prairieriversnetwork

SPRING 2023 VOLUME 23 ISSUE 1

CARBON CAPTURE "GOLD RUSH"

By Andrew Rehn

Due to our state's unique geology and an influx of federal incentives, Illinois could become ground-zero when it comes to carbon capture and storage (CCS), and the State is unprepared to protect us from this growing threat. Fossil fuel and ethanol companies are looking to exploit gaps in Illinois' regulatory framework, putting Illinois landowners, public health, water resources, and our climate at risk.

What is CCS?

Uncaptured Carbon

Carbon

Capture

Carbon capture and storage is the process of isolating CO₂ either at a source (power plant, factory) or directly from the air. Then the captured CO₂ is transported, often through a pipeline, and stored, usually in underground geological formations such as saline reservoirs or depleted oil reservoirs. Carbon capture technology may one day be used to help decarbonize the "hard to decarbonize" industries such as steel

Intensified Co-pollutants

and cement. However, in the short term, it is likely to be used to extend the life of coal and gas power plants as well as ethanol plants, hurting our chances of advancing Illinois toward its climate goals.

What is at Stake?

There are major concerns with CCS at every step in the process. Here, we will break down a few of them.

of carbon Operation capture equipment is likely to increase pollution for frontline communities. Running carbon capture equipment requires a significant amount of energy-called a parasitic load. Power plants will have to operate more to generate the energy necessary to capture the carbon they are producing. Worse, the financial incentives for carbon capture may drive an economic decision to run dirty power plants more. That additional operation leads to increases in all of the non-CO₂ pollutants that power plants produce, including smog-creating and healthharming airborne pollutants, and for coal fired power plants, more coal ash. Leaking or failed CO₂ pipelines and sequestration sites undo any climate benefit of capturing CO₂-and can even be life-threatening. The failure of a compressed carbon pipeline in Satartia MI gave the US its first real insight into what a pipeline rupture could look like. A CO₂ pipeline belonging to Denbury Enterprise ruptured and released a plume of CO₂ into Satartia. Residents were sickened and disoriented by the plume. Cars and emergency vehicles, relying on engines that combust oxygen, shut off. First responders were unequipped for the situation and walking into the unknown. That no one was killed is simply good luck.

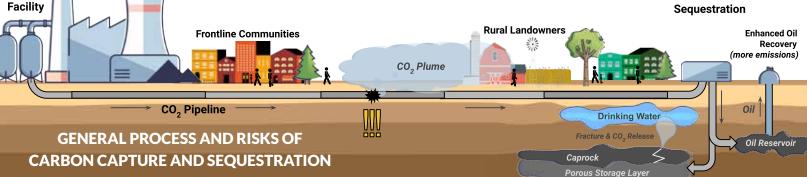
The climate benefit of carbon capture is not guaranteed, and use

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Sequestration





DIRECTOR'S NOTES MAGGIE BRUNS

"Spring: A lovely reminder of how beautiful change can truly be."

Spring is in the air, and change is all around us. In January, I moved home to Illinois to join the Prairie Rivers Network team. It's an exciting time to be

here, and I'm thankful to the staff, board, and members for the support and trust to lead our next chapter. After several cold, gray months here in Central Illinois, I'm thrilled to watch the landscape—and particularly our prairies—change before my eyes!

As the Illinois landscape changes around us, PRN is navigating many new changes and challenges facing our water, land, and communities. As you will see in this edition of our newsletter, we are at the crossroads of transforming our energy systems, which brings both opportunities and new threats. From carbon capture and sequestration to keeping harmful pesticides out of our air and waters, to protecting habitat for threatened and endangered species, it's not always easy to navigate.

We have incredible opportunities to lead Illinois through lasting change, but we will need to embrace the unknown, try new things, and build our muscles to tackle the challenges of tomorrow. I'm excited to work with all of our members, partners, and volunteers to shape this next chapter for PRN and fight to protect our communities and the rivers that connect us all together.

Spring brings balance to our days, growth from the soil, ripples to our waterways, and hope for the future. It's that hope that inspires my work with PRN and our mission together. Let's get to work! //

WHY I SUPPORT PRN

In 2017, I contacted PRN to help alert the public of potential harm from the use of dicamba herbicide on soybeans. Kim Erndt-Pitcher answered the call. For the past six years, she has led—with great support from staff, volunteers and donors—what has proven to be a national model for monitoring and spotlighting off-target herbicide harms.

The lack of sound monitoring and documentation of environmental harms of these pesticides made it easier for EPA to put another problem pesticide on the market with practically no accountability.

Into this breach stepped PRN staff Kim Erndt-Pitcher and Robert Hirschfeld, and volunteer Marty Kemper in developing protocols for ecological monitoring and tissue sampling for herbicide residues. Scientific methodology, integrity, and transparency substantially enhanced their credibility.

PRN has provided a model for what we expect of pesticide regulatory agencies—to responsibly respond to our rights to know and to reassure the public of the health and environmental safety of pesticides they regulate. We need more PRNs in the world.

By Lou Nelms, PRN member and volunteer



OUR MISSION: Protect Water. Heal Land. Inspire Change.

Using the creative power of science, law, and collective action, we protect and restore our rivers, return healthy soils and diverse wildlife to our lands, and transform how we care for the earth and for each other.

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This year marks the 50th anniversary since the Endangered Species Act of 1973 (ESA) was signed into law by President Richard Nixon. In that time, we have seen some species come back from the brink of extinction, but too many have been added to the list. In this article, we look at the ESA, its success and its challenges.

By Jeff Kohmstedt

We now take for granted the sight of a bald eagle in our skies. The white head shining brilliantly on the blue backdrop of the sky, leaving no doubt you are looking at one of America's greatest symbols. If not for the Endangered Species Act of 1973, we might not have that sight at all.

The ESA replaced two earlier laws that sought to protect endangered species, the Endangered Species Preservation Act of 1966, and the Endangered Species Conservation Act of 1969. The first established a federal list of endangered species and the second expanded on that list to include species around the world. The Endangered Species Act took those two bills and did so much more. It expanded the power of the endangered species list, created a "critical habitats" designation for places where endangered species live, and it expanded the authority of agencies to protect both habitat and the endangered species that live there.

Who Doesn't Like a Spotted Owl?

When the ESA passed in 1973, it did so nearly unanimously, passing the U.S. House 390-12 and unanimously in the Senate. In today's political climate, it is hard to believe we could come to such agreement on an issue of such importance: saving wildlife.

Between 1970 and 1990, 542 species were listed as threatened or endangered. The need for action to protect species was clear. In 1963, the bald eagle, the symbol of America, had fewer than 500 breeding pairs in the lower 48 states. As of 2020, population estimates have increased to 316,000 individuals including over 71,000 breeding pairs.

Many people probably had not heard of or thought much about the ESA after its enactment until the northern spotted owl started making headlines in the 1980s and 1990s when



the media pitted loggers against a bird and its habitat. That fight, which culminated in a 1991 federal court ruling that the owl should be protected, was perhaps a signaling of future political entrenchment on the environmental front.

What We Saved

In one sense, the ESA is a feel good story. The country came together, enacted legislation to solve a problem, and "saved" threatened or endangered species. The bald eagle now has a conservation status of "low concern." In addition to bald eagles, American alligators, which were originally protected under the 1967 ESA law, have largely recovered from the brink. Humpback whales were listed as endangered in 1973. Today, their populations are slowly rebounding worldwide thanks to public outcry, a commercial whaling moratorium, and the ESA.

The ESA also inspired states to create their own lists with their own success stories. For example, the river otter was listed as endangered in Illinois in 1989 but has since recovered through reintroduction. It was officially delisted in 2004.

While these success stories are heartwarming, in the face of global climate change, shouldn't we do more?

Does the ESA Go Far Enough?

As we have seen, the success stories of the ESA are truly remarkable. The criticism of the ESA is equally so, from control of land use to pitting animals versus people. As PRN celebrates the 50th anniversary of the ESA and all it has accomplished, we must ask: does it do enough? Are we saving the flashy species ("charismatic megafauna") over the less exotic or lesser-seen ones? How many species have we already lost, and how many are we currently failing to protect because we do not have the resources to assess their populations and enforce protections? No doubt, the world is a better place because of the ESA. A world without humpback whales, bald eagles, or our iconic river otter is one lacking the biodiversity the world deserves. But there is clearly more to do. //

HEAL LAND. CHARGING FORWARD

Biodiversity across the globe faces seemingly insurmountable threats. But here in Illinois, PRN fights to protect the best of the best, increase the amount of quality habitat for wildlife, and connect people with nature.

By Kim Erndt-Pitcher

Together with our amazing members and volunteers, we have put our hearts and souls into protecting people and nature from harmful pesticides. Over the past five years, we have worked to inform the public about the harmful impacts of pesticides through educational videos, trainings, helping landowners tell their stories, crafting sound policy recommendations grounded in science and justice, and pushing for stronger regulations at both the federal and state levels.

Recognize the Symptoms

Symptoms of herbicide exposure can be difficult to recognize if you do not know what you are looking for. In fact, what you think is normal, may in fact be injured leaves... they have just looked that way for many years due to chronic exposure. If you do not know what symptoms of drift look like, you can see photos of normal and symptomatic leaves on our website (tinyurl.com/tree-monitoring) or you can watch one of the many videos and trainings we have available on our website and YouTube channel. You can join one of the training sessions or site visits we will hold this year. Become a volunteer and help us protect our wild places! Email monitoring@prairierivers.org for more information.

Our Tree and Plant Health Monitoring Program, which documents the geographic distribution, frequency, and



PRN volunteer Marty Kemper leads a monitoring training for IDNR staff

severity of herbicide drift to trees and other broadleaf plants is entering its sixth year!

Over this time we have published reports such as *Drifting Towards Disaster: How dicamba herbicides are harming cultivated and wild landscapes*, our 2018 and 2019 Monitoring Report, and last year we were contracted to write the report for the Illinois Nature Preserves Commission, which outlines the threats drift poses to our most valuable protected areas for biodiversity.

Charging Forward!

We are now in the process of writing a new three-year summary of our monitoring data from 2020-2022, which, sadly, highlights marked decline of oak populations in some of the areas we have documented herbicide drift for several consecutive years.

We have shared these reports, written countless comment letters, and held numerous meetings with state and federal regulators and decision-makers. Yet, there is much to do, and we are nowhere near stopping. In fact, we are charging forward!

This winter we formed the Herbicide Drift Coalition. It is a space where organizations, groups, and individuals that have been injured by drift gather, to strategize, to build power, and to create a louder, more unified voice. We will use these collective and individual voices to educate decisionmakers on the threats posed by herbicide drift to the people and places of Illinois. We will put pressure on the chemical industries, regulatory agencies, and applicators to protect biodiversity and our communities from this harmful drift.

None of this, and I do mean none of this, would be possible without our smart, talented, and incredibly persistent members and volunteers. They have spent hours reading reports, sharing information, monitoring, helping edit and review reports, and have become good friends in the process. But we have much more to do. If you are interested in helping us protect our wild places, our neighborhoods, our state from the harmful impacts of pesticide drift please let us know! We would love to work with you. //

A HISTORIC TRANSITION UNDERWAY

In March, Illinois celebrated news of \$40 million in funding to help transitioning energy communities most impacted by recent plant and mine closures.

By Amanda Pankau

Energy Transition Community Grants were created by the 2021 passage of the Climate and Equitable Jobs Act (CEJA) to support the economic and social impacts of the transition away from coal. PRN has worked side-by-side with coal communities for decades to ensure the protection of land and water resources. That work continues, along with an effort to support a just and equitable transition for these communities hardest hit by coal's decline. As part of that effort, we advocated alongside coal community leaders to create this new CEJA grant program, Energy Transition Community Grants, and we are working collaboratively with communities to help ensure their needs are met through the grant process.

Coal's Decline Pre-Dates CEJA

The coal industry in Illinois has long been a story of boom and bust. For over a century, communities and workers have faced closures with little notice. Mechanization has meant that coal mining jobs have been on a steady, overall decline since 1930. Early unregulated mining before 1977 left communities with polluted land and water that is still being cleaned up today.

These are not stories of some distant past. In 2012, Peabody Energy closed Willow Lake Mine due to safety concerns. The CEO of Vistra Energy even announced, "Coal is on its way out," shortly after the company took control of Illinois' downstate coal plant fleet in 2018. Workers, communities, land, and water have long been left behind by the coal



industry. Coal's fate was ultimately sealed by falling prices of natural gas, wind, and solar. Coal is a non-renewable resource that is very expensive to extract from the earth, burn for power, and clean up afterward. The days of this non-renewable resource have been numbered from the start, but the list of communities impacted is long and will require resources and investments.

CEJA Brings Opportunity & Solutions

CEJA is a necessary plan for this disorderly, long-timecoming transition. Thanks to CEJA, coal communities will have advanced notice of closures, access to scholarships for the dependents of laid off workers, job retraining opportunities, and the Energy Transition Community Grant Program to provide annual financial support for six years after closure.

Another new CEJA program will redevelop shuttered coal plants into solar and battery storage projects, generating power, creating jobs, and injecting tax revenue back to the community. CEJA sets out an orderly, planned transition, over more than two decades, to build out clean energy resources and slowly phase out fossil fuel plants.

This is an unprecedented opportunity to grow a new clean energy economy, and Illinois can be a leader in that future. Like CEJA, recent federal laws, namely the Infrastructure Investment and Jobs Act and the Inflation Reduction Act, are targeting investments to coal communities and rural regions, and not just in clean energy.

If put to use, these policies can help coal communities be a part of powering the nation and more! We need to harness every opportunity for each community's unique future. Creating a new vision and narrative about coal communities' futures is a place to start, but we cannot stop there. PRN will continue to support coal communities in taking advantage of state and federal opportunities to help bring that new vision to life. //

PRN BRIEFS

With Spring comes lots of opportunities at PRN. Here is a brief taste of what is on our plate in the coming months!

Middle Fork of the Vermilion

As long-time PRN members may recall, Dynegy has proposed moving the coal ash from the banks of the Middle Fork of the Vermilion and into a new landfill constructed onsite and out of the floodplain. PRN supports that plan (but details will matter). Now, we await a permit proposal by the Illinois EPA that would advance Dynegy's plan. When that permit proposal happens, PRN and the general public will have a new opportunity to review the permit and submit public comments. Be assured that you will hear from us as soon as that happens!

Meanwhile, PRN, with Earthjustice, has intervened in the state's enforcement case against Dynegy concerning the management of their coal ash. Our intervention in that case allows us to monitor the progress of Dyengy's interim agreement with the State and evaluate Dynegy's plans for restoring the Middle Fork. That interim agreement includes tracking the dangerous erosion of the riverbank, creating a response plan if erosion reaches a critical limit, creating a groundwater trench to stop the seeps, and planning to remove water from the impoundments to prepare for closure. PRN and Earthjustice are working with experts to advise and improve those plans.

Staffing Up

PRN will be staffing up in the coming months to expand the reach and impact of our programs to protect water, heal land, and inspire change across Illinois. Keep an eye on our website (prairierivers.org/about-us/jobs/) for opportunities to join the team!

Member Picnic

Join us for our annual member picnic on June 3, 2023 at the Walnut Hill Shelter at Homer Lake Forest Preserve (2573 S Homer Lake Rd, Homer, IL 61849). Look for details in the mail soon! //



MARK YOUR CALENDAR

PRN ANNUAL DINNER SEPTEMBER 22, 2023 PEAR TREE ESTATE



At our Spring major donor appreciation event in Champaign, our members shared with us what inspires them to be a part of Prairie Rivers Network. Local artist David Michael Moore captured their thoughts in the fun image above. Check out the time-lapse video at prairierivers.org/inspire.

"GOLD RUSH" (From page 1)

of this technology could even result in more CO_2 being released. Some studies show that the use of carbon capture may actually increase net emissions, turning CO_2 into a commodity worth producing. Furthermore, captured carbon is often used for Enhanced Oil Recovery (EOR) (90% of captured carbon in 2021), that is, using captured carbon to extract more oil and gas out of the ground. Studies show that using CC for EOR could lead to 4 times as much CO_2 being released as it removes.

Lastly, sequestering CO_2 underground poses risks to our water. A leaky storage layer may cause CO_2 to rise into drinking water aquifers and alter the water chemistry. This could mobilize inorganic compounds (such as heavy metals) into the drinking water. The storage CO_2 can also mobilize organic compounds (such as Benzene) which could travel with the CO_2 leak into drinking water. These threats are not well understood, but the burden should fall on industry to prove that our water will be safe, particularly sole source aquifers like the Mahomet Aquifer.

Big Carbon is Coming...

Industry is moving carbon capture forward in Illinois on multiple fronts. Two of Illinois' remaining coal fired power plants - Prairie State and Springfield's Dallman - are seeking to install carbon capture systems as a way to keep operating until 2045 (unfortunately CEJA did not forbid this). Dallman has installed a pilot carbon capture system, and Prairie State is exploring options. ADM, already engaged in sequestration in Decatur, is working with Wolf Carbon Solutions to expand its operation and bring in more CO₂ from ethanol plants in Iowa with a proposed pipeline cutting across part of Illinois. Among the many proposed connections, that pipeline will connect to an ethanol plant on the Southside of Peoria; a community already facing high pollution and socioeconomic burdens. The Navigator Pipeline is proposed to be 1,300 miles long and carry carbon captured from ethanol and fertilizer production from four states across 13 Illinois counties. Carbon capture is here and looking to grow in Illinois' unregulated landscape.

Meanwhile, carbon industry giants are pushing state legislation to protect their business interests in CCS at the expense of Illinois taxpayers. Their legislation would allow companies to amalgamate a property owner's land for sequestration (like eminent domain), pass liability of stored CO₂ to the state, and lacks any assessment of environmental risks or opportunities for public participation.

... Unless You Take Action

It is clear that Illinois needs to take action to protect itself from a goldrush of industry interest in CCS. The Carbon Dioxide Transport and Storage Protections Act, HB3119, would protect Illinois communities, shield the state from absorbing industry's risk, ensure environmental assessment at every step of the CCS process, and include meaningful public participation. PRN is working with environmental partners in the state to support HB3119 and protect Illinois' communities and our state's commitment to climate action, instead of industry's bottom line. //



The Dallman Power Plant in Springfield is the site of a carbon capture pilot program.

IL IS NOT READY FOR CARBON CAPTURE!

Contact your state legislators today! Ask them to support HB3119, the Carbon Dioxide Transport and Storage Protections Act! It is the only bill written to protect Illinois' communities and our state's commitment to climate action, instead of protecting industry's bottom line. The bill:

- Creates sensible protections at all steps in the CCS process.
- Shields the state from financial and liability risk.
- Helps Illinois achieve its climate goals.

 Protects landowner's rights from eminent domain and industry grabs.

It is imperative that you contact your State Representative and State Senator about HB3119. Tell them to protect Illinois from becoming a carbon dumping ground for the energy industry!

prairierivers.org/take-action



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GIVE STOCKS OR SECURITIES

Did you know you can donate stocks and securities directly to PRN to support our mission to protect water, heal land, and inspire change? This benefits not only PRN, it can also benefit you. Talk with your broker today to see if this is a good option for you.

Most brokerage firms will require a letter of intent to request the transfer with this information.

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Contact Vickie at 217-344-2371 for more.