Depth and aerial extent of all usable fresh and potable water (USDW) underlying the area proposed for exemption

The following formations underlie the exemption area; associated tops and bottoms from Brinkerhoff 3A well.

Wind River Basin hydrostratigraphy[B]								
Formation	**Top feet (MD)**	**Bottom feet (MD)**	**Description**	**Hydrogeologic Units[B]**	**Min (TDS)[C]**	**Median (TDS)[C]**	**Max (TDS)[C]**	**No. Samples**
Frontier	3005	3731	Oil, gas, water	Minor aquifer with basal confining unit[B]	3,841	5,982	11,536	17
Muddy	4248	4306	Oil, gas, water	Minor aquifer within major confining units[B]	4,589	8,370	10,370	10
Cloverly (Dakota and Lakota)	4466	4783	Oil, gas, water	Minor aquifer[B]	4,543	6,143	8,347	4
Nugget	5421	5488	Oil, gas, water	Major sandstone aquifer[B]	4,936	26,454	39,294	11
Crow Mountain (Curtis)	5700	5791	Oil, gas, water	Marginal aquifer[B]	9,101	12,300	41,433	7
Phosphoria[A]	6756	*7011*	Oil, gas, water	Identified as confining unit and minor aquifer[B]	2,500	13,023	31,429	67
Tensleep[A]	*7011*	*7306*	Oil, gas, water	Identified as major limestone aquifer[B]	1,828	2,806	23,665	72
Amsden[A]	*7306*	*7624*	Oil, gas, water	Confining unit and marginal aquifer[B]	6,100[D]	6,100[D]	6,100[D]	1
Madison[A]	*7624*	-	Water	Identified as major limestone aquifer[B]	1,960	3,279	10,316	6
Madison Fm is deepest penetration in Steamboat Butte Field (outside of AOR)								

[A] Projected tops and bottoms from calculate from gross thickness of intervals encountered in Tribal E 26 (NENW Sec. 5 T3N R1W)

[B] Hydrogeological information was gathered from Chapter 6 '*WBRB Hydrogeology and Groundwater Resources*' prepared by Paul Taucher, Keith Clarey, David Copeland, Melissa Thompson, Brett Worman and Nikolaus Gribb. Chapter 6 is a portion of the electronic version, created on October 3, 2012, of the *Wind/Bighorn River Basin Water Plan Update – Groundwater Study, Level I (2008–2011)* prepared under contract for the Wyoming Water Development Commission (WWDC)[3] by the Wyoming State Geological Survey (WSGS)[1], United States Geological Survey (USGS)[2], and Water Resources Data System (WRDS), in cooperation with the Wyoming State Engineer's Office (WSEO) and the Wyoming Oil and Gas Conservation Commission (WOGCC).

[1] *Wyoming State Geological Survey, P.O. Box 1347, Laramie, Wyoming 82073-1347*

[2] *U.S. Geological Survey, Wyoming Water Science Center, 521 Progress Circle, Suite 6, Cheyenne, Wyoming 82007*

[3] *Wyoming Water Development Commission, 6920 Yellowtail Road, Cheyenne, Wyoming 82002*

[4] *Energy Compliance LLC, 2302 Nighthawk Drive, Laramie, Wyoming 82072*

[C] Water quality data gathered from "Produced Waters Database" at the USGS Geology, Energy & Minerals Science Center for Steamboat Butte Field and offset Pilot Butte Field

[D] Only one sample available for the Amsden Formation in Steamboat Butted Field