Despite temperatures topping 100 degrees, over 60 ranchers and rancher-supporting organizations, including Powder River, spent most of Aug. 10, walking through fields of diverse cover crops at Little Horn Ranch/Twin Creek, Koltiska Cattle & Hay Ranch, and the Wyarno University of Wyoming Research Station during the Working Lands Field Day.

Planting cover crops is increasingly used to help regenerate soils, often depleted from years of traditional practices such as tilling, excessive use of ag chemicals (inputs becoming prohibitively expensive), overgrazing, and monocultures. The result is tightly compacted soil nearly devoid of the organic mass needed to supply nutrients to the plants and unable to absorb water for plant usage and storage.

The field day began early with coffee, donuts, and an introduction to soil health by UW Extension soil health expert Caitlin Youngquist. Youngquist said that modern-day ranchers and farmers have traditionally employed an operational triad of chemicals, machines and biology, and that although they have a good handle on chemicals and machines, there’s been a lack of exposure to biology depriving producers of the

Working Lands Field Day Showcases Soil Health Practices

My first experience working for Powder River was in May 2017 when I was hired on contract do some communications work. I attended the contested case hearing before the Wyoming Environmental Quality Council regarding Ramaco’s Brook Coal Mine and thought, “What have I gotten myself into?” I knew very little about coal mining at that point, and now I know just a little bit more, but I was so impressed by our members who withstood badgering from the opposition’s battery of attorneys with grace and grit. So I stuck it out, asked a million questions, then eventually joined the staff full-time as the communications and development director in January 2018. In the ensuing years, I have learned much from our members and the other staff, and for that I am very grateful.

I have stepped into the role as Powder River’s Executive Director and hope that everyone here will help me continue learning. Thankfully we have smart and dedicated members and staff that I can count on to answer my questions and help make Powder River the best, scrappiest organization we can be. There are many issues on our plate right now, but at the core are our members who make our work possible.

I’m in the midst of settling back into the Sheridan office, so don’t be a stranger. Also, mark your calendars for our 50th Annual Meeting on Nov. 5 – let’s celebrate a half century of protecting our natural resources, landscapes, and communities. We have a busy fall ahead of us, and I know that you all are right here, ready to raise your voices for Wyoming.

Robin EH. Bagley
Powder River Staff
Message from the Chair

Dear Members,

When preparing to write these messages, I am willing to look anywhere and steal any ideas that appear ripe, so I diligently read the messages from leaders of other groups to which I belong. This month a likely victim appeared in the BROADSIDE from Great Old Broads for Wilderness (which I joined as much for the name as for the cause), where Shelley Silbert, the former Executive Director, focused her piece on “Transition and Change.” Oh yeah – that applies to us right now! So I began to rob her blind. But then I asked myself, what do those terms really mean? And, being me, I wandered right off script.

“Change” is what the seasons do, what the weather does and what we do to soiled diapers. Sometimes it is better; sometimes it isn’t. It is just different. Most of us want it but don’t really like it. It is not very controllable or predictable; it can make us very uncomfortable. It can be sudden or gradual. It is also inevitable. But what about “transition?” Humans transition from childhood to adult status, my weight transitions from awful to slightly more acceptable, a compost pile transitions from kitchen waste to lovely soil. Transitions seem to take more time, to have more intermediate stages and often end up with more positive results.

Powder River is experiencing new things. We have functioned without an Executive Director for months while the staff and Board worked very hard to pick up the threads that were not being woven. That was change, but it was also transition. Even though it took time and we tried several different iterations of leadership, we just came through the process with a new Executive Director! We are so fortunate that our Communications & Development Director, Robin EH. Bagley, offered to transition into the Executive Director position. Together, Board and staff agreed that Robin will make an excellent leader for our group, and she has assumed the duties, if not the full benefits, of the job. Because Robin has been a long-time employee of Powder River, she is able to move into her new role quite seamlessly. She already understands who we are and why we are. She knows our strengths and she knows where we need to grow. Robin is emblematic of the positive new place to which we have transitioned.

Remembering that change is inevitable, we recognize that moving one piece in a puzzle causes many internal shifts and that certainly feels like change. New positions will be created, and old ones will look different. There will be new faces in new positions and familiar faces in different ones. Some very valued employees will no longer be with us. We have some exciting new employees. Having just experienced the turmoil of change, it is time to reach out to our members and ask you to help staff and Board find our equilibrium by responding to alerts, by contributing ideas and thoughts, by attending our Annual Meeting in November, and by joining with your like-minded neighbors to make a power surge flow through those grassroots that keep us strong.

The job of transitioning to the best organization we can be is slow, difficult and underway. We are quite sure that there will be bumps in the road, and we will have to navigate some unfamiliar territory, but we are equally confident that we will transform into a more powerful force for the things our members care about. And that, my friends, is what PRBRC values the most.

Joyce C. Evans

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Powder River Solar Energy Production

Energy Produced: 4524.9 kWh
Carbon Offset: 800 lbs
We have offset the equivalent of 8 trees in June & July 2022. With a total equivalent of 27 trees in 2022!

Did you know that Powder River has a YouTube Channel?

You can find us by going to YouTube.com and searching PowderRiverBasinRC. All of our solar stories and our oil & gas impact videos are available to watch.
Earlier this month, a federal judge struck down the Bureau of Land Management’s (BLM) Resource Management Plan (RMP) for the Buffalo Field Office. Deciding in favor of Powder River and other conservation groups, the judge ruled that BLM failed to address the public health consequences of allowing massive amounts of coal, oil, and gas production from public lands and minerals in the Powder River Basin, including approximately six billion tons of federal coal over the next 20 years.

If you are having a sense of déjà vu, you’re not alone. This is the second time the judge has ruled against BLM, holding that the agency failed to comply with a previous court order directing the agency to account for the environmental and human health impacts of burning publicly owned coal. The judge also held that BLM failed to consider alternatives that would limit or end new coal leasing in the Powder River Basin—the largest coal-producing region in the U.S.—in violation of the National Environmental Policy Act (NEPA).

The Buffalo RMP designates how much federal coal can be mined and burned within the planning area of Campbell, Johnson, and Sheridan Counties in Wyoming. Almost all coal mined in the region is used for electricity production, making the region the largest single-source of carbon dioxide pollution in the nation. More than 43% of all coal produced in the U.S., and more than 85% of all federal coal produced in the U.S., comes from the Powder River Basin, which stretches more than 13 million acres across Wyoming and Montana.

“Put simply, [the National Environmental Policy Act] requires BLM to bookend its analysis by considering a no-future-leasing mining, failed to disclose potential harm from fossil fuel combustion and failed to disclose the short-term climate harm of methane emissions.

In 2018, the judge ordered BLM to revise its land management plans for the Buffalo Field Office. The judge ruled that the agency failed to consider an alternative that reduced the amount of coal available for strip-mining, failed to disclose potential harm from fossil fuel combustion and failed to disclose the short-term climate harm of methane emissions.

In 2020, BLM responded to the court’s order by revising its analysis but again failed to consider alternatives that would reduce or eliminate additional coal leasing, to account for climate change and to disclose or analyze the human health impacts of the harmful and toxic non-greenhouse gas pollutants that would result from burning more coal, oil, and gas.

“The tragedy is that this litigation didn’t need to happen. Seven years ago BLM promised the American people an ‘open and honest conversation’ about the federal coal program,” said Lynne Huskinson, retired coal miner and Powder River Board member from Gillette. “But we’re still waiting for them to do an honest analysis of the climate and public health consequences of their choices. Maybe now BLM will finally wake up.”

Powder River and other groups were represented in the litigation by Western Environmental Law Center and Earthjustice.

Shannon Anderson
Powder River Staff

Powder River Helps Organize the Wyoming Coalition for Healthy Soil

Powder River, along with other ranch and farm support organizations, producers, and state agencies have formed a collaborative called the Wyoming Coalition for Healthy Soil (WCHS) whose purpose is to help Wyoming ranchers and farmers who are interested in improving the soil health on their operations. The producer-centered effort is dedicated to providing ranchers and farmers with the science-based, location-specific resources they need to stop soil degradation and improve soil health in order to make their operations more viable. A survey will soon be sent to ranchers and farmers to help identify what they feel is most important in soil restoration. This will be followed up by listening sessions throughout the state. Powder River will be sending the survey to all members who we have identified as members of the ranching and farming community. If you would like to be involved in this important project, please email a request to Pennie Vance at penniev@powderriverbasin.org or call 307-672-5809.

Pennie Vance
Powder River Staff
Powder River “At The Table” at R-Calf USA Convention

Ranchers from around the U.S. including Powder River member Wilma Tope, a rancher from Aladdin, and staff member Pennie Vance, gathered recently in Deadwood, South Dakota, for the annual R-Calf (Ranchers-Cattlemen Action Legal Fund) convention. Quoting from their website, R-Calf “fights for the livelihoods of ranchers, giving voice on issues that harm the livestock industry...we have fought Antitrust, Checkoff, Animal ID and more... successfully!”

Because R-Calf’s work to protect independent ranchers often aligns with Powder River’s ag work, we work together with other rancher support groups on issues such as those listed above as well as accurate country of origin labeling for U.S. beef and instituting equity in the livestock packing industry.

Thanks to the efforts of Sam Wagner, organizer for Dakota Resource Council, our sister organization in North Dakota, several of us, including ranching members, were able to meet with Andy Green, USDA Senior Advisor for Fair and Competitive Markets, during the convention. Green helped strategize on how to effectively work with the current administration on issues that are causing catastrophic harm to the independent cattlemen across the country.

Pennie Vance
Powder River Staff

Congress Extends & Increases Solar Tax Credits

We’re excited to share some good news for those of you thinking about adding solar panels to your roof or in your backyard: Congress just passed a climate and spending bill that extends the residential tax credits available to homeowners who install solar panels. The Inflation Reduction Act sets the tax credit at 30% (increasing from 26% for projects installed this year) and extends it through 2032.

The bill also removes the requirement that energy storage (think batteries) must be tied to a solar project to qualify for the tax credit, so you can separately add storage to your home system and still get the credit. This is really good news for the electric grid to help our utilities have energy systems that are more resilient and dependable as well as being lower cost for customers.

Congress also extended and increased the tax credit for larger renewable energy systems installed by utilities and third-parties. This makes Wyoming wind incredibly competitive going forward, since it is such a low-cost resource for power generators. For these larger projects, Congress added in some good requirements for prevailing wage and labor benefits. Additionally, solar power projects eligible for the full 30% tax credit can increase their tax credit by an additional 10% - to 40% in total - by purchasing domestically produced hardware. In order to qualify, 100% of steel and iron must be manufactured in the United States, and 40% of manufactured goods - like solar panels, inverters, and electrical gear must be manufactured domestically. These requirements may be difficult to meet initially, but they will encourage domestic manufacturing for the solar industry, creating even more jobs.

There are also tax credits in the bill for manufacturing companies. There is even a new 10% added tax credit if a project is sited in an “energy community” defined as a brownfield area or a location formerly used for fossil fuel development, like a coal mine or power plant site. And there is another 10% added tax credit for projects that sell solar power electricity to low-income families and individuals. All in all, this means projects can get up to a 60% tax credit if they qualify for everything, creating significant economic incentives for new renewable energy.

Separately, there are tax credits for electric vehicles, heat pumps, and energy efficiency upgrades. As the saying goes, the cheapest kilowatt-hour is the one not consumed, and it has been a long-time priority of Powder River to help homes and businesses become more energy efficient.

Look for guidance from the IRS and other sources as these programs get rolled out, and if you have any questions, don’t hesitate to contact us, and remember we have a list of Wyoming solar installers on our website that are available to consult with you if you’re looking to get a project going.

Shannon Anderson
Powder River Staff

Photo courtesy of Premier Electric
Coal Community Revitalization

Energy communities across the nation are facing many of the same issues – how to fund economic transition while revenue and jobs decline. To help, the federal government – with support from both the Biden administration and Congress – has decided to shoulder the financial burdens of cleanup and investments into much needed infrastructure, including those for emerging energy resources. The Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization (IWG) is meant to provide integrated support, including information and technology, as well as substantial capital investments.

The IWG has been meeting with stakeholders in coal communities around the nation and gathering input to coordinate efforts on behalf of a just and equitable transition from fossil fuels. Powder River has been attending listening sessions and providing feedback via a number of forums, joining others to advocate for internet connectivity, climate resilience measures, and civic engagement to inform grassroots solutions.

The work on behalf of coal communities is ongoing and evolving. There is a need for investments in both hard and soft infrastructure including housing, child and elder care, and healthcare. There are many pieces to the puzzle, but they are starting to fit together. Citizens are often unaware of the opportunities available to their communities, including investments in energy resources that are affordable, reliable, and don’t leave another legacy of waste behind.

One major step the IWG has done is create a website, energycommunities.gov, that serves as a hub for updated information, and offers a central clearinghouse of various available opportunities. These can be in the form of grants and other funding or in technical assistance.

Stakeholders have reported that the process is hard to navigate, and the IWG is working to ensure that improvements are being made. In addition, the IWG held grant writing webinars to help local stakeholders learn how to navigate the application process. However, it still takes a lot of capacity that most communities don’t have. The IWG is already working to address that, with regional coordinator positions being filled as soon as possible, as well as other measures. The public comment process is one tool of civic engagement already available (there will be others). The deadline has been extended to Sept. 8. Visit energycommunities.gov/comment to help prioritize and plan assistance to energy communities. The comment format is designed to let you answer questions by checking boxes, as well as write comments in your own words.

Keep in mind that perspectives matter. Our local governments are tasked with balancing budgets, so it’s easy to see why they might be enamored of billionaires’ proposed projects with slick marketing and government money. To keep from repeating a history of systemic social and environmental injustice, we must have more perspectives and a longer vision.

Wyomingites have the opportunity to direct investments in areas that make sense from a fiscally conservative point of view, along with protections for the places and wildlife we love. Our coal workers and communities can’t bear the burden of transition alone. The nation can invest wisely in Wyoming with our help.

Wyoming people are resilient, capable and creative. But they also desire the chance to make their own decisions. Our organization will continue our work to make sure citizens are informed and engaged, across the state.

Michele Irwin
Powder River Staff

Deuter J oins Powder River Staff

Hello everybody! My name is Claire Deuter, and I am the new Renewable Energy Community Organizer for Powder River in Sheridan. I grew up in Rapid City, South Dakota where I enjoyed camping, hiking, biking, and exploring caves in the Black Hills. I feel incredibly grateful to now live in Wyoming where I can connect with the state’s communities and explore the great outdoors. I am eager to work together to protect Wyoming’s environment and prepare for a sustainable future.

I graduated from South Dakota State University in 2018 with a bachelor’s degree in Political Science and Global Studies. During college, I gained a passion for environmental advocacy and worked with fellow students to campaign for climate action and sustainable policies. After college, I attended Lewis & Clark Law School in Portland, Oregon and graduated in May 2022 with a certificate in Environmental and Natural Resources Law. There, I learned about energy regulation, public land management, administrative law, and other environmental law topics. I spent my summers throughout college and law school interning for environmental nonprofits and learning from passionate and experienced community leaders.

I believe that Wyoming is one-of-a-kind with its beautiful and diverse landscapes and hardworking and caring communities. Wyoming’s potential for renewable energy gives me hope for a sustainable future that protects both the state’s environment and its people. I feel very grateful to join the Powder River team and to work with such dedicated staff and members. I look forward to fighting for Wyoming’s future!

Claire Deuter
Powder River Staff
Powder River Energy Speeds-up Power Line Removal in Sage Grouse Core Areas

In April, leaders from Bighorn Audubon Society and Powder River Basin Resource Council joined to open a discussion with Powder River Energy Corporation (PRE-Corp) regarding the utility’s progress in removing unneeded coalbed methane (CBM) power lines from sage grouse habitat. Thousands of miles of power lines were installed during the CBM boom from the mid-90s to mid-2000s. The industry went bust in 2007, and bankrupt companies walked away from their responsibilities to plug and reclaim thousands of CBM wells.

Fortunately, many in the Powder River Basin had seen this kind of boom bust scenario before and raised concerns. PRE-Corp is a cooperative utility serving rural residents (many of our members) and industry in the Powder River Basin. PRE-Corp realized that they and their member-owners (rural landowners and industry) could be left holding the bag for the costly reclamation and removal of thousands of miles of unnecessary power lines if the industry went bust. The utility responded by charging industrial customers a fee and establishing a fund to use for line removal when the bust hit. The fund has over $19 million to pay for CBM power line retirement and removal.

The critical importance of power line removal from sage grouse habitat came to our attention during a public presentation by Dr. Chris Kirol, sponsored by the Bighorn Audubon Society. Kirol’s years of sage grouse research showed that power lines enabled more predation on sage grouse and that sage grouse avoided these areas.

PRE-Corp executives agreed to meet face to face with us in May. They described their process for power line retirement and removal, and confirmed that they are planning to retire and remove just over 36 miles of power lines from the Wyoming and Montana sage grouse core areas. About 29 miles of those lines are within Wyoming, with 65% of that line in the Thunder Basin core area. PRE-Corp’s planning timeline would have taken until 2030 to retire those lines. However, as a result of our meeting and follow-up outreach by Dr. Kirol, who provided data and GIS mapping for further review by the utility, PRE-Corp informed us in early August that their team will speed up the removal of unnecessary power lines in sage grouse core areas. Those lines are now expected to be removed by 2024.

Overall, PRE-Corp has about 1,470 miles of power lines subject to retirement, if it is determined they are inactive with no need for future use. Some of those lines are in prime sage grouse habitat, and we hope those lines can also be retired in the near future.

We applaud PRE-Corp for meeting with us and taking action to move more quickly to retire power lines in high-value sage grouse core areas within and outside of core. We hope to continue to work with them on this issue to increase the miles of power lines removed from other areas of important sage grouse habitat across the Powder River Basin that are not within sage grouse core. Many of our members are also PRE-Corp members so if you have interest in this issue and suggestions or questions please give us a call.

Jill Morrison
Bighorn Audubon Society Board Member & Powder River member

Update on Oil & Gas Activity in Laramie County

After reaching an all-time high of $122 a barrel on June 8, 2022, the price of a barrel of oil has been trending downward since then. It averaged $114 a barrel in June, $99 a barrel in July, and $91 a barrel through the first 15 days of August. Although these numbers suggest that it is still profitable for oil and gas companies to increase production, the Wyoming Oil and Gas Conservation Commission (WOGCC) reports that the rig count in July was 21, and only two of those were in Laramie County.

With this apparent caution on the part of oil and gas companies to increasing activity, it is easy to fall asleep at the switch. But, the Cheyenne Area Landowner’s Coalition strives to remain vigilant. Our past experiences with the Department of Environmental Quality (DEQ) and the State Engineer’s Office are a constant reminder that the objective of preserving our air quality, water quality, and property values must not be forgotten.

Still, there is activity ongoing in Laramie County; Samson Energy continues its drilling activity in and around the Iron Mountain – Four Mile Road area and north. Recently, Longs Peak has submitted applications to drill (APDs) to the WOGCC for four sites north and south of Interstate 80. Flaring has been reduced by increased use of pipelines; however, one can still see numerous flares lighting up the nighttime sky.

Monitoring oil and gas activity in Laramie County is an ongoing process and should be important to all residents of the county. The Coalition wants to increase its membership, and this can be done by signing up with the Powder River Basin Resource Council and indicating that a small portion of one’s dues be allocated to the Cheyenne Area Landowner’s Coalition.

Alex Bowler
Cheyenne
Reform for 1872 Mining Law Possible

Written 150 years ago with the intention of easing the burdens of the Civil War through westward expansion, the General Mining Law has seen few revisions since its inception.

Now the time is ripe for a needed upgrade, thanks in part to the bipartisan infrastructure bill passed by Congress and signed into law by President Biden. It includes important language regarding mining supply chains (particularly for critical minerals) needed to transition from fossil fuels. And thankfully, the Department of the Interior (DOI) is taking seriously the need for an overhaul of how the mining law is implemented in places like Wyoming. The DOI is engaging stakeholders and taking public comment on how the regulations governing environmental protection at mining sites can be improved.

The DOI's review is a major opportunity to improve environmental stewardship at mines, better balancing mining with other uses of public lands, protecting cultural and sacred sites, and preventing abandoned mines.

Of note for Wyoming, uranium is the only energy mineral that is governed by the General Mining Law. With uranium possibly making a comeback because of nuclear power’s role in the global economy and new tax credits with climate change in mind, it's even more important to address the deficiencies in the 1872 Mining Law to not only better protect communities and the environment, but workers as well.

The DOI is looking at adding in royalties and reclamation bonding to minerals produced under the 1872 Mining Law, which is good news for taxpayers. Under current requirements, a uranium or critical minerals boom in Wyoming would not generate wealth for the state in the same way fossil fuels and trona have.

Reforms also call for a way to pay for cleanup of the estimated half million abandoned hardrock mines nationwide. Unlike the reclamation requirements of the Surface Mining Control & Reclamation Act (SMCRA) that applies to coal, the Mining Law lacks sufficient tools to ensure that type of oversight. Wyoming still has uranium waste from the last boom. Before we start generating waste from another, there ought to be a clear plan.

For a just and equitable transition, we can’t perpetuate the same harms as have been done under the current law, especially to indigenous people. Reforms could help assure social and environmental justice with inclusive land planning, assurances of clean water and that front line communities don’t bear further harm.

Reform is an opportunity to rewrite the rules and re-right some wrongs. The DOI has created an intergovernmental working group with expertise in mine permitting and environmental law and they have been looking at ways to do just that.

The working group has held a series of virtual listening sessions, and will have closed the deadline for comments by the [Breaks print date]. The group will present a report to Congress this November. Stay tuned for more opportunities to participate in reforming this 150-year-old law.

Michele Irwin
Powder River Staff

Groups Call on DEQ to Reduce Air Pollution at Jim Bridger Power Plant

In comments submitted to the Wyoming Department of Environmental Quality (DEQ) this month, Powder River joined Sierra Club and National Parks Conservation Association (NPCA) in calling for reduced air pollution at the Jim Bridger Power Plant. The plant’s operator, PacifiCorp (doing business in Wyoming as Rocky Mountain Power or RMP) is moving forward with a plan to convert units 1 and 2 at the plant to natural gas. While the plan will reduce pollution from nitrogen oxides and sulfur dioxide, the groups contend that the agency can – and should – do more to limit pollution harmful to public health and the environment.

Specifically, the groups told DEQ to ensure that pollution limits are more effective than the previously required pollution controls for nitrogen oxide that PacifiCorp would have installed had the company continued to operate the plant units with coal. The Clean Air Act requires the “best available retrofit technology” for the Jim Bridger plant, partly based on a review of what pollution control technology other plants have and the corresponding emissions limits they are able to achieve. The groups argue that DEQ is letting PacifiCorp off easy, and we urged the agency to require a stronger pollution limit for nitrogen oxides.

The DEQ is currently in the process of considering our comments, and the agency will respond to them before the proposal is submitted to the Environmental Protection Agency (EPA) for its review.

Shannon Anderson
Powder River Staff
Save the Date

POCO - Organizer Training

CELEBRATING 50 YEARS OF PROTECTING WYOMING’S QUALITY OF LIFE

50TH ANNUAL MEETING!

NOV. 5TH - SHERIDAN RAMADA PLAZA
Powder River is Hiring!

Powder River is seeking applicants for our Oil & Gas Organizer position.

**Duties:**
- Develop and implement organizing and grassroots campaign plans for issue-based campaigns focused on reducing the impacts of fossil fuel energy development in Wyoming;
- Recruit new members and engage in organizational outreach activities;
- Provide direction and support to members who are addressing issues of concern to the organization;
- Collaborate with members on research, campaigns, and communications;
- Represent Powder River to external public and private entities, including government departments, the state legislature, the media and regulated businesses;
- Coach members to develop leadership, public presentation, and organizational skills;
- Participate in organizational fundraising, communications, and event responsibilities as assigned; and
- Perform other activities as required or assigned.

**Qualifications:**
- Commitment to Powder River’s mission, issues and values;
- Ability to work well with people from diverse backgrounds and viewpoints;
- Strong speaking and writing skills;
- Willingness and ability to work flexible hours, including some evening and weekend hours, and to travel;
- College degree (or equivalent work experience);
- Strong background in natural resource management, energy, agriculture and/or Wyoming issues preferred; and
- Experience in issue-based campaign work, communications and/or fundraising also a plus.

**Compensation and Benefits:**
Salary starts at $41,000.00 and commensurate with experience. Powder River offers a generous benefits package including health and dental insurance, vision, paid vacation leave, paid holidays and paid long-term sabbatical leave.

**How to apply:**
This position is open until filled, but we encourage applications as soon as possible. The position can be located in: Cheyenne, Laramie, Casper, Gillette or Sheridan.

If interested, please email a cover letter, resume, and two brief writing samples to careers@powderriverbasin.org (include Organizer Position Application in the subject field) or mail to: Hiring Committee, Powder River Basin Resource Council, 934 North Main St., Sheridan, WY 82801.

Powder River Basin Resource Council is an Equal Opportunity Employer.
Do you …

… want to solve a science mystery?
… have an engineering design idea?
… think you can apply math to help the greater good?

Wyoming State Science Fair invites 6th - 12th grade students to conduct and submit their original science, engineering, and math research for competition.

When: Regional competitions begin mid-January annually … so start today!

Advance Science & Win Prizes: Regional fair qualifiers may apply to compete at the Wyoming State Science Fair in early March. You could win $$$, internships, gadgets, and opportunities to compete at Broadcom MASTERS or the International Science & Engineering Fair (ISEF).

For More Info & Competition Rules
Contact: Erin Stoessz, Director at 307-760-2465 or wyostatefair@gmail.com

Visit: uwyo.edu/sciencefair or facebook.com/WYStateScienceFair
Working Lands...Continued from page 1

working knowledge needed to have healthy soil on their operations. That’s the gap she works to address.

Youngquist discussed essential biological factors that affect soil and plant life including why the organic matter and the carbon cycle are important. “The primary goal of soil health restoration is to get carbon back into the soil as fast as possible and keep it there,” she said. Carbon, which is taken from the atmosphere thru plants for healthy soil is an essential ingredient in growing healthy crops. Tilling and other practices that expose soil cause a loss of carbon. Cover crops help restore it.

The field trip gave producers a chance to see the actual effect of cover crops when applied in a working ranch setting. Brian Cherni, manager at the Twin Creek Ranch/Little Horn Ranches, told participants that a growing awareness of good land stewardship and the problems with conventional ranching practices, such as soil degradation and loss and the escalating cost of inputs, have raised the bar on land management. These factors contributed to his interest in more sustainable practices.

Cherni shared how they transitioned the irrigated fields seen at the tour from conventional to more soil friendly practices, including the purchase of a no till drill and managed grazing. They planted a bi-annual season grass mix in 2021 which was stockpiled during winter and grazed in spring 2022, followed by a warm season mix planted in July. The July planting was an impressively dense, vibrant, thigh-high field of grasses. Digging six or eight inches beneath the surface of the planted fields and contrasting it to soils from an adjoining test strip revealed a moderate increase in the newly planted field of organic matter, signaling that, while regeneration takes time, the Twin Creek Ranch is on its way to experiencing the benefits of healthy soils.

Jim Koltiska, owner of Koltiska Cattle and Hay showed a section of his ranch where he’s working to regenerate dryland crop soils. Koltiska said that in the past, he had lush wheat fields but over time, they produced less and less. The soil seemed to be giving out. That prompted him to seek expertise at local, state and federal agencies and started his journey to restore soil health. Participants were able to walk through a field of diverse grasses including waste high sunflowers which he said provide excellent nutrition that are often the first choice of his cattle. He said there were failures but he is seeing soil improvement and intends to continue experimenting with regenerative soil health practices.

Tyler Jones, Assistant Farm Manager at the UW Sheridan Research and Experiment Center, gave a tour of research experiments to determine best practices for implementing soil health in Wyoming soils. This included a study of tillage methods such as conventional till, no till, fallow, and vertical tilling, and a study evaluating a variety of dryland cover crop species. The most striking study was the difference in soil quality on a conventionally tilled plot as compared to the other plots using cover crops and limited surface disruption. The conventionally tilled area was tightly compacted with heavy clods and almost no organic layer resulting in nearly sterile dirt that would need expensive inputs like artificial fertilizer applications and aggressive tilling to grow crops. The other plots which utilized limited till and cover crops were developing a layer of biomass and an increasing ability to grow crops without soil disruption and artificial amendments.

The field trip proved to be a valuable learning experience for producers and supporting organizations. The event was put on by Natural Resources Conservation Service, Sheridan Community Land Trust, Powder River Basin Resource Council, Sheridan County Farm Bureau, University of Wyoming, Planck Stewardship Alliance, Sheridan County Conservation District, Young Producers Assembly, Millborn Seeds, North40Ag, White Ranch, Broken Arrow Ranch and Double Rafter Ranch. The group is planning a larger, statewide event, likely for the fall of 2023.

Pennie Vance
Powder River Staff
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<td>Deuter Joins Powder River Staff</td>
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<td>Powder River Energy Speeds-up Power Line Removal in Sage Grouse Core Areas</td>
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<tr>
<td>Update on Oil &amp; Gas Activity in Laramie County</td>
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<tr>
<td>Reform for 1872 Mining Law Possible</td>
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<tr>
<td>Groups Call on DEQ to Reduce Air Pollution at Jim Bridger Power Plant</td>
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<td>Save the Date</td>
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<td>POCO-Organizer Training</td>
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<td>Powder River is Hiring</td>
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<tr>
<td>Wyoming Science Fair</td>
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<td>Wyoming Delegation Contact Information</td>
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