

Groundwater and Water Well Protection Stakeholder Discussion Summary

Issues	Concerns to keep in mind when working on a solution
Limited Statewide Standards	
<ul style="list-style-type: none"> ● Lack of statewide standards has led to some improperly constructed, maintained and decommissioned wells: <ul style="list-style-type: none"> ○ Standards (regulations) exist for PWS wells, but some construction issues are difficult to impossible to fix after the fact. ○ Difficult to know if a well has been installed properly. ● Concern that there is no assurance that the aquifer is, and will remain, safe. <ul style="list-style-type: none"> ○ Improperly constructed private (unregulated) wells could impact the water quality of a shared aquifer. ● No standards to reference when inspecting well drilling operations or equipment, as may be done by a hired engineer. <ul style="list-style-type: none"> ○ Leads to ineffective collaboration between the property owner, on-site engineer, well driller, pump installer, agencies, etc. ○ Costs of problems that arise due to the lack of standards to be applied when the well is installed are often passed on at a later time to the well owner. ● Standards do not necessarily mean more or stronger regulations. ● No Alaska-specific guidance on how to properly decommission an abandoned well. ● The clients of water well drillers can impede proper well construction. ● No standardized scope on contracts (hard to bid). ● Backflow prevention is commonly overlooked. 	<p>DEC regulates public water system (PWS) wells, and does have construction requirements with some enforcement authority. However, it is common for a well to be drilled as a private (unregulated) well, and then later convert to a PWS well. This is an issue because once the well is drilled it may be difficult to impossible to correct some construction aspects after the fact.</p> <p>There are no requirements for private wells, except within the Municipality of Anchorage. Private wells may have some minimal requirements if there is a reasonable chance that it could impact a public water system (PWS) well, but this is often difficult to show and enforce. There may be minimal requirements from lending institutions during property transactions, but these are not widely distributed or necessarily state-endorsed.</p> <p>Without standards to follow, to be enforced, and to be referenced during inspections, the quality/quantity of the aquifer, as well as the protectiveness, is largely an unknown. This also adds to communication breakdown between entities overseeing the well installation. When constructions flaws are identified after the well is installed, the risk of contamination and the cost of repairing, treating, or finding a new source often fall on the well owner.</p> <p>It was mentioned that the National Ground Water Association (NGWA) has a certified water well contractor and pump installer certification program that some states have adopted as a Statewide Certification Program. Also, it was pointed out that certification programs don't always need to be mandatory to be successful. Voluntary certification could result in more business for those opting to participate. i.e. public referred to list of certified well drillers when inquiring.</p>

	<p>Several attendees expressed a concern of unnecessarily creating more regulations. A couple of attendees thought enforcement authority may need to be stronger for existing regulations in order to ensure public health and consumer protection. Some identified a need for standards and/or stronger regulations to deal with point sources of contamination, such as dog kennels/livestock and others. Others felt that there was a mutual need for having statewide standards, but may need to consider regional variations. Some standards cannot be applied statewide due to regional geological variability and regional surface construction needs.</p> <p>Most agreed that abandoned wells and poorly maintained or improperly decommissioned abandoned wells are prevalent and are a problem. There is not an inventory of the number of abandoned wells in the state, but it is occasionally informally tracked and reported when observed. DEC requires that abandoned wells be decommissioned following procedures found in the ANSI/AWWA A100-97 publication, but this is copy-right protected and may be difficult to access for some. The MOA also has decommissioning requirements. DEC and DNR have collaborated to create a Well Decommissioning Record Form that is available online and identifies key aspects of the decommissioning process that should be recorded and submitted to DNR. DEC Spill Prevention and Response (SPAR) has a Monitoring Well Guidance (2011) that identifies decommissioning procedures for monitoring wells associated with contaminated sites.</p> <p>The clients of water well drillers often make choices based on cost and are not typically willing to pay to drill further into the aquifer to ensure longer-term quantity, if their initial needs are adequately met. If a well driller tries to educate the client on proper well construction, it may be construed as a business-opportunity by the well driller and not taken seriously.</p> <p>There is no incentive for well drillers to bid high on a project in</p>
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	<p>order to ensure robust well construction at the risk of losing the contract.</p> <p>The lack of standards, especially for private wells, has led to various construction flaws like not installing backflow prevention devices, the presence of improper cross-connections, and others.</p>
<p>Contractor Licensing</p>	
<ul style="list-style-type: none"> • Only a general or specialty contractor’s license is required: <ul style="list-style-type: none"> ○ No knowledge, skills, experience necessary. ○ The client has no state-endorsed assurance that the well driller is qualified; there is no well driller certification requirement in the state of Alaska, which is a unique fact compared to other states. ○ Unsatisfied clients have little recourse. • Well drillers or pump installers are not licensed to complete plumbing and electrical work leaving the well. • MOA is the only local government that has a well driller certification program, which provides some revolving training. • There is no state-endorsed well driller/pump installer certification or training. 	<p>The state has been contacted multiple times, and more frequently in recent years, by citizens/business owners with limited or unknown training regarding drilling a well, asking what the requirements are to drill a well, and the response is that no special training or proof of knowledge is needed, only a general or specialty contractor’s license. This leaves the client unsure of the quality of contractor’s work, and leaves them with little recourse for when the well is installed improperly. The onus is typically on the well owner to repair deficiencies, cleanup contamination, install treatment, or to find a new source.</p> <p>AWWA feels their members are self-regulated by virtue of needing to stay in business and by having a vested interest of keeping their industry reputable, and some private citizens agree based on no water quality issues in their area that they are aware of. Some private citizens feel AWWA and non-AWWA well drillers are not self-regulated enough. Some possible issues are not immediately apparent and do not typically fall under the purview of AWWA. There is also no formal process in which AWWA can regulate its members or other non-AWWA well drillers, and unless it is a collaborative effort with an agency (-ies) that has enforcement authority, or license revocation authority, and it is an issue that gets significant attention, it may not be a reliable process.</p> <p>Pump installers may not be the same as the well driller, and a home owner can install their own. The DOL&WD Mechanical Inspections has a requirement for pump installers to be licensed</p>

	<p>for electrical and plumbing work and includes training and experience requirements. However, many felt that it was not applicable to the specialized work needed from the well to the house or building, and that the process is overly cumbersome because it includes a much broader scope of skills needed for unrelated electrical and plumbing work by non-well contractors.</p> <p>Some felt that the MOA process for certification and their regulations have become overcomplicated and act as an unnecessary barrier. However, there was agreement in general that training is a good idea, and the MOA program does offer that.</p> <p>Other programs offer certification/training, such as the National Ground Water Association (NGWA). Some AWWA members maintain NGWA-certification.</p>
Well Logs -11 AAC 93.140 requirement	
<ul style="list-style-type: none"> • Requirement to submit well logs to DNR is not easily enforceable. • If well logs are not kept, incomplete or not submitted, valuable information is lost or unavailable. • The quantity/quality of drinking water in new developments is not consistently or comprehensively inventoried. • Well logs that have been submitted to DNR are not found on WELTS. • The quality of water is not consistently monitored, and the quantity of water with respect to aquifer boundaries is not known for most aquifers in Alaska. 	<p>There is no simple or immediate recourse for well drillers that choose not to submit well logs.</p> <p>Well logs are a primary source of information by the public, well contractors, engineers, planners, regulators, and others. The lack of available information from well logs can negatively impact decision-making and groundwater protection efforts.</p> <p>Well logs are the only relatively consistent mechanism for conveying information that could be used to understand the quantity (extent) and quality of aquifers.</p> <p>DEC oversees water quality monitoring for regulated contaminants by PWS wells, but has no oversight for private wells. Some lending institutions, as well the Municipality of Anchorage, may require sampling for certain high-profile contaminants (i.e. nitrates or arsenic) during property transactions for private wells. Well logs are one minimum tool that can help conceptually understand the boundaries of aquifers in an area.</p>

	<p>DNR has recently funded a regional groundwater study in the Mat-Su with a request for additional funding to continue monitoring, and has proposals to the legislature to acquire funding for similar regional-scale studies in the Anchorage and Kenai areas. Remote communities may have local-scale groundwater studies, but publications are not easy to locate, and are sometimes proprietary and difficult to obtain.</p> <p>Well logs that were submitted and are not found on WELTS may possibly be because well logs (or copies) are not being submitted to the appropriate authority (directly to DNR).</p>
Information requests	
<ul style="list-style-type: none"> • Lending institutions need to know if a well is “certified” during property transactions. • Private owners sometimes pay an engineer for only his opinion. 	<p>PWS wells go through an engineering approval process, but this is not the case for private wells.</p> <p>Engineers are sometimes hired to help plan, design, and oversee the construction of private wells, but there are no statewide standards to reference to ensure minimum safeguards are applied. The well driller is the primary source of information for how the well was constructed, and the well log is the only method for conveying this information, which again stresses the importance for accurate and complete well logs to be submitted to DNR’s public database.</p>
Miscellaneous	
<ul style="list-style-type: none"> • Identifying areas with water quality/quantity issues as well as identified contaminated sites is not broadly known. • Access to septic system locations is limited and difficult to obtain. 	<p>DEC Drinking Water Protection web map has drinking water protection areas for PWS wells (and intakes) and DEC Contaminated Sites layers. http://bit.ly/dt7p2d</p> <p>State and local governments may have locations identified on as-builts, but this information may not be available digitally or in a centralized location. There is a desire by those siting wells to have this readily available like in a web map. This is ideal but would require significant staff resources and dedicated funding to develop.</p>

General Conclusions	
<ul style="list-style-type: none"> The question was asked whether stakeholders agreed that issues presented by the state and others identified by attendees were for the most part valid, and whether there was an interest to work towards a solution(s) and how that should be accomplished initially. 	<p>The majority of the participants attending each meeting agreed that there are valid issues that need to be addressed.</p> <p>How to address the issues wasn't determined at the meetings. However, it was agreed that further discussion is needed to address these concerns.</p> <p>Prioritization of issues can be addressed if/when stakeholder workgroups are held.</p>