



City of Laramie

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MEMORANDUM

Date: July 21, 2019

To: Laramie City Council

From: City Manager's Office

Subject: Little Valley Subdivision

Staff has developed this memo to provide Casper Aquifer related information regarding the proposed Z Homes Little Valley Subdivision development of 32 twin homes units and a future multi-family apartment complex on 6-acres at 4503 Bobolink Lane.

All required aquifer studies have been successfully completed, including the initial Site-Specific Investigation (SSI) and the subsequent peer review. Major aquifer related matters addressed in the studies are as follows:

- Both the SSI done by Trihydro Corporation and the peer review done by Engineering Associates determined this **development is a "low" potential risk** to the aquifer.
- Development must be kept 100-feet away from vulnerable features (fault, fold, fracture, drainage or conduit to the Casper Aquifer). **Two vulnerable features** are on the site.
 - 1) An unnamed **ephemeral drainage** in the northeast corner of the property, and
 - 2) the **Sherman Hills Fault** which also crosses the northeast portion of the property and then trends to the northwest of the 6-acre lot.
- **~51-feet of protective Satanka Shale overlays the Casper Aquifer** at the site, which is less than the 75-feet recommended by the CAPP.
- Both the initial SSI and peer review concluded storm water management as the most critical need for protecting the aquifer. The initial SSI *did not* recommend onsite detention, but the peer review *did* recommend additional engineering controls to "control/regulate/treat" storm water runoff. **A requirement for onsite detention of storm water has been added to the plat** - with the understanding that proper controls and a maintenance plan will be necessary to protect the Sherman Hills Fault.

- The depth to groundwater at this site is ~125 feet; Therefore, **pesticides, herbicides and fertilizers with 48-hour attenuation are not identified as being a risk to the aquifer.**

The City **Aquifer Protection Overlay Zone (APOZ) and recent studies provide guidance about how the Bobolink site should/could develop** to protect the water supply as follows:

- **Residential uses are *not* prohibited activities** in the APOZ according to both the Aquifer Protection Plan (CAPP) or Municipal Code.
- The CAPP recommends the City annex as much land as possible within the APOZ and, also, recognizes how unlikely it is for all critical areas to be publicly-owned. Accordingly, the **City's most effective protection strategy for privately-owned properties is residential uses that are connected to municipal water and sewer services.**
- As identified in the *2015 Laramie Monitoring Well Study*, **groundwater at this location flows toward the City's Turner municipal wellfield.**
- The *Albany County Septic System Impact Assessment (Wenck Associates, May 2019)* identified **septic systems as a potential source of contamination to the Casper Aquifer. Should this site develop within the City, one existing septic system and a private well would be removed from the APOZ.** Should this site develop outside the City, County Staff have indicated it would be possible to approve up to three (3) additional homes on this 6-acre lot, each with individual well and septic system, in addition to County regulations allowing for a more-dense multi-family (or commercial) development with a package treatment septic plant.
- The *201 Wastewater Intergovernmental Agreement* is expired with no apparent intent of the County to renew this longstanding arrangement; The **County no longer requires developments like this that are contiguous to City limits to connect to City services.**

One public comment has been received as follows:

- Chris Moody, P.G. (Wyoming Groundwater) made public comment at the *July 8, 2019* Planning Commission meeting and later via direct communication to City staff.

Mr. Moody maintained that the initial SSI and peer review do not consider information learned during the *2015 Laramie Monitoring Well Study*, which identified the Sherman Hills Fault as not being a single feature but, rather, a “fault zone” which is perhaps ~300 feet wide.

Ramifications of public comment: The majority of the development site would fall within the required vulnerable feature setback (100 feet) should the Sherman Hills Fault be considered as a “fault zone.”

(The variance process can be applied to allow certain types of development to occur closer than 100 feet to a vulnerable feature. *However, by definition, twin homes are single family housing and do not require a variance - whether or not they are in a fault zone.* The future, proposed multi-family development associated with this property would need to go through the variance process before anything was constructed within the required setback.)

REFERENCES:

Casper Aquifer Protection Plan (CAPP) can be viewed here:

(Casper Aquifer Protection Plan: <http://www.cityoflaramie.org/index.aspx?NID=226>)

Casper Aquifer Protection Overlay Zone can be viewed here:

(Zoning Ordinance 15.08: <http://www.cityoflaramie.org/DocumentCenter/Home/View/2227>)