

FLORIDA RURAL WATER ASSOCIATION
WELL ASSESSMENTS AND RECOMMENDATIONS

System Name: _____ PWSID#: _____ System Well ID _____

FLUWID#: _____

Groundwater Specialist Name _____

Date of Visit _____

Item Description	Problems Associated with Items	Typical Solutions	<u>Recommendations, if any</u>
Well Seal	Well not Properly Sealed could allow potential biological/other surface contaminants into the well and ground water.	Call well driller to properly Replace/Repair Well Seal and/or tighten well seal bolts to tighten rubber gasket or silicon caulk around well seal.	
Vented	Improper venting may allow contaminants to be sucked into the well casing from outside due to vacuum created by pump cycling.	Clean and/or install appropriate, screened air vent on top of the well that allows the well to vent properly. Vent should be 12 inches above grade and downward facing to prevent rainfall and debris from falling in.	
Well Cover	Inadequate well covering allows surface contaminants to enter well and ground water, which may cause microbiological sampling failure.	Provide a constructed shed or well house over the well that will keep outside elements from being in contact with the well casing and/or seal.	
Drainage	Improper packing drains and/or floor drains can allow surface run-off to enter the well and contaminate the ground water supply/source.	A drain should be made of a non-corrosive material extend off the Concrete Pad allowing water to flow away from the wellhead.	
Concrete Pad	If the pad is improperly sloped, cracked, not large enough, or doesn't exist, surface water could enter around the well casing and affect the ground water quality.	Seal all cracks with appropriate cement or other concrete type sealers, and/or extend out to make sure pad is a minimum 6' X 6' X 4" in size. <i>Appropriate sealers are rigid or hard drying weatherproof/UV resistant sealant. Do Not Use Silicon or other flexible adhesives.</i> Make sure the pad is sloped where all surface water drains away from the well seal and doesn't pool around well head	
Clean Up	Debris, chemicals, contaminants are present at or around the well site, could cause contamination to the well.	Remove all non-water treatment chemical containers from well site, clean and mow grounds to ensure nothing is remaining. Keep well head free of algae, bugs, leaf litter, etc.	
Painting	If paint is peeling or doesn't exist, rusted piping and other items may lead to degradation of well equipment and possible contamination to water supply.	Scrape and/or sand surfaces and then paint/re-paint items to make sure a good coat is applied. Paint well to coat metal and inhibit rust or other corrosion events.	
Packing Gland	If packing gland isn't properly maintained this could cause water to leak out and the pump shaft to wear out quickly and contaminate well. Problematic signs to be aware of are pump vibrations and metal shavings around the gland.	Call a well driller to Re-pack/replace/tighten packing gland so that excess water won't leak out of the packing or leak into the well. (Remember that over tightening the packing gland can cause breakdown as well)	
Electric Conduit	If electrical conduit is improperly installed or sealed this could allow water quality contamination to the well/water supply.	Seal up joints with appropriate fittings and/or seal with silicon adhesives so that bugs, debris, etc. cannot enter the conduit and get in well.	
A&V Valve	If A&V Valve isn't properly installed/operated, then well could be contaminated by surface contaminants entering through the vent	Make sure all the vents on the A&V Valve are working properly so that contaminants cannot enter the piping/system.	

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Signage	Improper signage may allow non-authorized personnel to enter the well site and cause damage to the well and/or facility or allow use of the area for storage.	Post "No Trespassing" signs on all four sides of the well compound area. Identify contact persons/number in case of emergency.	
Chlorine Secure	Chlorine Bottles/Tanks not secured can easily be tipped over and can cause spills/discharges to occur. Direct Sunlight will cause degradation of Liquid Chlorine and ineffective to disinfect water.	Secure chlorine tanks/cylinders with chains or other device so the containers can't tip over easily. Insure that liquid chlorine is kept out of direct sunlight and heat.	
Tank Access	Access to ground storage tanks by non-authorized personnel can allow contaminants to be put directly into the water supply.	Secure ladder and access points by locking measures and/or remove access ladder and store in area where it can be secured.	
Sampling Point (Raw Water)	Sampling point needs to be smooth and non-threaded around the discharge area where samples are collected to avoid cross connection.	Replace regular water faucets with smooth end faucets so that bacteria cannot grow around the area where the water discharges.	
Secure Facility	Gates and well-house doors that are not locked and secure may lead to people entering the wellhead area and cause problems.	Make sure doors have deadbolt locks that secure the well house and gates to fences are chained and locked as well. Security Fence should be barbed wire with at least 3 strands and trees and other buildings should be at least 10ft from fence to prevent people from climbing and clearing a locked fence. Post Federal Offense signs on the gates around the system.	

Definitions:

Well Seal - Is a device used to seal off the top of a well casing while allowing the discharge pipe and electrical control wiring to pass through the top well without allowing anything to get back into the well casing.

A&V Valve - Air and vacuum valve that allows well/piping to breathe appropriately through normal structures.

Vent - A device, usually located on the wellhead itself, that allows access air from the well to enter/escape when the well is either turned-off or on and the ground water fluctuates during/after operations.

Packing Gland - is the area around a well pump shaft that is lubricated to keep shaft spinning freely without wear to the bearings or shaft.

Electric Conduit - Piping, such as PVC or galvanize, in which electrical wiring is run inside when electrical wiring has to be exposed to the air and/or ground area. It protects the coating on the electrical wiring from the elements such as soil, air, and water when used outside.

Cross Connection: Any physical connection or arrangement of piping or fixtures which may allow non-potable water or industrial fluids or other material of questionable quality to come in contact with potable water inside a distribution system. This would include any temporary connections, such as swing connections, removable sections, four way plug valves, spools, dummy sections of pipe, swivel or change-over devices or sliding multiport tubes or other plumbing arrangements.

