

TO: Senator Pat Connell, Chair, Water Policy Interim Committee

FROM: Tim Davis, Administrator, Water Quality Division

DATE: December 18, 2017

SUBJECT: Application of MCA 75-5-222 (SB 325) for the Butte Silver Bow Wastewater Treatment Plant

Are natural (pre-mining) copper conditions in Silver Bow Creek greater than the current water quality standard (MCA 75-5-222(1))?

WPIC requested that DEQ explain whether Butte Silver Bow could benefit from Part 1 of SB 325 because naturally occurring copper levels were higher than the water quality standard for copper in Silver Bow Creek. If naturally occurring levels are equal to or lower than the standard then Part 1 of SB 325 does not provide Butte Silver Bow any benefit because they can discharge up to the standard rather than being held to the more stringent natural condition. A number of efforts have been made to characterize the natural background condition of Silver Bow Creek. These include:

- Aquatics Resources Injury Assessment Report, Upper Clark Fork River Basin (Montana Natural Resource Damage Program, 1993);
- Silver Bow Creek and Clark Fork River Metals TMDLs (DEQ, 2014);
- Additional Water Quality Portal (WQP) data queries for this evaluation.

These efforts have come to a similar conclusion that pre-mine copper concentration was near or below the current water quality standard (**Figure -1**).

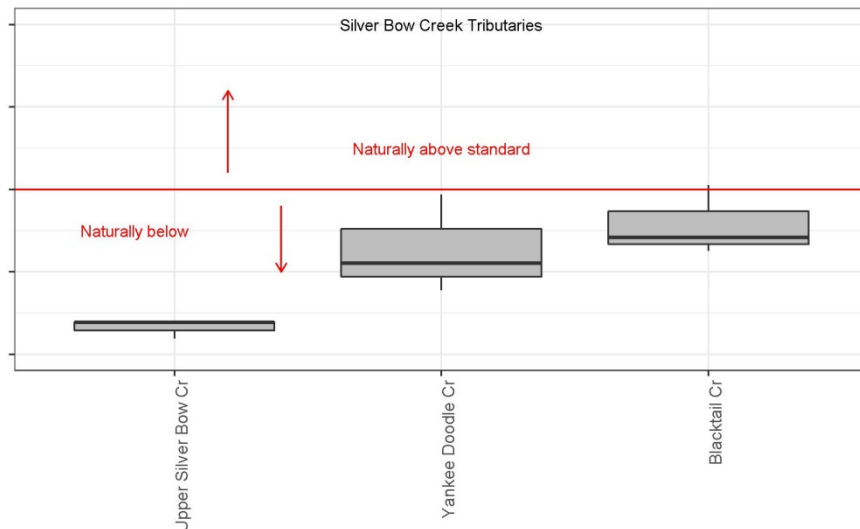
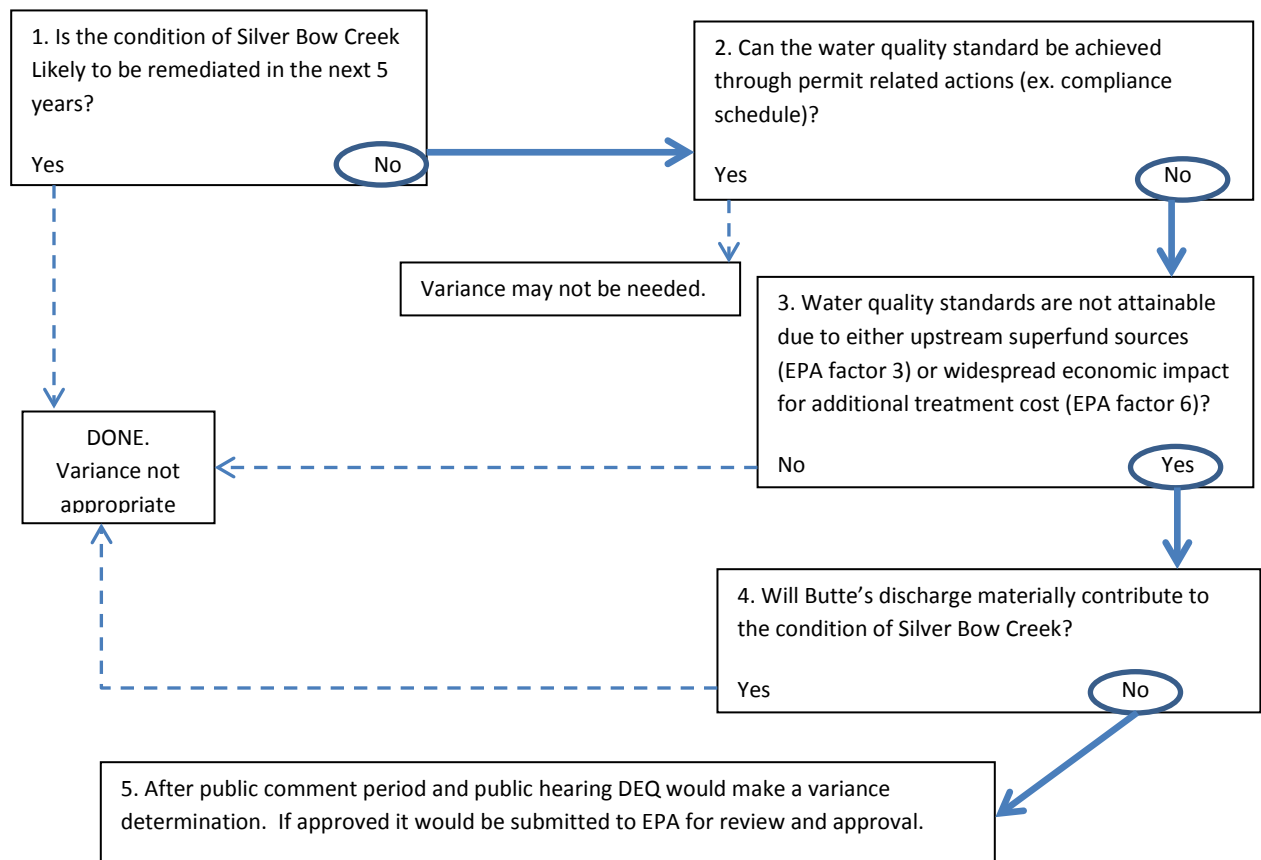


Figure -1. Example of tributary data available that represents pre-mine conditions. Data were converted to a compliance ratio for illustration purposes by dividing the sample concentration by the hardness-dependent standard of the sample.

Conclusion: Before mining occurred in the watershed, natural (nonanthropogenic) copper concentrations were likely very close to or below the current water quality standard. Therefore, DEQ does not believe the current copper standard is more stringent than natural and 75-5-222(1) is not applicable.

Evaluation of Applicability for Temporary Copper Variance under 75-5-222(2) for Butte Silver Bow Wastewater Treatment Plant (WWTP)-

DEQ has also analyzed whether a variance from the water quality standard under Part 2 of SB 325 could apply to Butte Silver Bow. The figure below highlights an example of the analysis that DEQ would conduct under the draft Administrative Rules as part of the variance decision process for the Butte Silver Bow WWTP:



Conclusion: After review of current treatment provided by the Butte Silver Bow WWTP and the conditions of Silver Bow Creek, Butte Silver Bow could potentially qualify for a temporary variance under the draft Administrative Rules for 75-5-222(2).

References

Montana Department of Environmental Quality. 2014. Final - Silver Bow Creek and Clark Fork River Metals TMDLs. Document C01-TMDL-05aF. Water Quality Planning Bureau. Helena, MT.

Montana Natural Resource Damage Program. 1993. Aquatics Resources Assessment Report, Upper Clark Ford River Basin June 1993.