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December 28, 2022

Department of Natural Resources
Attn: Patrick Lennberg
Colorado Division of Reclamation, Mining & Safety
1313 Sherman Street Room 215
Denver, CO 80203-2243

Re: Sandy Acres Pit, DRMS Permit No. M-1980-110
Hydrologic Balance response

Dear Mr. Lennberg:

This is a follow up to our December 21, 2021 letter regarding water observed at the former Sandy Acres Pit.

In 2022 we completed installation of approximately 1000 feet of 8" diameter perforated pipe to convey the water to the north which is the natural groundwater gradient. We completed installation of a sump at the north end of the pit. This sump is constructed in native granular material which allows water to infiltrate and flow along the natural groundwater gradient. After installation of the sump the surface water level in the pit dropped (see photos).



May 13, 2022

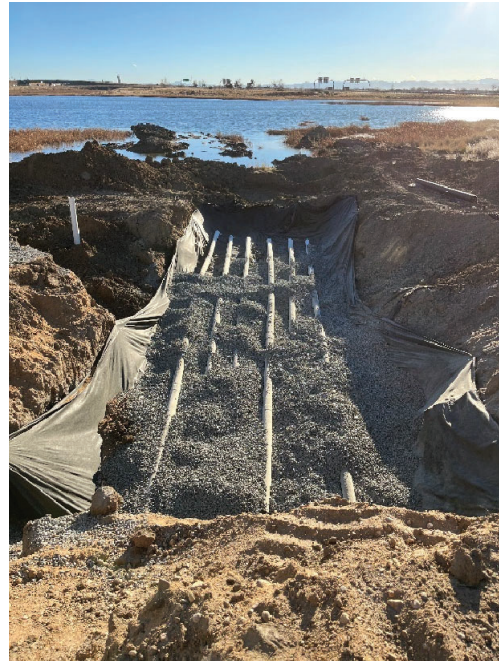


June 29, 2022

Unfortunately, toward the end of the summer surface water levels in the pit had risen (see photo). We believe that at least some rise in water level can be attributed to algae clogging the infiltration system from the pit to the sump. We are in the process of improving the infiltration system to help keep water flowing into the sump (see photo).



August 25, 2022



December 9, 2022

The initial performance of the sump was encouraging and indicates that the concept works. The more robust infiltration system being installed will limit clogging and better transport water from the pit to the sump. We propose to continue monitoring water levels and if needed modify the sump/infiltration system during 2023 to eliminate ponding water. On or before December 31, 2023 we will provide an update of actions taken and the corresponding results.

If you have any other questions, need more information, or if you would like to meet, please email me at dslack@e-470.com or call me at (303) 537-3710.

Sincerely

Derek Slack, P.E.
Roadway Maintenance Manager