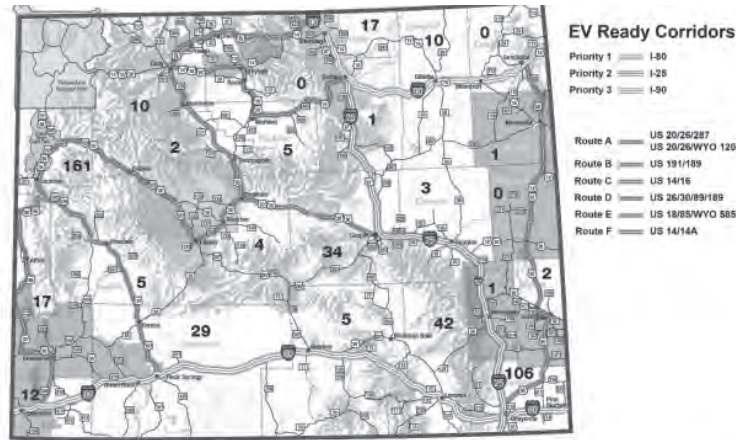




WYDOT Rolls Out Plan to Increase Electric Vehicle Charging Stations

Wyoming's Zero Emission Vehicle Strategy is the state's plan to use federal infrastructure funding to accomplish its zero emission infrastructure visions. The strategy recognizes the electric-vehicle-centric nature of much of the federal rollout, by including both short-term needs to take advantage of the current funding, and longer-term demands, which may include hydrogen powered trucks and vehicles, as well as electric aircraft and trains. The draft plan will be modified as needed based on public input, with comments being accepted through the end of April. A final plan will be available for public comment in June before being submitted to the Joint Office of Energy and Transportation (JOET).



Map Notes: Scheduling of station installation along routes A – E to be determined after the Secretary USDOT deems corridors are built out and contingent upon available NEVI funds.

Bold numbers indicated the number of registered EVs in that county.

Highlight counties indicates those counties selected in the NEVI program for Justice40 program consideration.

Highlight indicates Wind River Reservation also a Justice40 program designated area.

Electric vehicle corridors map (Photo courtesy of WYDOT)

formula program guidance in February. Seven-and-a-half billion dollars is earmarked over the next five years to build out a national network of 500,000 electric vehicle (EV) chargers by 2030. These guidelines require build-out of designation corridors first (the interstate system), what type of charger and how many, power preferences (150-350kw), and location (every 50 miles, within one mile of the interstate). With three interstates crossing through our state on the way to major tourist destinations, Wyoming is in a good position to capitalize on this funding.

Wyoming has requested exceptions and flexibility to some of these guidelines (especially the 50-mile requirement), but state leaders hope to maximize our share of this funding

JOET, a new federal agency created in the infrastructure act, released the National Electric Vehicle Infrastructure (NEVI) funding resources available, including \$1.2 million in Volkswagen settlement (approximately \$25 million), while strategically utilizing other funding

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Groups Request that WY DEQ Reopen Aethon's Wastewater Permit

On March 17, Powder River, Wyoming Outdoor Council, and the Natural Resources Defense Council submitted a letter to the Wyoming Department of Environmental Quality (DEQ) requesting that they reopen the wastewater discharge permit for Aethon's Moneta Divide oil and gas field. The letter followed a meeting with DEQ staff regarding the January permit modification that moved sampling locations and removed sampling requirements for compounds like radium, lead, and mercury. While researching this permit modification, it became clear that discharge into Alkali and Badwater Creeks has severely damaged the creek beds, and that Aethon is



A photo taken by Wyoming DEQ inspectors shows cloudy water and white surface deposits along, and in, Badwater Creek

releasing benzene and toxic levels of salts in their discharge. Current permit conditions do not regulate benzene and give Aethon several years to come into compliance with limits on salt concentration. Meanwhile, the streams continue to suffer and the risks to downstream users of Boysen Reservoir and the Wind River, like the town of Thermopolis, continue to grow.

Following our meeting with DEQ, we requested documents that showed repeated Whole Effluent Toxicity (WET) test failures. WET tests are a toxicity test where water flea and minnow larvae were placed in discharge water to see if they could survive. They could not.

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Powder River Basin Resource Council (Powder River) is a grass-roots organization of individuals and affiliate groups dedicated to good stewardship of Wyoming's natural resources. Powder River was formed in 1973 and stands for the preservation and enrichment of our agricultural heritage and rural lifestyle; the conservation of Wyoming's unique land, minerals, water and clean air consistent with responsible use of these resources to sustain the livelihood of present and future generations; and the education and empowerment of Wyoming's citizens to raise a coherent voice in the decisions that will impact Wyoming residents' environment and lifestyle.

Powder River is a member of the Western Organization of Resource Councils (WORC). WORC member groups are Dakota Resource Council, Dakota Rural Action, Idaho Organization of Resource Councils, Northern Plains Resource Council, Oregon Rural Action, Western Colorado Congress, Western Native Voice and Powder River Basin Resource Council.

The services provided by Powder River include public education, community organizing and lobbying as permitted on behalf of its membership. Powder River is a non-profit, 501 (c)(3) tax-exempt organization.

Membership dues: \$30 for individuals, \$50 for families and \$20 for students and senior citizens. Powder River is dependent on contributions for its work; contributions, large and small, are welcomed.

Active Affiliate Organizations

- Alliance for Renewable Energy (ARE)
- Clark Resource Council (CRC)
- Cheyenne Area Landowners Coalition (CALC)
- Pavillion Area Concerned Citizens (PACC)
- Sheridan Area Resource Council (SARC)

Board of Directors

Chair.....Joyce Evans
 Vice Chair.....David Romtvedt
 Secretary.....Lynne Huskinson
 Treasurer.....Cissy Dillon
 Wayne Lax, Gillian Malone, Liza Cuthbert-Millett, Bob LeResche, Barbara Chase, Maria Katherman, Marcia Westkott and Greg Findley

Staff

Executive Administrator- Stephanie Avey
 Staff Attorney- Shannon Anderson
 Communication/Dev. Dir- Robin EH. Bagley
 Organizers- Pennie Vance, Sheridan, Lottie Mitchell, Lander and Michele Irwin, Green River.

Powder River Offices:

Main Office:
 934 North Main St
 Sheridan WY 82801
 Ph: (307)672-5809
 Email: info@powderriverbasin.org
 Web: powderriverbasin.org

Lander Office:

153 N. 4th Street
 Lander WY 82520
 Ph: (307)672-5809

Powder River Breaks

Editor: Robin EH. Bagley
 Layout: Stephanie Avey
 Photos by Powder River staff and members.

Message from the Chair



Dear Members,

Our Powder River purpose is three-pronged: To preserve and enrich our agricultural heritage and rural lifestyle; to conserve our unique land, mineral, water and clean air resources, consistent with responsible use of those resources to sustain the livelihood of present and future generations, and to educate and empower our citizens to raise a coherent voice in the decisions that impact their environment and lifestyle. Now and then, in the life of a board member, events occur that send that member searching for a foundation. Such a time arrived in mid-March when Alyssa Duba, our gifted and energetic new director, informed me that she was finding that her position at Powder River was not a good fit for her.

Having had enough life experience to know that trying to talk someone out of a decision they have agonized over and reached after deep thought and consideration is a foolish and fruitless pursuit, I accepted her resignation. I informed the rest of the board and broke the news to the staff at our March board meeting. Since that time, both board and staff have undoubtedly made several trips to the handbook to pull together the strength to continue forward in a seamless manner.

I have never been so proud of a group of people as I have been of these dedicated souls associated with Powder River. Shannon, Stephanie, and Pennie, the resident Sheridan group, simply took over the duties that had to be done in Sheridan. Robin never missed a beat as she assumed more grant writing responsibilities and kept on with the communications duties. Michele and Lottie kept organizing, with Michele offering her "buffalo wisdom," and Lottie taking over the running of the Lander office. Board members stepped up and started doing extra work in the issue groups as well as in the banking and financial areas. The Personnel Committee is meeting weekly and, together with the staff, is putting together an interim plan to sustain us until a new director is in place. Members have reached out with offers to help and to move the search along. As near as I can tell, not one of the numerous balls these people are always juggling has hit the ground.

There is no doubt that Alyssa will continue to do great things in this world, making it a better place for all. She and her husband will raise their beautiful daughter to be the kind of citizen this world needs. She will find ways to fulfill Powder River's purpose even without being a part of our staff. We all wish her the very best and know she will achieve much.

As for the work, it is getting done. As for the staff, they are meeting goals and taking the time to care for themselves and one another. As for the members, we are grateful to you, for your concern and energy devoted to the further growth of the organization. As for the funders, we will continue to use your contributions wisely, economically, to get the results needed. And, for those who would abuse the resources of our state without regard to the well-being of its citizens, don't rest easily, because Powder River Basin Resource Council is still here!

Joyce E. Evans

Powder River Solar Energy Production

Energy Produced: 400.9 kWh
 Carbon Offset: 611 lbs
 We have offset the equivalent of 7 trees in February & March 2022!
 With a total equivalent of 10 trees for 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.

Interior Department Launches New Orphan Well Plugging Program

Powder River has long advocated for more funding to plug and reclaim wells left orphaned by defunct oil and gas operators. Orphaned wells are not only a problem here in Wyoming, but across the country, and this crisis led Congress to push forward a new program in last year's infrastructure law. The law includes \$4.7 billion for orphaned well site plugging, remediation, and restoration activities. A portion of the funding is dedicated to cleaning up federal wells, but most of the funding will go to states.

The Interior Department officially launched the program in January, and the agency has been working with state regulators and other stakeholders over the past few months to develop guidelines and start the funding process. The first state grant applications are due next month, and other parts of the program will be rolled out over the coming months.

Powder River, along with the Western Organization of Resource Councils (WORC) and other allied organizations, has been active in



tracking the program and providing comments to Interior as needed. Staff members Shannon Anderson of Powder River and Sara Kendall of WORC presented at an Interior Department-hosted webinar in early January, and we submitted comments on the guidance document earlier this month. We anticipate other opportunities for staff and member participation in the program, both at the agency level and the oversight level exercised by Congress, so stay tuned for ways you can be involved in ensuring the program's success.

Meanwhile, we know that one-time funding won't solve the problem. Rather, systemic changes to federal oil and gas bonding is needed to curb the rate of orphaned wells and prevent taxpayers from being left holding the bag when companies walk away. We are looking forward to new rules from the Bureau of Land Management as early as this summer, and in the meantime, we continue to advocate for company-by-company bond increases to mitigate the risks of the federal oil and gas program.

Shannon Anderson
Powder River Staff

Schiffer High School Students Learn about Sheridan Seed Library

In March, over a dozen students from the John C. Schiffer Collaborative School, accompanied by their science teacher, Jules Craft, participated in a field trip to the Sheridan County Seed Library. Powder River staff, Pennie Vance, gave a presentation on the seed library, which was first established at the Sheridan County University of Wyoming Ag Extension facility. Then, with help from Powder River members, it was later moved to the Sheridan County Fulmer Public Library to provide area gardeners better access to seeds.

After sharing information on the importance of growing non-hybrid plants in order to protect the viability of our food stocks, Vance demonstrated how students could participate in the seed library's seed saving program by checking out seeds from the library and, later in the season return their own packets of saved seeds. The



students enjoyed looking through the wide variety of catalogued seeds and checking out their favorites to plant this spring. A number of students chose heirloom seeds to plant as Mother's Day gifts.

Powder River solicits donations yearly, primarily from small heirloom seed companies across the United States and Canada. Those companies have provided almost 800 packets of seeds this year. With more individuals growing backyard and community gardens, use of the Sheridan Seed Library continues to increase. Powder River is proud to collaborate with Fulmer Public Library to put Sheridan County on the map with hundreds of seed libraries cropping up across the country to help promote sustainable, resilient regional food systems. Seed libraries can be found in Gillette, Lander, Casper, Torrington, Cheyenne, Rock Springs, and Laramie.

Pennie Vance
Powder River Staff

Bill Looks after Interests of Billionaires, Not Wyoming Citizens

The \$4 billion nuclear project proposed for Kemmerer will certainly bring jobs, but also will bring costly socio-economic impacts to the area, and if HB 131 passes, those costs will not be borne by the billionaires but will fall on the citizens of the state of Wyoming.

~ Jill Morrison

eliminating the \$5-per-megawatt-hour tax for experimental nuclear plants. There is no justification for providing nuclear generation a free ride — especially when the proposed plant is already receiving billions of dollars in subsidies from the U.S. Department of Energy, which is, in fact, footing half the construction cost.

Wyoming does not need to provide further tax breaks to the billionaire proponents behind these projects.

The \$4 billion nuclear project proposed for Kemmerer will certainly bring jobs, but also will bring costly socio-economic impacts to the area, and if HB 131

passes, those costs will not be borne by the billionaires but will fall on the citizens of the state of Wyoming.

HB 131 passed the House Tuesday and is headed to the Senate, so call your legislators and ask them to vote no on HB 131 to keep our Industrial Siting Act in place and to maintain a revenue tax on nuclear generated electricity.

Let's protect our Wyoming taxpayers and communities first, not out-of-state billionaires.

**Jill Morrison
Story**

Editor's Note: This was originally printed in WyoFile on March 2, 2022. WyoFile is an independent nonprofit news organization focused on Wyoming people, places and policy. HB 131 passed both houses, but thanks to amendments offered in both the House and Senate, there was robust debate around the bill, and the vote was much closer than anticipated.

Wyoming Legislature Focuses on State's Energy Future

The 2022 Wyoming Legislative Session was fast and furious, with lawmakers tackling the biennium budget along with redistricting, American Rescue Plan Act (ARPA) appropriations, and hundreds of individual bills. For our part, Powder River closely tracked around 20 bills focused on energy, environment, and agriculture issues ranging from the regulation of nuclear energy to severance taxes to landfill remediation. Thanks to member engagement, we had another very successful year of lobbying, advocating for good bills signed into law, stopping some very bad bills, and amending some others. Our focus now turns to the interim session: committee work between legislative sessions. Here is a recap of some of the key bills - both good and bad - that made into the statute books this year:

House Bill 45 sets up a new mine reclamation bonding option through an assigned trust. It would allow coal and other mining companies to set aside cash held by the state to meet bonding obligations.

House Bill 89 helps counties and regulators better address oil and gas companies that are delinquent in their tax payments. It authorizes the Oil and Gas Commission to order well plugging or prohibit drilling if a company owes money to counties or the state, providing an important new enforcement tool against companies that aren't paying their taxes.

continued on next page

Rulemaking Begins to Restore NEPA Provisions

Earlier this month, the White House Council on Environmental Quality (CEQ) released a pre-publication of final changes to the implementing regulations for the National Environmental Policy Act (NEPA), reversing several permitting changes to the regulations made under the prior administration. NEPA is known as the nation's bedrock environmental law, guiding the environmental review process of major federal actions from highway construction to energy development. The changes, referred to by the administration as Phase 1, are the first of two steps in the administration's plan to update the regulations, which focuses on provisions that caused significant interpretation or implementation challenges.

"Strong NEPA regulations mean that the concerns of rural and Tribal communities can't just be steamrolled by corporations in pursuit of their profits. This is an important first step, but the Biden Administration must continue down this path to ensure the public has a real voice in federal decisions and to prioritize protecting the land, water, and air we rely on to survive," said Barbara Vasquez, a leader with the Western Organization of Resource Councils from Cowdrey, CO.

"These core NEPA regulations are essential to Tribal citizens like me. NEPA review is one of the only avenues for us to voice our opinions about projects that directly impact our lives and communities. Throughout the history of this nation, the needs, safety, and health of Indigenous peoples have been ignored. The changes in NEPA's Phase 1 are a step in the right direction. I urge the Biden Administration to take

even stronger steps in Phase 2 to address environmental justice issues, including climate change, and support of community and third-party monitoring," said Lisa DeVile, Secretary of Dakota Resource Council and Vice-President of Fort Berthold POWER from Mandaree, ND.

Changes under Phase 1 include restoring the 1978 definition of "effects," thereby requiring consideration of cumulative, direct, and, indirect effects, which the rollback of the regulations had consolidated. This ambiguity led to several concerns, including whether the impact of pollution or climate change could be considered as a cumulative problem.

Additionally, restoring the original implementing regulations reinstated the requirement that agencies consider the public interest "purpose and need" of proposed actions subject to NEPA. Under the 2020 regulations, this assessment was largely limited to the goals of the applicant which short-cut the range of alternatives and mitigation measures an agency could consider in response to a project proposal.

Finally, the restored regulations clarify that agencies have the discretion and flexibility to develop procedures stronger than the CEQ regulatory requirements in order to meet an agency's specific purpose and mission.

The administration intends to develop Phase 2 rulemaking to tackle the 2020 NEPA revisions more broadly, with a particular focus on integrating policies on climate and environmental justice and provide regulatory certainty to federal agencies and entities proposing projects.

WORC Staff

Wyoming Legislature...Continued from previous page

House Bill 105 reduces the severance tax on coal by .5%, resulting in approximately a \$10 million loss in revenue each year.

House Bill 131 is a major overhaul of our state statutes for permitting nuclear waste storage and nuclear power plants. It attempts to smooth the way for TerraPower's Natrium power plant proposed near Kemmerer by removing many of the public process and protections in our current state laws. It also exempts the project – and any future "advanced nuclear" power plants – from a \$5/MWh generation tax currently in the law.

House Bill 136 places the burden of proof for a new high use water permit in a groundwater control area on the permit applicant. This will help the Board of Control and the State Engineer's Office to conserve scarce water resources and to protect existing water rights' holders.



Senate File 9 authorizes the Wyoming Business Council to issue revenue bonds for ag processing operations, like small-scale meat processing.

Senate File 35 specifies that a charging station is not a "utility" for the purposes of Public Service Commission regulation, paving the way for electric vehicle charging stations in Wyoming.

Senate File 46 sets forth the annual priority list for landfill cleanup projects.

Interim committee meetings start this month with the Joint Minerals Committee meeting in Casper and the Joint Revenue Committee meeting in Lander. Most committees will meet three times before the next legislative session in January 2023. You can find the calendar of meetings and other details, such as meeting agendas, handouts, and bill drafts by visiting the Legislature's website at: www.wyoleg.gov/Calendar/.

Shannon Anderson
Powder River Staff

The Wyoming Way of Life

In a recent column, Wyoming Sen. Cynthia Lummis argued for the continuing operation of the coal fired Jim Bridger power plant. Her arguments were not helpful to me in understanding either the issues around reducing pollution from the plant or the current arguments concerning its continued operation.

Sen. Lummis made three main points. The first was that the impending closures are based on bad faith actions of the Biden administration seeking to undo what she termed nonpartisan actions of the Trump administration. The second point was that the plants should continue operation without change because they provide jobs. The third was that the coal burned at the Bridger site is among the cleanest available. None of these points clarifies the history of pollution issues around the plant's operation or suggests ways in which we can protect both our environment and the livelihoods of individuals, families, and communities in a time of economic transition.

In 2014, the state of Wyoming, the Environmental Protection Agency, and Berkshire Hathaway-owned PacifiCorp, serving Wyoming as Rocky Mountain Power, agreed to guidelines to limit pollution that degrades air quality and visibility in national parks and wilderness areas. These guidelines were part of Wyoming's State Implementation Plan (SIP) in compliance with the Regional Haze Program of the Clean Air Act. The agreement included the installation of Selective Catalytic Reduction (SCR) technology that would cut nitrous oxide emissions by 80-90% at the four units of the Jim Bridger plant. SCR was installed at units 3 and 4 but not at units 1 and 2. The end of 2022 was set as the deadline for SCR technology at unit 1, and the end of 2021 for unit 2. PacifiCorp has now stated that because of increased costs and its intention to convert the Bridger plant to natural gas by 2024, it will not install SCR at units 1 and 2. In 2020 Governor Mark Gordon's administration submitted a revised State Implementation Plan that would undo the 2014 agreement by removing the requirement to install SCR technology. The EPA has issued a formal notification of its intent to deny Wyoming's revised plan. To avoid the required closure of unit 2 Governor Mark Gordon has issued an emergency order allowing the unit to operate until April 30, 2022.

Here's my point: in 2014, in response to the Regional Haze Program standards of the Clean Air Act, Wyoming and PacifiCorp agreed to install Selective Catalytic Reduction technology that is highly effective for reducing pollutant emissions from coal fired electric plants. Eight years later, having not installed this technology, both wish to back out of the agreement.

The final point Senator Lummis made was that Wyoming coal is cleaner than other coal. But cleaner isn't clean. According to a National Parks Conservation Association 2020 analysis, the Jim Bridger plant is the largest single industrial source of regional haze-contributing pollutants — sulfur dioxides, nitrogen oxides and particulate matter — in Wyoming, and the third largest in the nation.

~ David Romtvedt

The second point Sen. Lummis made involved jobs — the power plant provides jobs. But this ignores the continuing decline in the number of jobs at the plant, the national decline of coal and subsequent loss of jobs, and the negative effect on job numbers caused by air pollution and haze. In Wyoming these problems come to a head because we are a major coal producer with mines and power plants close to national parks and wilderness areas.

A lot of people in Wyoming have jobs because of the parks and wilderness areas which fuel tourism economies dependent on a pristine environment. Increased air pollution means fewer visitors and fewer jobs. Defending jobs in one sector at the expense of those in another serves none of us. Wyoming's elected officials would be well advised to implement

policies and programs to create new jobs by embracing cleaner fossil fuel technologies, investing in renewable energy sources, and developing sustainable economic models.

The final point Sen. Lummis made was that Wyoming coal is cleaner than other coal. But cleaner isn't clean. According to a National Parks Conservation Association 2020 analysis, the Jim Bridger plant is the largest single industrial source of regional haze-contributing pollutants — sulfur dioxides, nitrogen oxides and particulate matter — in Wyoming, and the third largest in the nation. Wyoming's industrial activity — primarily coal mines and coal-fired power plants — is a major contributor to regional haze. If the state and PacifiCorp won't install the technology that would allow us to burn coal in a cleaner way, then given the long-term agreements in place, Jim Bridger unit 2 will be taken offline.

In her column Sen. Lummis stated that the Biden administration has continuously shown hostility to "the Wyoming way of life" without telling us what she believed the Wyoming way of life to be or what the hostile acts were. As a resident of Wyoming, my way of life is driven by love of open spaces, by compassion for my human and nonhuman neighbors, by a desire to protect the air and water upon which life is dependent, and by a sense of responsibility in the use of finite resources. That's my Wyoming way of life. I see no evidence that the administration is hostile to it.

**David Romtvedt
Buffalo**

Editor's Note: This was originally published in the Feb. 19, 2022 issue of the Casper Star-Tribune.

Regional Haze Plan Doesn't Plan to Reduce Regional Haze

Almost a year overdue, the Wyoming Department of Environmental Quality (DEQ) finally released its draft proposal to implement the federal Clean Air Act's regional haze reduction program in February. This second planning period proposal is required to show reasonable progress toward achieving the Regional Haze Rule's goal of achieving natural visibility conditions in areas designated as "Class 1" under the Clean Air Act, typically national parks and wilderness areas, of which Wyoming and surrounding states have plenty worthy of protection. To achieve this goal, the Regional Haze Rule focuses on reducing haze-causing pollutants of nitrogen oxides, sulfur dioxides, and particulate matter, all of which also negatively affect public health.

Unfortunately, DEQ's draft plan achieves none of these goals and remarkably does not require *any* additional reductions in pollution at *any* of the state's large industrial sources, such as coal-fired power plants, coal mines, or oil and gas facilities. Rather, DEQ adopts the view that such reductions are not necessary by relying on voluntary commitments from companies like Rocky Mountain Power to reduce pollution.

Along with our long-time partners in regional haze work - National Parks Conservation Association and Sierra Club - and with extra legal and technical expert support, Powder River submitted detailed comments to the DEQ in March. We highlighted the need for enforceable and strong pollution reduction requirements, especially

Unfortunately, DEQ's draft plan achieves none of these goals and remarkably does not require any additional reductions in pollution at any of the state's large industrial sources, such as coal-fired power plants, coal mines, or oil and gas facilities.

~ Shannon Anderson

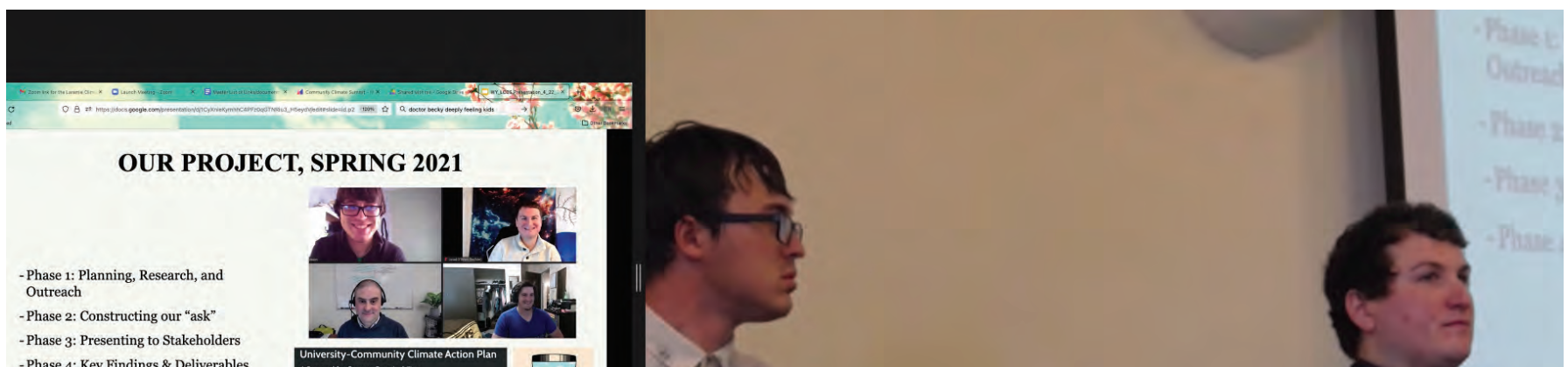
reductions in nitrogen oxide pollution, which remains largely uncontrolled at most coal plants in Wyoming. Our comments largely echoed comments of the Environmental Protection Agency (EPA), which has ultimate approval authority over any regional haze plan submitted by the state. If EPA deems the state plan inadequate, the federal agency has the ability to implement its own federal plan. Such an action would not be unprecedented, as EPA made a similar determination of inadequacy back in 2014 with DEQ's proposal in the first planning period.

Our comments were also similar to those brought forward by a group of federal land managers, including the National Park Service, which have specific authority to weigh in on haze reduction plans because of the goal of reducing pollution in national parks. Regrettably, DEQ ignored the comments of both the EPA and the Park Service and instead moved forward with a plan that is legally deficient and technically inadequate, putting the state on a likely path of EPA denying the plan unless DEQ significantly changes its proposal before submitting it to EPA.

While we wait for DEQ's response to our comments, Powder River and our allies will continue our work to push the state and EPA to adopt a stronger plan. The public health of Wyomingites and the views of our iconic national parks and wilderness areas depends on it.

**Shannon Anderson
Powder River Staff**

ARE Presents at Laramie Community Climate Summit



Alliance for Renewable Energy members Jarad O'Brien and Finnegan Jackson present at the Laramie Community Climate Summit on April 22.

Bill Barlow Memorial State Science Fair Awards

Again this year, Powder River participated in the Wyoming State Science Fair by selecting two projects for the Bill Barlow Memorial Youth in Conservation Award. Liza Cuthbert-Millett, Gillian Malone, David Romtvedt, and I reviewed original student research projects that touched areas the Barlow Memorial prize is meant to recognize—Wyoming’s ecosystems, sustainable agriculture, and renewable energy. It was a cold and snowy week so the online format, like last year’s, was even a bit welcome.



This study had other aspects that we appreciated: their collaboration allowed them to learn from one another’s observations and ideas, often an important aspect of scientific endeavors, which likely abetted their passion and tenacity. They sought out experts and acknowledged their help but put in the time and effort themselves to answer their question.

Although there were no computer scientists on our judging panel, we could all appreciate, even understand, the work done by Ms. Ramesh comparing three types of machine learning trees applied to

finding a predictive model for likely two-form bumble bee habitat. Her study put to great use a very large data set from “citizen science” bumble bee sightings for the algorithms to learn from and predict where the bumble bee might most likely be found in Wyoming. We were delighted to get to peek under the hood a bit at this much mentioned process! Her clear presentation made this possible for us.

Although there were fewer entries than in previous years, two projects really stood out and received our unanimous selection: one from the junior division, “Can’al Deer Cross?” by Reece Woolwine, Fisher Mills, and Keegan Nance from Pinedale Middle School, and one from the senior division, “Evaluating Machine Learning Methods for Modeling the Distribution of the Two-Form Bumble bee (*Bombus bifarius*) in Wyoming,” by Padmalakshmi Ramesh of Laramie High School. Both studies had clear and focused questions, described and presented their methods and results completely and had conclusions that were well-justified. Additionally, we appreciated that both projects approached questions with significance for Wyoming.

This young woman also showed an understanding of the limitations of the original data she was processing. Two of our judges were also impressed as they listened to her being interviewed by experts with experience in machine learning or its use in their fields. Their questions allowed her to articulate her understanding of this technology and her modifications to the programs that she chose.

“Can’al Deer Cross?” (say it three times fast) is a study on the difficulties for mule deer in crossing the Canyon Canal in Sublette County. It was designed to evaluate the problems that students had observed in their science fair project last year, which focused on migration timing. We liked that they followed their curiosity about this discovery and how they used scientific methods to answer a genuine question they had exposed. The three students collaborated to place motion cameras, analyze what was recorded and come to conclusions about canal design and deer behavior. They had some unexpected results as well as weather-induced variables, which they acknowledged and planned to address in further studies next year. Their results have real-world application for mitigating migration impediments for mule deer, and the trio have gained a real appreciation for the odyssey and difficulty that is migration!

Our interviews with all of our 16 - 18 finalists were online, so we missed out on the real interaction of meeting them in person, which makes the process more fun and helps encourage the students. Among those finalists were several projects that related to Powder River’s issues, though none stood out in terms of time and effort invested, reasonableness of conclusions, and overall knowledge gained compared with the two studies above. Our awardees, while seeing the limitations of and even gaps in their studies also saw the immediate practical uses of their work. It is easy to imagine them in the future contributing to science and communicating their findings with clarity and enthusiasm.

**Maria Katherman
Douglas**

Donate a Dependable Car to Powder River



Powder River staff members travel around Wyoming, and we put a lot of miles on our cars. We keep them well-maintained as we want the staff to travel safely. However, the vehicles do eventually wear out. In the past we have been lucky enough to have members donate cars in good condition, which is a wonderful gift for Powder River.

If you have a reliable, dependable car that you would like to donate, please contact the office at 307-672-5809. Thanks to all of our members for their continued support!

Powder River Staff

Remembering Neil Edward Anderson

July 13, 1938 – December 1, 2021

There is so much more to a life well-lived than mere dates, education and jobs can convey.

Perhaps you knew Neil as a cherished father, brother, friend, neighbor, sometime Quaker, member of our Qi Gong family. You may have known him as a raconteur, telling tales of his years working in many aspects of the trucking industry as well as his travels or as a teller of very silly jokes. You may have been one of the unwary who found out what a skilled card player lurked under his mild demeanor or as a child learning uproarious card games. Perhaps you never knew his name, but he was the man who drove home to get tools to get your car started on I-90 or the Old Hardin Highway or perhaps the couple who had jackknifed their large RV on a crowded lakeside parking area. He was the one who untangled the mess and got you on your way. Neil helped several young mothers in the Tongue River Valley who were strapped for cash. He rarely mentioned that he was always looking for people who needed help. You may have known him as the man who walked around Dayton when he could, eventually using a walker, or the guy who sat out in front of the Corner Grocery, drinking coffee, kibitzing and watching the world go by.

Neil's years as an Army payroll clerk in Cold War England created a passion about the UK in general, British sport cars, motor sports, particularly Formula One (though he enjoyed The World of Outlaws Dirt Cup circuit as well). Always ready for travel and adventure, Neil followed the European Formula One circuit in 1979, joined along the way by family and friends. He delighted in sharing his almost encyclopedic knowledge of and enthusiasm for cars of all kinds, like it or not! Neil's delight in all things automotive got him a volunteer position in Chaco Canyon, the year he joined his wife and sister to wander around the country in VW vans. Neil also kept up on the many



changes in the airplane industry and is remembered for piling the family in the car and parking toward the end of one of the Sea-Tac runways where we could experience the power and sound of a take-off, right over our heads. If you knew Neil as a man of enthusiasms, you knew that he expected you to follow along. However, you also knew that he would wholeheartedly support you in yours!

He was a compulsive reader of all forms of print, with a library of books as well as film on WWII. Neil was a fixture at the Corner Grocery in Dayton because he picked up the Sheridan Press, every day – rain or shine, and drove to Sheridan for the Billings Gazette.

Many of you shared in his boisterous, complicated and loving marriage of 40 years. To many more, Neil is known as a man who

heroically and courageously overcame incredible physical and mental challenges and tried to make the most out of every day, however difficult. In all these personas and many more he is missed.

Neil is survived by, Patty Kemper and his former wife, Barbara Anderson, his blended family of Garrett Anderson (Theresa) and David Thompson (Moi) as well as his grandchildren Quinn, Noah, Emma, Hannah, and Rebecca. Sisters: Janet Anderson and Judy Anderson. He was preceded in death by both parents Wilma and Edward Anderson.

If you wish to commemorate Neil with a donation, support The Food Group and Powder River Basin Resource Council. If you wish a Neil's eye view of Dayton, grab a cup of coffee at the Corner Grocery and sit on "Neil's Bench."

A celebration of the life of this kind, smart, irascible, funny, generous, loving and maddeningly dear man will be held sometime in the summer or fall and Neil, who liked nothing better than a party, would say "you are all invited!"

Renew Your Membership Today!



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www.powderriverbasin.org/donate-join/





Tips for Increasing Ranch Profitability with a Holistic Paradigm Shift



As profit margins in traditional cattle ranching operations grow tighter, ranchers are looking for new methods for returning profitability to ranching. In March, a Sheridan workshop featured local rancher and profitability expert, Burke Teichert, who shared a paradigm shift promising just that. The workshop was sponsored by the Young Ag Producers of the Wyoming Stock Growers Association and the Sheridan District Natural Resources Conservation Service.

Teichert, a member of Understanding Ag, an organization aimed at providing regenerative agriculture education (along with experts such as Gabe Brown), is a long-time rancher who has owned and managed ranches throughout Wyoming and the Mountain West. He opened the workshop by telling the young ranching audience, “Many of you won’t like what I have to share. You’re in a paradigm lockdown.” He further advised, “But don’t look down on this major paradigm shift. You can either break out of conventional ranching or go broke.” Teichert followed this blunt statement with management specifics and success stories of ranchers who are embracing this shift.

Along with history and tradition, ranches are also complex science and management laboratories. Teichert focused on these new goals to reflect ranching’s complexities:

- Work with your team to establish clear cut goals. What do you want your ranch and life to look like in five, ten, and 20 years? Include the landscape, financial goals, and quality of life. Every single decision you make will impact those goals.
- Increase your gross margin by improving the health of soil, feed, and livestock, plus managing everything holistically, which decreases inputs and labor and increases herd size without

adding acreage.

- Cut overhead to the bone. Sustainable year-round grazing management reduces hay production. Many ranchers who traditionally fed all winter now feed a month or so at most. “Every time you put a machine between a cow and her mouth,” cautioned Teichert, “you’re increasing overhead.”

- Rethink everything you’ve practiced regarding time of calving, size of cows and calves, and weaning.

Early calving increases rate of calf loss, and is harder on the cows as well as the calving crew. Late weaning can also be less stressful.

- The trend for decades has been bigger cows and calves. That makes little sense when a bigger cow takes more feed to produce bigger calves which sell for less per pound. Teichert strongly recommends analyzing profit per acre, not profit per cow.

These few details fail to even scratch the surface of the new holistic ranching paradigm. Fortunately, Teichert and other experts at Understanding Ag provide excellent resources to fill the gaps. A webinar that echoes the Sheridan workshop titled “Building Resiliency: Farm and Ranch Profitability” featuring Teichert is available at Understanding Ag’s website understandingag.com under “Resources” then “Past Webinars.”

Look for more articles, opportunities to connect with regenerative ag producers, field trips and webinars as Powder River expands its regenerative ag work. If you have thoughts about what you’d find most helpful, please drop a note to Pennie Vance, Ag Organizer, at penniev@powderriverbasin.org.

Pennie Vance
Powder River Staff

Powder River Wants Member Input! Strategic Planning Process Moves Forward

Powder River board and staff are preparing for a strategic planning session this year, and we want to hear from you! If you have feedback on any of the questions listed below, please let us know by July 31. You can reach out to Development Director Robin EH Bagley with any feedback via email at rbagley@powderriverbasin.org, phone (307-672-5809 ext. 300), or snail mail to our Sheridan office at 934 North Main Street, Sheridan WY, 82801.

1. What are your thoughts on Powder River’s strengths throughout the years?

2. In your opinion, where do we need improvement or any changes? Are we focused on the issues and areas in our mission and of concern to our members and Wyoming people?
3. What are the changes that you see happening on the ground and politically in Wyoming, and how do we as an organization respond nimbly to these changes?
4. From your viewpoint what does Powder River offer that no other Wyoming organization does – do we do something unique?

Thank you for your input as we move forward with this process!

WYDOT...Continued from page 1

funds managed by the Department of Environmental Quality (DEQ). The state hopes to begin the request for proposal (RFP) process this fall, with construction of new EV charging stations beginning in 2023.

WYDOT also funded a study in 2019 that looked at costs, locations and corridor prioritization specific to the state, and in June 2021, the state established an intergovernmental Zero Emissions Working Group, which put together the state's Zero Emissions Strategy to enable and manage the system build-out. This group meets monthly, and includes representatives from the following offices: Governor, WYDOT, DEQ, Public Service Commission (PSC), Wyoming Energy Authority, Department of Agriculture, Office of Tourism, and the Wyoming Business Council. These agencies will also share administrative work loads associated with the rollout.

In January of this year, the PSC held a technical conference to discuss demand charge and infrastructure installation challenges associated with Direct Current Fast Charging (Level 3/NEVI) station build-out. The agency will also be involved with ensuring that rates for at-home charging and associated demand charges are in the public interest.

All of these inputs and others have helped inform the plan, which takes into account Wyoming challenges, including projected lack of use to offset costs, electricity demand charge pricing at low-use stations, and fair and equitable revenue generation and rates. Wyoming's plan would incentivize and subsidize private investment through the dispersal of NEVI funds, which can be used for operational expenses for the five years of the program to offset some of the financial risks.

Current estimates (per the WYDOT study) put the cost of a station meeting NEVI guidelines at between \$500,000 and \$750,000, with an estimated monthly energy cost of \$10,000-20,000, assuming access to existing electrical infrastructure. Projects that include energy generation and storage would cost more up front, but change the long-term economics considerably because of overall reduced power costs over the life of the project.

While the focus is on interstates and main transportation corridors, the state also recognizes that off-route communities and others may feel left out of the plan, and intends to mitigate that through continued communication, as well as through additional funding, education and public information/feedback sessions. All interested parties should remain engaged and informed, as opportunities will continue to be made available.

Aethon...Continued from page 1

Instead of triggering enforcement actions like fines, these test failures have resulted in a study of potential causes of failure while discharge continues unabated. Our letter outlines the need for stricter permit conditions around WET testing, including quarterly testing and financial penalties for test failure, in order to prevent toxic discharge from continuing to degrade Alkali and Badwater and potentially harm Boysen Reservoir and downstream fisheries.

Documents and pictures also show high concentrations of chemicals associated with the production of gas and oil in discharge sampling. Aethon's current permit only allows discharge of produced

In order to rapidly, transparently, and equitably distribute funding, WYDOT intends to hire a consultant to develop the technical and location requirements to establish the corridor/route recommendations and update them based on available funding. The consultant will also write the RFPs.

In addition, there are other discretionary funds available through the federal infrastructure bill. Direct-to-user grants are competitive and include not only EV, but also hydrogen, propane and natural gas fueling infrastructure. Eligible applicants include governments, tribes, and nonprofit agencies. Among these funds are two types of grants: contracts with private entities to install infrastructure, or community grants for projects that reduce greenhouse gasses and expand gaps in access. The state has a funding matrix available online that identifies the various programs, including some not mentioned here.

The plan is meant to be adaptive as zero emission vehicle use grows and technology creates new opportunities. What is meant to remain consistent is collaboration, coordination and synchronization of Wyoming's efforts to ensure fair and equitable access for all.

Ultimately, the EV rollout is an opportunity to drive the conversation of energy transition. There will be ongoing opportunities for concerned citizens and ratepayers to become more informed and to engage in the process. The Wyoming Legislature has identified interim priority topics that will include work by the Transportation and Minerals committees. Revenue opportunities and regulatory rates also need to be discussed. Nationally, the Highway Trust Fund - designed to fund road maintenance - is declining (a result of fuel efficiency improvements). Wyoming doesn't need to solve the problem on its own, but it can be part of the larger dialogue as we examine these issues.

Electrifying the transportation sector helps establish a more flexible, resilient smart grid, a point recognized by Powder River and our members, most recently in a 2021 resolution. We look forward to remaining engaged as the process continues to roll out. Citizens and ratepayers need to be part of the process. WYDOT's [Zero Emission Vehicles \(state.wy.us\)](https://state.wy.us) website is a good place to check for more information. We'll do our part to keep you informed about upcoming opportunities to be involved.

Michele Irwin
Powder River Staff

water into Alkali and Badwater, and the permit prohibits discharge that forms sludge or a visible hydrocarbon sheen on the surface of the water into which the discharge occurs. Pictures of the creeks suggest that these conditions are being violated, but DEQ has not issued any notices of violation regarding this issue.

Our letter highlights DEQ's obligations to enforce permit conditions and the agency's duty to protect Alkali and Badwater Creeks and downstream users. Based on the new information provided to us via a records request, we believe we have standing to request that the permit be reopened, and are waiting to hear from DEQ on further actions.

Lottie Mitchell
Powder River Staff



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Encouraging Responsible Development Today... _____ For Tomorrow...

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Save the Date

2022

21 May Board Meeting, Buffalo

9 - 11 June WORC Summer Meeting, Sheridan

Planned Giving and Estate Planning Gifts

The Powder River "family" has been thinking a lot about the future lately, because, as the saying goes, "We aren't getting any younger." We want to make sure this organization remains viable for future generations in the same way it serves today's members. So we're inviting you, our extended family of members and donors, to consider including Powder River in your estate plans.

Your gift would create a living legacy allowing Powder River to continue our work far into the future and helping ensure Wyoming remains the place we know and love for our kids and grandkids.

As one long time Powder River member, Digger Moravek stated, "I want to raise Hell long after I'm gone." You too can do this through a bequest to Powder River.

The two easiest ways to include Powder River in your estate planning take little time (and no legal assistance).

- **THROUGH YOUR RETIREMENT ACCOUNT** (Your IRA, Roth-IRA, SEP-IRA, 401(k), or other such account): Name *Powder River Basin Resource Council* as a Primary beneficiary for a percentage. One percent, 10%, 25% or whatever you wish. You can do his through the account custodian, or often even on the custodian's website in a few minutes (Powder River's Tax ID is 74-2183158).

- **THROUGH YOUR LIFE INSURANCE POLICY:** - Name *Powder River Basin Resource Council* as a primary beneficiary of any percentage of your life insurance policy. You can do this through your insurance agent or the insurance company, or often even on your insurance company's website in only a few minutes (Powder River's Tax ID is 74-2183158).

If you are preparing a formal will or living trust document, you can include Powder River Basin Resource Council as a primary beneficiary of a specific dollar amount or percentage of your estate. If you already have such an instrument, you can have it revised to include Powder River. This is probably best done through your attorney.

Finally, there are several more complex tax-advantaged ways to contribute to Powder River's future and receive continuing income and tax advantages during your lifetime. These include "charitable remainder trusts" and sale of appreciated and depreciated securities. Please consult your legal and financial advisors about how you can use such tools to support Wyoming's most effective grassroots member organization, and how you might benefit.

If you have any questions, please give Powder River a call at 307-672-5809

Thank you!

Wyoming Delegation Contact Information

Barrasso, John (R)
307 Dirksen Senate Office Building
Washington, DC 20510
Website: barrasso.senate.gov
Phone: (202) 224-6441
Fax: (202) 224-1724

Cynthia Lummis (S)
Dirksen Senate Office Building
Suite SD-G12
Washington, DC 20510
Website: lummis.senate.gov
Phone: 202-224-3424

Cheney, Liz (R)
416 Cannon House Office Building
Washington, DC 20515
Website: cheney.house.gov/
Phone: (202) 225-2311
Fax: (202) 225-3057