

December 7, 2012

Mr. Chandler Peter
US Army Corps of Engineers
Denver Regulatory Office
9307 South Wadsworth Blvd.
Littleton, CO 80123

RE: Potential soil subsidence hazard at or near the proposed NISP Glade Reservoir dam site

Dear Mr. Peter:

A new report has recently come to our attention that we believe must be addressed in the Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed Northern Integrated Supply Project (NISP) that you oversee. The online report, [Colorado Map of Potential Evaporite Dissolution and Evaporite Karst Subsidence Hazards](#)¹, by Jonathan White with the Colorado Geological Survey (CGS), documents and maps locations where near-surface evaporite rocks occur in Colorado and notes the hazard potential of ground subsidence that can occur in such terrain.

The North Forty News published a portion of the report's map (Figure 1) showing known sinkholes and Karst soils in the vicinity of the proposed Glade Reservoir dam site. This map reminded us that in 1989, after a particularly pronounced reservoir drawdown by the Bureau of Reclamation, five sinkholes were discovered at the southern end of Horsetooth Reservoir². Four additional sinkholes appeared in the same area over the next several years. Further investigation revealed that the sinkholes were likely associated with the geology of the underlying Lykins Formation beneath the reservoir and the foundation of Horsetooth Dam. Reclamation had to go to considerable expense to at least temporarily plug these sinkholes to prevent increased leakage beneath Horsetooth Dam and lessen the risk of catastrophic flooding to populated areas downstream. Thus, we know that the potentials described in the CGS report are significant in our area.

¹ White, J.L., 2012, Colorado map of potential evaporite dissolution and evaporite karst subsidence hazards, Colorado Geological Survey on-line publication, Accessed 12/6/2012 at <http://geosurvey.state.co.us/pubs/online/Pages/Colorado%20Map%20of%20Potential%20Evaporite%20Dissolution%20and%20Evaporite%20Karst%20Subsidence%20Hazards.aspx>

² Accessed 12/6/2012 at <http://abouthorsetooth.com/html/background.asp>

To our knowledge, such a hazard was not addressed in the NISP DEIS and we feel strongly, especially considering the major potential public safety ramifications, that it must be thoroughly addressed in the Supplemental. Therefore, we ask you to fully investigate the hazard potential for any dam constructed at or near the proposed Glade Dam site and include in the SDEIS a dam failure inundation map and an Emergency Action Plan as required by the State of Colorado³. We also ask you to estimate the likely effects to NISP water yields from probable excess leakage as well as maintenance costs to plug sinkholes as they appear repeatedly through time.

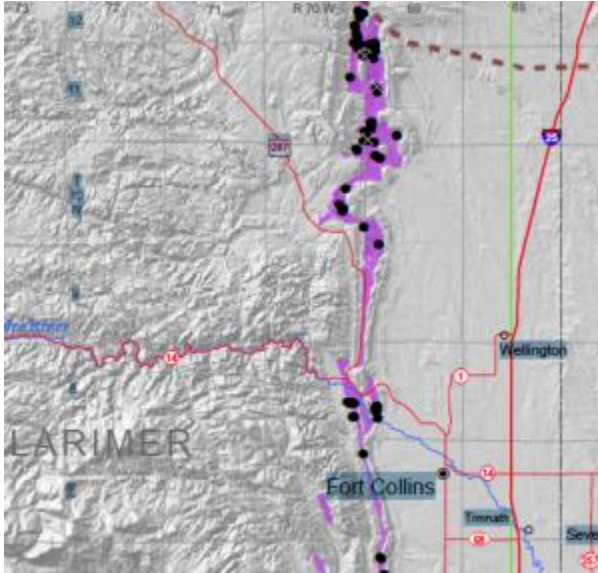


Figure 1. Karst soils (purple) and known sinkholes (black dots) from <http://www.northfortynews.com/colorado-geological-survey-study-reveals-subsidence-hazard-along-larimer-county-hogbacks>

We look forward to hearing from you about this critically important matter that must be addressed to fully comply with the National Environmental Policy Act. Thank you.

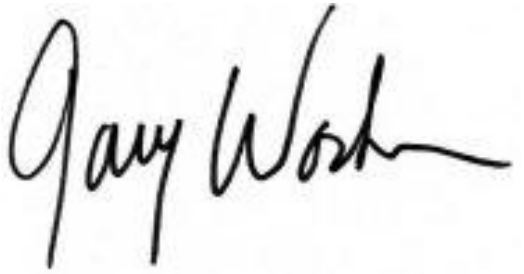
Sincerely,

John Bartholow, Board of Directors, Save The Poudre: Poudre Waterkeeper

A handwritten signature in black ink that reads "John M. Bartholow". The signature is written in a cursive style with a long horizontal line extending to the right.

³ Accessed 12/6/2012 at <http://water.state.co.us/DWRIPub/Documents/eapguidelines.pdf>

Gary Wockner, Director, Save The Poudre: Poudre Waterkeeper

A handwritten signature in black ink that reads "Gary Wockner". The signature is fluid and cursive, with a long horizontal stroke at the end.

CC:

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