

Keen, Shelley

From: Roxanne Brown <RBrown@spfwater.com>
Sent: Tuesday, February 21, 2017 3:51 PM
To: Keen, Shelley
Cc: 'Christopher H Meyer (ChrisMeyer@givenspursley.com)'; Nate Runyan (runyann@cityofnampa.us)
Subject: Permit 63-32835 (City of Nampa) [IWOV-GPDMS.FID388186]

Shelley –

This email is an initial response to your letter dated November 21, 2016 concerning additional information to be supplied by the City of Nampa to support the City's water right permit for RAFN. Preparing these data and materials has proven to be a complex task.

The City currently operates two systems to deliver municipal water supply to its citizens. One system has historically been used for potable supply, the other for irrigation. However, the two systems are now interconnected at several points, and the City will continue to connect the two systems during the planning horizon of the RAFN permit. There are two types of connection in place today between the potable and irrigation water distribution systems:

1. Well 14 and Well 17 (both potable supply wells) are directly connected to both systems and can meet water demands for potable and irrigation uses.
2. Five interties between the two distribution systems have been installed to date. The interties were installed to provide water from the potable system to the irrigation distribution system to meet irrigation demands.

The City relies to a large extent on surface water supplies for its irrigation system. Those supplies are supplemented by a number of ground water rights for wells that are used exclusively for that irrigation system. The City intends to continue to integrate its systems so that wells may serve both potable and irrigation needs, as required to meet increasing water demands. This is particularly true for shoulder seasons when little or no surface water is available. The City also needs the ability to meet summer-season irrigation demand with potable supplies on a contingency basis in the event of system repair/failure or surface water shortage.

The City has provided SPF with technical information to support the rate at which potable water can be supplied to the irrigation system without jeopardizing flows and pressures in the potable system. These values are summarized in the following table:

2030 Peak Hour/Max Hour Demand for RAFN		
System	Rate (gpm)	Rate (cfs)
Potable	16,950	37.77
Irrigation	94,393	210.32
	TOTAL	248.09

Current Interties		
Name	Rate	Rate
Crestwood	800	1.78
Astoria Park	800	1.78
Dooley	400	0.89
Greenhurst/Stoddard	1,000	2.23
Lava Springs	800	1.78
Well 14	1,700	3.79
Well 17	820	1.83
	TOTAL	14.08

Potable + Intertie:

$$\begin{array}{r}
 16,950 \\
 800 \\
 800 \\
 400 \\
 1,000 \\
 800 \\
 1,700 \\
 820 \\
 \hline
 23,270 = 51.85 \text{ cfs}
 \end{array}$$

$$\begin{array}{r}
 16,950 \\
 94,393 \\
 \hline
 111,343 = 248.09 \text{ cfs}
 \end{array}$$

0.55 = current deficit

Potable + Intertie Demands = 51.85 cfs
 Water Right (w/o Well 20) = 51.30 cfs

Difference	0.55 cfs
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Potable + Irrigation Demands = 248.09 cfs
 Water Rights w/o Well 20) = 126.84 cfs

Difference	121.25 cfs
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The 2030 water demands shown in the first block are the projected demands from water master plans completed by Keller and Associates in 2014. The potable demand is a straight-forward projection with a calculated peaking factor. The irrigation demand is calculated as a max. hour demand. The current irrigation demand is met by surface water supplied from the Boise River by three irrigation districts (and the groundwater supplied by Well 14, Well 17, and the system interties).

A gap analysis using the current system interties indicates an additional 0.55 cfs is needed to supply the difference between the potable water rights and current demands on the potable supply wells. This gap does not include additional interties to be constructed during the permit planning horizon.

The second gap analysis indicates the difference between potable-plus-irrigation water rights vs. potable-plus-irrigation system demands. The City does not expect to fill the entire gap (121.25 cfs) during the planning horizon for permit 63-32835. However, we believe the license for 63-32835 could be issued for the entire 5 cfs permitted based on the City's intention to continue to expand the interconnection between its potable and irrigation systems. In short, the City may not experience the full 121.25 cfs potential gap, but it certainly will need the 5.0 cfs sought by the Well 20 license. This is obviously new territory, and we would like to discuss this approach with IDWR as soon as possible.

Could Chris Meyer (the City's water lawyer) and I meet with IDWR to discuss these issues in the near future? We believe our response to your November 2016 correspondence will be more complete after that meeting.

Thank you for your consideration,

Roxanne

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