

Prysby, Mike (DEQ)

From: Donaldson, Kristina (DEQ)
Sent: Monday, March 25, 2013 3:12 PM
To: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Cc: Bloemker, Jon (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Butler, Sonya (DEQ); Willard, Veronica (DEQ)
Subject: RE: Flint Scenarios

Here are my comments on the attached documents:

- Currently Flint receives water from DWSD and uses their water treatment plant as a back-up. Flint is currently in compliance with the SDWA as they stand with regard to reliability/redundancy. There is no regulatory reason for leaving the DWSD system. The issue of KWA vs. DWSD is mainly a question of cost.
- The February 2013 TYJT report indicates that there are economically viable options that would allow Flint to continue to receive water from DWSD. There is conflicting information on costs depending on the source, and I really don't know which cost estimates are most correct. If there is a cost effective option for Flint to stay on the DWSD system, it should be pursued.
 - o If Flint leaves the DWSD system, there will be ~30 miles of unused water infrastructure. The cost of maintaining excess water infrastructure and capacity in the DWSD system will be the burden of the customers that remain on the DWSD system.
 - o The DWSD system has already undergone a significant reduction in water demand that continues to hurt their bottom line. The loss of an additional customer will only exacerbate the problem.
- Small water systems that receive water from the DWSD on the Imlay to Flint transmission line will likely be left to build their own water system (Imlay, Mayfield, Greater Lapeer Utilities Authority).

With regard to Flint's representation/decision making authority:

- For the last 10 years, DWSD has implemented a customer outreach program open to all customers known as the Technical Advisory Committee (TAC). TAC has developed Partnering agreements to work together on decisions regarding the DWSD system. The TAC has worked with DWSD to develop the latest rate structure, capital improvements program, etc. Historically, Flint has chosen not to participate on the TAC, but could do so going forward to make sure they have a say in the decisions relating to the DWSD system.
- DWSD is currently working on converting to a water authority. This new structure could allow for a seat on the Board of Water Commissioners.

From: Shekter Smith, Liane (DEQ)
Sent: Friday, March 22, 2013 8:41 AM
To: Donaldson, Kristina (DEQ); Prysby, Mike (DEQ)
Cc: Bloemker, Jon (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Butler, Sonya (DEQ); Willard, Veronica (DEQ)
Subject: FW: Flint Scenarios
Importance: High

Kris and Mike –

Note the assignment below, due next Wednesday morning at the latest.

**City of Flint Water Supply Assessment
Tucker, Young, Jackson, Tull Inc.
February 2013**

MDEQ – LDO Comments

1. DWSD's most cost-effective option of 8 MGD maximum day from either the Imlay Station or from FL-1 in Table 6-1 clearly causes the Flint WTP to exceed the 2:1 DWSD – Flint River blending ratio during maximum day demand and the high usage months in the summer. The need to soften during higher usage from the Flint River will increase capital improvement costs and on-going operation/maintenance costs at the Flint WTP.

Additional capital improvement include:

- Repairs to lime slakers and lime storage silos
- Disposal of lime sludge residuals – on site de-watering/filter press system
- Potential for higher Cryptosporidium Bin classification from the Flint River which will require more advanced treatment (UV disinfection, etc).
- Flint WTP is rated at 36 MGD. Existing components (pumps, treatment basins, chemical feed systems) may not be suitable for treating at very low rates (8.0 MGD or less).

Additional operational costs include:

- Additional treatment chemical cost – lime-soda ash for softening
- Additional electrical usage for increased ozone generation and softening
- Additional system monitoring for increased levels of disinfection by-products

The TYJT report does not address these additional costs.

2. The Average Unit Cost of purchased water from DWSD presented in Table 4-2 is misleading since the annual change was based on a hypothetical rate that Flint would have been offered had they signed a new purchase contract with DWSD. The actual annual change (average) of water purchased from DWSD by Flint is approximately 10.5% based on a rate analysis conducted by Flint and their consultant.

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3. The TYJT report projects the cost of the pumping stations at \$71 million and is approximately \$40 million higher than KWA's cost estimate. KWA, Flint and their consultant ~~provide accurate construction costs that would support their cost estimate.~~ We would agree with TYJT's experience of higher construction costs in the immediate Detroit metropolitan area due to local construction costs and and requirements; however, these higher ~~are not~~ *may not* ~~always~~ applicable in out-state areas.

4. In Table 5-5 TYJT's estimate of \$71 million and \$218 million for the pumping stations and transmission main respectively includes their 30% ELAC estimate. TYJT; however, includes an additional \$32.5 million for further ELAC costs and increases the total ELAC costs to approximately 43%. It appears that the ELAC is being double-counted and a 43% ELAC seems unwarranted for a project having a significant amount of preliminary design engineering completed.

5. Page 19 of the TYJT report states that under the KWA option, two separate treatment process streams would need to be maintained for the Flint River as a back-up supply. This is not true. The Flint WTP could use their existing KWA treatment train to treat Flint River water; however, some of treatment processes would need to be adjusted (increase coagulant and disinfectant dosages).

6. TYJT states on Page 15 that approximately \$7.1 million in capital improvements will be needed at the Flint WTP for the KWA option based on the 2009 KWA preliminary engineering report. A decrease in these costs (KWA option) is likely as some of the capital improvements are not critical in the WTP's operation. However, additional capital improvements are needed if the WTP is utilized as part of DWSD's most cost effective blending option (see Item #1).

7. Page 18 of the TYJT report offers a second pipeline to Flint for redundancy along with sharing the capital cost of the new pipeline by all DWSD customers. How well will other DWSD customers accept this proposition?

8. The DWSD also offers to sell the existing transmission line to Flint for \$4.7 million. What are the O&M costs of the transmission main? These costs do not appear to be included in the cost analysis. Will Flint be able to charge (sell) water to the Lapeer county customers that would then be purchasing water from Flint's pipeline? Finally, the pipeline is 50 year old, what is the remaining life expectancy of the pipeline and is this the best long-term investment for Flint? *what is the average cost of a pipeline to pack on DWSD's portion of the main?*

9. Page 2 states that the 18 miles of pipeline from KWA to the Flint WTP is a 30-inch diameter main. The KWA Appendix 20 – October 2012 document states the pipeline is a 36-inch diameter main. The city of Flint is also investigating the proper size needed for this pipeline to meet their WTP's rated capacity and will be addressed in the final design.

10. Page 20 states that due to Flint's high water loss that the KWA pipeline

will be oversized. KWA pipeline size is being based to meet San Jo. 2030 projected water use & needs to be sized for some degree of system expansion. MDEQ also doesn't take the position of downsizing sewer capacity on the presumption that a utility will fix its internal infrastructure to reduce unaccounted water.