

Circle Speaker

APRIL-JUNE 2021

WHITE CLAY & NAKODA ENVIRONMENTAL NEWSLETTER

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TC Energy Corp. today said it has terminated the Keystone XL pipeline project. ShannonPatrick17/Flickr

OIL AND GAS

Developer cancels Keystone XL pipeline

By Carlos Anchondo and Timothy Cama, E&E News reporters | Published: June 9, 2021 at 4:57 PM
<https://www.eenews.net/stories/1063734591>

TC Energy Corp. today canceled the Keystone XL pipeline, roughly 13 years after developers first proposed the project, which became a leading target for climate activists.

The 1,200-mile line, designed to carry crude from Canada's oil sands through Montana, South Dakota and southern Nebraska, has faced years of pointed opposition from environmental and community groups, as well as a number of legal battles that landed the project before the U.S. Supreme Court.

But a fatal blow came in January, when

President Biden revoked the pipeline's permit to cross the U.S.-Canada border. TC Energy suspended work on Keystone XL the same day.

"We value the strong relationships we've built through the development of this Project and the experience we've gained," TC Energy President and CEO François Poirier said in a statement today announcing the project's termination.

TC Energy said the decision was made after a "comprehensive review of its op-

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Developer cancels Keystone XL pipeline

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tions" and in consultation with the government of Alberta, which invested more than \$1 billion in the project.

"We remain grateful to the many organizations that supported the Project and would have shared in its benefits, including our partners, the Government of Alberta and Natural Law Energy, our customers, pipeline building trade unions, local communities, Indige-

nous groups, elected officials, landowners, the Government of Canada, contractors and suppliers, industry associations and our employees," he continued.

Former President Trump gave federal approval for Keystone XL's permit in 2017, reversing an Obama-era decision that said the pipeline would not serve the national interest (Greenwire, March 24, 2017).



Tribal Consultation Opportunity: Notice of Intention to Reconsider and Revise the Clean Water Act Section 401 Certification Rule

By Karen Gude, Gude.Karen@epa.gov | Monday, June 7, 2021 12:22 PM

Dear Tribal Partner,

The U.S. Environmental Protection Agency (EPA) is initiating consultation and coordination with federally-recognized Indian tribes on the Notice of Intention to Reconsider and Revise the Clean Water Act Section (CWA) 401 Rule. On May 27, 2021, EPA announced that it would revise the CWA Section 401 Certification Rule and initiate a series of stakeholder engagements on the upcoming rulemaking effort. CWA Section 401 provides states and tribes with a powerful tool to protect the quality of their waters from adverse impacts resulting from federally licensed or permitted projects. EPA promulgated implementing regulations for water quality certification prior to the 1972 amendments to the Federal Water Pollution Control Act (commonly known as the Clean Water Act), which created Section 401. In 2020, EPA revised these regulations found at 40 CFR part 121. Clean Water Act Section 401 Certification Rule, 85 FR 42210 (July 13, 2020).

On January 20, 2021, President Biden signed Executive Order 13990 directing federal agencies to review rules, including the Clean Water Act Section 401 Certification Rule, issued in the prior four years that are, or may be, inconsistent with the policy stated in the order. Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, Executive Order 13990, 86 FR 7037 (published January 25, 2021, signed January 20, 2021). Consistent with this Executive Order, EPA has completed its ini-

tial review of the Clean Water Act Section 401 Certification Rule and determined that it will propose revisions to the rule through a new rulemaking effort.

The tribal consultation letter and consultation and coordination plan are attached. These consultation materials are also available on EPA's Tribal Consultation Opportunities Tracking System (TCOTS) website located at: <https://tcots.epa.gov>.

EPA is holding two Tribal Consultation Kick-off Webinars on **June 29, 2021, from 2:00 – 4:00 PM Eastern Time, and July 7, 2021, from 2:30 PM to 4:30 PM Eastern Time**. To register, please visit: <https://www.eventbrite.com/e/us-epa-cwa-section-401-tribal-consultation-kick-off-webinar-tickets-156753749685>. Please see the attached consultation plan for additional information.

EPA's anticipated timeline for the consultation and coordination period for this action is expected to extend from June 7, 2021, to September 7, 2021.

For any questions, please contact Emma Maschal, Office of Wetlands, Oceans and Watersheds, by email at cwa401@epa.gov or by phone at 202-566-1156.

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Company officially nixes Keystone XL pipeline

By Rachel Frazin

<https://www.msn.com/en-us/news/politics/company-officially-nixes-keystone-xl-pipeline/ar-AAKSG2c?li=BBnb7Kz>

The company behind the Keystone XL pipeline announced on Wednesday that it's officially scrapping the project after President Biden nixed a border-crossing permit for it.



Company officially nixes Keystone XL pipeline

A statement from TC Energy said that after "a comprehensive review of its options, and in consultation with its partner, the Government of Alberta, it has terminated the Keystone XL Pipeline Project."

"We value the strong relationships we've built through the development of this Project and the experience we've gained," François Poirier, the company's president and CEO, said in a statement.

The company also said that it will work with regulators and others to safely terminate the project.

The news was first reported by the Washington Examiner.

On his first day in office, Biden decided to revoke the

key permit for the project, garnering cheers from many environmental and indigenous groups and ire from conservatives.

In an executive order doing so, Biden argued that the proposed oil pipeline "disserves" the U.S. national interest and that "leaving the Keystone XL pipeline permit in place would not be consistent with my Administration's economic and climate imperatives."

Since then, a cohort of states with Republican attorneys general sued Biden over the decision.

Wednesday's news reignited GOP criticism of Biden over his decision.

"This is devastating news for our economy, jobs, environment and national security-and it's entirely President Biden's fault. It's beyond clear that President Biden is beholden to extreme environmentalists," Sen. Steve Daines (R-Mont.) said in a statement.

Former President Trump had championed the vessel, which would have shipped carbon-intensive tar sands oil from Canada to the U.S. across 1,200 miles.

He issued a permit allowing it to cross the border during the first months of his presidency.

The vessel's proponents say it would have brought jobs and revenue, while opponents argue that the country shouldn't import tar sands oil, and tribes have said the Trump administration ignored their treaty rights when approving the pipeline.



EPA, Army Announce Intent to Revise Definition of WOTUS

By Karen Gude, Gude.Karen@epa.gov | Wednesday, June 9, 2021 12:00 PM

Dear Tribal Environmental Directors and Natural Resource Directors,

The U.S. Environmental Protection Agency and Department of the Army (the agencies) intend to estab-

lish a new definition of "waters of the United States" to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. In addi-

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EPA, Army Announce Intent to Revise Definition of WOTUS

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tion, U.S. Department of Justice filed a motion requesting remand of the 2020 Navigable Waters Protection Rule (NWPR) in the District Court of Massachusetts on June 9, 2021.

Executive Order 13990 on “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis” directed EPA and the Army to review and, as appropriate and consistent with applicable law, take action to revise or replace the NWPR defining “waters of the United States.” EPA and the Army have completed this review and determined that they have concerns with the NWPR, including that it is causing significant, ongoing, and irreversible environmental damage.

The agencies intend to pursue a new rulemaking process to replace the NWPR with a durable definition of “waters of the United States.” In the interim, the NWPR is still in effect across the country. Further details of the agencies’ plans, including opportunity for public participation, will be conveyed in a forthcoming action.

The agencies’ new regulatory effort will be guided by:

- Protecting water resources and our communities consistent with the Clean Water Act.
- Considering the latest science and the effects of climate change on our waters.
- Emphasizing effective implementation.
- Reflecting the experience of landowners, the agricultural community that fuels and feeds the world, states, tribes, environmental organizations, and community organizations.

The Clean Water Act prohibits the discharge of pollutants from a point source into navigable waters. Navigable waters are defined in the Act as “the waters of the United States, including the territorial seas.” Thus, “waters of the United States” is a threshold term establishing the geographic scope of federal jurisdiction under the Clean Water Act. It is not defined by the Act but has been defined by EPA and the Army in regulations since the 1970s.

To learn more about the definition of waters of the United States, visit <https://www.epa.gov/wotus>.

Please contact CWAwotus@epa.gov with any questions.

Swift Fox Pups!

From Dana Nelson, Fellow, Smithsonian Conservation Biology Institute

"Hooray for some good news: Swift fox pups have been born on Fort Belknap for the first time in over 50 years! A pair of foxes released last September now has 4 little ones venturing out of the den. If you are lucky enough to see a litter, remember that this is a very sensitive time of year. Any disturbance can

compromise the puppies. Please keep your distance to avoid stressing or disturbing the family, and please be sure to call Fort Belknap Fish and Wildlife Department with your sighting (406-353-8471) so that this great reintroduction success can be documented!"



K-State Selected for \$5 Million in EPA Funding to Deliver Training, Technical Assistance to Brownfield-Impacted Communities

Contact Information: Emily Albano (albano.emily@epa.gov) | 913-551-7860 | Environmental News | 04/19/2021
<https://www.epa.gov/newsreleases/k-state-selected-5-million-epa-funding-deliver-training-technical-assistance-brownfield>

(Lenexa, Kan., April 19, 2021) - Today, the U.S. Environmental Protection Agency (EPA) is announcing that Kansas State University (K-State) is one of six organizations nationwide to receive a total of \$11 million in grants to provide training and technical assistance to communities across the country under the Technical Assistance to Brownfields (TAB) program.

K-State was selected to receive \$5 million to provide assistance in EPA Regions 5, 6, 7, and 8, and will also coordinate with the other selected recipients on nationally-led efforts and tools.

Much of the technical assistance will be provided to communities in underserved and economically-disadvantaged neighborhoods – places where environmental cleanups and new jobs are most needed. This assistance is available to all stakeholders and comes at no cost to communities. It is an important part of the Biden-Harris administration's commitment to advance economic opportunities and address environmental justice issues in disadvantaged communities.

"A primary goal of our Brownfields technical assistance program is to help communities transform environmental liabilities into community assets," said Barry N. Breen, acting assistant administrator for EPA's Office of Land and Emergency Management. "Today's selected grant recipients will serve as independent resources for communities facing the challenges of assessing, cleaning up, and preparing brownfield sites for redevelopment."

"K-State is well-suited to provide local stakeholders with the expertise needed to realize the potential in their neighborhoods," said Acting EPA Region 7 Administrator Edward Chu. "Tackling a contaminated property can be an intimidating endeavor but, through the TAB program, K-State will be able to provide clear, actionable guidance to help cities and other stakeholders turn brownfield sites into community assets."

"We are privileged and honored to be selected to continue serving communities and tribes across EPA Re-

gions 5, 6, 7, and 8. This area is like none other. We can't wait to make new friends, and work with old ones, to bring brownfield revitalization dreams to life!" said Blase Leven, Kansas State University TAB program director.

The TAB program helps communities, states, tribes, and others understand the human health and environmental risks associated with contaminated or potentially contaminated properties, and learn how to assess, safely clean up, and sustainably reuse them. For example, the training and research to be delivered by the selected TAB providers will assist communities in:

- Identifying and prioritizing brownfields for redevelopment
- Determining the potential public health impacts of brownfield sites
- Identifying appropriate funding/financing approaches
- Applying for and managing EPA Brownfields grants
- Evaluating economic feasibility of reuse plans
- Interpreting technical brownfield reports, assessments and plans
- Understanding and navigating regulatory requirements

Today's selected grant recipients are:

- **University of Connecticut** will provide assistance in EPA Region 1.
- **New Jersey Institute of Technology** will provide assistance in EPA Region 2.
- **West Virginia University Research Corporation** will provide assistance in EPA Region 3.
- **International City/County Management Association** will provide assistance in EPA Region 4.
- **Kansas State University** will provide assistance in EPA Regions 5-8. The university will also coordinate with the other selected recipients on nationally-led efforts and tools.
- **Center for Creative Land Recycling** will provide assistance in EPA Regions 9 and 10.

Background: This Technical Assistance to Brownfields (TAB) grant is a competitive grant awarded every five years.

Climate Change Program News

By Dennis Longknife, Climate Change Coordinator

Hello Climate Warriors, time for an update on my program. First, I would like to thank the Creator for continued health and to all of you in Indian Country.

The last few weeks we have had some crazy weather, from a late season snowstorm that brought temps down to 34 degrees, May 21, to a hot sunny 95 degree day on June 3.



Let me introduce you to our partners at the Center for Large Landscape Conservation, who are pictured in the following order below: Melly Reuling - VP for Conservation Programs, Angelina González-Aller - Community Resilience Program Manager, Rebecca Waters - Conservation Outreach Coordinator, and Sara Pearce - Conservation Intern. The CLLC worked with our program previously to get our Climate Change Adaptation Plan in Draft Form, and through a Wildlife Conservation Society Grant (WCS), we are continuing our partnership and working together once again. These individuals are great to work with.

CENTER
for
LARGE LANDSCAPE
CONSERVATION



Through the WCS grant, my main priorities are to: continue working with CLLC, who will be assisting in facilitating the community meetings, and gathering data and information, to complete our Draft Climate Adaptation Plan. We will also continue collecting more information from various Tribal programs to fill in the sectors of the plan. Our meetings will be hosted in our communities of Hays, Lodge Pole, Dodson, and the Fort Belknap Agency after the Reservation is fully opened. We also are working with our elders and Native Language Program, to add our tribes language into our Final Climate Change Adaptation Plan.

Another project I am working on is the Little Rocky Forest Resilience Project (LRFR). We are currently

completing our climate change plan with efforts to integrate climate change mitigation and adaptation efforts wherever possible. The draft FBIC climate change plan identifies a crucial need for building adaptive capacity in our 70,000 acres of forests in a warming, drying climate.

Climate change is driving rapid forest degradation, jeopardizing water, people, and wildlife. This project seeks to increase forest resilience and protect carbon sink capacity in the Little Rocky Mountains by restoring ponderosa pine forests and applying adaptive management techniques.

The goals of this project are threefold:

1. To implement a climate adaptive forest restoration treatment in the Little Rocky Mountains, reducing the likelihood of devastating wildfire with the co-benefits of protecting carbon sink capacity and a place of cultural and spiritual significance to the people of FBIC;
2. To provide additional resources to the FBIC Climate Change program to continue work on outreach, education, and planning for climate change;
3. To engage Aaniiih Nakoda College students on the issue of climate change and provide student interns with the opportunity to develop skills in forest and stream monitoring.

The project entails working with partners on the LRFR project, such as Chet Gladstone - BIA Forester for the BIA Program, Lee Black Crow - Fire Management Director, and Michael Black Wolf - Director of the Tribal Historic Preservation Office (THPO). The LRFR Project's main tasks are to thin 100 acres of forested timber, using tribal members who have been trained in chainsaw work, and to monitor the site using the Aaniiih Nakoda College student interns to assist in measuring the overall forest health conditions before, during and after thinning treatment. Some of the monitoring methods we will use are: collecting core samples of pine trees - by looking at tree rings in a core sample, you can get a lot of tree history information such as, fire and drought history, precipitation events, and the age of the tree. We will also be identifying habitat types of the canopy and shrub layers,

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Climate Change Program News

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identifying native plants on site, and collecting soil samples to measure soil health, tree litter/duff layers, and finally but just as important, identifying forest insect and disease in the 100 acre plot in the Little Rocky Mountains. If approved by FBIC, we will also use a Drone to record flights above the Little Rocky Forest Resilient site, before during and after the project is completed.

Our student Interns will gain valuable Forest Ecology and Management Principal Practices, that they can apply to real world research and career goals, in the event they want to further their dreams in a Forestry Career. They are our future leaders and hopefully they will return to manage our own forests, that is the Legacy I would like to leave behind.

Education & Outreach

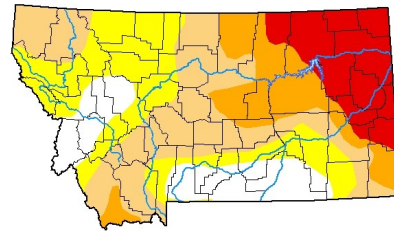
I gave a Virtual Zoom, Climate Change Presentation to the University of Montana, Environmental Studies Class of Dr. Robin Saha, I also gave two more Climate Change Presentations to the Aaniiih Nakoda College (ANC), one titled the "Climate Change Adaptation Plan", to Dan Kinsey/Environmental Science Instructor's, Natural Resources Class, and another presentation to Chelsea Morales/Ecological Health Instructor's, Ecological Health Summer Course, titled, "Climate Change and Health Impacts".

I recently received some Noxious Weed Posters and Flyers, provided by the Washington State University Extension Program, through USDA/APHIS, and a Tribal Collaborative Response to Invasive Species Project funding, and Dan Fagerlie, Project Director. A few years ago we had a series of meetings with some of our tribal programs, which included the MSU Extension Program/Elizabeth Werk, and Dan Kinsey/Environmental Science Instructor, of ANC. From those meetings came some very beautiful posters, showcasing our invasive plant species, such as Spotted Knapweed, Leafy Spurge, Canada Thistle, Cheatgrass, Poison Hemlock, and Russian Olive.

I have also been very busy with other Climate partners, such as the Montana Drought Workgroup, where I give updates on our local climate/weather conditions, we are currently in a Severe Drought Pattern (D2), because of no snowpack and very little spring rains. Impacts to our agriculture, flora and fau-

na, and some cultural practices, these all will be evaluated and incorporating plans, to ensure our ecological community remains Resilient for years to come.

U.S. Drought Monitor Montana



May 25, 2021
(Released Thursday, May 27, 2021)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	14.48	85.52	60.47	30.69	15.56	0.00
Last Week (5-18-2021)	12.37	87.63	66.02	33.98	15.71	0.00
3 Months Ago (3-23-2021)	3.34	96.66	55.54	8.95	0.00	0.00
Start of Calendar Year (1-29-2021)	36.37	63.63	34.41	8.27	0.36	0.00
Start of Water Year (9-29-2020)	11.86	88.14	40.59	4.22	0.02	0.00
One Year Ago (5-26-2020)	67.29	32.71	2.47	0.00	0.00	0.00

Intensity
 None (White) D2 Severe Drought (Orange)
 D0 Abnormally Dry (Yellow) D3 Extreme Drought (Red)
 D1 Moderate Drought (Light Orange) D4 Exceptional Drought (Dark Red)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
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NOAA/NWS/NCEP/CPC

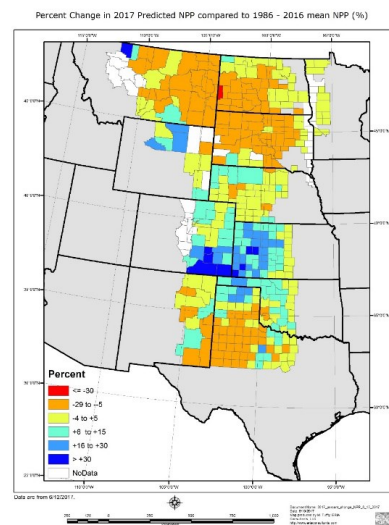


droughtmonitor.unl.edu

I am a member of the Joint Science Committee (JSC), and is made up of federal agencies and partners, including tribes with the Missouri River Basin. The JSC meetings provide input both to the North Central Climate Adaptation Science Center (NC CASC), and the US Department of Agriculture's Northern Plains Regional Climate Hub (Hub).

The JSC is an opportunity for tribal nations in the region to educate and ensure that both centers understand their priorities and needs in Indian Country, and in understanding and responding to climate change. Our perspectives on tribal issues will add great value to this committee. Our last meeting was held Virtual and we got to listen to a Presentation called Grasscasting by Danielle Peck of the Northern Plains Climate Hub.

It is a user friendly application that uses current climate data, and generates a Grassland Productivity Forecast for your area, which makes it a great planning tool for implementing agricultural activities.



"Based on observed weather to date and seasonal weather forecasts...we expect grassland productivity in your county...to be X% higher or lower than your county's 30-year average"



Invasive Weeds to Report if Discovered on the Fort Belknap Reservation

These plants are non-native and outcompete desirable native vegetation on tribal lands and neighboring areas and destroy native ecosystems

Leafy Spurge

Euphorbia esula



Leafy spurge is a deep-rooted perennial from 6 - 36 inches tall. Plants begin growing in early spring before their competitors. Each umbel supports 7-10 groups of tiny flowers. With bluish-green leaves, it has milky sap that may cause severe irritation to human skin and hair loss on the legs of horses in heavily infested pastures. It competes strongly in pastures and rangelands.

Spotted Knapweed

Centaurea stoebe



Spotted knapweed is a biennial or perennial growing up to 5 feet tall with a stout tap root. It is hairy and rough giving the plant a somewhat woolly appearance. Plants start as a cluster of radiating leaves of deeply lobed leaves the first year, known as a rosette, produce flowering stems the following year. Spotted knapweed is a very aggressive species. Biocontrols reduce plant vigor and seeds.

Canada Thistle

Cirsium arvense



Canada thistle is a colony-forming perennial that grows 1 to 4 feet tall. Leaves are oblong to lance-shaped and spiny. It produces multiple purple flowers that are small ranging from 1/2 to 3/4 inches in diameter. Canada thistle spreads by seed and horizontal roots that reach depths of 20 feet. It invades riparian areas, roadsides, fields and rangeland. It can be controlled with herbicides.

Russian Olive

Elaeagnus angustifolia



Russian olive is a deciduous multi-stem shrub or tree, growing up to around 20 feet. It spreads along waterways and has naturalized along many of our major rivers in the interior western U.S. It can crowd out important native riparian plant communities that provide valuable wildlife habitat. Plants primarily reproduce from seed. Seed dispersal occurs during the fall and winter, primarily by birds, other vertebrates and possibly water and ice.

For more information and to report invasive plants:

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Provided by WSU Extension through USDA APHIS PPQ PPA 7721 TCRISP (Tribal Collaborative Response to Invasive Species Project) Funding in Partnership with FRTEP Award 2017-41580-26917

Cooperators: Fort Belknap Reservation; Washington State University; U.S. Department of Agriculture; Daniel L. Fagerlie, Project Director, fagerlie@wsu.edu. Images and/or text by: Dan Fagerlie; Washington State Noxious Weed Control Board; Montana State University; montana.gov; mtweed.org. Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.

Circle Speaker

Cleaning indoor air may prevent COVID-19's spread. But it's harder than it looks

Ventilation, filtration and few other tricks help, but no solution works for all

By Tina Hesman Saey | MAY 18, 2021 AT 6:00 AM

<https://www.sciencenews.org/article/coronavirus-covid-air-spread-indoor-clean-ventilation-filtration>

As restaurants, bars, businesses and schools reopen and mask requirements drop for the fully vaccinated, some people are asking how to bring in customers and students while still preventing COVID-19 infections from spreading. Some scientists and engineers are doing research that may help clear the air, making it safer for everyone to breathe.

Though no one solution works for all places, public spaces need to focus on proper ventilation, air filtration, germicidal ultraviolet lights and air quality monitoring rather than rigorously disinfecting surfaces, say many scientists who cite evidence that the virus lingers in the air.

"This is what's really frustrating," says Jose-Luis Jimenez, an aerosol scientist at the University of Colorado Boulder. "We've wasted billions and billions of dollars on disinfecting, which doesn't serve any purpose whatsoever, yet things like having a \$50 filter in every classroom, we haven't done."

Scientists have hotly debated whether SARS-CoV-2 counts as an airborne virus. While some researchers maintain that coronavirus can be picked up from infected saliva droplets that have landed on surfaces, many others counter that the possibility is a slim one. Touching a contaminated surface has a 1 in 10,000 chance of causing an infection, according to the U.S. Centers for Disease Control and Prevention. So, handwashing and standard cleaning practices are probably enough to eliminate any coronavirus that lands on surfaces or strays to hands.

A wealth of data now suggests that COVID-19 is spread mainly through inhaling fine aerosol particles that can hang in the air for hours, researchers argue in separate publications that appear online April 14 in the *British Medical Journal* and in the May 1 *Lancet*. Ten lines of scientific evidence support airborne transmission, the *Lancet* report says, and little data favor droplets or contact with contaminated surfaces as the primary way the virus is spread. On April 30,



Pedestrians walk along an overpass from a train station in Perth, Australia, where lockdown restrictions were recently lifted, though face masks remain mandatory. PAUL KANE/GETTY IMAGES

the World Health Organization updated its transmission information to acknowledge aerosols as a source of spread.

Learning how to clean the air of potentially virus-laden aerosols could have long-term benefits for health and allow businesses and schools to remain open during future outbreaks. That's promising because though COVID-19 cases, hospitalizations and deaths are falling in the United States thanks to vaccinations, mask wearing and people moving outside as the weather warms, the virus is still spreading widely in some places. On May 13, the U.S. Centers for Disease Control and Prevention updated its recommendations saying that fully vaccinated people no longer have to wear masks, except where required by federal, state, local or tribal requirements, including business or workplace guidelines. It's not yet known if or how that will affect cases, though some researchers predict the coronavirus will make a comeback as people congregate inside in the fall and winter, which may require masking up again (SN: 4/23/21). Air cleansing strategies may help stop the resurgence, as well as prevent flu, colds and many other illnesses, including possible future pandemics.

Indoor air ought to be regulated for infection control,

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Cleaning indoor air may prevent COVID-19's spread.

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much like food and water are, air experts propose in the May 14 Science. Indoor air has mainly been conditioned to control odors and temperature, but systems should be upgraded to strip out pathogens, too, the scientists say.

Knocking respiratory viruses out of circulation wouldn't just improve health, it would also be good for the bottom line. In the United States alone, yearly economic losses from flu total \$11.2 billion, and other respiratory viruses cost about \$40 billion. COVID-19's global monthly harm is estimated to be \$1 trillion.

"There needs to be a shift in the perception that we cannot afford the cost of control, because economic costs of infections can be massive and may exceed initial infrastructure costs to contain them," the scientists wrote.

Science News spoke to several researchers who shared tips about easy ways to clean the air, how to gauge whether those steps are working and what to avoid.

Ventilation

Cleansing the air is mostly a matter of proper ventilation and filtration. The equipment needed to do those things has been around for decades.

"We have the tools. We have the knowledge," says Charles Haas, an environmental engineer at Drexel University in Philadelphia.

Ventilation replaces stale indoor air with fresh air from outside, which dilutes the concentration of any virus that's present. Simply circulating air with fans isn't enough, Haas says. "If all you're doing is moving around dirty air, the net effect is not going to be beneficial."

Most experts recommend completely replacing all the air in a room six times every hour. That's about average for many schools, offices and nursing homes, says Nora Wang Efram, senior director for research at the Washington, D.C.-based nonprofit American Council for an Energy-Efficient Economy. Hospitals often exceed that level of ventilation. Homes are among the least-ventilated places where people spend their time, with some exchanging air only once every two hours, she says.

Getting proper ventilation might be as easy as opening a window or turning up the fan on a heating and cooling unit. But there are trade-offs in increased energy costs, Efram warns. "Generally, we say increase ventilation, which means your fan has to run faster. Open up the damper and bring in more fresh air. Put in a filter. But there is a limit, and a balance. It's not like you can maximize everything at once," she says.

For instance, opening a window might be fine on breezy, balmy days. But when it's scorching hot or freezing cold out, during allergy season or when wildfires or pollution make breathing outdoor air dangerous, windows aren't an option. In that case, a building's heating, ventilation and air conditioning, or HVAC, system may be a good — if not better — substitute.

Researchers in Germany tested how cross-ventilation from two open windows performed against an HVAC system for clearing aerosol particles from a university lecture hall. In the winter, drafts of cold air from the open windows quickly made conditions in the lecture hall unpleasantly chilly. People would need to repeatedly open the windows for 10 minutes and close them for five minutes to perform similarly to the HVAC system, which did six air changes per hour and kept temperatures comfy, the researchers report March 20 at medRxiv.org. The work is preliminary and hasn't been reviewed by other scientists yet. But in this case, the HVAC was the winner.

In many places, including office buildings, hotels and stores, windows don't open. There, the heating and cooling system is the only option for dumping stale air and bringing in fresh outside air. Many modern buildings already have HVAC systems that provide proper ventilation, says Martin Bazant, a physicist and chemical engineer at MIT who developed a tool to help people calculate how much ventilation they need for their space.

What's going on in a room makes a big difference in how much virus may need to be cleared from the air, Bazant and MIT colleague John Bush, an applied mathematician, report April 27 in the Proceedings of the National Academy of Sciences. "An interesting bit of science that has developed over the last year ... is the strong dependence on vocalization [for] aerosol

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Cleaning indoor air may prevent COVID-19's spread.

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generation,” Bazant says. “For instance, just breathing heavily while exercising doesn’t generate that many more droplets. It’s really coming from your vocal chords.” Speaking or singing generate more aerosol particles, and the louder the sound, the more aerosols are generated. So, a choir room would need more ventilation than the school library where people are sitting quietly.

Filtration

Another wrinkle to consider: Increasing ventilation in one room may carry infectious viruses into connected rooms through HVAC vents, researchers report in the June 15 *Building and Environment*. Central heat and air handling systems that serve multiple rooms are common in schools, strip malls, residential and office buildings, says coauthor Timothy Salsbury, a mechanical engineer at Pacific Northwest National Laboratory in Richland, Wash. If a person with COVID-19 were in one room and the HVAC were turned off, infectious virus particles would stay in that room, he says. “As soon as you start adding air flow to the space, you move the virus from the infected room to the uninfected [connecting] room.”

And that’s where filtration comes in. Experts recommend filtering air through materials that can trap airborne particles containing the virus. Such devices include HEPA filters or furnace and air conditioner filters with a Minimum Efficiency Reporting Value, or MERV, rating of 13. (MERV ratings range from 1 to 16. The higher the number, the more effectively the filter can catch small particles.) Ramping up filtration to pull the coronavirus out of the air can be a good substitute for increasing ventilation, Jimenez says.

Most new buildings in the United States follow building codes that require filters rated MERV8 or higher. But many older buildings have HVAC systems that can’t handle higher level filters, which have more resistance and require more pressure to push air through, Efram says. “If the pressure builds up [too much], it’s going to damage your HVAC system,” she says.

If buildings can’t handle extra filtration at the central unit and building owners can’t afford to upgrade the HVAC system, portable air-purifying machines may help. Many small units that can filter the air in a room are available. Among the best are high-efficiency par-

ticulate absorbing filters, better known as HEPA filters.

HEPA filters effectively remove viruses, pollen, dust, bacteria and other particles from the air. Some units can be expensive, Efram says, and they tend to move air slowly, effectively reducing the number of air changes per hour. Some large rooms, or rooms where lots of people congregate, such as classrooms, may need several units.

A study in the Netherlands found that HEPA units cleared the air of bubbles standing in for coronavirus-carrying aerosols better than open windows and doors did. But study participants said the units were too noisy and created bothersome drafts, the researchers reported in the Jan. 15 *Building and Environment*. Some restaurants are experimenting with tabletop filters that can suck in diners’ exhalations and send the filtered air skyward instead of toward a dining companion’s face.

Many people have the mistaken idea that air purifying equipment has to be high tech and expensive to be effective, says Marwa Zaatari, a building scientist with expertise in indoor air quality and a partner at D Zine Partners, a Texas-based company that designs indoor air quality systems. All you really need is a fan and a filter, she says. Well, five filters.

Corsi boxes, named after environmental engineer Richard Corsi of Portland State University in Oregon, consist of cubes made of five MERV filters with a box fan as the sixth side. The DIY filtration unit is a relatively low-cost alternative that even tenants who don’t control their building’s central HVAC system can use.

A Corsi box (pictured) is a low-cost, DIY indoor air filtration solution that consists of one box fan plus five filters arranged in a cube. COURTESY OF TEX-AIR FILTERS



Filters will remove viruses from the air over the long

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term, but unless there is a filter between two people it won't stop short-range virus transmission, Bazant says. That's why masks are important (SN: 2/12/21). If both people are wearing masks, it's like having two filters, he says.

Restaurants and bars have an extra challenge in the filtration department because patrons don't wear masks while they eat and drink. And lingering over dinner can create a cloud of particles that other diners can breathe in, says Kimberly Prather, an aerosol scientist at the Scripps Institution of Oceanography in La Jolla, Calif. The longer people spend in potentially virus-laden air, the higher the infection risk, she says. "It's all about time. It's not just a whiff" as people pass on the street.

Monitoring

How can diners, store patrons, students and teachers know whether they are breathing safe air? There are no guarantees, but Jimenez, Prather and other experts think the United States should take cues from other countries and post carbon dioxide levels outside businesses and classrooms as a proxy for air freshness.

People breathe out CO₂ all the time. In fact, every exhaled breath is about 4 percent carbon dioxide, Jimenez says. (The rest is mainly nitrogen and oxygen, but may contain small amounts of thousands of other compounds.) Without proper ventilation, CO₂ levels build up. And that's not good at all, Jimenez says. "We get dumber when there is high CO₂," he says. Studies have shown that student performance suffers and people have trouble making decisions as carbon dioxide levels rise.

Worse, high carbon dioxide levels mean a higher chance that "the air you breathe in has already been in somebody else's lungs," Jimenez says. "You don't want your lungs to touch the air that has been touched by other lungs."

Outside, the air people breathe is quickly diluted. Out of every million molecules of outside air, about 400 are carbon dioxide — a concentration of 400 parts per million. Ideally, indoor air shouldn't get much above 700 parts per million of CO₂, Jimenez says.

A portable carbon dioxide monitor can cue people in to whether the store or movie theater they're walking

into has enough ventilation. But it's not a perfect measure, Jimenez stresses. Filtered air may be a bit stuffy, but would have lower infection risks than unfiltered air. And activities, such as an exercise class or choir practice, in a room may produce CO₂ levels similar to other situations, but carry 100 times the infection risk, he and University of Colorado colleague Zhe Peng reported online April 5 in *Environmental Science & Technology Letters*.

Sterilization

Some companies have proposed spraying chemical disinfectants that could kill the virus in the air, Efram says. One proposal would release a fog of the chemicals into a movie theater to sanitize the air. That might be fine when people aren't there. But it wouldn't help with the cloud of aerosols moviegoers constantly emit when they breathe, cheer, laugh or gasp at the antics on screen. "Nobody wants to get sprayed down while they're eating their popcorn," Efram says.

There is a sterilizing technique that could be used while people are in the room, Prather says. Germicidal ultraviolet light may zap the virus and kill it in the air. At least ultraviolet-C radiation has been shown to destroy the outer protein coat of the original SARS virus. No one knows exactly how much UV-C is needed to inactivate SARS-CoV-2.

Still, UV-C lights installed in the upper parts of rooms and shielded from people's eyes may kill lingering viruses and bacteria, making air safer, Prather says. "But you can do it wrong," she says. Such systems need to be installed by professionals and can be costly. Still, properly installed germicidal UV lights can help protect against a variety of pathogens, not only SARS-CoV-2.

Not all UV lights are created equal, though. Consumers should beware of UV photocatalytic oxidation, or PCO, lamps, says Zaatari, the Texas building scientist. Those lamps shine UV light on a catalyst to create chemicals, which can kill pathogens. But the reaction can produce formaldehyde and other potentially harmful chemicals that may damage people's lungs.

Another product to shy away from is ionizers, which often come built into air purifiers along with HEPA fil-

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ters. Companies have also been marketing “bipolar ionization” as a way to kill the virus in the air. Those electronic air cleaners work by creating ozone, gaseous hydrogen peroxide and other chemicals that may or may not kill the virus, but could also damage lungs, Zaatari says. She wrote an open letter urging schools and organizations that set building standards to not use the devices.

Some companies say that their ionizers don't produce ozone. That may well be, but ozone is what is doing the work to kill pathogens, Zaatari says. “So, when they show us a test with no ozone, we know the effectiveness is close to zero.”

The effectiveness of those products has not been proven the way ventilation, filtration and UV-C irradiation have, she says. “At best they don't work, and at

worst they produce harmful by-products,” Zaatari says. “We don't have a shortage of proven solutions. So why would we, in uncertain times, do uncertain things?”



The Metropolitan Transit Authority in New York City recently launched a pilot program to sterilize subway cars, buses and other facilities with virus-killing UV light (pictured). MARC A. HERMANN / MTA NEW YORK CITY TRANSIT

Legacy of pollution blocks prospects for future gold mine near Fort Belknap Reservation

By David Murray, Great Falls Tribune

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<https://meic.org/legacy-of-pollution-blocks-prospects-for-future-gold-mine-near-fort-belknap/>

Officials representing the tribes of the Fort Belknap Indian Reservation are continuing their efforts to block any potential that gold mining operations will return to the Little Rocky Mountains; lands considered sacred to the Assiniboine and Gros Ventre peoples.

On May 1 the tribes issued a news release alleging that a Bozeman-based mining company that is seeking to dig a exploratory test trench on the site of one of Montana's most notorious gold mining operations is not legally authorized to do business in the state.

"It is extremely troubling that steps toward renewed mining are being approved when this company cannot really be held accountable in Montana, because it has no registered agent and because it should not be doing business here at all," said Andrew Werk Jr., President of the Fort Belknap Indian Community.

Werk asserted that Blue Arc LLC, the Bozeman-based company which has applied to dig the 0.36-acre test trench, is not registered with the Secretary of State's

Office and is therefore not authorized to do business in Montana. A search of state records revealed that Blue Arc did register with the state in August 2013 as a foreign limited liability company with headquarters in Minneapolis. Their registration became inactive in November 2017 after it lapsed and was not renewed.

"Without being registered and having a registered agent in Montana, Blue Arc cannot be readily taken to court in the event that it causes further pollution or damages the reclamation that has already been done to the mines," Werk said.

Toxic legacy of mining in Little Rockies

The Gros Ventre and Assiniboine tribes have adamantly opposed commercial mining in the Little Rocky Mountains, which stand at the southern terminus of the Fort Belknap Reservation, since closure of the Pegasus Gold mining operation in 1996.

Pegasus Gold Corp., through a subsidiary called Zort-

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man Mining Inc., operated an open-pit cyanide heap leach gold processing operation on Bureau of Land Management (BLM) lands in the Little Rockies from 1979 to 1996. Over 17 years, 2.5 million ounces of gold was extracted by Pegasus Gold using multiple cyanide heap leach pads.

The operation created hundreds of high wage jobs and yielded an estimated \$875 million in revenues, but when Pegasus declared bankruptcy in early 1998 the company left behind a toxic legacy of acid mine waste that continues to pollute streams flowing onto the reservation to this day. Taxpayers were saddled with the costs of cleaning up the mess.

As of 2018, state and federal agencies had already poured close to \$100 million into reclamation of the 1,200-acre abandoned Pegasus mines site. BLM predicts that continued treatment of the area's ground water, which is laced with heavy metals, nitrates, selenium and cyanide will remain necessary well into the next century. The ongoing cost to taxpayers now rests at around \$2 million to \$2.5 million per year.

The expensive clean-up effort added weight to a 1998 voter initiative that banned cyanide heap leach processing in Montana. That and a substantial increase in the total value of reclamation bonds hard rock mining companies must post prior to obtaining an operations permit means that it would be virtually impossible for any company to renew operations in the Little Rocky Mountains using the same mining techniques Pegasus Gold employed in the 1980s.

"It will never be an open pit mine again," said Luke Ployhar, owner of Blue Arc mining. "That was always the big problem with Pegasus and that's what caused all the problems that nobody likes. Anything that we're pursuing will never be of that scale or even come remotely close to what it was before."

Blue Arc's plan for the mine

Ployhar, who grew up in Lewistown, said his family purchased 1,100 acres of land at the former Pegasus gold mining site more than 20 years ago and that they have never blocked the Department of Environmental Quality (DEQ) or the BLM from carrying out their reclamation activities. He said Blue Arc's primary focus would be on underground mining operations

exploiting the historical shafts and drifts that were sunk into the mountain as long as a century ago.

The presence of gold has been attracting miners to the Little Rocky Mountains since the 1890s. In the early 1920s close to 2,000 people lived and worked in the mining town of Zortman, which once boasted the second largest cyanide mill in the world. It is estimated that the historical mines in the Little Rockies produced \$125 million in gold before shutting down in the late 1940s.

Ployhar believes valuable gold deposits still exist within the tunnels that honeycomb the area, some of which extend down as much as 400 feet beneath the present surface. He is proposing that Blue Arc be allowed to develop "a small, surgical underground mine" with minimal surface disturbance limited to an area of less than three acres.

"The best thing we could possibly do up here is kind of like how the old timers did it," he said. "There's higher grade mine zones that contain a decent enough grade of ore that could be recovered economically."

Since open pit cyanide leach processing has been banned in Montana, any ore removed from a Blue Arc mine would have to be transported to a separate location for processing within a controlled structure.

In April 2020 the BLM proposed withdrawing about four-square miles of public lands surrounding the old Pegasus mine from consideration for hard rock mining for the next 20 years. The action is meant to allow for continued reclamation work at the site and to protect the work that's already been done there.

However, the large majority of Ployhar's mining patents lie within deeded private property, not public lands. On March 3, 2020, Ployhar applied for an exploration license from the DEQ.

"An exploration license is not an operating permit to mine," information from the DEQ's web site states. "An exploration license only authorizes activities to be conducted for the purpose of determining the presence and extent of an ore body. An exploration license does not authorize the mining of an ore body."

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Legacy of pollution blocks prospects for future gold mine near Fort Belknap Reservation

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Ployhar's exploration permit application asks that Blue Arc be given permission to extract up to 1,000 tons (roughly 30 dump truck loads) of bulk sample from a single trench dug into the exposed wall of what had once been an underground mine drift. It goes on to state that only existing roads would be used to access the site, except for the construction of a new half-mile road to access the trench and other temporary stockpile areas.

The entire project would be located on Ployhar's private property and would disturb 1.39 acres. Recovered samples would be shipped to a testing facility in Nevada to determine their mineral quality. Any new surface disturbances would be reclaimed at Blue Arc's expense, with the sole exception of the half-mile access road which would be kept for use by the landowner.

On Feb. 1 of this year the DEQ conditionally approved Blue Arc's exploration license application based upon a final Environmental Assessment (EA) that found no "significant impacts associated with the proposed exploration activities for any environmental resource."

"The proposed project would occur in an area that has been heavily impacted by previous mining and reclamation activities at the Zortman Mine," the EA for Blue Arc's mineral exploration project states. "Any impacts from the proposed project would be temporary and would be reclaimed at the conclusion of the project. Thus, the proposed project would not contribute to the long-term cumulative impacts of mining in the area."

The DEQ's greatest concern was that any activity Blue Arc undertakes not damage a liner underlying waste rock left behind by Pegasus Gold back in the 1990s. The DEQ is requiring Blue Arc to contract with a qualified engineer to test the liner in multiple locations, and if any damage is discovered Blue Arc would be responsible for all repairs. Any required repair work would then have to be approved by a DEQ engineer.

Fort Belknap tribes' lawsuit against Blue Arc

Two months after the DEQ issued its decision the Fort

Belknap Indian Community sued both Blue Arc and the DEQ claiming that the DEQ did not properly consult with the tribes before approving Blue Arc's exploration license, which is required by state law whenever there is a substantial probability that a project will have a significant impact on a tribe or its resources. The tribes also allege that DEQ's decision to approve the exploration license violates the Montana Environmental Policy Act, which requires state agencies "to inform the public and public officials of potential impacts resulting from decisions made by state agencies."

The Fort Belknap Indian Communities lawsuit has been joined by the environmental organization Earthworks and the Montana Environmental Information Center.

"It's extremely reckless for the State of Montana to issue a mining corporation an exploration permit that is right smack dab in the middle of a place where the Fort Belknap Indian Community and the federal government have put an incredible amount of time and money in trying to reclaim from past mining," said Derf Johnson, staff attorney with the Montana Environmental Information Center.

"We are really dismayed that this could occur after the painful history of the Pegasus Gold Company going bankrupt and leaving Montana taxpayers and the Bureau of Land Management to clean up the mess Pegasus left behind and treat the polluted water that comes out of those mines forever," said Fort Belknap Councilman Warren Morin. "Anyone mining in Montana must abide by the law and must be fully accountable for any further harm."

A representative of the DEQ said she could not comment on the tribes' allegations since they are currently in litigation. She did, however, say it is important to clarify that the DEQ has not yet issued an exploration license to Blue Arc.

"We issued the final environmental assessment and our decision to approve the license application, but we cannot actually issue the license until the company posts a reclamation bond. They have not yet done so," said Rebecca Harbage, Public Policy Director for the Department of Environmental Quality.

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Legacy of pollution blocks prospects for future gold mine near Fort Belknap Reservation

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A tale of two gold mines?

For his part, Blue Arc's Ployhar admits to feeling as though his company is being punished for the bad actions of Pegasus Gold; a company he had nothing to do with. He also notes that nobody from the tribes, Earthjustice or the Montana Environmental Information Center has ever contacted him to ask about his plans or to express their concerns.

"Nobody's talked to us about it, nobody's even asked us," Ployhar said. "It's just this 'mining bad' attitude where everybody just throws their hands up and doesn't give us a chance to respond. People shouldn't just jump to the conclusion that its going to be another big open pit. It would never be that."

Ployhar said he's sympathetic to the tribes' concerns and admits that he could have done a better job reaching out to tribal officials at the beginning of the process to explain his operation.

"The tribes are upset and rightfully so," he said of Pegasus Gold's toxic legacy. "We know the damage that was done. It was tough for them and for everybody else who had to deal with it."

But Ployhar also notes that his proposal is for a small operation on private property that would comply with all environmental regulations, and with strict oversight by all the relevant state and federal agencies. He also suggests that the mitigation efforts Blue Arc

would be required to employ could potentially clean up some of the mess still left behind by Pegasus, and possibly relieve Montana taxpayers of some small portion of the financial burden associated with it.

"If we can get it up and running to speed (the Blue Arc mine), we would be legally required to deal with water treatment and to make sure all the other environmental safeguards are up to snuff," he said. "It could actually fix some of the stuff they're worried about from the past because some of the old tunnels could get plugged and back filled with a lime and concrete mixture that helps to block the acid rock drainage."

"It could end up being a win-win situation for everyone," Ployhar suggested. "It would provide jobs, it could fix a lot of the damage that's already up there, it would probably end up contributing funds to the water treatment the state's currently covering, and then a lot of the damage that was done up here by Pegasus could be repaired."

That possibility remains unproven. As of early May the DEQ had not yet answered the complaint filed by the Fort Belknap Indian Community, and there is no certain timeline as to when the issue could be resolved.

David Murray is Natural Resources/Agriculture reporter for the Great Falls Tribune. To contact him with comments or story ideas; email dmurray@greaalltribune.com or call (406) 403-3257.



Invasive mussels found in aquarium moss balls

March 11, 2021

<https://www.seelelake.com/story/2021/03/11/news/invasive-mussels-found-in-aquarium-moss-balls/7119.html#:~:text=Invasive%20zebra%20mussels%20found%20another.pet%20store%20in%20Washington%20state.>



Invasive zebra mussels found another avenue for potential infestation of Montana waters. Montana, Fish, Wildlife & Parks was notified Wednesday that zebra mussels were detected in aquarium moss balls sold at a pet store in Washington state. FWP immediately

checked pet stores around Montana and found invasive mussels in moss balls at multiple locations.

It appears these moss balls were imported from the Ukraine to a distributor in California and were shipped to pet stores nationwide. The facility that imports the moss balls has been quarantined and all shipments of moss balls have been stopped.

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Invasive mussels found in aquarium moss balls

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A moss ball is a species of green algae that is formed into a ball and is two - five inches in diameter. Moss balls are purchased for home aquariums to help absorb harmful nutrients in the water and limit the growth of undesirable algae.

All of the mussels detected in Montana so far have been dead shells. However, live mussels were found on moss balls in Oregon and Idaho.

FWP is working closely with other states and federal agencies to address this nationwide issue.

If you have recently purchased moss balls, remove them from the water, place them in a plastic bag and put them in the freezer overnight. Additional guidance for addressing potential mussels in aquariums

and how to treat tank water will be available soon.

Additional reminders:

- It is illegal to release fish and other aquarium pets into natural waterways.
- Aquarium plants can impact native aquatic plant and animal species. Let unwanted plants dry and then dispose in the garbage.
- Aquarium water can harbor pathogens and diseases. Dispose of tank water on the ground away from waterways.

If you have any questions call the Aquatic Invasive species hotline 406-444-2440.

Visit Don't Let It Loose <https://www.dontletitloose.com/>



EPA Takes Action to Bolster State and Tribal Authority to Protect Water Resources

Contact Information: EPA Press Office (press@epa.gov) | 05/27/2021

<https://www.epa.gov/newsreleases/epa-takes-action-bolster-state-and-tribal-authority-protect-water-resources-0>

WASHINGTON – Today, the U.S. Environmental Protection Agency (EPA) announced its intent to revise the 2020 Clean Water Act (CWA) Section 401 Certification Rule after determining that it erodes state and Tribal authority. Through this process, EPA intends to strengthen the authority of states and Tribes to protect their vital water resources.

“We have serious water challenges to address as a nation and as EPA Administrator, I will not hesitate to correct decisions that weakened the authority of states and Tribes to protect their waters,” said EPA Administrator Michael S. Regan. “We need all state, Tribal, local, and federal partners working in collaboration to protect clean water, which underpins sustainable economic development and vibrant communities. Today, we take an important step to realize this commitment and reaffirm the authority of states and Tribes.”

“States and Tribes have relied on the Clean Water Act for almost 50 years to protect our waters and people, and EPA’s action is essential to restoring that historic authority,” said Oregon Governor Kate Brown. “The prior administration’s rule was not only harmful to the

environment, it was corrosive to state, federal, and Tribal partnerships. Communities rely on clean water, businesses rely on clean water, and our environment is dependent on clean water. We welcome this important step by the Biden-Harris Administration to restore a strong, collaborative approach to protecting one of America’s most precious resources.”

EPA intends to reconsider and revise the 2020 CWA Section 401 Certification Rule to restore the balance of state, Tribal, and federal authorities while retaining elements that support efficient and effective implementation of Section 401. Congress provided authority to states and Tribes under CWA Section 401 to protect the quality of their waters from adverse impacts resulting from federally licensed or permitted projects. Under Section 401, a federal agency may not issue a license or permit to conduct any activity that may result in any discharge into navigable waters unless the affected state or Tribe certifies that the discharge is in compliance with the Clean Water Act and state law, or waives certification.

The agency’s process of reconsidering and revising

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EPA Takes Action to Bolster State and Tribal Authority to Protect Water Resources

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the 2020 CWA Section 401 Certification Rule will provide opportunity for public and stakeholder input to inform the development of a proposed regulation, and will include sustained dialogue with state and Tribal co-regulator partners and local governments around these issues. EPA will begin a stakeholder engagement process in June to hear perspectives on this topic and how to move forward. More information will be available at: www.epa.gov/cwa-401.

While EPA engages with stakeholders and develops a revised rule, the 2020 rule will remain in place. The agency will continue listening to states and Tribes about their concerns with implementation of the 2020 rule to evaluate potential administrative ap-

proaches to help address these near-term challenges.

Background

Executive Order 13990 on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis directed EPA to review and, as appropriate and consistent with applicable law, take action to revise or replace the 2020 Section 401 Certification Rule. Prior to the 2020 rule, EPA promulgated implementing regulations for water quality certification before the 1972 amendments to the Federal Water Pollution Control Act (commonly known as the Clean Water Act), which created section 401.



Origins of the Chief Medicine Pipe

Told by Thick

Shared by Morris "Davy" Belgard, Brownfields Environmental Technician

A boy who was about seventeen years old was roaming the earth all alone, and one day a stranger who was in search for him found him and approached him. This person who had found this boy began to speak and instruct the boy. He told the boy to build a raft out of logs this raft was to be double layer of logs.

The first layer of bottom layer of logs were to be larger than the top layer and were fastened together and were to be spaced apart and not touching or against one another, but the top layer were to be smaller logs or lodge poles and these to be against one another and must lay cross ways. He was to build a shelter on this raft for his use. Then this person left this boy after instructing him. When the raft was finished, this person again approached this boy and presented the boy with a pipe, which in reality was the famous Chief Medicine Pipe, called the Flat Pipe.

Then this person told the boy that it was going to rain for many days until the earth was covered with water, and when the water reached him, he must get into the shelter on the raft taking with him the pipe he now has in his possession. Shortly thereafter it began to rain. When the water reached him, he done as he was commanded by his instructor; he took the pipe and got on the raft and entered the shelter there on with resignation.

It continued to rain and all this time this boy with his pipe on the raft was floating at will. He drifted with the wind in whichever direction it blew.

After it quit raining the wind drifted him and the raft to where there was a small tract of land that in reality was the top of a mountain. The boy then got out of his raft and stepped on the ground carrying with him the pipe.

On this bare piece of land which evidently was the highest place on earth because it was the only evidence of land after the rain, he commenced to cry, he'd cry as he walked around and when tired would lay down and sleep. When he had carried this on for an indefinite time, a voice spoke to the boy or young man, telling him to find and obtain some dirt from the bottom of the water by means of sending down animals and fowls which same had appeared on this piece of land mysteriously, he was to instruct them to not take of this mountain the dirt they were to go in search of, but to go down beyond to where the ground was level away from the mountain. He then chose the beaver, the muskrat, the turtle, and the mud hen.

After making his choice he first sent the beaver down

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Origins of the Chief Medicine Pipe

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in search of dirt, and after a long time the beaver floated to the surface and drifted to where this young man was waiting. The beaver had drowned so this young man examined the beaver's body very carefully for even particles of dirt but could not find even one grain of sand. He then sent the muskrat next to search for dirt.

The muskrat also drowned, and his body floated to the surface of the water, and it drifted to where this young man was waiting, and in examining the body carefully he found particles of dirt in the muskrat's mouth and around the base of its claws where they connected to the feet. The young man scraped all this dirt off and gathered it together. He next sent the turtle down in search of dirt. The turtle went down, and it also drowned and floated to the surface of the water, so the young man took and examined its body for dirt and found some in its mouth and claws and the round the edges of its shell, so he scraped it all together and placed it with the other he had taken from the muskrat's body. He then sent the Mud Hen down in search of more dirt. The Mud Hen also drowned, and its body floated to the surface too and upon examination it had more dirt on it and then the other three animals had. Then the young man scraped the dirt off the mud hen and with it and what was taken from the other animals was not very much.

Then the Great Spirit appeared to the young man and made his presence known by taking these few grains of dirt and placing it on the palm of his hand holding hand with palm up in front of him. Then the Great Spirit sang a song and when he had sung it three times he shouted, Yoo-hou-hou.

Then the Great Spirit blew the dirt off the palm of his hand and immediately all the water disappeared, and the land was once again visible. Then the Great Spirit left the young man without further instructing him. This young man did not know what to do or where to go, and he had this pipe in his possession, so he took up his pipe and began to wonder over the earth, he roamed the earth and as time passed his spirit began to sink within him and sadness overcame him, then he began to cry, he cried as he wondered over the earth.

When he'd get tired, he'd lie down and sleep wherever it may be. The loneliness he was undergoing was

bearing more heavily on him as time passed, but he kept on with his crying. Then one day while he was sound asleep the Great Spirit came to him and without waking him took out of this young man one of his ribs and after the Great Spirit did this, he woke this young man from his sleep and spoke to him, telling him, "I am going to give you a mate."

He showed this young man a bone he held in hand, telling him, "I took this bone out of your body, it is one of your ribs it came from your left side, and it's the shortest one on that side."

The Great Spirit then started to sing, he sang one song three times, then he shouted three times, Yoo hou hou, then the Great Spirit blew his breath on the bone as he held it before him in both hands with palms covering the bone and there stood a woman. Then the Great Spirit told this young man, "This woman will be your mate, I will now give you living, whereby to sustain life for you and your posterity. So saying, he told the young man, "Rise up your head and look around, all this that you see I give you to use as food."

The young man then looked about him and saw great herds of bison and game of all kinds, and on the bushes and trees he saw the natural fruit and he saw the smaller plants and vegetation that he was to use.

Of these smaller plants, the Great Spirit told this young man, "You will find there the potato, the turnip, the corn and the tobacco. The Great Spirit said, "The potato, the turnip, and corn you may use for food, but the tobacco is not to be used as food, it is for a different purpose of which I will teach you. Of these plants, you may use the roots for medicine. The Great Spirit turned his attention to the pipe and began to instruct and teach this young man who now had a mate.

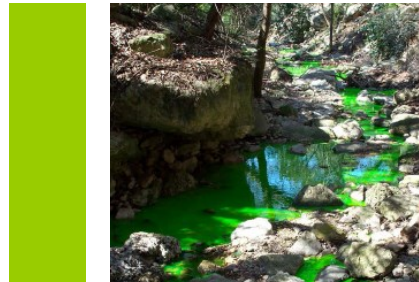
The Great Spirit told the young man, "Now first of all, here are these animals that played an important part in obtaining dirt from under the water. Of these you will exclude the beaver that alone, of the three animals and one fowl that you used to get this dirt with, did not accomplish bring up dirt, but the other two animals and one fowl; you are to associate them with the pipe. This pipe is to become a Chief Medicine Pipe, for the use of you and the future generations of your people.

COMMON WATER QUALITY COMPLAINTS COLOR GUIDE

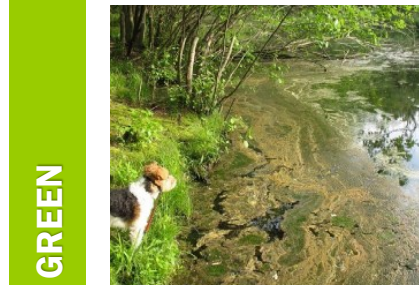
YOUR GUIDE TO IDENTIFY POSSIBLE SOURCES OF UNUSUAL APPEARANCES OF WATERWAYS

<https://www.austintexas.gov/sites/default/files/files/Watershed/Austin-Guides/Common-Water-Quality-Complaints-Color-Guide.pdf>

Shared by Mitchell Healy, Water Quality Coordinator



COLOR/APPEARANCE: Fluorescent green (or other bright unnatural color).
ODOR: None.
DESCRIPTION: Green, blue, red, violet are typical fluorescein dye colors. Can be any other bright color
POSSIBLE SOURCE: Uranine dye used in antifreeze (bright green). Fluorescein dye used for testing sewer lines, storm drains, ground water systems, etc.. “Zep” brand commercial detergent – an orange colored powder that turns bright green when mixed with water. Can be fabric dyes or inks from printers or paper and cardboard manufacturers.



COLOR/APPEARANCE: Dark green (brown or golden) algae or “pea soup” color.
ODOR: None (sometimes musty or fishy).
DESCRIPTION: Fibrous, slimy, or hairy layers of algae, possibly with air bubbles in daylight hours. Usually one predominant species of blue-green algae that creates the water color. Convulsive, erratic swimming and lethargic behavior in fish. Sometimes associated with fish kills due to high pH (>9.5) and extremely fluctuating dissolved oxygen, along with producing toxins harmful to living organisms.
POSSIBLE SOURCE: Excessive algal growth most frequently caused or made worse by nutrients or fertilizers in conjunction with slow moving water and sunlight.



COLOR/APPEARANCE: Red to orange to purple (variable).
ODOR: None to slightly sweet or fermented.
DESCRIPTION: Found only in standing water. Color is pH dependent. Sometimes seen as strip of color along stream banks containing dense vegetation.
POSSIBLE SOURCE: Natural berry extract, look for berries such as mulberry, persimmon, etc..



COLOR/APPEARANCE: Shades of red or rainbow sheen with droplets colored red, blue or yellow.
ODOR: Diesel odor.
DESCRIPTION: Can be bright blood red for new fluid or dark red to brown for older fluid in large amounts. Can be a thin sheen on surface for small quantities.
POSSIBLE SOURCE: Diesel is sold color coded depending on federal fuel taxes paid: Red – for use off-road in construction machinery or generators; Blue – for use in farm machinery; Yellow – for use as motor fuel on roads; Purple, green, orange are obtained by illegally mixing fuels; If highly viscous and red, it could be transmission fluid.



COLOR/APPEARANCE: Reddish-orange (sometimes iridescent) gelatinous deposits; spongy growth.
ODOR: None.
DESCRIPTION: Usually at small seeps, springs, or storm sewer outfalls. Iridescent sheen breaks into irregularly shaped “plates” when disturbed, does not swirl (Note: if swirls, see rainbow sheen).
POSSIBLE SOURCE: Iron with metabolizing bacteria. Could be natural or corroding metal (i.e. dump site or landfill).

(Continued on page 21)

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COLOR/APPEARANCE: Orange-red.

ODOR: None.

DESCRIPTION: Can occur naturally as part of rock (high in sulfide minerals) weathering process but exacerbated by large-scale earth disturbances. Can have good water clarity. Low pH.

POSSIBLE SOURCE: Acid drainage associated with mining or industrial waste drainage to the waterway.



ORANGE

COLOR/APPEARANCE: Orange-brown with thick floating mats; can have a rainbow sheen.

ODOR: None to petroleum or diesel odor.

POSSIBLE SOURCE: Old diesel from an illegal discharge.



COLOR/APPEARANCE: Yellow coating on stream bed.

ODOR: Rotten egg odor.

POSSIBLE SOURCE: Sulfur entering the stream from upstream industrial waste or coal-using operation.



COLOR/APPEARANCE: Yellow scum, film or suds.

ODOR: None to pine-like.

DESCRIPTION: Usually in stagnant water or non-flowing pools, or slow moving streams. Typically in spring.

POSSIBLE SOURCE: Pollen from flowering trees or evergreens like oaks, junipers/cedar, and pines.



COLOR/APPEARANCE: Yellowish-brown, lumpy and immiscible in water.

ODOR: Oily.

DESCRIPTION: Material clumps and can be somewhat frothy.

POSSIBLE SOURCE: Emulsified oil or lubricant.



YELLOW

COLOR/APPEARANCE: Yellow-brown to dark brown.

ODOR: Rotten egg odor.

DESCRIPTION: Common in streams during the fall. Common in streams draining marsh and swampland.

POSSIBLE SOURCE: Occurs naturally each fall when dead leaves collect in the stream



BROWN

(Continued on page 22)

(Continued from page 21)



COLOR/APPEARANCE: Brown tea-like, transparent.

ODOR: None.

DESCRIPTION: Found only in standing water. Presence of an abundance of leaves, organic matter in area. Associated with woodlands or swampy areas. Can appear like tea or coffee. Common in Fall. Low DO and pH and may see large fish at surface gulping air.

POSSIBLE SOURCE: Naturally occurring Tanning. Extract from decaying plant parts such as leaves, acorns, galls, etc..



COLOR/APPEARANCE: Brown, black or gray.

ODOR: None.

DESCRIPTION: Suspended sediments are common after rainfall. Sediment will eventually settle on the stream bottom in low flows.

POSSIBLE SOURCE: Natural sediments in stormwater. Excessive amounts in stormwater can indicate inadequate erosion and sedimentation controls at upstream construction sites. Soil erosion caused by vegetation removal from a riparian zone. Can indicate improper dewatering or washing practices at upstream construction sites during dry periods. Can result from a water line break.



COLOR/APPEARANCE: Brown, black or gray.

ODOR: None to rotten egg odor.

DESCRIPTION: Usually seen in the evening and early morning hours.

Fish gasping and swimming at the surface of the water. Often associated with fish kills due to low dissolved oxygen (<2 ppm) with pH of 6.0 – 7.5.

POSSIBLE SOURCE: Large amount of dying algae, frequently occurs after an algae bloom.

BROWN



COLOR/APPEARANCE: Gray or black film or scum.

ODOR: Strong “sewer”, ammonia, rotten-egg, or hydrogen sulfide odor; can have chlorine odor.

DESCRIPTION: Usually easy to follow upstream to the source. Can appear as a film on the surface or scum on the bottom. Can consist of solids or appear clear with no solids. Can appear milky-gray or black. Can see fish kills and large fish coming to surface and gulping air.

POSSIBLE SOURCE: Indicative of sewage leak or overflow, or other oxygen demanding waste. If solids are in the form of small “pellet”, it could be bat guano (typically late spring to early fall). Food, grain, or animal processing industry construction sites during dry periods. Can result from a water line break

GREY



COLOR/APPEARANCE: Clear Black.

ODOR: None.

DESCRIPTION: Often results in distressed or dead fish. Seen in the Fall when temperatures drop and the heavier water falls to the bottom, forcing the bottom, less-oxygenated waters to the top where they get re-oxygenated. Also seen in Spring as surface waters warm.

POSSIBLE SOURCE: Turnover of oxygen-depleted bottom waters. Sulfuric acid spill.

BLACK



COLOR/APPEARANCE: White (sometimes tinted green or blue) and sudsy.

ODOR: Detergent or cleaner odor; may smell like solvent or have no odor at all.

DESCRIPTION: Can be bright green or blue tinted with some heavy-duty detergents. If storm water runoff, suds tend to be more “tan” in color.

POSSIBLE SOURCE: Usually associated with home car washing or other detergent discharge activity. Industrial strength floor cleaners and waxes usually form more tenacious suds. Can naturally occur as first flush stage of storm water runoff with high velocity and sufficient agitation.

FOAMY

(Continued on page 23)

(Continued from page 22)



COLOR/APPEARANCE: Milky white and cloudy (no identifiable solids); sometimes chalky where dry. **NOTE:** color can vary widely.
ODOR: None or faint to strong paint or solvent cleaner odor.
DESCRIPTION: In flowing water, will mix through entire water column. In still water, can settle as layer on stream bottom.
POSSIBLE SOURCE: Can be illegal discharge of floor stripper to storm drain. Can be illegal discharge of paint or solvent (i.e. from washing of paint equipment to storm drain). Milk from food processing discharge.



COLOR/APPEARANCE: White and cloudy (no identifiable solids); chalky where dry.
ODOR: None or chlorine odor.
DESCRIPTION: Suspended in flowing water; can settle out in still water. Usually in an easy to follow trail to source.
POSSIBLE SOURCE: Typical runoff from concrete pouring, washing or cutting. Swimming pool backwash from DE filter media.



COLOR/APPEARANCE: Clear with dead aquatic life.
ODOR: None to sharp, pungent odor; chemical or chlorine odor.
DESCRIPTION: Water may appear clear; no unusual color. Water may contain debris. Fish may have bleeding from the gills. Fish may be schooling near the shore and have sluggish behavior. May see algae if herbicide.
POSSIBLE SOURCE: Chemical spills. Pesticides from application just before heavy rain – see fish dying after heavy rain. Upstream fire discharged debris and fire-fighting chemicals. High temperature of water in hot, summer months, particularly in shallow, low-flow areas. Swimming pool water discharge. Chlorinated water line break.



COLOR/APPEARANCE: White cottony masses on stream beds.
ODOR: Rotten egg odor.
DESCRIPTION: Can appear like long mop strings attached to rocks and stream bottom.
POSSIBLE SOURCE: Usually indicative of sewage fungus; its presence indicates illegal discharges of wastewater or other organic pollutants.

WHITE / CLEAR



COLOR/APPEARANCE: Variable-colored scum floating on the surface.
ODOR: None to faint organic solvent.
DESCRIPTION: Can cause coloring of the water but usually appears as a separate colored layer that floats on the surface.
POSSIBLE SOURCE: Indicative of oil-based paints that are immiscible with water. Can also be indicative of paint sprayed directly onto water surface. Some floating small plants such as “mosquito fern” (Azolla sp.) can look like red or green scum.



COLOR/APPEARANCE: Dull sheen, swirls or plates when disturbed.
ODOR: None to rotten egg odor.
DESCRIPTION: Light layer on the stream surface. Seen best in standing water.
POSSIBLE SOURCE: Bacterial or fungal scum associated with decaying organic matter or fish kills.

SWIRL

(Continued on page 24)

(Continued from page 23)



COLOR/APPEARANCE: Whitish to brownish, lumpy or filmy.
ODOR: Rancid cooking grease odor.
DESCRIPTION: Swirls of light and dark brown colors.
POSSIBLE SOURCE: Typically from restaurant used cooking oil bin or improper disposal and washing practices.



COLOR/APPEARANCE: Rainbow sheen, swirls when disturbed.
ODOR: None to oil, gasoline or diesel odor.
DESCRIPTION: Thin film that floats on top of the water.
POSSIBLE SOURCE: Typical in stormwater runoff from streets and parking lots. In non-stormwater runoff, could indicate a petroleum spill.

SWIRL



Brownfields, UST's, and COVID

By Kermit Snow Jr., BTRP Compliance Officer

Wahey Nee tine. Hello my relatives. Well, things are still slowly starting to open up. We are now in Phase II, but we're not out of the woods yet, we have to stay vigilant. We are into the 3rd Quarter and still a lot to get done and not at full strength in the office, we did manage to have our Contractor's here to get some much needed field work done on the Old Agency Dump. Good to see our Contractor's Heather Grotbo and Sam Berkelhammer (Newfields) here and their drillers, Chris Tigart and Tom Gopher, out of Great Falls, MT (Boland Construction and Drilling). It was good to see an old friend from Rocky Boy (Tom), who was working on the drilling rig. We got a late start, as the Drilling crew was kind of lost, lol. They finally made their way to the site and what should happen, they ended up getting stuck and it was almost quitting time for the Tribe. I made a mad dash to the Roads Department and was able to catch the Director, Pete Bishop, before he headed home. He climbed on to their front-end loader and came and pulled out our friends. Big shout out and thank you to Pete for taking the time to come and help us. They were here all week taking soil samples and drilling for

monitoring wells. That is one Environmental Site Assessment (ESA) down, as we await the results of their testing and hopefully move on to a Clean-up grant to potentially cleanup three Targeted Brownfields Assessment (TBA) sites - the Old Lodge Pole Elementary School, Old Sacred Heart Catholic Church "Pink Church", and Old Water Treatment Plant.



On September 22, 2020, EPA was on site at the Kwik Stop Convenience Store for their 3-year inspection. The inspection went pretty good with some minor problems. We were sent a letter from EPA with three areas of concern, ATG System, spill prevention equipment testing and overfill prevention equipment testing. On February 22, 2021, we had an extreme wind event here that did extensive damage to the canopy and fuel dispenser pumps at the Kwik Stop Convenience store here at Fort Belknap. Aside from ripping up the canopy, it did damage to all three dispensers under the canopy, they did manage to salvage one of them and get it in working order. On May 20, 2021, EnergiSystems was on site to fix and replace spill

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Brownfields, UST's, and COVID

(Continued from page 24)

buckets and butterfly valves and fix all areas of concern to put us back in compliance. We are still waiting on the Insurance Company to get everything else fixed, new fuel dispensers and new canopy.



On our Transfer Site inspections, we have noticed that Prairie Mountain Utilities (PMU) has been cleaning up each site and they are all looking great. There is still a lot of work needed, such as chain link barrier fences on the concrete walls, new gates, fence line repair, and a few other minor modifications to make them look nice. I would like to give a shout out to Chuck McConnell, Joe Brown Jr. and Frank Fox for helping clean up these sites, you can tell they take pride in their work.



Frank Fox doing his thang at the Hays Transfer Site.

We are still waiting for people to get back to their offices so we can have public meetings about potential cleanup of the Old Lodge Pole Elementary School, Old Sacred Heart Catholic Church, and Old Water Treatment Plant. We would like to get the Council, Programs, and other Stakeholders together and talk about what we would like to do with the school once we get it cleaned up. We will have eight (8) classrooms, one Administration office w/Teacher's Lounge, a reception office, small kitchen, gym w/ stage and two bathrooms to work with and try and see who can fill these spaces once everything is cleaned up. We have had a couple ideas thrown at us, but the more input we get from the community on how they would like to see this building used will put us in the right direction.



Well, this past year has been somewhat of a burden on all of us, but we are all still trying to do the best we can and hope to get out and see all our friends to see how they are doing in their communities and how we can help each other. I am looking forward to this year's Tribal Lands Forum, although it will still be virtual, it will be good to see what they have for us this year. So, until we see each other again in person, zoom zoom until then. Aho

Watch video:
<https://www.youtube.com/watch?v=eWuab-pLdYU>

Earth Day 2021: There is No Climate Justice Without Gender Justice

By Elizabeth Barajas-Román, President & CEO, Women's Funding Network | April 20, 2021
<https://www.womensfundingnetwork.org/2021/04/20/earth-day-2021/>

We join you in celebrating the women at the forefront of climate solutions on this Earth Day 2021.

In addition to their leadership, women and girls around the globe are demanding that policymakers center racial and gender equity in their climate agenda. As many of you know, 80% of people displaced by climate change are women, 50 – 80% of the people responsible

for farming food in the developing world are women, and 8 out of every 10 women and girls across the world are responsible for collecting household water.

Fortunately, your organizations are uniquely aware of the interconnectedness of climate change and the economic survival and prosperity of women and their families. You ensure that the voices of those most impacted by environmental degradation are leading collaborative strategies that support thriving communities and a sustainable planet.

For example, the New Hampshire Women's Foundation and League of Conservation Voters are co-presenting two upcoming virtual events featuring state and national leaders in climate justice. Both events will focus on underrepresented groups including people from lower incomes and marginalized genders in communities of color.

"As we celebrate Earth Day this year, we hope you'll add a gender lens to your consideration of climate

justice," said Tanna Clews, CEO of the New Hampshire Women's Foundation in a recent op-ed. "The promise of solutions from bold women and eco-feminists that lead the fight against climate change, contrasted with the disproportionate burden that women bear for environmental harms, calls us to action. There is no climate justice without gender justice."



On the global stage, policymakers are building gender and racial equity into their plans to combat climate change. The Paris Climate Agreement specifically states "gender equality, empowerment of women and inter-

generational equity" as being essential to addressing climate change and calls for a gender-responsive approach in solutions and decision-making. In the U.S., President Biden appointed a woman of color, Shalanda Baker, as the first ever deputy director of energy justice for the Department of Energy.

As feminists, we understand that white supremacy and patriarchy built into the all the systems that govern our lives has put our planet in crisis. Fortunately, your work mobilizes resources on multiple fronts that address root causes as well as ongoing environmental emergencies. This April, we join you in echoing first female president of Ireland, Mary Robinson, who said, "Climate change is a man-made problem—with a feminist solution."



Prairie Mountain Utilities PSA's

From: Carolyn Horn carolyn.horn@ftbelknap.org | June 10, 2021 4:05 PM

Water Restrictions for All of Fort Belknap Indian Reservation:

As summer is quickly approaching us, we at PMU would like everyone to please remember that it is easy to forget about water conservation. We ask that you please be mindful of the time of day and how frequently we water our lawns and/or gardens. Please water either in the morning when it is still cool out or in the evenings after the sun has gone down and it is again cool outside. We recommend from 7 AM to 9 AM and from 8 PM to 10 PM.

Please do not turn your hoses on and just let them run all day, this is an unnecessary use and waste of water.

We are also asking that there be no filling up of big swimming pools either.

If you are caught watering outside of the recommended timeframe and/or caught filling up big swimming pools you will be subject to disconnect and a \$100.00 reconnect fee assessed to you before your water service is reconnected.

KEEP TRANSFER SITES CLEAN

PLEASE DO NOT THROW ANY ANIMAL CARCASSES INTO ANY TRASH CAN OR DUMPSTER OWNED BY PMU. IF ANYONE KNOWS OF OR SEES ANYONE DOING THIS PLEASE CONTACT PMU IMMEDIATELY.

Our cans are not meant to have animal carcasses in them nor do we dispose of any animal remains. As it gets warmer outside the smell of decaying animals is an unpleasant odor for not only our drivers but passing motorists as well. Please be mindful of everyone and do not place these items in the cans.

There are cans available at the Transfer Sites (garbage dumps) that are marked Appliances. Please do not place furniture or any other form of disposal in these cans, these are for **APPLIANCES ONLY (this includes water heaters)!!!!**

Please throw all your waste into the containers, **DO NOT LEAVE GARBAGE OR ANY OTHER TYPE OF DISPOSAL YOU MAY HAVE ON THE GROUND – PLACE WASTE INSIDE THE CANS!**

We have worked very hard to clean up the trash around the transfer sites and ask that you please place your waste inside the canisters instead of on the ground in front of them.

We appreciate your cooperation in this matter and are sorry for any inconvenience that this may cause. We are also looking for Board Members from the Southern End- Hays\Lodge Pole. If you have any questions, please call Prairie Mountain Utilities at 353-8313/353-8320 or 399-1628.



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Harlem, Montana 59526
Phone (406) 353-8313 | Fax (406) 353-4977 | WTP (406) 353-4975
Email: fbwaterplant@yahoo.com



Fort Belknap Indian Community
ENVIRONMENTAL PROTECTION DEPARTMENT
 Fort Belknap Agency
 656 Agency Main Street
 Harlem, Montana 59526



Happy Earth Day! April 22, 2021

f Find us on Facebook:
<https://www.facebook.com/ftbelknap.environmental/>

www.ftbelknap.org

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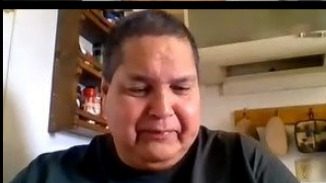
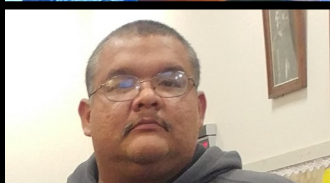
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