

RE: Tsivoglou-Neal Equation

Wednesday, August 15, 2018
4:06 PM

Subject	RE: Tsivoglou-Neal Equation
From	Byrum, Shane
To	'John Michael Corn'
Cc	Ross, Sarah M.; 'Starke, T. Mayes'; Mike Corn; Paul Marotta; Blanz, Bob; Leamons, Bryan; Hicks, Basil; McWilliams, Carrie
Sent	Tuesday, October 31, 2017 3:02 PM

Yes, this resolves my comments.

From: John Michael Corn [<mailto:JMCorn@aquater.com>]
Sent: Tuesday, October 31, 2017 2:09 PM
To: Byrum, Shane
Cc: Ross, Sarah M.; 'Starke, T. Mayes'; Mike Corn; Paul Marotta; Blanz, Bob; Leamons, Bryan; Hicks, Basil; McWilliams, Carrie
Subject: RE: Tsivoglou-Neal Equation

Shane,
I have added the graph. I also corrected the daily maximum language.
Does this resolve all of your comments?

If so, we can re-issue the document.
Regards,
John Michael

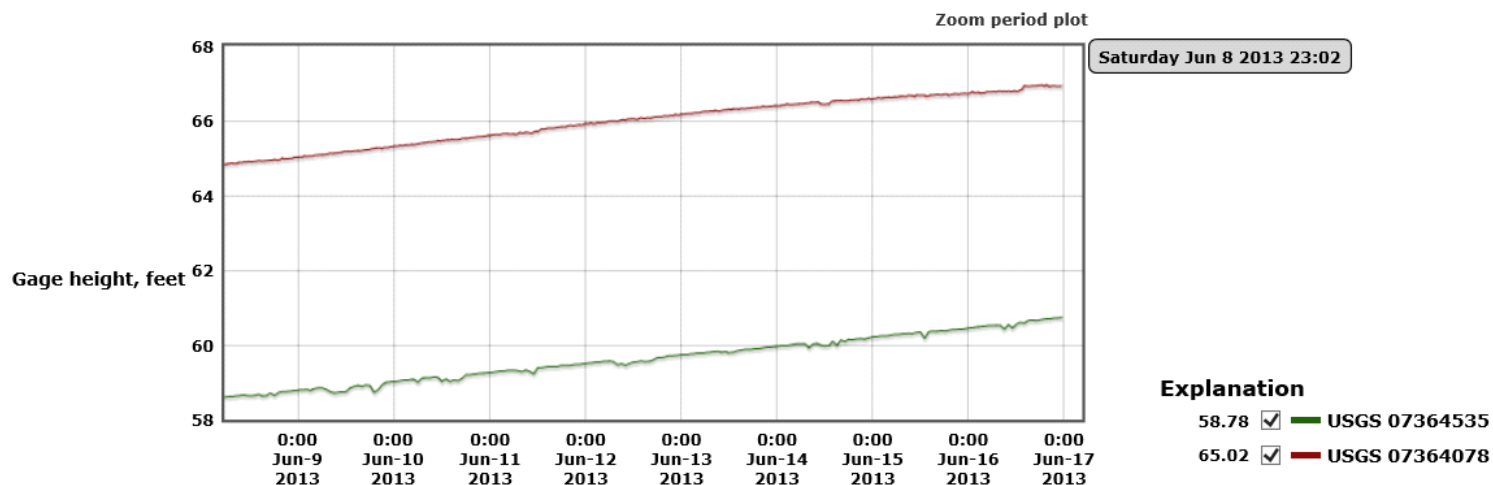
From: Byrum, Shane [<mailto:BYRUM@adeq.state.ar.us>]
Sent: Tuesday, October 31, 2017 11:53 AM
To: John Michael Corn <JMCorn@aquater.com>
Cc: Ross, Sarah M. <Sarah.Ross@GAPAC.com>; 'Starke, T. Mayes' <Thomas.Starke@gapac.com>; Mike Corn <JMCorn@aquater.com>; Paul Marotta <PMarotta@aquater.com>; Blanz, Bob <blanz@adeq.state.ar.us>; Leamons, Bryan <LEAMONS@adeq.state.ar.us>; Hicks, Basil <hicks@adeq.state.ar.us>; McWilliams, Carrie <mcwilliamsc2@adeq.state.ar.us>
Subject: RE: Tsivoglou-Neal Equation

John Michael,

Yes, the revised table and footnotes are good if you could include a USGS graph similar to one below to firm up the footnote discussing where the Delta H came from. Using USGS website, I was able to plot the upstream and downstream gage heights together and find a Delta H of approximately 6.2 ft between Felsenthal and Sterlington gages during flood conditions when river stage was 65 ft or greater at Felsenthal (see graph below). Therefore, a Delta H of 5.2 feet is acceptable as a lower Delta H yields a lower K2 using the Tsivoglou-Neal equation.

Also, the last sentence of the section titled "Effluent Data" should be edited as shown: "At a BOD₅ concentration of 123.8 mg/L, this results in a CBOD_U concentration of 420.9 mg/L for the ~~monthly average~~ daily maximum condition."

USGS 07364078 Ouachita River at Felsenthal L&D (lower) USGS 07364535 Ouachita River at Sterlington, LA



Let me know if you have questions. I look forward to receiving the revised report.

Shane Byrum
Staff Engineer

Arkansas Department of Environmental Quality
NPDES Branch, Office of Water Quality
(501) 682-0618
byrum@adeq.state.ar.us

From: John Michael Corn [<mailto:JMCorn@aquater.com>]
Sent: Tuesday, October 31, 2017 10:25 AM
To: Byrum, Shane
Cc: Ross, Sarah M.; 'Starke, T. Mayes'; Mike Corn; Paul Marotta
Subject: Tsivoglou-Neal Equation

Shane,
The flood condition exists between the upstream and downstream gages. Please let me know if the revised table and footnotes are acceptable.

Regards,
John Michael

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