From: Nickel, Brian
To: "June.Bergquist@deq.idaho.gov"
Bcc: Poulsom, Susan
Subject: RE: City of Sandpoint WWTP upgrades
Date: Tuesday, December 23, 2014 10:14:00 AM

June:
Without speaking for our compliance staff on the legality of Sandpoint's bypasses, I will say that the design flow(s) that we use to establish permit conditions should be based on the plant's ability to provide secondary treatment, **not** based on their ability to deal with peak flow events by partially bypassing secondary treatment.
Thanks,
Brian Nickel, E.I.T.
Environmental Engineer
US EPA Region 10 | Office of Water and Watersheds | NPDES Permits Unit
Voice: 206-553-6251 | Toll Free: 800-424-4372 ext. 6251 | Fax: 206-553-0165
Nickel.Brian@epa.gov
http://epa.gov/r10earth/waterpermits.htm
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From: June.Bergquist@deq.idaho.gov [mailto:June.Bergquist@deq.idaho.gov]
Sent: Tuesday, December 23, 2014 8:50 AM
To: Nickel, Brian
Cc: June.Bergquist@deq.idaho.gov
Subject: RE: City of Sandpoint WWTP upgrades

Hi Brian,
Just as an aside, the bypass that Sandpoint shows and does utilize each year may not be legal. I was the last to do an NPDES inspection for this facility (2013) and noted this as a concern. There was follow up by Rob Grandinetti and Maria Lopez but I don't know what was decided. So I guess my point is that the bypass feature may or may not be a legal part of their treatment system and it might have a bearing on future discussions regarding this permit.
June

From: Nickel, Brian [mailto:Nickel.Brian@epa.gov]
Sent: Tuesday, December 23, 2014 8:21 AM
To: John Tindall; June Bergquist
Cc: Thomas Herron; Poulsom, Susan
Subject: RE: City of Sandpoint WWTP upgrades

John, June:
That sounds like a good plan. For what it's worth, let me explain how I'm interpreting the documents you've sent me so far.
One could conclude from the hydraulic profile that the plant's secondary treatment capacity is 4.8 mgd. It uses a peak flow rate of 14.97 mgd, but 10.17 mgd of that bypasses the aeration basin and secondary clarifiers (5.17 mgd is diverted just downstream of the grit chamber, and another 5.0 mgd is diverted just downstream of the primary clarifiers). So, at least for short periods of time, the plant can apparently provide secondary treatment for 4.8 mgd. The O&M manual and the "G01-4" drawing both state that the "maximum month" design flow is 6.09 mgd, but this may anticipate some periods of secondary treatment bypass within the month, since only 4.8 mgd is subjected to

secondary treatment under peak flow conditions, based on the hydraulic profile. So, one could argue, based on the available documentation, that limits (which are maximum allowable discharges over a day, week, or month) should be calculated based on 4.8 mgd.

However, the City's biggest concern, as I understand it, is not the effluent limits, but rather the facility planning requirement, which is triggered at 85% of their design flow. That requirement is (and was in their old permit as well) triggered based on a 12-month rolling average flow rate. As you said, the O&M manual and the "G01-4 drawing" that you sent to me state that the "avg day" design flow is 3.62 mgd. Since the O&M manual is more recent than the "G01-4 drawing," it appears as if the "projected" flow in the drawing is now the actual design flow. In any event, since the facility planning requirement is triggered based on a 12-month average flow, the design flow used for this requirement should be the plant's average day design flow, **not** a flow that can only be sustained for short periods of time (e.g., a "max month" design flow). At this point, based on the documents that I have seen, the plant's average day design flow is 3.62 mgd. So, if the City wants to change the facility planning requirement, what I will want to see is documentation showing that the plant can treat more than 3.62 mgd, **on average**.

Another thing I should mention about the facility planning requirement is that the outcome of that planning process would not necessarily be an expanded WWTP. For example, Sandpoint has I/I issues, and, according to their application, 3% of their collection system is combined storm and sanitary sewers. I know they've done some work to reduce I/I already, but, if they could reduce I/I and/or separate their sewers to a point where their flows were within the existing plant's capacity, that would satisfy the facility planning requirement, in our view.

Thanks,

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From: John.Tindall@deq.idaho.gov [mailto:John.Tindall@deq.idaho.gov]
Sent: Monday, December 22, 2014 5:47 PM
To: Nickel, Brian; June.Bergquist@deq.idaho.gov
Cc: Thomas.Herron@deq.idaho.gov; Poulsom, Susan
Subject: RE: City of Sandpoint WWTP upgrades

Hi Brian & June

Today I talked with Brett Converse, of J-U-B Engineers who is working for Sandpoint. He explained that the city wants their design flow to be shown as 5 mgd in the permit and all permit limits calculated using that value. He will provide us with further documentation to justify this design flow. It is not clear to me from the O&M Manual, design criteria or hydraulic profile that 5 mgd is the current design flow for the secondary treatment process. The upgrades done between 2008-2010 increased the design capacity.

The 3.62 mgd is shown in the attached design criteria from the record drawings for the recent upgrades as the projected 10 year design flow (somewhere between 2018-2020 when population increases would result in this flow). The 2011 O&M Manual (on pg. 1-4, Section 1.4, Table 1-1) has 3.62 mgd as the average day design flow without any reference to a time period this covers. It is

confusing to determine what to use.
Brett understands that the results of the permit limits using the 5 mgd design flow may be different. He said they will be able to maintain the current TP loads.
I would recommend that we wait to get the justification from Brett for the higher design flow.
Thanks. JT

John Tindall, P.E.
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From: Nickel, Brian [mailto:Nickel.Brian@epa.gov]
Sent: Monday, December 22, 2014 10:06 AM
To: June Bergquist
Cc: John Tindall; Thomas Herron; Poulsom, Susan
Subject: RE: City of Sandpoint WWTP upgrades

June:
Thanks for sending this. I haven't done an exhaustive search, but I think this is the first time I've received these particular documents.
I just want to double-check that this is the most recent information available regarding the plant's design capacity, since it's a few years old. Were there no upgrades made after 2007, which affect the plant's capacity?
Thanks,

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From: June.Bergquist@deq.idaho.gov [mailto:June.Bergquist@deq.idaho.gov]
Sent: Monday, December 22, 2014 7:07 AM
To: Nickel, Brian
Cc: John.Tindall@deq.idaho.gov; June.Bergquist@deq.idaho.gov; Thomas.Herron@deq.idaho.gov
Subject: RE: City of Sandpoint WWTP upgrades

Hi Brian,
Here is the information I have on the design flow, this was part of what I sent you a while ago. If they want to pursue going to 5mgd they are into the alternatives analysis and socio-economic justification and since they don't meet our mixing zone policy now, they certainly will not at an increased flow so it is likely that certification can't be provided without a solution to these problems. This places us we back to where we are now with 3.62mgd. At our meeting with Sandpoint all they wanted was to change the requirement to prepare a new facility plan at 5mgd instead of 3.62. Sounds like

they changed their mind on that point.
June

From: Nickel, Brian [mailto:Nickel.Brian@epa.gov]
Sent: Thursday, December 18, 2014 4:17 PM
To: John Tindall
Cc: June Bergquist
Subject: City of Sandpoint WWTP upgrades

John:

As you may know, a draft NPDES permit for the City of Sandpoint is currently out for public review and comment.

http://yosemite.epa.gov/r10/water.nsf/NPDES+Public+Notices/sandpoint_id_2014

One of the issues that has come up is confusion over the plant's design flow. The City had reported 5.0 mgd on their most recent application, but when I sent a preliminary draft permit to DEQ that was based on that design flow, June was concerned about that figure. She suggested that the design flow should have been 3.62 mgd, which was the "average day" design flow in the City's 2011 operations and maintenance manual (see attached). So, I revised the permit accordingly.

The City does not agree that 3.62 mgd is the correct design flow, and has stated that upgrades to the aeration (fine bubble diffusers) and solids handling have increased the plant's secondary treatment capacity to 5.0 mgd. I believe there were some improvements to the headworks as well. They said that these upgrades and the associated re-rating of the plant were reviewed and approved by DEQ.

I was hoping you might have some documentation that you can share with me, which supports the City's statements regarding the design flow.

Thanks,

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