Comments on Fingerprint Memo

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To: Dave Dilks <ddilks@limno.com>; Tim Towey <ttowey@limno.com>;

Dave and Tim,

Just a couple of comments.

In table 2, the first two rows of Table 2 (Page 7) reference “MW-5S” for the well data used. It would be less confusing to use the full title “RM-MW-5S”. All the data and reports for our plant site use the full title because we have over 120 of them and with the project to look upgradient and using this data it should help to lead to less confusion in the future.

On Page 9 just ahead of Figure 6 there is the following paragraph:

“An evaluation was performed to determine whether a mixture of the patterns observed in the Kaiser river wells and Kaiser up-gradient wells improved the match with the load estimate for the 2014 Barker to Trent reach. A pattern comprised of varying proportions of the patterns in the up-gradient and river wells was compared to the load pattern. Figure 6 shows how the cos-θ value changes with an increasing fraction of the up-gradient pattern. The value of cos-θ changes very little from 0 to approximately 20% and then begins to decline. The inclusion of a relatively low contribution of the up-gradient wells neither hurts nor helps the similarity measure.”

While I have not seen any clear definitions of what range of values of cos-θ are considered a “good” correlation, I suggest the following revision to this paragraph:

An evaluation was performed to determine the impact on the value of cos-θ when the mixture of the patterns observed in the Kaiser river wells and Kaiser up-gradient wells was varied from 100% river wells to 100% up-gradient wells relative to the load estimate for the 2014 Barker to Trent reach. Figure 6 shows how the cos-θ value changes with an increasing fraction of the up-gradient wells pattern. The value of cos-θ ranges from about 0.95 to 0.90 as the percentage of up-gradient wells pattern increases from 0% to approximately 50% with the value of cos-θ declining to 0.80 with the pattern percentage for the up-gradient wells at about 75%. Thus the value of cos-θ appears be relatively insensitive to a wide range of mixtures of river wells pattern and up-gradient wells pattern.

The main reason in my mind for the revision is to make it clear to folks that the up-gradient groundwater PCB loading can still be very significant even in the Mirabeau to Trent reach.

Let me know if you have any questions.
Thanks,
Bud

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