

2210

2510 Watershed Surveys and Plans

December 23, 1983

Storm Damage on Deer Creek Allotment

District Ranger, Safford RD

The week of November 1, 1983 I accompanied District Ranger Cecil Sims and several members of his staff on a storm damage survey of improvements and riparian areas on the Deer Creek Allotment, Galiuro Mountains. We rode five days, seeking to observe as much of the allotment as possible.

The first day we rode from Deer Creek, past Mud Spring, around Sycamore Canyon, and down Horse Canyon to Powers Garden Administrative Site

The second day we rode up North Field Canyon, over to Crooked Dam and Mailbox Canyon, then to Peepstem and Pipestem Canyons. We rode up Pipestem Canyon to the West Crest Trail, which we followed south to the head of South Field Canyon, then down South Field Canyon to Powers Garden.

The third day we rode to Old Tent Lookout, continued to the West Crest Trail, followed that south to Grassy Peak and the Powers Mine Road, which we followed to Powers Mine and Kielberg Dam. We returned to Powers Garden following Rattlesnake Canyon.

The fourth day we rode through Sonoran Basin and over to Sycamore Creek. We returned to Powers Garden by following Sycamore Creek out to Rattlesnake Canyon and going up Rattlesnake Creek.

The fifth day we returned to Deer Creek Administrative Site by way of Rattlesnake Canyon, Sycamore Creek, and Mud Spring.

We observed many water developments during the five days. The rock dams, such as Crooked Dam, Middle Pipestem, Upper Pipestem, Sonoran Basin Dam, and Kielberg Dam were not structurally damaged by high water. The storage behind the dams, however, is minimal because of debris deposited behind every one of them. Several of the rock dams we observed had no working means of piping water from behind the dam to a drinker. Alternatives for making these dams more useful were discussed. They included dredging, installing a perforated pipe into the face of the dam to tap water trapped in the debris, drilling a well into the deposit behind the dam, and raising the dam. All these alternatives have drawbacks as well as good points. Dredging is a problem because the tanks are remote, and there is an abundance of fresh material poised and waiting to roll in behind the dredged dam. Dredging would supply a lot of water storage area, and if we put a sediment trap above the reservoir, we could keep the storage capacity high for a longer time. Evaporation off the surface would be a problem. Installing perforated pipe in either of the face of the dam or vertically into the deposit would work fine if we could keep the perforations open. Apparently there are ways to keep a pipe open and we should try them.

Drilling a well vertically into the deposit is fine except that the remoteness of the area makes maintaining a pump of any kind a problem. Raising the dam in most places is not feasible, and would collect an additional amount of debris in a short time.

My recommendation is to build a sediment trap upstream and make sure there is a pipe in the face of the dam that we can keep open. This combination should be effective.

The dirt tanks we observed were in good condition and were full of water.

All of the water developments we observed have proper water rights with the exception the small dirt tank adjacent to the road near Powers Mine. This tank is unnamed and is not on the Allotment Improvements list that I referred to.

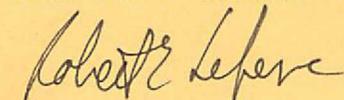
Just a note about the Powers Garden water system. The pick-up point was damaged in the October storm, and a makeshift pick-up apparatus was functioning when I saw it. Every effort should be made to reconstruct the pick-up point so it picks up the water from the gravel, not the surface flow.

Our brief look at the Cienega Fire left me with the impression that the slopes are fairly well revegetated. The top of the fire, however, is not doing as well. The attached photographs of the fire only represent the upper portion, and are not an example of what appeared to be the majority of the fire.

The main channel of Rattlesnake Canyon sustained some very large flows and a great deal of rearranging occurred within the floodplain. A number of mature Ponderosa Pine and Sycamore trees were lost due to undermining and battering by water and floating debris. A surprising number of young trees remain. This is encouraging and leads me to believe that the vegetation in the riparian area will recover rapidly. The channel itself may not really stabilize for some time. Tremendous quantities of rock, gravel, and sand as well as limbs and logs from downed trees are in the channel. These will move a lot in future runoff events, making the channel unstable. The trail along the bottom is unrecognizable in some reaches, and will probably be difficult to establish in the near future because of the numerous channel crossings and close proximity to the channel throughout its length.

Tributaries to Rattlesnake Canyon have fared much better due to less volume of water in them. Little if any riparian area damage was noted along the tributaries.

I appreciate the assistance of the District employees in making this survey and am eager to see more of the Galiuro Mountains. I especially appreciate Ranger Cecil Sims' assistance in helping me define the work "dark".



ROBERT E. LEFEVRE
Forest Hydrologist

BLefevre:sg:revised 1/9/84



Crooked Dam - 11/1/83



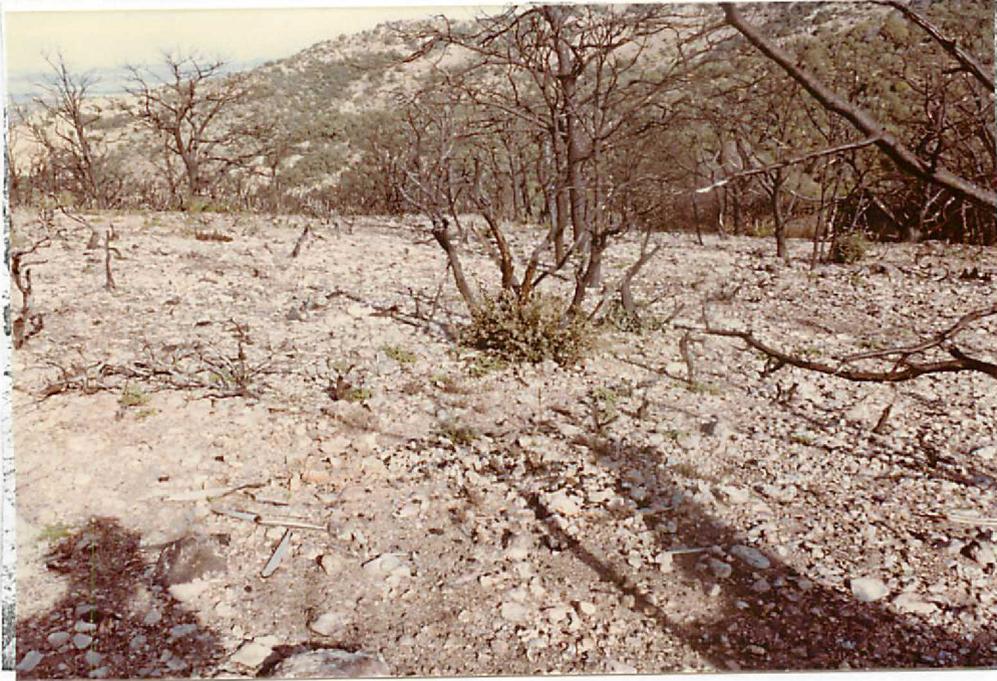
Mailbox Well - 11/1/83



Small Rock Dam
at Mailbox Well - 11/1/83



Mailbox Well Trough - 11/1/83



Cienega Fire - 11/1/83



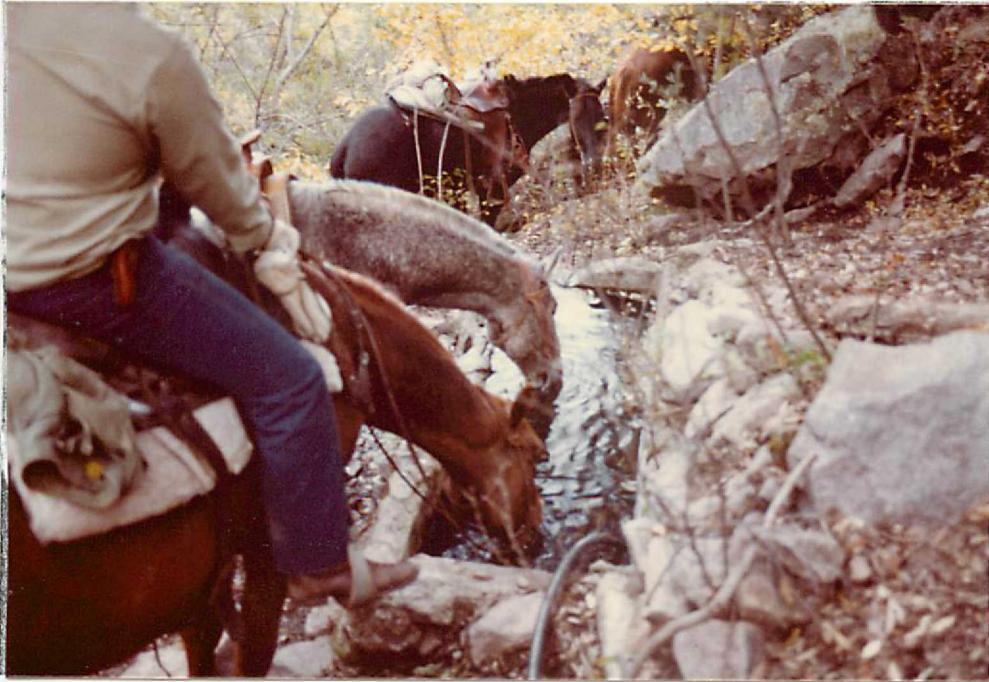
Cienega Fire - 11/1/83



Along West Crest Trail 11/1/83



South Field Canyon Spring 11/1/83



South Field Canyon Spring Trough 11/1/83

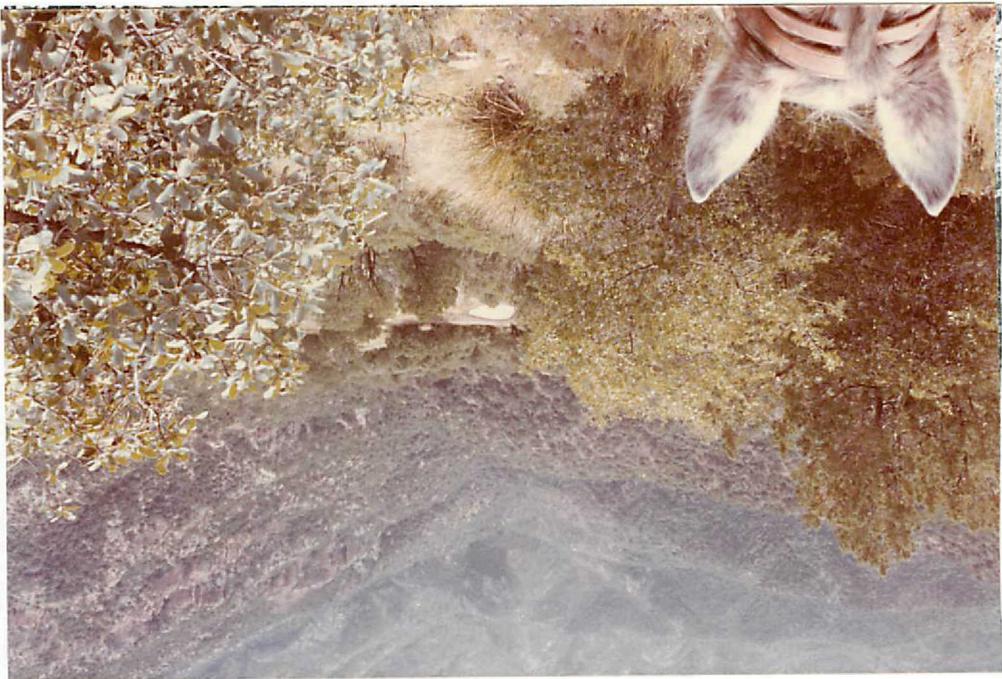


South Field Canyon Dam - 11/1/83

Powers Mine - 11/2/83



Kleiberg (Grassy Ridge) Tank 11/2/83





Kielberg Dam (Upper) 11/2/83

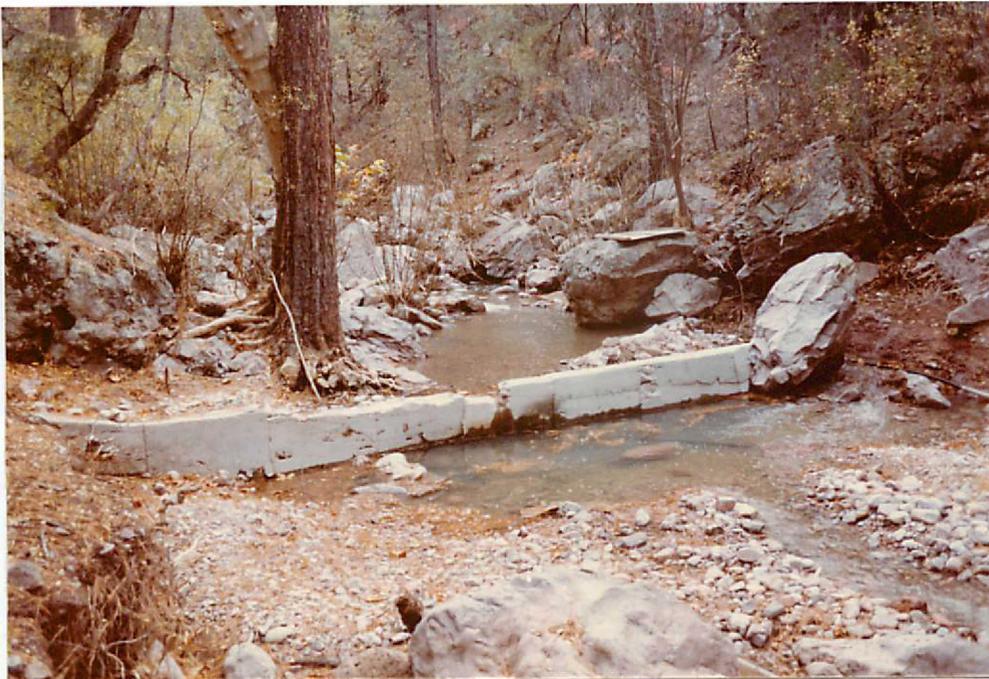


Kielberg Dam (Lower) 11/2/83



Unnamed Tank in Kielberg Canyon
near Powers Mine

11/2/83



Powers Garden Water Works 11/2/83



Powers Garden Water Works 11/2/83



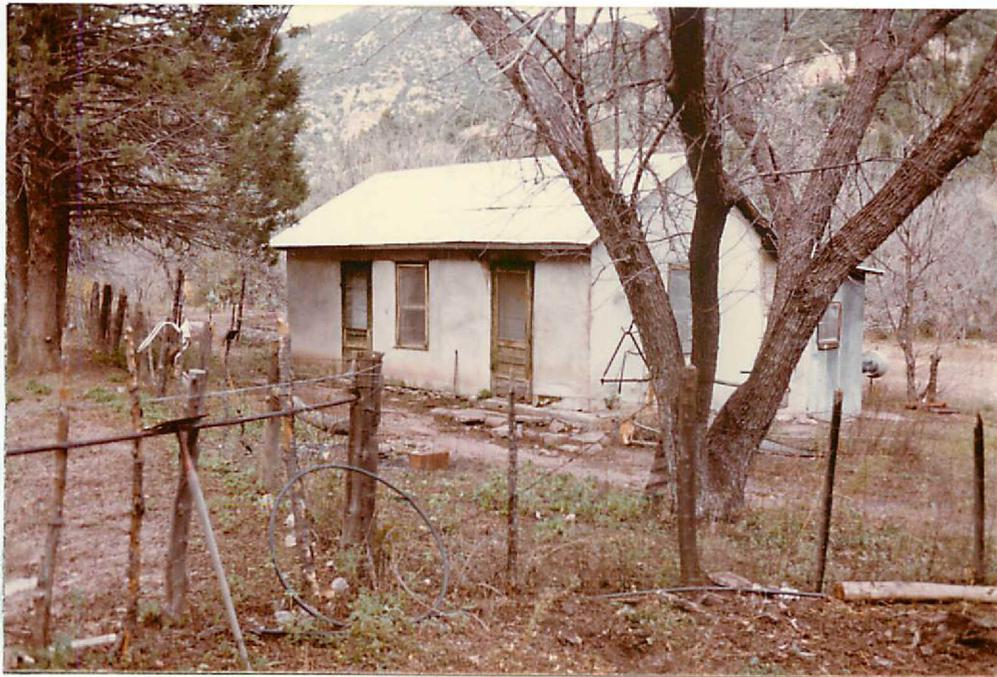
Powers Garden Water Works 11/2/83



Pipeline to Powers Garden 11/2/83

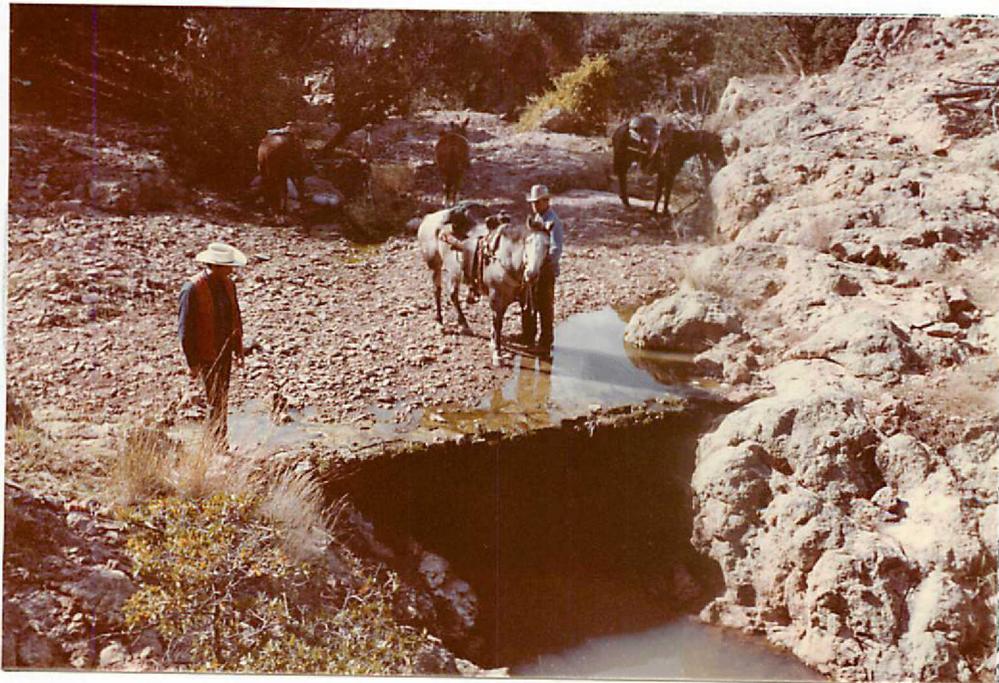


Outbuildings at Powers Garden 11/2/83



Powers Garden Cabin

11/2/83



Sonoran Basin Dam -

11/3/83



Rattlesnake Canyon - 11/3/83