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**From:** Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov>  
**Sent:** Monday, April 29, 2019 6:05 PM  
**To:** Garwin Yip - NOAA Federal  
**Subject:** Re: spring creek debris dam info

Here is what the 2004 Biop said about Spring creek in effects section. More here for PA than in current. I assume MOU is the same, but don't know for sure.

*"D. Spring Creek Debris Dam*

*Runoff containing acid mine drainage from several inactive copper mines and exposed ore bodies at Iron Mountain Mine is stored in Spring Creek Reservoir. Since 1990, concentrations of toxic metals in acidic drainage from Iron Mountain Mine have progressively decreased due to several remedial actions including the construction and operation of a lime neutralization plant. Operation of the Spring Creek Debris Dam and Shasta Dam have allowed some control of the toxic wastes with dilution criteria which is considered an improvement over conditions present when winter-run Chinook salmon were first listed. Reclamation proposes to implement actions that will protect the Sacramento River system from heavy metal pollution (i.e., acid mine runoff) from Spring Creek Dam and adjacent watersheds.*

***When storage within Spring Creek Reservoir is less than 5 TAF, Reclamation is able to make controlled releases that result in allowable concentrations of total copper and zinc in the Sacramento River below Keswick Dam. When Spring Creek Reservoir storage exceeds 5 TAF and water must be released, the MOU provides for "emergency" relaxation of these criteria, which leads to a 50 percent increase in the objective concentrations of copper and zinc. In recent years Reclamation, DFG, and the Regional Water Quality Control Board (RWQCB) have agreed to not use the emergency criteria until a spill is imminent. In order to minimize the build-up of toxic metals in the Spring Creek arm of Keswick Reservoir the releases from the debris dam are coordinated with releases from Spring Creek Powerplant to keep the metals in circulation with the main body of the lake. During significant rain events and because Spring Creek Debris Dam releases are maintained to achieve a dilution ratio with Keswick releases, uncontrolled spills of contaminated water can and have occurred. Low concentrations of copper and zinc resulting from those spills are usually limited to areas immediately downstream of Keswick Dam. With the completion of Slickrock Creek Retention Reservoir in 2004, approximately 95 percent of the toxic metals that historically emptied into the Sacramento River have been eliminated (see OCAP BA Appendix J). This reduction in toxic metals reduces the risk to developing salmonid eggs and fry below Keswick Reservoir to a level that would not be considered harmful."***

**Sarah Gallagher | Fish Biologist**

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On Thu, Apr 25, 2019 at 4:42 PM Sarah Gallagher - NOAA Federal <[sarah.gallagher@noaa.gov](mailto:sarah.gallagher@noaa.gov)> wrote:

That I am not sure; it seems like there must be some type of balance with what comes over from Whiskeytown, and what comes down spring creek. if the purpose of the dam is to keep debris back from entering the powerplant tailrace and to dilute pollution.

**Sarah Gallagher | Fish Biologist**

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On Thu, Apr 25, 2019 at 4:17 PM Garwin Yip - NOAA Federal <[garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov)> wrote:

So it seems like the Spring Creek Debris Dam is associated with, but not influenced by, the Spring Creek gunnel, or the other way around, correct?

Sent from my iPhone

Begin forwarded message:

**From:** Sarah Gallagher - NOAA Federal <[sarah.gallagher@noaa.gov](mailto:sarah.gallagher@noaa.gov)>

**Date:** April 25, 2019 at 3:43:05 PM PDT

**To:** Garwin Yip - NOAA Federal <[garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov)>

**Subject: spring creek debris dam info**

<https://www.usbr.gov/mp/mpr-news/docs/factsheets/trinity-division.pdf>

Spring Creek Debris Dam, located on Spring Creek above the Spring Creek Powerplant tailrace, is an earth fill structure, 196 feet high, with a crest length of 1,110 feet. Spring Creek Reservoir, with a capacity of 5,870 acre-feet, controls debris which would otherwise enter the powerplant tailrace and provides important fishery benefits by controlling contaminated runoff resulting from old mine tailings on Spring Creek.

<https://semspub.epa.gov/work/HQ/181026.pdf>

"3.3.3. Spring Creek Debris Dam Area The Spring Creek Debris Dam (SCDD) area is owned by the federal government and managed by the Bureau of Reclamation (Reclamation). Reclamation will operate SCDD to manage water discharged from the Site in perpetuity; therefore, the land use and ownership are not expected to change. "



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