

# Ground Truth

A Publication of the Diablo Trust - A Northern Arizona Collaborative Grassroots Land Management Team



The Diablo Trust is a 501(c)(3) land management team created in 1993 to promote the social, biological, and economic sustainability of 426,000 acres of intermingled federal, state, and private lands southeast of Flagstaff, AZ, by engaging in a collaborative stewardship process that is in harmony with the natural environment and the broader community.

The phrase **"Learning from the land and sharing our knowledge, so there will always be a West"** captures our mission.

*Ground Truth* is the publication of the Diablo Trust, mailed free-of-charge to everyone on our mailing list. If you would like to be added to or removed from the mailing list, please contact us at:

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Contributors are solely responsible for the content of their articles, and the opinions expressed in the articles, linked materials, and comments are not necessarily those of the Diablo Trust.

## Drought is Complex

By Andrew Brischke

Ag & Natural Resources Assistant Extension Agent

Rainfall isn't equal. Not in terms of effectiveness, anyway. I think it's safe to say most Arizona residents would agree that precipitation is highly variable. Annually, seasonally, spatially, and in terms of frequency and intensity are all highly variable in Arizona.

From an animal production point of view, we need different types of rain. Our winter/spring rains grow cool-season forage while our summer monsoon rains grow warm-season forage. Hard, intense storms fill tanks; while less intense, higher frequency rains grow forage. But because these factors are so variable, it can be difficult to identify drought in a timely manner, and then interpret drought in terms of agricultural and ecological impacts.

Drought is more complex than simple precipitation deficits. Factors affecting drought include temporal and spatial variability of precipitation events, rainfall intensity, and temperature and cloud cover which influence

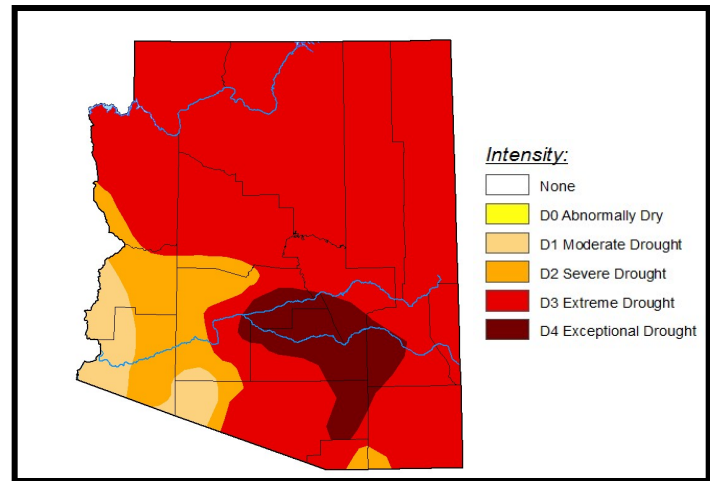


Figure 1: US Drought Monitor severity map of Arizona—October 20, 2020  
Source: US Drought Monitor for Arizona\*

evaporation. Similarly, drought impacts vary among different land uses. One way we describe drought is through timescale and impacts (Table 1). On the US Drought Monitor (USDM) these are defined as “S” for short-term and “L” for long-term (not shown in Figure 1) and correlate to different types of drought: meteorological (precipitation and temperature), agricultural (mainly short-term impacts to soil moisture and the ability to grow crops and forage),

hydrological (long-term impacts to streamflow and reservoir storage), and ecological (long-term impacts to vegetation dieback and increased likelihood of wildfire).

The USDM also describes drought in terms of intensity and relative frequency of each. These categories are described as: Abnormally Dry (D0), Moderate Drought (D1), Severe Drought (D2), Extreme Drought (D3), and Excep-

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# Diablo Trust



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## From the Calendar

### Summer 2020 Events

#### Day on the Land—June 20th

Our Day on the Land featured a tour of the USGS RestoreNet research plots located on Flying M and Bar T Bar ranches. RestoreNet is part of the Restoration Assessment and Monitoring Program for the Southwest (RAMPS). Molly McCormick, RAMPS Coordinator/Ecologist, and Katie Laushman, RAMPS Field Manager, led about 25 folks in two socially distanced tour groups to view the study plots and discuss the first-year results. For more on how the project fared during the rest of this incredibly dry summer, please see page 7 for an update on the RestoreNet project.



USGS-Led Day on the Land Tour.

#### Annual Campout Under the Stars—August 15th–16th

This year's Annual Campout Under the Stars at Ashurst Run on Flying M Ranch was attended by over 50 people. After some check-in and safety measures, folks gathered around – socially distanced – in the shade to hear from our two featured speakers: Chris Parish and Michele Losee. Chris Parish, Director of Global Conservation with The Peregrine Fund, spoke to the group about California condor recovery efforts, lessons learned and the complex issues associated with a successful recovery of this endangered species. "Lead poisoning remains the single greatest threat to recovery and implications for other less studied species is equally important." Following Chris's presentation, Michele Losee spoke to the group about the International Raptor & Falconry Center – a nonprofit organization that is devoted to the conservation and understanding of raptor species worldwide. She shared her passion for falconry and the importance of raptors in the open space landscape. The crowd was then introduced to Finley, an American



Linnaea Bolton, age 9, holding Finley.



Stephen Williams pour from the coffee tipper.

Kestrel, and Quinn, a dark-morph Ferruginous Hawk. Both birds were beautiful and captivating. Finley proved to be the most social and several of the kids in attendance were able to hold Finley.

Following our speakers, we were treated to a delicious tri-tip dinner prepared and served by Cannon Family Chuckwagon Catering out of their unique chuckwagon set up. Due to fire restrictions, there was no campfire but folks gathered in camp chairs around multiple lamp lights. Despite the lack of campfire ambiance, great conversation and laughter was heard all around. Many folks camped out at Ashurst Run that night and were treated to another delicious meal prepared by the Cannon Family – sausage gravy over the-best-biscuits-you've-ever-had, hash browns, fruit and coffee poured from a true coffee tipper.

Thank you to all who joined us for a safe and fun campout and we look forward to seeing you all next year!

## President's Message

By Kit Metzger

I'm happy to say that Diablo Trust has had an active summer/fall in spite of Covid-19 and very little summer rain. Just can't keep a great organization down! Many of our summer's activities are highlighted in this newsletter.



Days on the Land We had two successful outdoor events, Day on the Land at RestoreNet's seeding sites and our Annual Campout at Ashurst Run with guest speakers. See page 2 for more event details and page 7 for a RestoreNet summer update.

New Board Members We have three new Diablo Trust Board Members: Carl Taylor, David Wessel, and Heather Green. Welcome aboard! Get to know a little more about these folks in this newsletter (page 8-9).

Rangeland Technology Partnership Diablo Trust is one of the collaborators in the Rangeland Technology Partnership with Matt Reeves at Rocky Mountain Research Station in Missoula. See his article on how this project is unfolding (page 4).

New Booklet Norm Lowe spearheaded the development of the booklet, "Keeping the Landscapes of Coconino County Working and Wild". This booklet focuses on Diablo Trust's ongoing efforts towards sustainability in our area and Coconino County. Thank you to the Coconino County Board of Supervisors for supporting this effort with a grant. We have a sneak peak at this new booklet on page 11 with more to come in our next newsletter.

Beef Sales As some of you have seen, Diablo Beef from Bar T Bar Ranch is now for sale in our area. See Ellen Parish's article about this local product on page 10 and a yummy recipe using Diablo Beef on page 11.

Just like the rest of the world, Diablo Trust has kept all of these things in the air by conducting our Board/Operational Team meetings via telephone. Thank you Lisa Bolton for keeping all of this organized. This is our final 2020 Newsletter—look for our Annual Giving Letter and our Christmas Party Invitation in your mailbox.

**SPECIAL NOTE** The East Troublesome Fire in Northern Colorado unfortunately affected our former Program Manager Jeremy Kronen. He lost his newly purchased home and all the contents. Fortunately, he and his furry companions are fine, and if we know Jeremy he will take it in stride!! Wishing him the best in rebuilding.

*Kit Metzger*

Kit Metzger, Board President  
Contact: [president@diablotrust.org](mailto:president@diablotrust.org)

## From the Office

By Lisa Bolton

As 2020 slowly rolls to a close, it seems apt to reflect on the challenges this year has presented. Not only are we continuing to adapt to the new normal of combating a global pandemic, many of us have been affected directly or indirectly by catastrophic wildfires, floods, and very close to home—extreme drought. These stresses have been felt near and far.



While Northern Arizona avoided catastrophic wildfires and floods in 2020, we are still in the midst of an increasingly extreme drought. This, of course, only elevates the fire risk. But as temperatures begin to drop, hopefully so will the fire risk. As we continue to adapt to these ongoing challenges, it helps to look to different tools to make that an easier process. Two of our contributors in this issue shed some light on tools producers and land managers are using to better inform their decisions. Andrew Brischke (cover article) gets down in the weeds with the relationship between drought and rainfall variability. Dr. Matt Reeves (page 4) discusses a new partnership to co-develop tools and techniques that utilize big data—radar imagery, remote sensing and spatial modeling to help with management of land, water, wildlife and livestock. Diablo Trust will have more news about this partnership on our website and in subsequent newsletters as it progresses.

Many of us have spent more time outdoors during this pandemic and Northern Arizona has seen a sharp increase in recreation traffic, especially off-highway vehicle recreation. Enjoying the outdoors and our open lands is one of the great gifts we have in this part of the country. However, the impacts of this year's surge in activity has led to habitat degradation, road damage and safety concerns. Diablo Trust's Annual Meeting will focus on finding collaborative solutions for these increasing impacts with any and all interested stakeholders. So mark your calendars for February 26, 2021 and check our website for updated event details: [www.diablotrust.org](http://www.diablotrust.org).

Until then, have a safe winter and happy holidays!

*Lisa Bolton*

Lisa Bolton, Program Manager  
Contact: [info@diablotrust.org](mailto:info@diablotrust.org)



## New Resources for Managers and Producers

*By Dr. Matt Reeves, USFS Rocky Mountain Research Station Human Dimension Program*

The Rangeland Technology Partnership (RTP) was created earlier this year in response to a recognized need to improve the availability and usefulness of tools and technologies aimed at rangeland managers and livestock producers. The concept behind the RTP is to foster co-development of tools and techniques by direct feedback from managers and producers along with agency representatives. The members of this exciting partnership include the Diablo Trust, USFS (primarily Kaibab and Coconino National Forest but others exist within New Mexico and Arizona), Farm Services Agency, Arizona Game and Fish Department, Babbitt Ranches, and the Natural Resources Conservation Service. As a USFS Researcher, I leverage remote sensing and spatial modeling to improve predictability of rangeland performance in the fields of annual production of forage and rangeland fuels. In February this year, I visited with the RTP partners during the Diablo Trust Annual Meeting in Flagstaff. During that time, I provided an overview of eight new technologies that could benefit the group and are feasible to accomplish. Among the top three chosen by the RTP to pursue further include the Rangeland Production Monitoring Service (RPMS), Ecological Tipping Points, and monitoring stock pond levels remotely using radar imagery provided by NASA.

The RPMS is comprised of two products including annual maps from 1984 to present (2020 results are available now) and a forward-looking prediction system on the Fuelcast.net platform (<https://www.fuelcast.net/>). We use the RPMS to evaluate production trends that have occurred through history and the maps cover all rangelands in the coterminous US. We use the Fuelcast.net system to predict fuel and forage yield during each growing season. The forecasts start four months ahead of the peak of green in every area. So, for example, the predictions for most of the lower elevations in south and central Arizona will start in January. This unprecedented system gives producers and managers the upper hand offering a unique assortment of products to help folks understand what will likely happen in their neck of the woods. We offer a monthly webcast called “Reading the Tea Leaves” where we give an overview of forage and fuel conditions across US rangelands in 7 minutes or less. These archived webcasts can be viewed at: <https://www.fs.usda.gov/rmrs/events/tealeaves>. New episodes of Reading the Tea Leaves will start this January and document changes in forage and fuel yield expectations.

The Ecological Tipping Points is a project aimed at quantifying the main drivers of rangeland production. So many of us have preconceived notions about critical periods during the growing season that determine the amount

of forage in a given site. For example, we might think that at least one inch of rain in the first week of April is needed or forage yield will be considerably lower than normal. Using this new project, we will examine the relationships between monthly rainfall and temperature (especially thermal time) and annual forage yield. This is important because the relationships between rainfall and yield (from 1950 to 2020) have changed in many places and old assumptions may no longer be valid or may be less useful. Therefore, we aim to reorient the producer community to what the important tipping points are currently.

Monitoring stock ponds is relatively straight forward. We aim to use radar imagery from NASA to map all the relatively larger stock ponds and other catchments. The idea is to provide weekly updates regarding level of water in each tank with a hotspot analysis depicting where relatively large depletions may be occurring.

You might be wondering how any of this work may affect you or your operation. There are several ways in which I believe these tools and information will be helpful. First, the forage projections could be helpful when considering wildlife forage. For example, if all indicators suggest poor forage conditions, perhaps elk calf recruitment and survival may be in jeopardy and this could be communicated to stakeholders earlier in the year than previously possible. Second, producers may want early indication of when to sell livestock ahead of anticipated widespread forage shortages. Likewise, using the national coverage available from Fuelcast.net it may be useful to understand where hay supplies may be more abundant. Moreover, these forecasts of forage and fuel can provide timely information about expected fire behavior in advance of peak fire season. In addition, managers and producers alike are often interested in understanding how their management strategies are affecting forage trends across pastures and sites. The RPMS is particularly well suited for this type of inquiry. Third, range managers can use this information to communicate expectations with stakeholders, especially permittees. Also, the information and tools being developed by the RTP can aid managers who are rewriting allotment management plans.

The bottom line is that the tools, information, and forecasts cannot help you if you don't get engaged. To learn more about this, contact Dr. Reeves directly at [matt.c.reeves@usda.gov](mailto:matt.c.reeves@usda.gov).

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## Message from the

By Diana Kessler



This year is still creating new challenges amidst the regular rhythm of ranch life and works. The degree of dryness over the past several years came to a head in 2020. Most gauges received zero rain over the summer. However, our mom's favorite tank filled with the one storm of three-quarter inch of rain that fell on its little watershed; and it hasn't had water in it for 7-8 years, mysterious ways for sure. The grass die-off in the winter country did not begin its return to health and the stockponds in the summer country dried up by early September in spite of having good quantities in May. We hauled water on the only roads we could put trucks over and moved the cow herd off summer country two to three weeks early. Many of the cows took a look at the conditions they moved to and turned around and walked back up to Anderson Mesa!!

All the calves were weaned in early October during the windy period with dust obscuring the other end of the corrals. I cannot see the corrals for the dust right now and the water truck just rumbled by hauling another load to the bull pasture and the elk herd out there. The calves have received their preconditioning vaccinations and are grazing on pastures east of the headquarters. True to 2020 required adjustments, they get a feeding of hay every other



*Cattle walking on dry, dusty land. Credit: Kit Metzger*

day so they don't lose weight prior to sale day in early December. We still have to sort through the cows to decide which to keep here until next spring which assumes winter brings good snows for feed and water next spring.

We strive to achieve 'sustainability' financially, ecologically, practically, socially, inclusively, happily, gratefully and daily. Financial and ecological sustainability are direct and measurable for the most part. They have their roadblocks and disappointments and we have no choice but to address them. Social sustainability is greatly enhanced by the presence and work of Diablo Trust and we are grateful for it. This year has been vexing in the realms of inclusively, happily, gratefully and daily because of human nature or

that of multiple humans (employees). Ranch work and living have different challenges than a regular 9 to 5 job because the employees 'live' with each other, are quite distanced from the entertainment and socializing now common; and the phone and internet are not fast enough!! Soon, 2020 will thankfully be in the record books. We look forward to 2021. Ranchers must be eternally optimistic and incredibly strategic; a big job for sure but we are up for it.

### ***PARCHED: The Art of Water in the Southwest at the Coconino Center for the Arts***

From prolonged drought to flash floods, what are the particularities and paradoxes surrounding water in the American Southwest? Who has rights to water? How is water shared among people, plants and other animals? How do we reconcile diverse cultural and spiritual views of water? *PARCHED: The Art of Water in the Southwest* explores the complexity of water in the face of climate change and increasing populations. Curated by Julie Connick, the exhibition features nine Arizona-based artists created works, informed by sci-



entific and cultural inquiry, that reflect diverse perspectives and provocative insight into our intricate relationship with water in our natural, cultural, and political landscapes.

*PARCHED* is currently open at the Coconino Center for the Arts with limited in-person viewing. The exhibition will be on view through January 9, 2020, admission is free, registration is required.

To find out more about scheduling a visit, go to [ccaflagstaff.org/upcoming-exhibitions/parched](http://ccaflagstaff.org/upcoming-exhibitions/parched) or email Sarah Smallwood at [ssmallwood@flagartscouncil.org](mailto:ssmallwood@flagartscouncil.org)

## Drought is Complex

(Continued from page 1)

tional Drought (D4) (Table 1).

Drought conditions throughout much of Arizona are currently in Severe Drought (D2) or Extreme Drought (D3) with some areas entering Exceptional Drought (D4) (Figure 1). According to Table 1 this level of drought corresponds to ‘major to widespread pasture losses’ and ‘widespread water shortages’. These are very rare conditions to be expected to occur roughly once every twenty years.

But to tell a more complete story about agricultural and ecological impacts due to drought on the Diablo Trust ranches, we have to go further back in time. Drought is cumulative. To get a clearer picture of drought impacts, we need to look at accumulation over multiple time scales and intensity. One of my favorite tools to visualize drought ac-

cumulation is a Multi-Scale Standardized Precipitation Index (SPI) Plot (aka “barf-chart”). SPI uses precipitation data to estimate drought. The standardized index typically ranges from -3 (dry) to 3 (wet) and is based on departure from the long-term average in standard deviations. SPI can be created for differing timescale windows ranging from 1 - 60 months (Figure 2).

The multi-scaler plot illustrates how the devastating drought from 2017/2018 can impact agricultural and ecological resources for multiple years. Though there may have been slight intermittent relief between major drought events, impacts are still prevalent years after. Unfortunately, our current climate patterns of lower than average monsoon precipitation is compounding the problem. Seasonal timing of precipitation is significant in this case. The intermittent relief periods shown in the plot were better than

(Continued on page 7)

Table 1. U.S. Drought Monitor severity categories and commonly associated impacts.

Category	Description	Possible Impacts
None	None	None
D0	Abnormally Dry	Going into drought: <ul style="list-style-type: none"> <li>• Short-term dryness slowing planting, growth of crops or pastures</li> </ul> Coming out of drought: <ul style="list-style-type: none"> <li>• Some lingering water deficits</li> <li>• Pastures or crops not fully recovered</li> </ul>
D1	Moderate Drought	<ul style="list-style-type: none"> <li>• Some damage to crops, pastures</li> <li>• Streams, reservoirs, or wells low, some water shortages developing or imminent</li> <li>• Voluntary water-use restrictions requested</li> </ul>
D2	Severe Drought	<ul style="list-style-type: none"> <li>• Crop or pasture loss likely</li> <li>• Water shortages common</li> <li>• Water restrictions imposed</li> </ul>
D3	Extreme Drought	<ul style="list-style-type: none"> <li>• Major crop/pasture losses</li> <li>• Widespread water shortages or restrictions</li> </ul>
D4	Exceptional Drought	<ul style="list-style-type: none"> <li>• Exceptional and widespread crop/pasture losses</li> <li>• Shortages of water in reservoirs, streams, and wells creating water emergencies</li> </ul>

Adapted from: <http://droughtmonitor.unl.edu/AboutUSDM/DroughtClassification.aspx>

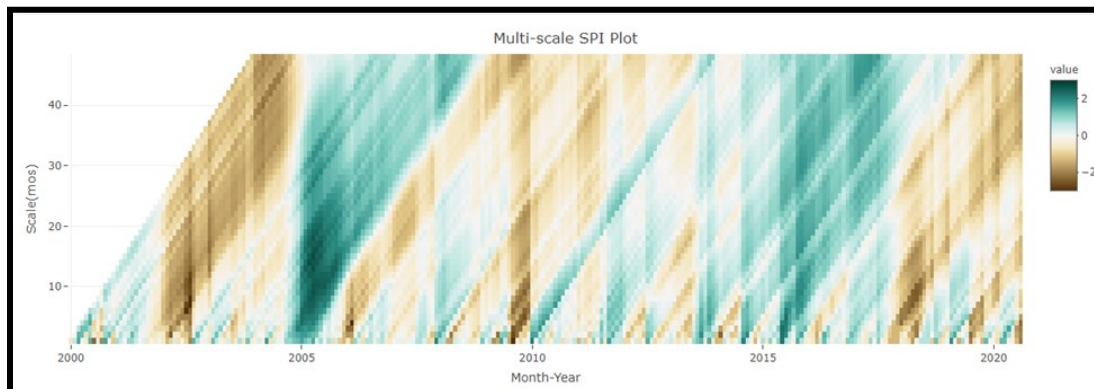


Figure 2. Multi-scale SPI Plot near Chavez Pass from Jan. 2000 – Aug. 2020. Each pixel represents SPI value for the month of year (x-axis) and accumulation in months (y-axis). SPI values are based on standard deviations from the mean (Lat: 34.95067; Long: 111.09443). <https://uaclimateextension.shinyapps.io/SPItool/>



## USGS Continues Work at Diablo Trust's RestoreNet Sites

By Katie Laushman, USGS RestoreNet Field Manager

The USGS Restoration and Monitoring Program for the Southwest, of the Southwest Biological Science Center, has completed a third summer of testing experimental restoration techniques on Bar T Bar and Flying M Ranches. The networked experiment, RestoreNet, spans multiple ecosystems of the Southwest and tests different seed mixes and methods to increase soil moisture to determine the most effective restoration techniques. After the initial seeding in 2018, our findings showed that digging small pits (16 inches wide, 4 inches deep) had the most successful germination of native seeded species while limiting non-native invasive species. After receiving helpful feedback during our February 2020 RestoreNet partner meeting, we decided to assess how restoration results differ between years with different climatic patterns (i.e. weak vs. strong monsoon). In summer 2020, we cleared the experimental plots of existing vegetation and implemented the experiment a

second time with the same seed mixes and treatments. Sites will be monitored quarterly for germination and survival of seeded plants. This information will help improve recommendations for range improvements by adding year to year variation in plant germination and establishment.

In addition to the RestoreNet re-seeding, we added a small trial of forage kochia (*Kochia prostrata*) at Bar T Bar ranch. Forage kochia has been shown to outcompete annual weeds in rangelands while also providing forage for livestock and wildlife. This trial is evaluating two varieties (Red Stem and Snow Storm), and two seeding rates, 3 lbs/acre and 1 lb/acre. The kochia trials will be assessed over the next year and can inform future range seedings.

You can read more about how RestoreNet is helping ranchers and land managers deal with the impacts of drought at [www.usgs.gov/sbsc/ramps](http://www.usgs.gov/sbsc/ramps).



RestoreNet site in July 2020, prior to reseeded.  
Credit: USGS



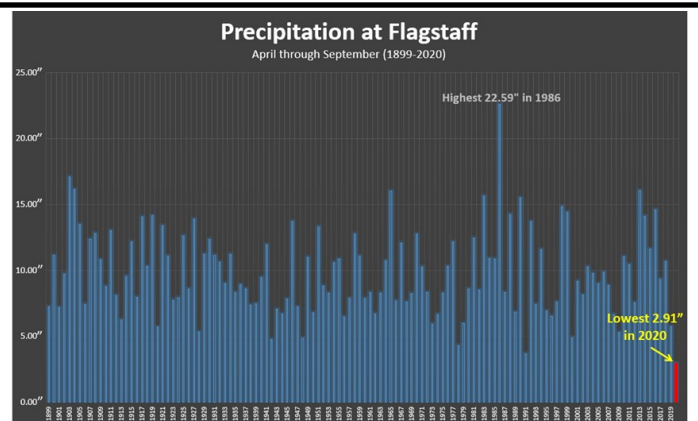
RestoreNet site in July 2020, after reseeded.  
Credit: USGS

## Drought is Complex

(Continued from page 6)

average winter/spring moisture. So while the cool-season forage may be taking advantage of their growing season, the warm-season forage resources have quite literally, been left out to dry.

*\*The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC.*



Flagstaff precipitation totals April through September [1899-2020]. This year has been the driest on record at only 2.91 inches of rainfall.

Credit: US National Weather Service Flagstaff Arizona



## Meet the New Diablo Trust Board Members!

### Heather Green



Heather moved to Flagstaff from Cholula, Mexico in 1971. Prior to Cholula, she lived in rural Pennsylvania outside of Erie. She graduated from Northern Arizona University in Flagstaff with a major in biology and a minor in anthropology, later studying wild turkeys in the White Mountains, while getting her master's degree

in biology.

Between degrees, Heather worked as a guide for an outdoor adventure program, field tech for Museum of Northern Arizona and Northern Arizona University, wilderness ranger, and seasonal employee with the Forest Service in AZ and WY (building fence, marking timber, range and wildlife surveys, fighting fires). Later she worked as a district biologist on the Coconino National Forest where she had the pleasure of meeting folks from Diablo Trust and working with various wildlife groups, research personnel, and agencies on projects and agreements. After this she became the forest liaison with the Greater Flagstaff Forest Partner-

ship, a collaborative group focused on forest health and fuels reduction around Flagstaff. She then finished her time with the Forest Service as the ecological lead for forest plan revision, a large multiyear planning effort. In addition to volunteering and working on various projects in recent years, she has also worked in the Museum of Northern Arizona's Ventures Program, a program that emphasizes field interpretation of archaeological and natural history resources in remote areas.

She has two children. Her oldest son runs his own engineering company out of Phoenix where he lives with his wife and two children. Her tallest son is a first officer with SkyWest Airlines and lives in Redwood City, California with his girlfriend who is nearly as tall as he is.

Born In: Buffalo, New York

Childhood Hero: My grandfather

Book Recently Enjoyed: Miracle Country by Kendra Atleework

Favorite Things To Do: Hiking, gardening, birding, writing, photography, working with textiles

Favorite Western Wear Item: Western shirts

Fondest Outdoor Memories: Hiking anywhere...

### Carlos "Carl" Taylor

Carl was born in Bisbee, AZ and grew up in northern Mexico, southern Utah and Brazil. He graduated from the Escola Americana do Rio de Janeiro, Brazil and from Carnegie Mellon University in Pittsburgh with a five-year bachelor's degree in architecture.



Carl practiced architecture in Atlanta, GA for 32 years with Taylor Anderson Architects specializing in high technology building types (research, labs, medical, etc.) and sustainable design. After selling his interest in the company in 1997, he and his wife, Holly, moved to Flagstaff.

For several years, Carl and Holly provided pro bono consulting to nonprofit organizations needing strategic planning for facilities, including advising and assisting on program analysis, budgets, strategic planning and facilitation.

Carl has a long history of public service in Northern Arizona. He served on the Flagstaff Area Regional Planning Team, was appointed County Hearing Officer for Environmental Issues, Chaired the Coconino County Planning and Zoning Commission and went on to serve eight years as

County Supervisor for District One (Flagstaff to the Utah border). He was appointed to the Arizona Criminal Justice Commission (by the Governor of Arizona) and the Resource Advisory Council of the Bureau of Land Management (by the U.S. Secretary of the Interior).

In his continued service to the community, Carl has volunteered with many organizations in both Flagstaff and Atlanta and has been the recipient of a number of awards for community and professional service.

In his spare time, Carl enjoys avocational archaeology, photography, travel and camping, and most of all spending time with my wife Holly.

Born In: Bisbee, AZ

Childhood Hero: Abraham Lincoln

Current Hero(es): Nathanael Green

Book Recently Enjoyed: The Hard Road West by Keith Heyer Meldahl

Favorite Western: Garden of Evil

Favorite Western Wear: Bola tie

Fondest Outdoor Memory: Discovering ancient sites

Favorite College Class: History of Western Civilization

(Continued on page 9)

## New Board Members...

(Continued from page 8)

### Dave Wessel

Dave has called Flagstaff home for the past 23 years. He and his wife, Tempy, have three adult children. Dave enjoys hiking, fishing, gardening and landscaping. His lifelong interest in the environment was inspired by stunning western landscapes seen from the back of the station wagon on those iconic family vacations. Summers on his grandparent's farm in Southeast Missouri and in-laws that ranched in Navajo County are the roots of his healthy interest in agriculture. In fact, Dave and his wife, Tempy, were pleasantly surprised to hear that Bart-Bar Ranch owned the Black Rock Ranch north of Joseph City once owned by Tempy's great grandparents! Dave is excited to bring these interests and his professional experience to service on the Diablo Trust Board.



Dave works for a regional transportation planning agency, MetroPlan, where he coordinates efforts between the City of Flagstaff, Coconino County, Arizona Department of Transportation, Mountain Line Transit and NAU. He had the good fortune to play a central role in the plans behind the last two transportation tax votes and influenced many local projects including the Fourth Street overpass, East Flagstaff traffic interchange, Lake Mary Road widening

and the regional trails and transit systems. He has over thirty years experience in land use and transportation planning including in Navajo County, Arizona and Pocatello, Idaho. He started his professional career with the Navajo County Parks and Recreation Department as the park planner later transitioning into the county planner position. His degree is in parks and recreation management from Colorado State University with a master's in community planning from the University of Maryland.

Born: Silver Spring, Maryland

Occupation: Transportation Planning Manager

Documentary Recently Enjoyed: Kiss the Ground (Netflix - regenerative agriculture, watch it!)

Favorite Western: Jeremiah Johnson (I have the soundtrack)

Favorite College Class: Forestry Camp

Favorite Quote: "Planning is the fulcrum between planning and democracy" (still trying to figure out who said this)

Why I Participate with Diablo Trust: I love the outdoors, the west and the land. I'm excited about big ideas like stitching together fractured ecosystems; and when I saw this group working collaboratively toward making these ideas a reality I had to see it for myself. And I love Dutch oven biscuits and gravy.

# #GIVING TUESDAY

GivingTuesday is a global day of generosity that will take place on **December 1, 2020** and Diablo Trust will be participating. Not only do we need your support, we need your help to spread the word. Please tell your friends and family why you believe in our work and encourage them to support us too!

Save the Date: Annual Christmas Party  
Friday, December 11th

*Due to COVID, details are subject to change.*

*Stay Informed: [www.diablotrust.org/calendar](http://www.diablotrust.org/calendar)*

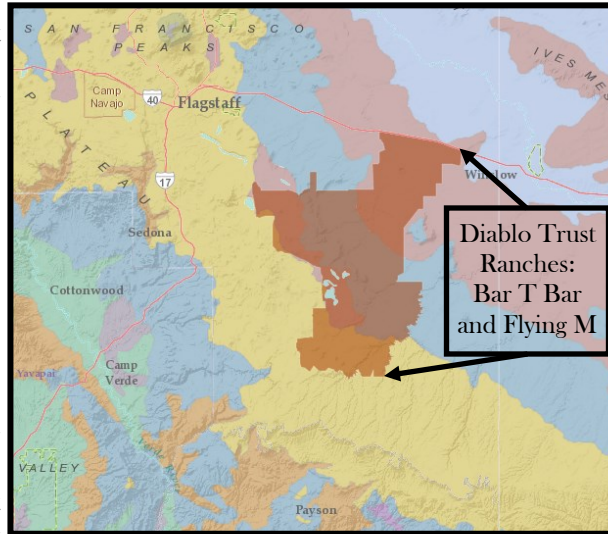
# Silver Lining

By Ellen Parish

As the shock waves of our region's reactions to COVID jolt every sector of our community, our community grows stronger by turning to each other. In this case, residents of Northern Arizona are turning to local producers to help supply the fresh, healthy food they desire.

Shortly after the closures and lockdowns began, my phone started to ring ... and ring and ring and ring. Friends, past customers, and folks I have never met, all calling to find out how they could purchase local beef. They wanted it now and they wanted everything from individual packages to large quantities, "How much for half a cow?" they would ask. "Can we buy in bulk?" some said. Unfortunately, food production is not instantaneous. Whether it's veggies, fruit, or meat, it takes lots of hard work and time to grow our food. In the case of local beef, we can be grateful that Bar T Bar Ranch is already supplying local restaurants like Diablo Burger with high quality, locally raised, range fed, ground beef.

Beginning in July Bar T Bar was ready to begin offering this ground beef to the Flagstaff community under the name Diablo Beef. As the word got out the orders began to pour in and customers were happy to purchase a case of ground beef from a trusted local source. Many families are working from home and unable to go out to eat, some are turning to ready-made meals offered by Laura Chamberlin. Laura is a local chef with years of experience and regularly partners with local growers to supply her customers with the best in healthy foods. She is now offering ready-made



meals on a larger scale and frequently uses Diablo Beef in her menu options as well as catering events. We hope to expand even further to offer Diablo Beef in more restaurants.

Diablo Beef has been well received and customers from Blue Ridge to Williams and Flagstaff to Phoenix are all eager to have this ground beef in their freezer and on their tables. Many families are sharing a box with friends and neighbors while others choose to stock up. Either way our community benefits from this healthy local beef.

When we support the local ranches who maintain open space, provide water for wildlife, reduce fire risk by grazing, protect our watershed, hire local workers and shop at local businesses the benefits go far beyond a healthy meal. By purchasing local beef people not only know exactly where their meat came from but the benefits spread to our economy, ecosystems, wildlife and families.

I'm a firm believer in the idea that there is a silver lining in every difficult situation. As we navigate these latest challenges, take time to see the positive growth happening all around us as we find local solutions, form meaningful partnerships and plan for our future.

A Family Grill Pack from Diablo Beef is a 42-pound box ground beef. It consists of 14 3-pound packages, vacuum sealed in flat rectangles for easy storage. The ground beef is 85-90% lean. The case sells for \$252.00.

For more information or to place an order please contact Ellen Parish at [ellenparish@gmail.com](mailto:ellenparish@gmail.com)

## Order Local Beef—Diablo Beef

*Range raised and fed on native, wild vegetation on a family ranch in N. Arizona*

### Family Grill Pack Details:

- 42 pounds of 85-90% lean ground beef
- Packaged as 14 3-pound packages vacuum sealed in flat rectangles for easy storage
- \$252 per Family Grill Pack (\$6 per pound)

### Upcoming Order Schedule:

- Order by November 16th for November 21st delivery
- Order by December 14th for December 19th delivery
- Order some for your holiday meals ... makes a great gift, too!

To order, email Ellen Parish at [ellenparish@gmail.com](mailto:ellenparish@gmail.com)





## Recipe Corner

### *Beef Stuffed Poblano Enchiladas*

- 4 large fresh poblano peppers
  - 1 15-oz can red enchilada sauce (or homemade)
  - 1/2 to 1 cup shredded cheese (Colby, cheddar or jack)
  - 1 lb Diablo Beef ground beef
  - 1 packet taco seasoning (or 2 T homemade)
  - 1/4 cup finely chopped onion
  - 2 cloves garlic, minced
  - 1/2 medium tomato, chopped
  - 1/4 cup finely chopped bell pepper
  - 2 T cilantro
  - 4 T canned tomato sauce
  - 1/4 cup water
  - Salt and pepper to taste
  - Cilantro, green onions and/or sour cream for garnish
1. Carefully cut a lengthwise slit along one side of each poblano pepper, then a small crosswise slit along top (so it is t-shaped). Careful not to cut the stem off, carefully cut out and remove the core and seeds.
  2. Roast the poblano peppers (grill or broiler) turning often until skin is completely blistered.
  3. Transfer poblano peppers to a covered bowl or sealed plastic bag and let steam for 10 to 15 minutes. Once cool enough to handle, use a butter knife to scrape away the charred skins and discard, careful not to tear the peppers. Set poblanos aside.
  4. Preheat oven to 350° F.
  5. Pour enchilada sauce into the bottom of a 9 x 12-inch casserole dish.
  6. Brown ground beef on medium heat in a large skillet.
  7. Add chopped onion, garlic, bell pepper, tomato and 2 oz. cilantro and continue cooking on low heat.
  8. Add taco seasoning, tomato sauce and 1/4 cup of water and mix well. Add salt and pepper to taste.
  9. Reduce heat to low and simmer while covered for about 15 minutes.
  10. Carefully stuff each poblano with about 1/2 cup of the beef mixture .
  11. Place peppers seam side up over the sauce in the casserole dish and top each pepper with shredded cheese.
  12. Cover the dish with foil and bake in the oven until hot and bubbly, about 30 minutes.
  13. Serve hot and topped with cilantro and/or scallions on top with a dollop of sour cream (optional).

*Yield: 4 servings; Serving Size: one stuffed poblano pepper*

*Recipe adapted from SkinnyTaste: [www.skinnytaste.com/turkey-enchilada-stuffed-poblanos-rellenos/](http://www.skinnytaste.com/turkey-enchilada-stuffed-poblanos-rellenos/)*

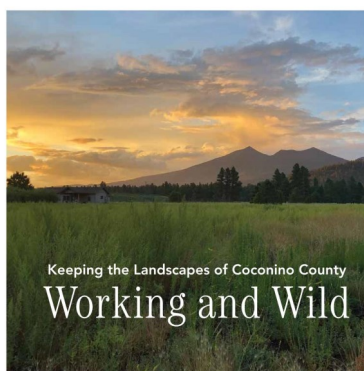
## Stay Tuned...

### Working and Wild Lands

With a generous grant from the Coconino County Board of Supervisors Diablo Trust, along with Shine Creative Industries and Rose Houk, produced a new informational booklet highlighting five components of what keep our landscapes of Coconino County wild and working. The booklet features:

- Restoring Healthy Forests
- Recreating for Land Health
- Seeking Land-Based Knowledge
- Building Water and Climate Resilience
- Making Room for Wildlife on Grasslands

Over the next several issues of Ground Truth, Diablo Trust will spotlight each of these five booklet topics along with content from partners and specialists. For a sneak peak at the booklet, please visit our website: [www.diablotrust.org](http://www.diablotrust.org).



### Save the Date for our Annual Meeting February 26, 2021

The Diablo Trust Annual Meeting is planned for Friday, February 26, 2021 and will focus on off-highway vehicle (OHV) recreation on our open lands. Northern Arizona has seen a sharp increase in this form of recreation and it is not without its consequences—wildlife habitat degradation, road damage, waste accumulation, speeding and safety issues.

Diablo Trust hopes to gather with OHV stakeholder groups to discuss solutions to these increasing problems and find a path forward for safe and responsible recreation on our open lands. Please check our website calendar for details and updates on this event:

[www.diablotrust.org/calendar](http://www.diablotrust.org/calendar).



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***"Learning from the land and sharing our knowledge . . .  
So there will always be a West"***

## Upcoming Events\*

\*Due to COVID-19, all event details are subject to change. In-person events will require safety measures. Please see our website calendar for details and updates or email [info@diablotrust.org](mailto:info@diablotrust.org).

Tue, Dec 01: **Giving Tuesday** • All Day

*A day to celebrate community through giving, collaboration, and acts of kindness. Please consider supporting Diablo Trust on Giving Tuesday.*

Fri, Dec 11: **Christmas Party** • 6:00PM—'til the cows come home! • Location TBD

*Details TBD, check our website for updates*

Ends Jan 9: **Parched: the Art of Water in the Southwest** • Coconino Center for the Arts

*Eight Arizona-based artists created works, informed by scientific and cultural inquiry, that reflect diverse perspectives and provocative insight into our intricate relationship with water in our natural, cultural, and political landscapes. Exhibit open now through January 9, 2021. Registration required.*

Fri, Feb 26: **Annual Meeting** • Location TBD

*Impacts of OHV Recreation on Our Open Spaces—Finding Collaborative Solutions*

Please visit our website [www.diablotrust.org/calendar](http://www.diablotrust.org/calendar) for more details, updates, and safety measures for these and future events. If you have suggestions for events, books, films, presentations, or field trips, please do not hesitate to contact us at [info@diablotrust.org](mailto:info@diablotrust.org)