

# VIEWS FROM THE WATERSHED

Spring, 2019

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## **Chairman's Column** by Stephen Williams

My travels took me through Dalhart, Texas and the Panhandle Country recently. My thoughts were not on the historic XIT Ranch or how the feedlots were doing there. I was thinking about the Dirty 30s.

John Wesley Powell, in his 1878 "Report on the Arid Region of the United States", warned against creating traditional farms on the High Plains. He said to do so would be destructive.

Those who did attempt to dry land farm with a horse drawn plow thought the tractor was heaven sent because it did the work of ten horses. The combination of a tractor, a one way plow and a combine made turning over native grassland to plant dry land wheat easy. A handful of wet years in the early 1900s convinced banks, which had refused to lend to farmers west of the 98<sup>th</sup> meridian, to be less cautious. The droughts of the 1870s and 1890s were forgotten because the 1920s brought wet years. A theory was postulated that the simple act of tearing up the sod would cause atmospheric disturbances that were enough to vary the weather patterns. In five years time, from 1924-1929, acreage in the Texas Panhandle that was plowed under for wheat grew from 876,000 to 2.5 million, a 300 percent increase. What had been prairie turf for 35,000 years was peeled off in a swift de-carpeting that remade the panhandles of Texas and Oklahoma, and big parts of Kansas, Nebraska and southeast Colorado.

As grain prices fell in the late 1920s rather than cut back to tighten supplies and increase prices, farmers tore up more grass. They had debts to meet. At the start of the 1930s wheat sold for one-eighth of the high price from ten years earlier. Across the Plains the last gasp was to tear up what grass was left and plant more wheat. At the end of 1931 the Agriculture College of Oklahoma did a survey of all the land that had been torn up in their state during the wheat bonanza. They were astonished to find that of 16 million cultivated acres, 13 million were seriously eroded. The erosion was due to a pair of conditions on the plains: wind and neglect. When a farmer tore out the sod leaving the land naked, it could not revert to grass because the roots were gone.

## **INSIDE THIS ISSUE**

Chairman's Column	1
Chairman's Column Continued & News Briefs	2
Barbara Neville-Johnson	3
Healthy Lands for Healthy Waters Program	4
Ecological, Soils, & Plant Workshop	5
Feed American Families Sign & Upcoming Events	6

Then the drought hit. Insects bred and hatched through the months that normally would have killed a generation in colder, wetter years. 1932 fulfilled the long ago warning of John Wesley Powell that this arid land was not fit for normal agriculture. The weather bureau counted half a dozen black blizzards on the Oklahoma Panhandle in the winter of 1932.

Franklin Roosevelt was elected President in 1932 and appointed Hugh Bennett, the son of a North Carolina cotton farmer with degrees in soil science from the University of North Carolina, director of a new agency set up to stabilize the soil.

In 1934 it started to blow. The worst and most persistent storms were in parts of Colorado, Kansas, Texas, Oklahoma and New Mexico. Men avoided shaking hands with each other because the static electricity was so great it could knock a person down. They put cloth on their door knobs and metal oven handles to inhibit the electric jolt. Car owners used chains, dragging them along the street as a ground for the electricity in the air. Hospitals postponed operations because they could not keep surgical wards clean.

During the storms of March and April, 1935 about 4.7 tons of dust per acre fell on western Kansas during each of the blizzards. The tonnage not only crushed trees, broke windows, and dented the tops of cars, but collapsed ceilings of houses.

After Black Sunday (April 14, 1935) Hugh Bennett worked Congress to create a permanent, well funded agency to heal the land. He envisioned local control via establishment of a soil conservation district in every farm community. He considered the soil conservation districts to be a neighborhood civil defense committee of the soil.

Continued on Page 2.

**Chairman's Column (Continued from Page 1)**

Arizona established Soil Conservation Districts in 1941 through the enactment of the Arizona Soil Conservation District Enabling Act. In 1972 the name changed to Natural Resource Conservation Districts. The Santa Cruz NRCD is one of 32 NRCDs in Arizona. We should never forget the tragedy of the Dirty 30s, and strive to be the best stewards of our natural resources that we can be.

Your District was busy this Spring. One rock dam was constructed on the Schock Ranch in cooperation with the Southeast Arizona Chapter of Quail Forever. The Santa Fe Ranch hosted four field days with classes of first and fourth graders from Rio Rico and Nogales in fulfillment of our Education Center's mission. The students learned about plants, ranch tools, pollinators, wildlife and animal behavior in a petting zoo venue with farm animals. The Education Center also co-sponsored Project WET at Nogales High School for fourth graders to provide information about the hydrologic cycle and water conservation.

Our fellow supervisor, Barbara Neville Johnson, passed away on March 14 of a heart attack. Celebrations of her life were held on March 23 in Patagonia and May 11 at the Poco Toro Ranch south of Patagonia. This was a real loss to the Santa Cruz NRCD. Please remember Barbara in your prayers. Her obituary is on page 3. Since this creates a vacancy on our Board if you know of anyone who is interested in filling this vacancy, please have them contact me (602-820-0191, [smw85611@gmail.com](mailto:smw85611@gmail.com)) or our Board Clerk, Chris Postel ([clerk.scnrcd@gmail.com](mailto:clerk.scnrcd@gmail.com)).

Our district meetings are held at noon on the fourth Wednesday of even numbered months, except December, in Patagonia at the Wild Horse Restaurant. Come join us for lunch and up to date agency news. 2019 meeting dates: June 19, August 28, and October 23.

Thank you for your interest in natural resource conservation and the Santa Cruz NRCD.

Stephen Williams, Chairman

**News Briefs:****Building One Rock Dams:**

On May 1-2, volunteers, lead by Jim Littlejohn (Quail Forever), built 12 One Rock Dams on Bill Schock's ranch.

**Nogales Water Festival:** May 9 (Nogales High School): Over 440 4th grade students participated.



Barbara Neville Johnson October 17, 1949 to March 14, 2019



**Barbara Neville-Johnson**

Barbara Neville Johnson rode off into the sunset on March 14, 2019. Barb was an avid horsewoman, artist, author, and lover of animals and nature. She had an adventurous life. She started life as an Air Force brat, living in many different places in the United States, including Hawai'i and Alaska. In the early 60's, she lived in Madrid, Spain with her family. That is where she became proficient in Spanish, but more importantly, where she had her first horse. Barb's love of horses started early in life, well before she got her own horse at the age of 10.

Her second horse, Joe, followed soon after she and her family moved to upstate New York. She trained him herself and moved him from New York to Nebraska to Idaho. Barb rode roundup numerous times at the ranch of old family friends in southeastern Idaho. She had many other horses throughout her life, but her first two were special to her.

Barb was a talented and creative artist. She earned her Bachelor of Arts and Bachelor of Fine Arts degrees in Sculpture at the University of Hawai'i. She expressed her art through painting, drawing, sculpture, photography, and jewelry making. She painted a multitude of oil paintings for much of her life and which were shown in many galleries. Many of those paintings are now hanging on the walls of family, friends and purchasers homes today. In the last years of her life she expressed her art through writing. As Barbara Neville she wrote: the Spirit Animal series (11 titles), Cha'a Many Horses series (3 titles), Max Storm Shadow Mysteries (2 titles), the Cowboy Dictionary and the Cowboy & Injun Dictionary. Bury the Hatchet (her final book, part of the Cha'a Many Horses) was released in the last couple of weeks. Her writing was a real passion in her life.

Barbara married Peter Johnson. Her greatest love were her children, Tiger and Fox. She was proud and joyful that Tiger is a pilot, following in the footsteps of the grandfather he never got to meet. She was proud and joyful that Fox shares her passion for animals, especially horses. She was a loving aunt to her nieces, Chelsea and Michelle Neville Cordell, introducing them to the care and feeding of a menagerie of farm animals.

Barbara and her husband Peter were some of the last people to have a residential homestead in Alaska. She also homesteaded and proved up on a business site in Alaska. Upon moving to Arizona, Barbara got Tiger and Fox involved in 4-H. She participated as a leader even after her children were old enough to move out of 4-H. For more than 10 years, she was active in Farmer's Markets in Santa Cruz County. She was an organizer and a vendor, selling eggs, jewelry, homemade goat cheese, and honey. She served on the Board of the Santa Cruz National Resource Conservation District.

In Arizona, her love of horses grew into a love of many different animals, including cats, dogs, goats, chickens, guinea fowl, peacocks, turkeys, ducks, horses, cows, and maybe more. When visiting her Rancho De Los Osos, one never knew what critters to expect to see.

Barbara is survived by her son Tiger, daughter Fox, husband Peter, sister Nancy, brother-in-law Martin Cordell, nieces Chelsea and Michelle Neville Cordell. She was preceded in death by her parents Bertie "Sam" Mart (Grange) and Harry Walter Neville, maternal grandparents Ellen Alverda (Jensen) and Ray Clifford Grange, and paternal grandparents Ruth Ann (Boyed) and Walter Henry Neville

Barbara was a loving daughter, sister, wife, and mother. Her surviving family and friends already miss her warmth, loyalty, wisdom, keen mind, and wit. Happy Trails Barbara. We miss you and love you.

In lieu of flowers, please donate to your local Humane Society, Animal Rescue or the American Heart Association.

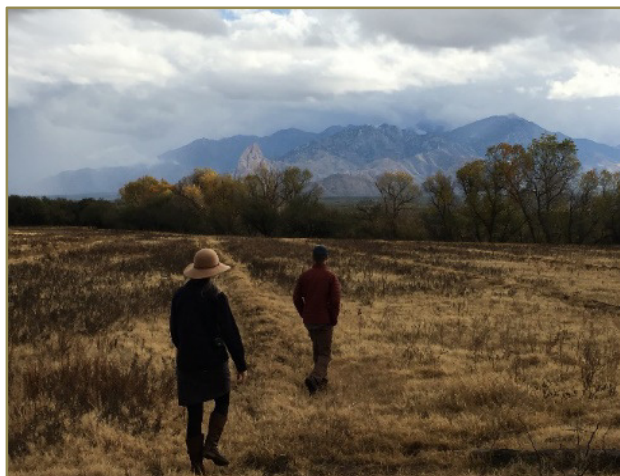
## Healthy Lands for Healthy Waters by Bailey Kennett, Arizona Land & Water Trust

How different, today, would our western lands and waters be without the focus and dedicated efforts of conservationists in the past? How different would they be going forward if that work were to stop? Working closely with agricultural landowners, Arizona Land and Water Trust works each day to protect Southern Arizona's vanishing western landscapes, its farms and ranches, wildlife habitat, and the waters that sustain them. In collaborating toward conservation for over 40 years, the Trust understands the critical role that farmers and ranchers play in the stewardship of our local environment.



The Upper Santa Cruz Watershed – from the river's headwaters in the San Rafael Valley (*photo, top left*), past the historic mission of Tumacacori (*photo, top right*), through the sacred foothills of Elephant Head in the Santa Rita Mountains (*photo, bottom left*) – is a unique landscape with profound connectivity between land and water. Throughout its course, the river naturally weaves above and below ground – *springing* to the surface where geology (and groundwater pumping) allows. And even where it disappears from view, galleries of Cottonwoods remind us that the Santa Cruz is not far below - it is here, alive, and responsive to the land.

This responsiveness is what Arizona Land and Water Trust works to protect. With support from University of Arizona hydrologist Dr. Ty Ferréand, PhD student Cara Nadler, as well as consultants AMP Insights and Martin & McCoy, the Trust is exploring the impact of potential future land uses on Santa Cruz River flows and shallow groundwater levels. In river systems where the connection between land use and river flow is so dynamic, protecting working ranches means protecting local water supplies – in addition to open space, wildlife habitat and agricultural heritage.



As Arizonan's, we have a unique respect for rivers and all they offer welcome shade on a hot day, the sweet scent of Cottonwoods in fall, sustenance for our crops and cattle, and so much more. Continuing our work together will ensure the Santa Cruz remains this resource, this refuge, upon which we all rely.

For more information on what you can do to support the Santa Cruz watershed, please contact Bailey Kennett, Desert Rivers Program Manager, at 520-577-8564 or [bkennett@alwt.org](mailto:bkennett@alwt.org).

ECOLOGICAL SITE, SOIL, PLANT WORKSHOP  
By Stephen Williams

On May 14, 2019 the Santa Cruz NRC D hosted a workshop on the Rose Tree Ranch in Elgin focused on ecological sites, soils and plant identification. Partners for the workshop included University of Arizona Cooperative Extension (Kim McReynolds, Dustin Hancock, Dr. Craig Rasmussen), Natural Resources Conservation Service (Alisha Phipps, Samantha Carrillo, Brett Myers, Emilio Carrillo), Arizona Land and Water Trust (Cameron Becker, Janelle Gaun), Arizona Revegetation and Monitoring (Jim Koweek), and Rose Tree Ranch (Bill Brake). Federal and State agency personnel, local landowners and ranchers, and non-governmental and wildlife organization representatives comprised the 40 attendees. It was a mild, breezy day that was perfect for the event.

Dr. Craig Rasmussen, University of Arizona Soils Scientist, explained the historical erosion and deposition events which took place in the area, and led to the creation of two predominant soil series: Bernardo and Hathaway. The group was shown soil profiles of both soil series and learned about argillic (clay) and calcic (limy) deposition layers in each profile. Using a dilute hydrochloric acid to check for the presence of lime provided a graphic visual of bubbly effervescence when the soil contained lime. Wetting soil to make 'balls' and 'ribbons' was another graphic demonstration that enabled participants to actually feel the differences between clay, sand and silt components of the soil.

The discussion of ecological sites, led by NRCS Rangeland Management Specialist Emilio Carrillo, was a real eye opener. Participants learned how elevation, precipitation, percent slope, soil type and specific vegetation species for the site all contribute to determining which ecological site is which. On two Limy Slopes sites we learned how some plants, like black grama and soap tree yucca, favor calcic soils. Our Loamy Upland site provided an opportunity to discuss the role of Lehmann lovegrass as soil cover and livestock forage since its introduction and establishment in our area. The Clayloam Upland site provided a visual for how a clay soil surface causes surface cracks due to the shrinking of the soil when it dries.



At all the stops Jim Koweek (Left Picture), of Arizona Revegetation and Monitoring, provided tutorials on plant identification. Due to plentiful fall and winter rain in 2018 there were annual forbs on the landscape that have not been seen in years. He provided handy tips for the identification of some plants based on vegetative characteristics that can be used even when the seedheads are missing.

Arizona Land and Water Trust provided our lunch, for which we are most grateful. The shade in the yard of the Rose Tree Ranch bunkhouse was a welcome place to share lunch for all attendees. Verbal comments overheard during lunch indicated participants gave the workshop very good reviews.

Please plan to attend our future workshops. Our Santa Cruz NRC D Newsletters and website will have details about dates, locations and topics. <https://santacruznrco.org/> Additional pictures below:





## FEEDING AMERICAN FAMILIES SIGN

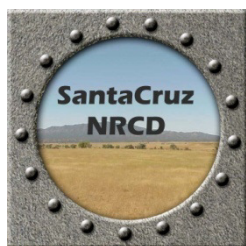
Would you like to proudly display the product of your livestock raising labor to feed American families? The Santa Cruz NRCO is sponsoring the sign you see shown here.

For information about placing an order for signs, custom made for your ranch please contact Stephen Williams at 602-820-0191 or [smw85611@gmail.com](mailto:smw85611@gmail.com)

### Mark Your Calendar

AACD Summer Meeting - July 9 - 11, Little America, Flagstaff, AZ

Society of Range Management Summer Meeting - August 14 - 16, Show Low, AZ



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