Message

From: Mary Iorio [miorio@mhanation.com]
Sent: 3/16/2021 7:02:45 PM
To: Aaron Larsen [allarsen@nd.gov]; Wirick, Holiday [wirick.holiday@epa.gov]
CC: Joshua Cunningham [jcunningham@mhanation.com]; Wert, Joshua E. [jewert@nd.gov]; Wax, Peter N. [pwax@nd.gov]
Subject: RE: Question re fish data in Lake Sakakawea and a comment re MPN vs. CFU

This is super helpful – thank you so much guys! :)

From: Larsen, Aaron L. [mailto:allarsen@nd.gov]
Sent: Monday, March 15, 2021 10:13 AM
To: Wirick, Holiday <wirick.holiday@epa.gov>
Cc: Mary Iorio <miorio@mhanation.com>; Joshua Cunningham <jcunningham@mhanation.com>; Wert, Joshua E. <jewert@nd.gov>; Wax, Peter N. <pwax@nd.gov>
Subject: RE: Question re fish data in Lake Sakakawea and a comment re MPN vs. CFU

Hi Holly,

As a follow-up to your question below, Josh put together a nice summary of historical fish sampling efforts on tribs of Lake Sakakawea from our biological monitoring efforts. First is a map displaying site locations and second is an Excel file with fish species information from those sites. Much of the information is dated but I still believe it's useful. Please let us know if you need any additional information.

Thanks,

Aaron

From: Wax, Peter N. <pwax@nd.gov>
Sent: Friday, March 5, 2021 2:33 PM
To: Wirick, Holiday <wirick.holiday@epa.gov>; Larsen, Aaron L. <allarsen@nd.gov>
Cc: Mary Iorio <miorio@mhanation.com>; Joshua Cunningham <jcunningham@mhanation.com>
Subject: RE: Question re fish data in Lake Sakakawea and a comment re MPN vs. CFU

Dear Holly:

I believe Aaron can get a fish list for the Missouri River Basin upstream of the reservoir and one for Lake Sakakawea (I have him linked to this response). He might have to harvest from a few resources, DEQ, NDG&F and USFWS but my guess is one of his staff has this already.

For E. Coli I will have to do some checking but I believe we are using the same volumes.

Thank you and everyone for your help.

Pete

From: Wirick, Holiday <wirick.holiday@epa.gov>
Sent: Friday, March 5, 2021 11:16 AM
To: Wax, Peter N. <pwax@nd.gov>

Cc: Mary Iorio <miorio@mhanation.com>; Joshua Cunningham <jcunningham@mhanation.com>
Subject: Question re fish data in Lake Sakakawea and a comment re MPN vs. CFU

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Hi Pete all is well on this fine Friday morning!

Question: My question is do you, Aaron or Joshua have fish species data in Lake Sakakawea and the tributaries that feed into the lake, or can you recommend a contact at Game & Fish who can help Mary Iorio at TAT Environmental access the fish species data? The information will be used in connection with the Tribe's development of WQS and the designation of uses so they need to know what cold water and warm water species are present. I know they're interested in fish shocking but that won't happen this field season. Thanks!

Comment: I recall we recently discussed EC method comparability (MPN vs. CFU). I thought the following excerpt from an email exchange I came across this morning (with Lars Wilcut at EPA's Office of Water in 2019) re: FC method comparability may be of interest to you.

EPA received comments requesting that the Agency allow for monitoring of fecal coliforms to be reported in colony forming units (CFU) per 100 milliliters in addition to most probable numbers (MPN) per 100 mL as specified in the existing regulations. Based on the research of Thomas and Woodward in *Estimation of Coliforms Density by the Membrane Filter and the Fermentation Tube Methods*, results from either technique can be considered comparable as long as the volume analyzed is equivalent. This finding of comparability is consistent with documentation for the existing fecal coliform limitations and standards. Therefore, EPA is revising the limitations and standards to allow for fecal coliform results to be reported in units of either MPN per 100 mL or CFU per 100 mL, based on the analytical method used to determine the results. Specifically, fecal coliform results should be reported in MPN per 100 mL if the multiple-tube format is used; and in CFU per 100 mL if the membrane filtration (MF) technique is used. According to SM 9222A and SM 9222B, although statistical comparisons show the MF technique to be more precise than the multiple-tube procedure, data generated from the MF and the multiple-tube test yield approximately the same water quality information.

Here's the FR notice adding updated methods to Part 136. It explains that both MPN and MF methods are approved by EPA.

https://www.govinfo.gov/content/pkg/FR-2003-07-21/html/03-18155.htm

Although there are differences in the methods, the Agency – as a policy matter – treats them as equivalent. The key is that any jurisdiction pick a method and stick with it, to make comparability easier. As to which of the two methods they pick, that's up to them as far we're concerned.

Thanks Pete - have a great weekend!

Holly Wirick
Water Quality Section
U.S. EPA - Region 8

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