Jean Jewell

From: secretary
Sent: Thursday, August 20, 2015 5:14 PM
To: Jean Jewell; Diane Holt
Subject: FW: Comment Attached, SCH-W-15-01
Attachments: PUC Schweitzer Fire Flow Report.docx

From: S.N.- SZFD
Sent: Thursday, August 20, 2015 5:13:54 PM (UTC-07:00) Mountain Time (US & Canada)
To: secretary; S.N.- SZFD
Subject: Comment Attached, SCH-W-15-01

Schweitzer Basin Water Company
SCH-W-15-01

Spencer Newton

579 Telemark
Sandpoint, Idaho
208-265-4741

Below is a report by an unbiased engineer, essentially stating that the water system is capable of providing the basic minimum fire flows with minimal modifications in relation to the current infrastructure. Much of this could have been addressed for pennies on the dollar over the past 25 years of SBWC ownership. It should also be pointed out that the original owner and builder of the water system and the community in which it serves, Mr. Fowler, constructed most of the primary infrastructure of the water system with 6 inch water lines. Six inch water lines, especially in the early 1970s, are the minimum standard and expected size for fire hydrant use. There is no reason for 6 inch water lines to have been utilized by the original owner down to the farthest ends of the water system unless he anticipated large amounts of water to be utilized someday, and the only thing that would need this type of water flow throughout the system is fire fighting. This is particularly true with so much available vertical drop available within the system to increase water flows and pressures for domestic use, which could have easily used much smaller water lines for far less initial investment.

Unfortunately, Mr. Fowler is no longer with us and no one can know his exact goals. However, common sense cannot ignore the obvious intent of Mr. Fowler or anyone else, who would have created this community and its infrastructure. Mr. Fowler did not own a small lot and build a small cabin and pipe water from the nearby creek a few feet away that others happen to latch onto and accidently grew into a mess of only small domestic water lines. Mr. Fowler did however own and start the resort, with involvement from others, and a community that had hundreds of lots, miles of roads and a 6 inch water system to supply it with, which is all the water it could ever need. It wasn't perfectly designed or implemented, but to believe Mr. Fowler's intent and ability to create a ski resort, this community and included 6 inch water lines by accident, when the only purpose for this type of volume is fire fighting, is nothing less than disingenuous.

There is comment that the water system was never intended for fire flows. This statement is ridiculous. Granted, it may not have been designed or engineered by Mr Fowler to a "specific fire flow standard", but the amount of 6 inch infrastructure proves in itself it was intended for large volumes of use, which would only be for fire fighting. There has also been duplicitous statements made that "other water systems don't meet fire flows". This is a silly comparison and is simply apples and oranges. We know that the SBWC system can meet the very basic minimum fire flow standards in most fire hydrants if they choose to. The comparison of other water systems that don't or can't meet fire flows is based on any number of factors. Most likely this includes: a lack of already available infrastructure that SBWC already has from the original owner, a lack of available vertical drop that SBWC has more than enough of, a lack of financial means that SBWC has absolutely no problem with, or a lack of interest, understanding or moral obligation to address the needs and expectations of the community that is ultimately paying for in the water system in the first place.

The Schweitzer Fire District has had six fire commissioners in the past several years since this issue of fire flows on the SBWC came to a head. All six of the fire commissioners past and present have supported the notice of violation on SBWC due to the reluctance of SBWC to address fire flows to the community it serves. All six of the fire commissioners, whose primary purpose is to represent the community, are still to this day, in support of pursuing legal action against SBWC but only because of the reluctance and lack of cooperation from SBWC. I can also attest that none of these commissioners have ever had a personal interest in this action regardless what others may want to allude to. As far as I know, SBWC has provided a good domestic water supply under the supervision of DEQ. At the same time, SBWC has chosen by its

actions, to ignore the needs of the community when it comes to fire protection. Rather than work with the fire district and the community to address known flow issues and over time enhance the safety of the public, firefighters and property, that SBWC has had both the financial means and time to address, (please decipher the SBWC financial statement in the application requested by the PUC) SBWC would rather make excuses and justify why it legally doesn't have to address fire flows, not that they can't or couldn't, they just don't have to. As advocates of this community's wellbeing, we would disagree.

The fact is, if Mr. Fowler had sold this water system to the community the primary focus would have been water service of all types including fire flows, not profit. I can all but promise that the various issues with this system including fire flows would have been easily rectified well over a decade ago and we would not be here today.

Preliminary Schweitzer Fire Hydrant Flow Report

Upon concerns from the Schweitzer Fire District (SFD) about the flow rates of the hydrants available for protecting the residents of Schweitzer Mountain in the event of fire, a review has been initiated. Schweitzer Basin Water Company (SBW) is the provider for the area, thus their flow test calculations were requested for comparison. As there were several instances of incomplete or inconsistent data provided, some independent sample testing was completed for comparison as well. According to the concerns of Schweitzer Fire, while the 200,000 gallon water storage system in use by SBW should be more than adequate for being able to provide the mandated 1000 gallons per minute (gpm) to be sustained for 2 hours, the current strictly gravity-fed set up and state of repair of equipment proves that actual delivery of this flow standard to be unachievable.

In data provided from SBW and SFD, the reported static pressures are in agreement, being within 1% of each data set. However, the figures reported for flow rate and the residual pipe pressure vary significantly, with SBW reporting flow rates on average of 20% higher than that as calculated by SFD. Unfortunately, as SBW does not report any of their findings for flow pressure, their calculations to find the flow rate cannot be replicated, thus it is impossible to verify their accuracy in reporting the flow rates at 20% higher on average. Additionally, it should be recognized that even with the 20% higher numbers, SBW's calculated flow rates fall well below the International Fire Code's (IFC) expectations of 1000 gallons per minute to be sustained continuously for 2hours.

When testing flow rates, it is the practice of SFD to test not on the initial burst from the hydrant, but rather to wait a few moments so as to obtain calculations that are based on the standard even flow. If SBW had taken their test number nearer to the burst upon opening, this could be a factor which led to their numbers being documented significantly higher. This theory on the discrepancy was first observed during an independent test of the hydrant located on Stella Lane. Upon being fully opened, the Stella Lane hydrant had an initial test in excess of 1090 gallons per minute (gpm), a figure only 3% different than that as reported by SBW. However, this flow could not be maintained and within minutes, when the flow equalized, the reading had fallen sharply to 750 gpm.

Advantageously, unlike strictly residential systems which have typically smaller pipe sizes, the vast majority of the piping in use in the SBW system is already currently at standard 6 inch diameter water mains. Most counties in the nation list 6 inch water mains as the minimal requirement for hydrant installations as this size will carry the mandated 1000 gpm flow easily. Additionally, the hydrant at Ullr Rd has been agreed by both parties to be providing sufficient approximate flow rates for the required 2hours in the event of an emergency. This is a great indicator that the SBW system will be capable of producing what is expected of it, so long as the basic necessary modifications, modest repairs and upgrades are responsibly undertaken.

One potential solution to provide adequate flow is to decrease system obstructions and redundancies by linking existing pipe networks to balance the pressure between hydrants. Additionally, maintaining sufficient pressure to hydrants while effectively utilizing and installing pressure reducing valves to residential customers, so as to maintain an appropriate service pressure, would ensure an increase in overall efficiency and fire flow rates. While taking cost into consideration is important, the main concern is and should be to rectify and optimize a system which is failing mandated standards in order to best provide for and protect the Schweitzer Mountain community.

Regardless of the significant discrepancies between the sets of testing done by the different parties, overall the SBW system in its current state has been shown to be inadequate. It should be noted that upon completion of necessary modest updates, which have already been paid for by customers, the system is inherently capable of meeting requirements. Having only one hydrant in the entire system that can be verified to be sufficient according to the standards set in place by the IFC , which has been adopted by the State of Idaho as law to be enforced by the fire officials for the safety of the public is unacceptable and deeply concerning. The Schweitzer community deserves proper protections to be put into place for in the event of an emergency.

Erik B Illum
BSME

hweitzer Fire Flows

Static Pressure (PSI)	Pressure at Flow (PSI)	Flow (GPM)	Flow @ 20 PSI	Residual Pressure (PSI)	
32	8	475	295	3	SFD
32		520		9.5	SBW
0.0%		8.7%		68.4%	Δ
52	11	557	515	15	SFD
66		650		15	SBW
21.2%		14.3%		0.0%	Δ
55	12	581.3		15	
16.7%		10.6%		0.0%	
65	10	531	439	1	SFD
55		600		13	SBW
-18.2%		11.5%		92.3%	Δ
72	19	731.4	N/A		SFD
68		750		20	SBW
-5.9%		2.5%			Δ
20	2	237	N/A	7	SFD
21		410		6	SBW
4.8%		42.2%		-16.7%	Δ
21	3	291	70	7	SFD
20		455		7.5	SBW
-5.0%		36.0%		6.7%	Δ
61	32	949	1498	42	SFD
63		1060		40	SBW

The following figures reflect the data coll
Schweitzer Fire District (SFD), the Schwei
company (SBW) and through independen
have been compared to the SBW data col
variance is shown. Unless otherwise note
from SFD is from a 9/17/13 study and the
10/30/14 study. In cases where the raw d
the equation is next to each instance.

Q = 29.83*C*d^2*sqrt(P)
C = 0.9 d = 2.5 [in]

Q = 29.83*C*d^2*sqrt(P)
C = 0.9 d = 2.5 [in]

s	64	9	497		19	SFD	<- 10/12/10 Data. W
	65		670		15	SBW	due to a valve being
	1.5%		25.8%		-26.7%	Δ	
	62	12	581	567	28	SFD	
	62		650		15	SBW	
	0.0%		10.6%		-86.7%	Δ	
rk	71	22	787	832	25	SFD	
	67		760		22	SBW	
	-6.0%		-3.6%		-13.6%	Δ	
k	36	0	168	108	0	SFD	
	30		520		10	SBW	
	-20.0%		67.7%		100.0%	Δ	
	40	1	168	128	0	SFD	Reported leaking
	80		790		22	SBW	
	50.0%		78.7%		100.0%	Δ	
	39	10	530.6		11		
	51.3%		32.8%		50.0%		
	78		1060		40	SBW	Installed after SFD te
st	78	12.5	1093.9		Varied		Q = 29.83*C*d^2*sq
N	78	20	750.4		Varied		C = 0.9 d = 2.5 [ir

The initial fire flow was adequate, however after a few short minutes the flow decreased.

n Caribou	95	16	671		18	SFD	<- 10/12/10 Data
	55		900		29	SBW	
	-72.7%		25.4%		37.9%	Δ	
ack Diamond	80	17	692	698	21	SFD	
	80		800		29	SBW	
	0.0%		13.5%		27.6%	Δ	
it Snowplow	62	10	531	545	22	SFD	
	55		800		23	SBW	
	-12.7%		33.6%		4.3%	Δ	
/ Elkhorn	60	7	417		0	SFD	<- 10/12/10 Data. Was not te
	62		554		11	SBW	due to the presence of a larg
	3.2%		24.7%		100.0%	Δ	
icket	91	10	531	519	17	SFD	
	94		840		25	SBW	
	3.2%		36.8%		32.0%	Δ	
Ghost	60	22	787	919	30	SFD	
	60		1030		37	SBW	
	0.0%		23.6%		18.9%	Δ	
itterling	42	8	475	364		SFD	
	42		490		8	SBW	
	0.0%		3.1%			Δ	
Passage	45	5	411	319	6	SFD	
	45		450		7	SBW	
	0.0%		8.7%		14.3%	Δ	
5 Test	44	7	443.9		10		Q = 29.83*C*d^2*sqrt(P)
	2.2%		1.3%		-42.9%		C = 0.9 d = 2.5 [in]
NW Passage	68	12	581	581	20	SFD	
	62		800		21	SBW	
	-9.7%		27.4%		4.8%	Δ	

Jean Jewell

From: db1250@yahoo.com
Sent: Thursday, August 20, 2015 4:40 PM
To: Beverly Barker; Jean Jewell; Gene Fadness
Cc: db1250@yahoo.com
Subject: Case Comment Form: Richard Baroni

Name: Richard Baroni
Case Number: SCH-W-15-01
Email: db1250@yahoo.com
Telephone:
Address: 231 Carr Creek Road
Sandpoint Idaho, 83864

Name of Utility Company: Schweizer Basin Water Company Acknowledge public record: False

Comment: In the past I lived as a full time resident at Schweitzer, and my water service was provided by Schweitzer Basin Water Company. During my time using the system, approximately 6 years, the service was adequate in terms of domestic use.

Recently, I have again hooked up to the system, and it has been brought to my attention that the current water system may not have water flows at some hydrants to be able to provide adequate fire protection from the water provided by these hydrants.

As a resident hooked up to this system, if there is not adequate water flows at various hydrants to provide expected and required protection in the event of a fire, it should be made known to the users of the system.

From a common sense standpoint, most reasonable people assume that if there is a fire hydrant in their location, it will provide adequate water for fire protection. If this isn't the case, it should be either corrected pursuant to the law, or at least made public.

Unique Identifier: 208.81.157.18