

**Marcus A. Wager**

---

**From:** Jim Flint <jimf@haies.net>  
**Sent:** Thursday, September 15, 2016 3:45 PM  
**To:** Stephen Hadfield; 'Mark Rees'; Scott L. Lyons; Marcus A. Wager  
**Subject:** [Junk released by Policy action] FW: Underground storage tanks in source protection zones

**From:** Kate Johnson [mailto:katej@utah.gov]  
**Sent:** Thursday, September 15, 2016 3:11 PM  
**To:** Jim Flint  
**Subject:** Re: Underground storage tanks in source protection zones

In other words, if it were a new well, land use agreements or an ordinance would prohibit septic tanks in zone 2 of an unprotected aquifer. For an existing well, there would be no prohibition, and, frankly, often they are already there. We would, though, expect a system to identify them as an uncontrolled PCS, and propose a "management strategy", which would often be educational, in order to reduce risks. Education would probably be advice about routine maintenance and about not disposing of household chemicals in the system.

**Kate Johnson M.S., P.G. | Environmental Program Manager | Source Protection Program**  
801.536.4206 (office) | 801.674-2553 (cell) | 801.536.4211 (fax)  
195 North 1950 West, Salt Lake City, UT 84116

**[DEQ Website \(see Interactive Map and EZ Records Search for Public Information\)](#)**

*Emails to and from this email address may be considered public records and thus subject to Utah GRAMA requirements*

On Thu, Sep 15, 2016 at 2:58 PM, Kate Johnson <katej@utah.gov> wrote: \*  
Jim, in this case, since as I recall this is an existing well, there are no requirements in the source protection rule that apply to septic tanks in zone 2....

**Kate Johnson M.S., P.G. | Environmental Program Manager | Source Protection Program**  
801.536.4206 (office) | 801.674-2553 (cell) | 801.536.4211 (fax)  
195 North 1950 West, Salt Lake City, UT 84116

**[DEQ Website \(see Interactive Map and EZ Records Search for Public Information\)](#)**

*Emails to and from this email address may be considered public records and thus subject to Utah GRAMA requirements*

On Thu, Sep 15, 2016 at 2:34 PM, Jim Flint <jimf@haies.net> wrote:

Kate,

Could you make the statement based on some qualifying language? For example, it's acknowledged that if a grease interceptor or pre-treatment is necessary, then such would be part of the "Properly designed for-their-application" wording below.

What's interesting is that there's an incongruity between Environmental Health and DDW (Source Protection) regarding septic systems. Environmental Health actually regulates them. I've designed systems in several states and they all generally operate on the premise of being 100 feet from a well. Vertically (in Utah), if one has four feet of soil below the drainfield bed to the groundwater level – that is considered sufficient. It's considered that the four feet of soil treats the pathogens sufficiently – that four feet of treating soil substructure is far less than the 100 feet horizontally. What I'm saying is that whether 4 feet or 100 feet of soil treatment is heralded as the necessary separational distance, these are the guidelines and standards that Environmental Health uses to protect wells and groundwater from the thousands of permitted septic systems in the State. That seems to be inherently 'controlled' – if not, why are the thousands of systems being permitted on that basis? DDW Source Protection seems to be adopting a more stringent standard (as a blanket rule saying that septic systems in general are to be prohibited in Zone 2) than the very people permitting septic systems. I appreciate the packed bed media policy (and that's the road this particular project will probably proceed with), but even without such a mechanism, it's hard to not see the incongruity.

The model ordinance you sent over (under definitions –'h') says that "septic tank/drain-field system discharges cannot be controlled with design standards." Then in Section 5 – Prohibited Uses it says:

'(b) Zone Two (in unprotected aquifers) – The location of pollution sources as defined herein, unless their contaminated discharges are controlled with design standards." I like the mitigate-able option with Section 5, but the point is raised: if septic systems have to be designed by State-licensed individuals and permitted through an Environmental Health department – how are they not 'controlled'?

An interesting aspect: for years almost every County that had a source protection program had wording that came from the State – one can recognize it immediately – it's in the documentation of Weber County that you sent over. When a County is asked where the wording came from, the universal answer is 'I don't know, the State just gave it to us so we ran with it.' The identical wording is easy to recognize (Zone 1 has listings 'a' through 'i'; Zone 2 are the same; Zone 3 has four listings and Zone 4 has three listings). Whatever ordinance a County has is probably after whatever the State has advanced, and it's probably an older State version. I think a worthy discussion between Environmental Health and DDW Source Protection would be whether septic systems should be listed in Zone 2, and if the introduced wording that such are considered "discharges that cannot be controlled with design standards" should remain.

In our case (and I realize this is a fortunate situation), our test profile for the septic system revealed an extremely favorable soil (sandy loam – excellent for percolation and excellent for general effluent treatment). The septic tank itself is a pre-treatment device. I realize the packed bed media mechanism supposedly results in a ‘cleaner’ effluent, howbeit the same quantity of flow. In our case, it’s hard to see how the 100-feet plus of favorable soil from the septic system to an off-site well is not considered a very favorable treatment system (regardless of whether there is a packed bed media system).

I guess I ventured – now what was I asking for? If wording could be stated that allows for a properly designed commercial system, or proffers in general that properly designed system in Zone 2, are acceptable. I know the natural tendency is to throw this on the local County’s source protection ordinance program, but in practical reality this is a State issue. The County doesn’t oversee Source Protection zones, but a County Environmental Health Department does permit septic systems. The County’s ordinance wording is from State-suggested wording that doesn’t coincide with common septic system permitting – it really would be healthy to have a discussion on that, and it needs to be from a larger arena than just the ‘water’ world or ‘septic’ world. There are serious legal matters that are inherent – source protection reports are declarative but the multitude of listed neighbors in the report never enter into self-limiting recorded deed restrictions, and nothing shows up on a title report. In an informal but real way, the application of a source protection report usually runs counter to an adopted General Plan or adopted zoning map for an area. It becomes de-incentivizing for a County to have a source protection ordinance. If I can help advance the discussion, I’d be happy to contribute.

Jim

---

**From:** Kate Johnson [mailto:[katej@utah.gov](mailto:katej@utah.gov)]  
**Sent:** Thursday, September 15, 2016 12:48 PM  
**To:** Jim Flint  
**Subject:** Re: Underground storage tanks in source protection zones

Hi Jim, I don’t know that I can actually say that for commercial systems, sorry, without some more analysis I don’t know that we would consider them controlled, since the size of the system would be so different. I imagine it’s likely they could be, but it would require some work to determine that. Sorry, Kate

**Kate Johnson M.S., P.G. | Environmental Program Manager | Source Protection Program**  
**801.536.4206 (office) | 801.674-2553 (cell) | 801.536.4211 (fax)**  
195 North 1950 West, Salt Lake City, UT 84116

**[DEQ Website \(see Interactive Map and EZ Records Search for Public Information\)](#)**

On Thu, Sep 15, 2016 at 12:38 PM, Jim Flint <[jimf@haies.net](mailto:jimf@haies.net)> wrote:

**Kate,**

This letter is fantastic!

Attached is the packed bed media letter – is there a way you send a similar email to what is written below stating that DDW policy is to consider packed bed media systems as a ‘controlled’ mechanism in zone 2 areas? The attached letter is fine – it just states ‘single family dwelling’ – if that could be changed to ‘commercial’ or just left generic (“Properly designed for-their-application packed bed media septic systems are considered controlled mechanisms in zone 2 source protection zones”), that would be great.

**Jim Flint**

**970-749-4314**



Neither the footer nor anything else in this e-mail is intended or constitutes an electronic signature and/or legally binding agreement in the absence of an express statement or Hansen and Associates policy and/or procedure to the contrary. This e-mail and any attachments hereto are Hansen and Associates property and may contain legally privileged, confidential and/or proprietary information. The recipient of this e-mail is prohibited from distributing, copying, forwarding or in any way disseminating any material contained within this e-mail without prior permission from the author. If you receive this e-mail in error, please immediately notify the author and delete the e-mail. Hansen and Associates disclaims all responsibility and liability for the consequences of any person who fails to abide by the terms herein.

---

**From:** Kate Johnson [mailto:[katej@utah.gov](mailto:katej@utah.gov)]  
**Sent:** Monday, September 12, 2016 12:40 PM  
**To:** [jimf@haies.net](mailto:jimf@haies.net); [mwager@boxeldercounty.org](mailto:mwager@boxeldercounty.org)  
**Subject:** Underground storage tanks in source protection zones

Gentlemen:

The Drinking Water Source Protection rule R309-600, offers several different criteria for evaluating whether a particular potential contamination source (PCS) is "controlled" or "uncontrolled". "Controlled" does not mean that there is no possibility of a release of contaminants; rather, it means that there are verifiable mechanisms in place to mitigate the impacts of an accidental release.

The different criteria used to evaluate such controls are regulatory, physical, negligible quantities, and/or best management/pollution prevention.

\* In the case of underground storage tanks (UST), regulated by DEQ/DERR under R311, and with a current permit issued under that authority, regulatory controls would generally apply.

Please also see R309-600-10 (3): Potential Contamination Source Inventory and Identification and Assessment of Controls

In summary, DDW would not consider a properly constructed and regulated UST, with a valid permit issued by the DERR under R311, to be an uncontrolled PCS, and therefore such a UST would be allowed in zone 2 of an unprotected aquifer.

thx, Kate

**Kate Johnson M.S., P.G. | Environmental Program Manager | Source Protection Program**

**801.536.4206 (office) | 801.674-2553 (cell) | 801.536.4211 (fax)**  
195 North 1950 West, Salt Lake City, UT 84116

**DEQ Website (see Interactive Map and EZ Records Search for Public Information)**

*Emails to and from this email address may be considered public records and thus subject to Utah GRAMA requirements*





September 12, 2016

Mr. Chad Munns, Chairman  
Box Elder County Planning Commission  
Box Elder County Courthouse  
01 South Main, Brigham City, UT 84302

Dear Chairman Munns and Commissioners,

The Bear River Water Conservancy District is writing this letter to respectfully request that the Planning Commission support and uphold the Drinking Water Source Protection Ordinance No. 216. This ordinance was signed by the County Commission January 20, 1998 for the explicit purpose of protecting the groundwater sources used for public drinking water from contamination and preserving the health, safety, and welfare of the residents of Box Elder County.

The District has a concern with the proposed Trigon development of a C-Store located at approximately 8720 South Highway 89 in the South Willard area where the septic system, uncontained storm water and underground storage tanks will be located above a public drinking water source (well) that provides culinary water to approximately 44 homes. Those pollution sources will contaminate groundwater especially in areas like the South Willard area where the soils are basically sands and gravels with high transmissivity.

For the Commission to permit a development wherein the septic system, storage tanks and uncontained storm water are located within the drinking water protection zone 2 of a public drinking water system, where it is explicitly prohibited by Ordinance 216, puts all other drinking water sources at risk as well as other land use ordinances that protect our water sheds and aquifers.

The District appreciates your time and willingness to support the District's request as we work together in the best interest of all the residents in Box Elder County.

Best Regards,

  
Voneene Jorgensen  
General Manager

Cc: Box Elder County Commission

Clinton Burt  
Chairman

David Forsgren  
Vice Chairman

Charles W. Holmgren  
Treasurer

Tyler Vincent

Jeffrey D. Scott

Roger Fridal

Neil C. Capener

Jay H. Carter

Russell D. Howe

Richard E. Day

Voneene J. Jorgensen  
General Manager

