="checkbox"/> pressure loss/inadequate pressure (<20 psi)	<input type="checkbox"/> improper operation of pumps/valves	
<input type="checkbox"/> improper surge control	<input type="checkbox"/> illegal use of hydrants	
<input type="checkbox"/> main breaks	<input type="checkbox"/> leaks	
<input type="checkbox"/> unprotected cross connection	<input type="checkbox"/> improper operation of valves	Other: _____
7. STORAGE TANKS [CHECK YES OR NO ON EACH ITEM]		<input type="checkbox"/> NA**
YES/NO	YES/NO	
<input type="checkbox"/> improper maintenance practices	<input type="checkbox"/> low disinfectant residual	
<input type="checkbox"/> presence of dead animals/insects	<input type="checkbox"/> hatch not sealed	Other: _____
<input type="checkbox"/> incorrect operation of level control valves, altitude valves, and related appurtenances		
<input type="checkbox"/> deterioration, rust, holes, or other breaches in vent, overflow pipe, access hatch, screens, ladders, etc.		

** NA (not applicable) should be checked if PWS does not have that component (i.e. no springs)



8. SOURCES – Well [CHECK YES OR NO ON EACH ITEM] <input type="checkbox"/> NA**		
YES/NO <input type="checkbox"/> defective/damaged well cap/well seal <input type="checkbox"/> floodwater/run-off inundation <input type="checkbox"/> missing/damaged grout seal <input type="checkbox"/> damaged pitless adapter	YES/NO <input type="checkbox"/> damaged well casing <input type="checkbox"/> damaged/unscreened vent <input type="checkbox"/> unprotected opening in pump/pump assembly Other: _____	
Surface Water Supply [CHECK YES OR NO ON EACH ITEM] <input type="checkbox"/> NA**		
YES/NO <input type="checkbox"/> potential source of contamination <input type="checkbox"/> change in sources <input type="checkbox"/> flooding	YES/NO <input type="checkbox"/> rapid snowmelt Other: _____	YES/NO <input type="checkbox"/> heavy rainfall
Spring [CHECK YES OR NO ON EACH ITEM] <input type="checkbox"/> NA**		
YES/NO <input type="checkbox"/> potential source of contamination <input type="checkbox"/> infiltration of surface run-off	YES/NO <input type="checkbox"/> improper development/poorly maintained spring box <input type="checkbox"/> rapid snowmelt Other: _____	YES/NO <input type="checkbox"/> heavy rainfall

** NA (not applicable) should be checked if PWS does not have that component (i.e. no springs)

<p>Section B - Description of Occurrence Use this space to provide additional information that supports your findings (i.e. water quality and pressure monitoring data). Include corresponding dates with your findings.</p> <p><input type="checkbox"/> Check if PWS did not find any causes for the contamination.</p>
<p>Section C - Corrective Action Use this space to describe corrective action taken or proposed corrective action with corresponding dates.</p>

PWS Representative (print name): _____	Signature of PWS Representative: _____
Sample Collector(s) (<input type="checkbox"/> same as above): _____	
Sample Collector(s): _____	Sample Collector(s): _____

Certification: I certify under penalty of law that I am authorized to fill out and complete this assessment and the information contained herein is true, accurate and complete to the best of my knowledge and belief.

Print Name: _____ Title: _____
 Signature: _____ Date: _____
 Phone #: _____ Email: _____

Return this form to the **Bureau of Safe Drinking Water Program** within 30 days of notification of a Level 1 Assessment Trigger.

AGENCY USE ONLY: Date received: _____	Agency Reviewer: _____
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Initial Trigger Date: _____	Initial Laboratory Notification Date: _____	Initial BSDW Consultation Date: _____
Total# routine and repeat samples: _____	Total# coliform positive samples: _____	Total# E-coli positive samples: _____
# of coliform detections in past 12 months: _____	# of Technique Triggers in past 12 months: L1 ___ /L2 ___	

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And If



- Next month the lab calls
- In FACT if the lab calls one
next 11 months

Coliform Detected

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Treatment Technique Triggers

Level 1 Assessment

- **Following a confirmed coliform sample**
 - WITHIN 30 DAYS OF TRIGGER.
 - Return form to office with repairs scheduled or completed.



Treatment Technique Triggers



Level 2 Assessment

- Following an E. coli
or
- 2nd Level 1 Assessment
within 12 mos.

Also Completed within 30 days of trigger.

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Treatment Technique Triggers



**E-Coli
or
2 Level 1 Assessments
Within
12-month period**

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Find and Fix



- No Violation if a **total coliform**
 - No public notice required
- Sanitary Defects must be fixed within 30 days of Trigger
- Failure to assess and/or correct is a Treatment Technique (TT) violation

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Find and Fix



- E. Coli results in an MCL violation
- Immediately triggers a Level 2 Assessment
- Public Notice required
- Sanitary Defects must be fixed within 30 days of Trigger

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Remember



**12 rolling
months**

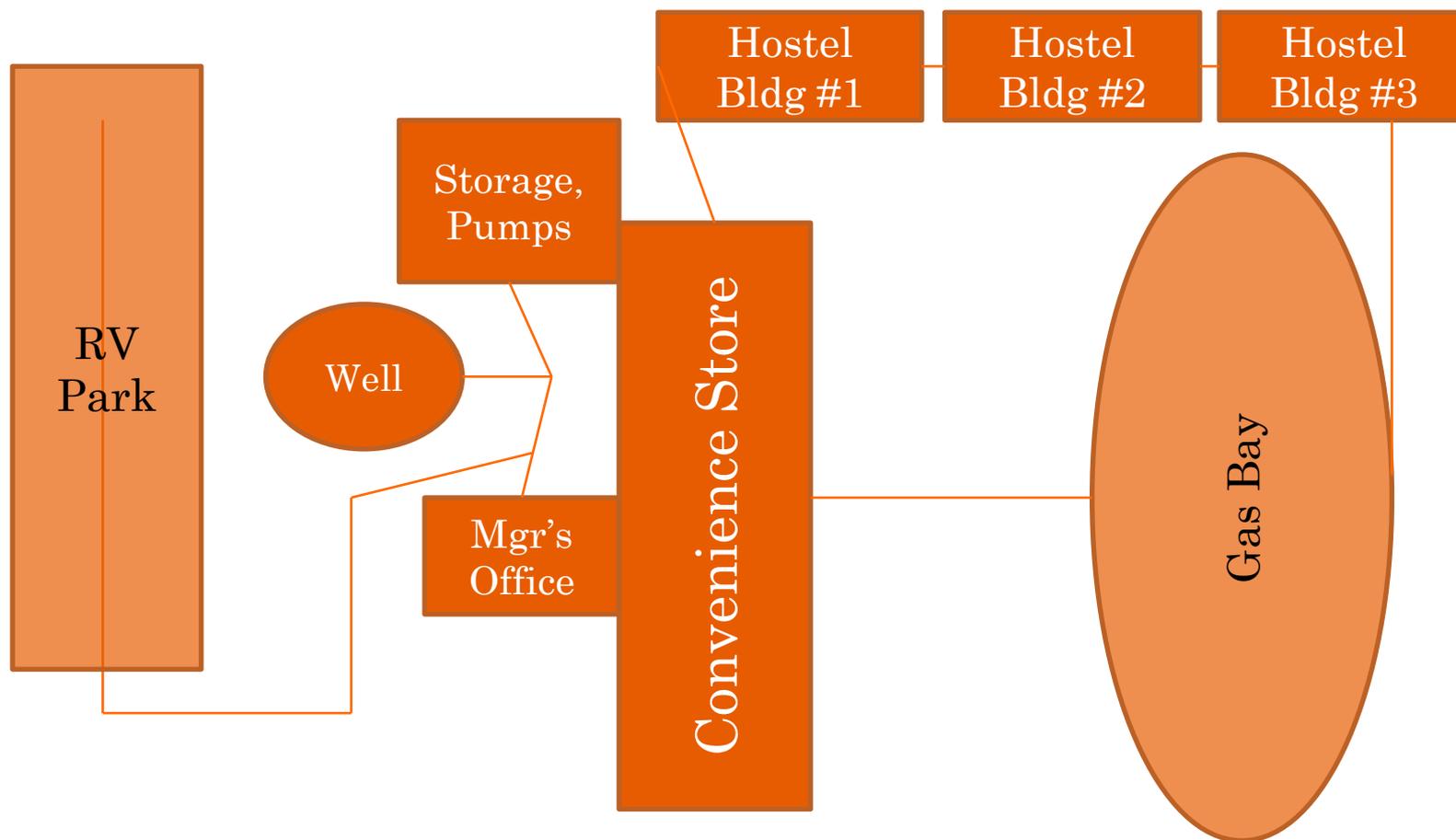
2nd Level 1

***E. coli* MCL
violation**

=

**Level 2 Assessment
(Done by a State Assessor)
30 Days to fix or develop plan**

Jemmy Jo's Barnstorming Center



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Jemmy Jo's Barnstorming Center



Level 1 Assessment

- Completed Checklist
- No Other Issues Reported
 - Sampling Technique valid finding

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Jemmy Jo's Level 1 Sampling Sites:



- Unsuitable site (swivel faucet that is not disinfected before sampling, multiple attachments, not kept clean)
- Change of use at sampling tap
- Failure to follow sampling protocol
 - Failure to remove tap aerator
 - Inadequate flushing prior to sample grab
 - Improper handling of sample
- Sampling of cold and hot water rather than cold water only
- Failure to follow sampling plan

Distribution System:



- Backflow prevention devices not tested or not working
- Line breaks or repairs
- SCADA issues (ignored, set improperly, not calibrated, not verified, alarms disengaged)
- Repairs completed without disinfection and follow-up sampling
- Unusual flow demand placed on the system
- Failure to construct or repair in accordance with approved Engineering Plans and design and construction standards

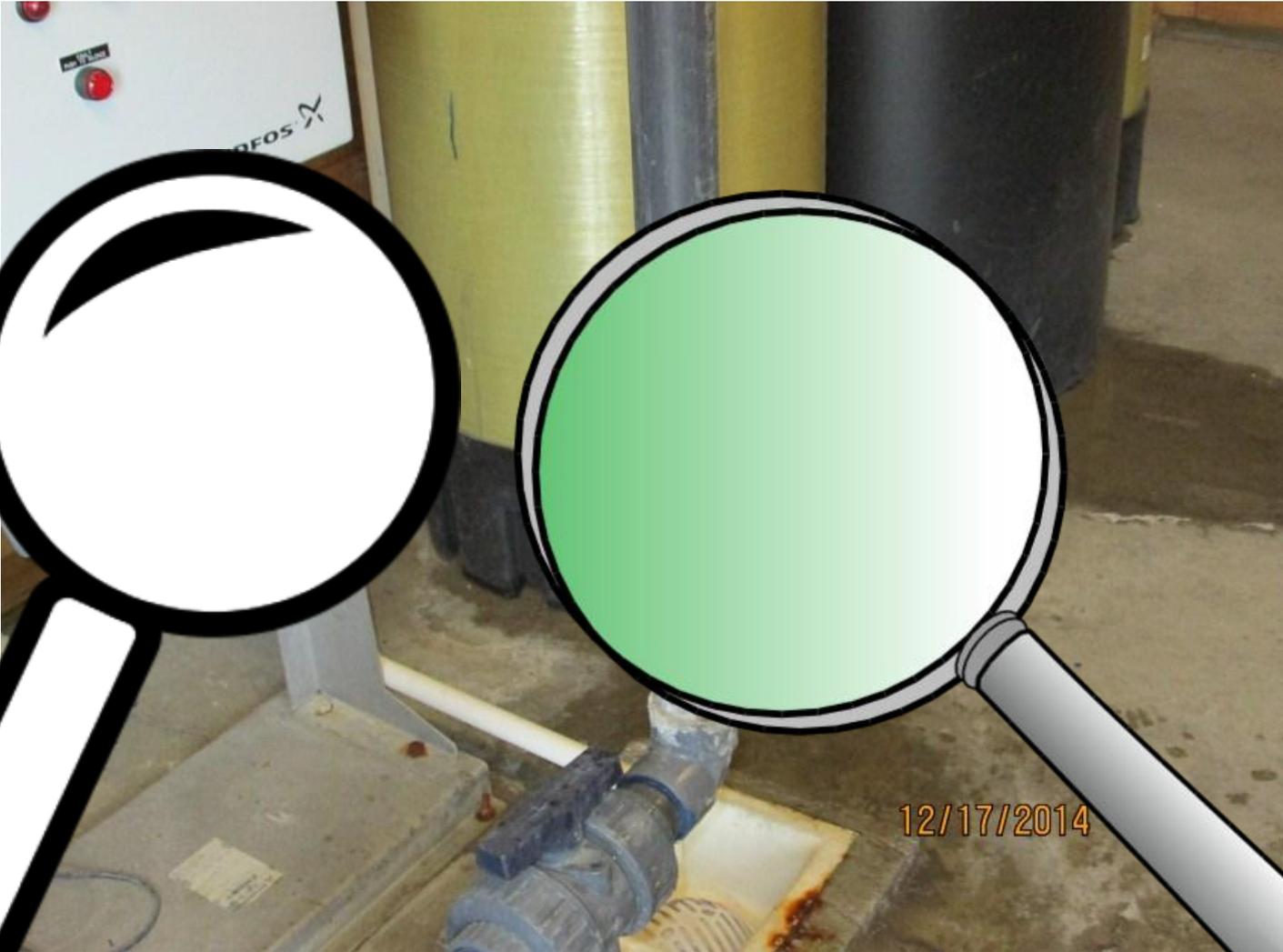
Level 2 Assessment



- Agency Personnel

Team based on your system's complexity and type of problem

- Technical Assistance Providers
- Operator from another system



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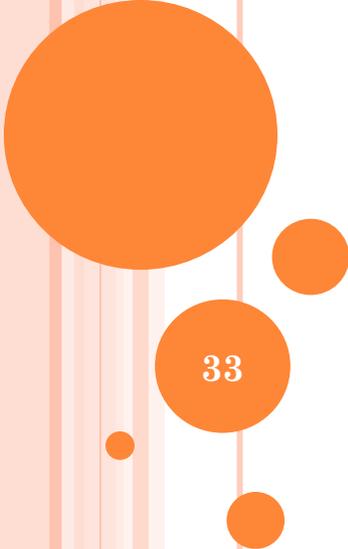
Jemmy Jo's Barnstorming Center



Level 2 Assessment

- Found multiple small leaks
- Backflow preventers untested
- Chlorine residual not checked
 - System fix within 30 days.
 - Schedule of Compliance with interim measures.

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SEASONAL SYSTEMS

33

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● Nevada

Seasonal Systems



Treatment Technique

○ Start-up Procedures

- **Complete all State-required seasonal system start-up procedures prior to serving water to the public**
- **Submit certification form about completion of start-up procedures BEFORE water is served to the public**

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Seasonal Systems

Required April 1, 2016

Start-up Start-up
Procedure

Complete before
operation

BEFORE

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Change is Coming



Required Approvals

- Start-up Standards



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REQUIRED



- Standard Operating Procedure for YOUR system
- Start-up Checklist
- Clean coliform samples on 2 consecutive days
- Approval from State or Agency



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AVAILABLE



- Standard Operating Procedure template
- Start-up Checklist (or Start-up/Shut-down Checklist)
- Facility Manager standing by -- Approval from State or Agency



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Start-up Procedure Certified



Nevada Division
901 South Stewart Street, Suite 4001, Carson City, NV 89701 • Phone: 775-487-9527
Coliform

PWS ID# _____ PWS Name _____
Compliance Period (mm/yy) _____

INSTRUCTIONS:
Review and evaluate the listed elements typically for (1) "Issue(s) identified" if any potential causes of contamination were not identified, or check (1) "NA" if the same. In Section B "Description of Occurrence" provide an answer. In Section C "Corrective Action" provide proposed or Return this form within 30 days after determination.

Section A

1. GENERAL
Have any of the following occurred at sample
 low/inadequate disinfectant residual
 operation/maintenance activities
 fire fighting events/flushing/shear
 signs of vandalism/forced entry

2. OPERATIONAL CHANGE
 potential source of contamination

3. SAMPLING SITES
 unclean or unrepresentative
 hot water present

4. SAMPLING PROCESSES
 improper sampling technique
 aerator was not used
 sampler error

5. TREATMENT PROCESSES
 change in flow rates
 inadequate disinfection
 turbidity measurements out of range
 treatment added or changed

6. DISTRIBUTION SYSTEM
 power loss
 standing water/debris in valve vault
 low disinfection residuals
 pump or valve failure
 pressure loss/inadequate pressure (<20 psi)
 improper surge control
 main breaks
 unprotected cross connection
 improper operation of valves
 No issues
 low disinfectant residual
 other:

7. STORAGE TANKS
 improper maintenance practices
 presence of dead animals/insects
 hatch not sealed
 incorrect operation of level control valves, altitude valves, and related appurtenances
 deterioration, rust, holes, or other breaches in vent, overflow pipe, access hatch, screens, ladders.

Coliform Bacteria Level 1 Assessment Form - 1

Doc Rev 09/2014



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What If



- I don't shut down my system
- Or maybe just a piece of it

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What If



- I'm not seasonal – I operate year-round
 - I just close off a couple of loops of the campground during the slow season
- Loss of pressure NAC445A.67265

Collect, on 2 or more consecutive days, samples of water from that part of the distribution system which indicate that the presence of any coliform bacteria complies with primary standards.

Safe Drinking Water



Public Safety



- BSDW
- Southern Nevada Health District
- Washoe County Health District
- **#1 Priority is public health and safety.**

How Can We Help



- Call Us
 - Explain your situation
 - Ask for advice.
-
- **#1 Priority is public health and safety.**

Your Turn



- Questions?

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