

Correspondence with Chris Filstrup 2015-02-07 about the model < filstrup@iastate.edu>

Hi Steve-

The values listed in Table 2 are summaries of average concentrations by region. The overall grand mean for total phosphorus, on a log₁₀-scale, is 1.1287.

Cheers!

Chris

From: Steve Carpenter [mailto:srcarpen@wisc.edu]

Sent: Saturday, February 07, 2015 7:06 PM

To: Filstrup, Christopher [EEOBA]; Downing, John A [EEOBS]

Cc: EHS; Soranno, Pat; Craig

Subject: Re: question about Filstrup paper

Hi Chris and John,

Thanks for the rapid reply and the confirmation.

I'm using the parameters in Table 3. Should I center TP?

And if I center do I use the median of 27.5 ug/L reported in Table 2?

Thanks for your patience.

Steve

On 2/7/2015 6:37 PM, Filstrup, Christopher [EEOBA] wrote:

Hi Steve-

You are correct. Throughout our analyses, we used the log₁₀-transformed total phosphorus concentration in ug/L. For hierarchical modeling, we also centered log₁₀ total phosphorus concentrations by the grand mean of TP. Sorry for the confusion.

Cheers!

Chris

From: Downing, John A [EEOBS]

Sent: Saturday, February 7, 2015 6:18 PM

To: srcarpen@wisc. edu

Cc: Filstrup, Christopher [EEOBA]

Subject: Re: question about Filstrup paper

Hi Steve-

By cc I'm pleased to introduce Dr. Chris Filstrup. He has worked with me here for a few years and would be the best to answer your question.

Chris- will you help Steve out speedily with this question?

Cheers!

John

Sent from my Verizon Wireless 4G LTE DROID

Steve Carpenter <srcarpen@wisc.edu> wrote:

Dear John, Pat, Emily and Craig,

We would like to use your excellent paper with Filstrup in L&O to provide the TP x Chl relationship for some simulations we are running in our WSC project.

I wonder if there is a typo in the units for TP in equation 1. In the definition of symbols (2 lines under eq. 2) the paper states:

TP_{ij} is TP concentration for lake j in region i,

However 'TP' has to be in log units for the equation to make sense. Otherwise we could be exponentiating a huge number. Farther upstream in the paper, under '*Candidate models*', log-10 transforms are mentioned.

Based on numerical experiments I think that 'TP' is log₁₀ total P concentration in ug/L. That transform produces a curve that makes sense.

Before investing in some very time consuming simulations I thought I would write to ask for clarification of that symbol. I know all of you, and I don't know Dr. Filstrup, so I thought I would start by asking folks I know.

Best regards,

Steve

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**** Steve Carpenter, Director, Center for Limnology, U.Wisconsin-Madison,
<http://limnology.wisc.edu> ****