

4-H'ers are Turning a Piney Slope into a Water Faucet For Their Camp Near Williams

Pinal County 4-H campers have prepared since 1975 for a harvest in Coconino County—a water harvest. They plan to be drinking to their success next summer.

The campers at the Pinal County 4-H Camp between Flagstaff and Williams are building a water project to capture runoff precipitation from the piney hillsides. The last major step, lining the 400,000-gallon storage pond with a butyl rubber sheet, should be completed in the 1980 summer, county 4-H agent Woodie Winans said recently.



Carolyn Thomas (right) and Terry Kisto of Sacaton haul a basket of rocks out of the bottom of the empty pond during a 4-H camp session in July 1979.

The water project will provide not only some hands-on lessons about conservation and cooperation, but also a usable water supply for the camp. Since the camp was founded in the Kaibab National Forest 12 years ago, it has had to buy water by the truckload. About 30 gallons, at a penny and a half per gallon, are used daily for each person at the camp. Avoiding waste is a recurring theme at the camp sessions. Winans asks campers to shower only once or twice during their week in the woods.

The Bill Combs family of Queen Creek donated the site for the camp. Roy Swisher of Coolidge guided its

early development. In recent summers, each of the two, one-week, regular sessions at the camp has drawn about 50 Pinal County 4-H'ers from other counties, too. Of the 60 junior leaders at each of the 1978 and 1979 sessions, about half were from Yavapai, Yuma, Mohave or Gila counties.

Other groups use the camp, too. Marching bands from Casa Grande Union High School and Tempe's Marcos De Niza High School have borrowed it for a week of the past two summers. This July, the Youth Conservation Corps from Central Arizona College spent a week there. The visiting groups each learn about and put in some work on the water project.

4-H'ers have been planning and working on the water project for four years, drawing on advice from University of Arizona, Forest Service and Soil Conservation Service resource people.

300-acre catchment

The pond which is the focus of the project is fed by an 800-foot-long, rock-lined channel that has been prepared along the bottom edge of a 300-acre hillside. The catchment area is unmodified pine forest. To minimize silting-in of the storage pond, the runoff water slows down in a broad settlement basin before it enters the storage pond. Water can also be shunted away from the settlement area and pond if the pond is already full.

Doug Cole, a Coolidge 4-H'er who has worked on the project since it began, said recently that the most rewarding moment so far was seeing the water from winter and spring runoff in the pond last June. "It was good just to see that it actually does work," he said. Since the pond was not lined or covered, however, this year's harvest had seeped out and evaporated by mid-July.

About 200 old tires piled near the settling basin are relics of a plan to line the pond with a plastic sheet held in place by a layer of tires. This year, however, that plan was traded in for one to use a butyl rubber liner that should last twice as long as the tires and plastic would have. The cost of getting the liner is the major remaining hurdle for the project, said Winans.

Though he often inspires the campers with predictions of the shimmering blue water, the pond will be covered with styrofoam floats to cut down evaporation losses. For use at the camp, the water will be filtered through sand and charcoal, then chlorinated.

Water from the pond will also feed a wildlife drinking tank in a sheltered spot 150 feet further from camp. UA Extension wildlife specialist John Stair has helped the 4-H'ers plan this part of the project. A wind-powered pump will deliver the water to the wildlife tank.

Dr. Sol Resnick, director of the UA Water Resources Research Center, has given crucial help in planning the water project. He met with camp workshops in 1975 to consider alternative water-supply options. One plan for a well in the adjacent valley was rejected as not dependable enough. Resnick and others at the research center have helped collect and analyze data on the physical characteristics of the camp area. The Soil Conservation Service analyzed soil samples. Ranger Dick Pellissier of the Chalender District of the Kaibab National Forest has also helped with the project at several stages.



Pinal County 4-H'ers Eddie Akers and Scott Cassels install an inlet gate for the water project. Water can be diverted if the pond is full.

Support back home

Work on the project by 4-H'ers and supporters has not been limited to one-week bursts up in Coconino County. Lots of the planning and backing takes place back home in Pinal County.



June 1979 campers clear the slopes of the pond. Last year's snowmelt put hundreds of gallons of water into the unfinished structure.

Doug Cole and Eloy 4-H'er Dominic Facio serve with 10 adults from around the county on the Water Project Steering Committee, including Bill Tanner of Casa Grande, president of the Pina County 4-H Clubs, Incorporated. Fundraising projects by community 4-H clubs have helped buy necessary materials. A 1977 bike-a-thon in Casa Grande raised about \$1,000 for the water project and an equal amount for the city's centennial celebration this year. Another bike-a-thon in Maricopa raised \$300 in that small town, and a third in Florence this spring added \$1,000 to the pot.

Many other donations of time, materials and money have come from individuals and organizations in the county, Winans reports. The Casa Grande Kiwanis Club, the Florence-Coolidge Natural Resources Conservation District, and the Kennecott Copper Corporation have been supporters. Howard Wuertz of Coolidge and Oliver Anderson of Maricopa spearheaded a donation drive among farmers and friends of 4-H.

The 4-H'ers involved with the project have learned some basic lessons about soils, water and watersheds. Some have learned new skills. Doug Cole, for example, learned surveying. Another lesson is more general. As Cole put it, "The project really shows how a volunteer effort can succeed when people put their minds together to get something done."

Curt Cassels, 18, of Casa Grande, was the camp director this summer, and has worked on the water project since its inception. "It's something that 4-H'ers of today can do for the 4-H'ers and other people who will be here 10 or 20 years from now," he said. "They will see something that we've done that we're proud of."