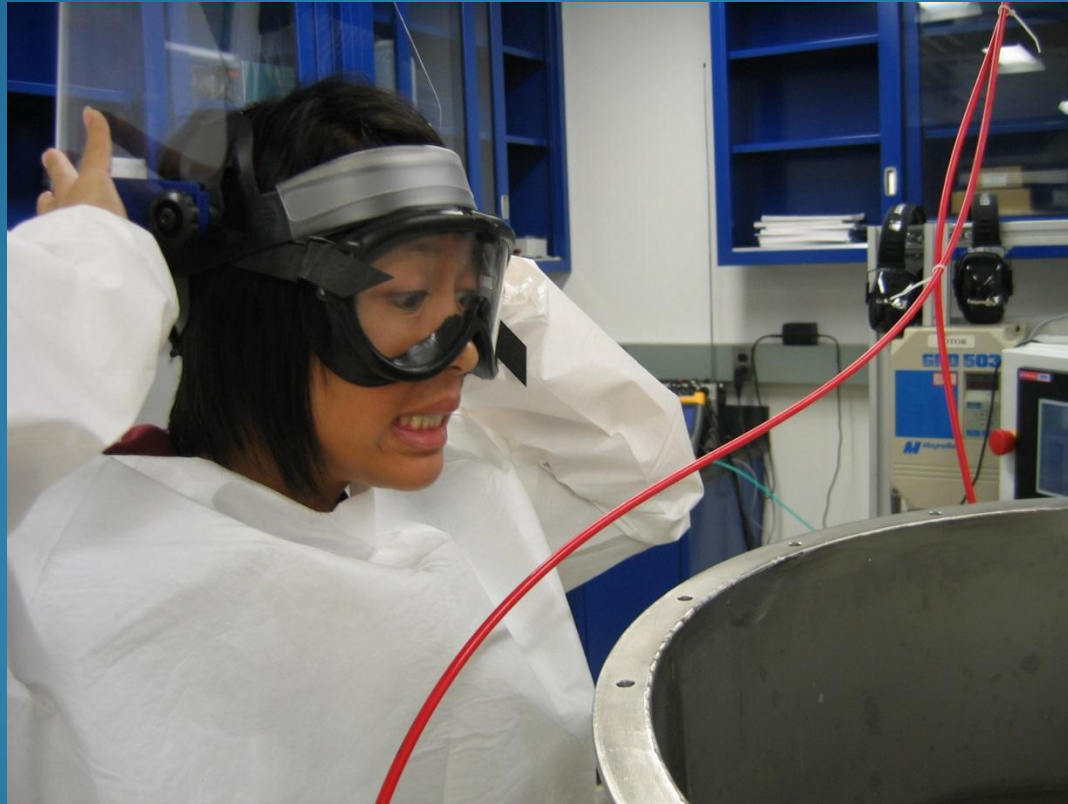


Sanitary Survey; A Problem of Scale



Relevant Sanitary Survey Concerns

- The coming US EPA greater scrutiny of small systems and the particular problems this could generate for smaller systems and new systems in Nevada.
- A high level review of the current guidelines for, and content of the Sanitary Survey.
- A brief overview of the physical hardware provision generally of most concern to BSDW inspectors.
- The key documentation and monitoring requirements likely to be unfamiliar and potentially problematic for small systems.
- The need for stakeholder participation in the process to prevent a disconnect between small system reality and regulatory requirements.

Why are Small Systems of Interest

- The coming US EPA greater scrutiny of small systems and the particular problems this could generate for smaller systems and new systems in Nevada.
- Why? The #s: CWS 33% (299 mil), NTNC 12% (6 mil), and Transients 8% (12 mil) based on 2011 values

Small CWSs	Small CWSs (<500)	Large CWSs (>10,000)	Small Transients (<500)
% of Systems In Class	55%	8%	97%
% of Population	2%	82%	4%
# of People Served	4.8 Million	246.1 Million	7.2 Million

Why are Small Systems of Interest

Totals	Small Systems (<500)	Large Systems (>10,000)
% of Systems	81%	2.8%
% of Population	4.4%	82%
# of People Served	14.1 Million	249.0 Million

- These small systems are thus the largest public health risk by far numerically, particularly considering the lack of public health infrastructure support and sophistication involved.

Why are Small Systems of Interest

- Thus, the Sanitary Survey as the basic tool for system evaluation is constructed to best serve 90% of the population,

But.....

- yet we in Nevada must most often use it to assess the 80% of the water systems for which it least fits.
- So how do we do this.

The Highlights of the Sanitary Survey

- A high level review of the current guidelines for, and content of the Sanitary Survey.
- A brief overview of the physical hardware provision generally of most concern to BSDW inspectors.
- The key documentation and monitoring requirements likely to be unfamiliar and potentially problematic for small systems.

The Sanitary Survey Should;

- Check that the necessary protective barriers are in place to protect the public health
- Assure all “8 Elements” or subject areas related to these barriers are covered
- Assure that management safeguards are in place to maintain the physical protection
- Assure complete and adequate contaminant monitoring is accomplished on an ongoing basis for all PWSs regardless of size
- Facilitate (and not degrade) the operator/regulator communication

Barriers

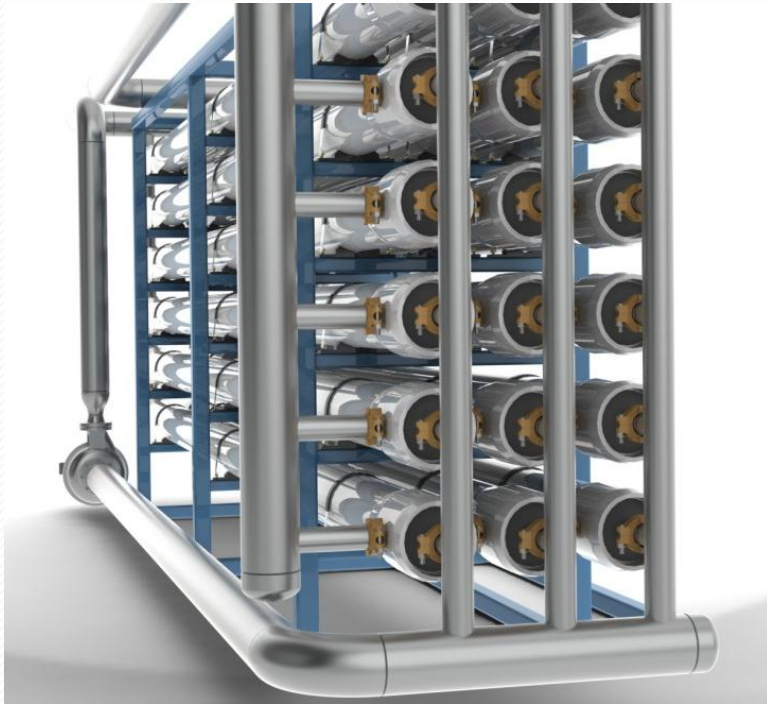
A water system operates by physically applying Hardware, Pressure, and Chemistry to create barriers to contaminants and pathogens. Thus the Sanitary Survey will check:

- Hardware, Pressure, and Chemistry based physical barriers used in the system
- Procedures required to maintain those barriers reliably
- Monitoring results to verify the ongoing effectiveness of those barriers

The “8 Elements”

- Source (Protection, Physical Components, and Condition)
- Treatment
- Distribution
- Finished Water Storage
- Pump/Pump Facilities and Controls
- Monitoring/Reporting Data Verification (Our data on water Quality)
- Water System Management/Operation (Documentation of system’s understanding and compliance with requirements)
- Operator Compliance with State Requirements (Training/certification)

Barriers to be Assured on an Ongoing Bases Regardless of System Size



Two NSF compliant membrane water treatment systems



Communication

- Use it to facilitate (and not degrade) the operator/regulator communication
- Communicate clearly both the specific regulatory requirements and the propose of doing a Sanitary Survey, but also its limitations
- Be clear that it is the on site ground truth assessed every 3 years
- Identify and direct corrective actions and timelines for system deficiencies with public health implications, but provide scalable alternatives particularly for documentation and treatment methods

A Walkthrough of the Sanitary Survey Checklist

- What we are looking at: Please reference your copy of the Sanitary Survey Checklist

Did We Mention Communication

- The need for stakeholder participation in the process to prevent a disconnect between small system reality and regulatory requirements.
- EPA is targeting emphasis of small and distributed system as a sustainability solution but one might ask if their definition and perceptions match Nevada Ground Truth on the matter.
- Documentation provisions are of particular concern
- So is the perception by most people that any accessible tap must be attached to a regulated system



Discussion and Comments