Biodiversity and Land Use

Our commitment to communities extends beyond cities and towns to the land and natural resources surrounding Xcel Energy facilities.

We manage thousands of acres of land through power line and natural gas rights of way and the lakes, rivers or grounds that support our power plants, substations, wind farms and other facilities.

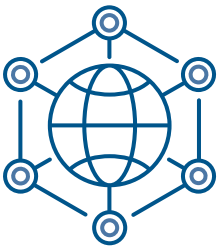
Given our footprint, we play an important role as stewards of these locations. We take precautions to protect wetlands, threatened and endangered species and other resources. When we upgrade, design and build facilities, we evaluate possible impacts to natural resources, wildlife and its habitat, and take appropriate steps to avoid or minimize potential risks.

We also look for opportunities to improve or restore habitat, with the goal of making a lasting difference. It's an approach consistent with our corporate environmental policy. Over the years we have funded and participated in studies, supported preservation efforts and worked side by side with conservation and environmental organizations on important stewardship projects.

Climate change is one of the greatest threats facing wildlife and the environment. By transitioning to renewable and other clean energy sources, we help do our part to reduce carbon and other greenhouse gas emissions.

Governance

The Operations, Nuclear, Environmental and Safety Committee of the board of directors annually reviews the company's environmental performance, including wildlife, habitat and land management strategy and compliance. Within Xcel Energy, the chief operations officer reports to the CEO and oversees natural gas operations and electric distribution and transmission, including land management and avian protection programs. The senior vice president of Energy Supply reports to the chief operations officer and is responsible for the company's environmental compliance.



LEARN MORE

Xcel Energy Bird Cam

Raptor Resource Project: Bald Eagle and Bird of Prey Cams

Managing Water Brief

Community Giving and Volunteering Brief

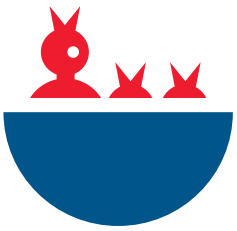
1,400

acres pollinator habitat developed

440

peregrine chicks

hatched at Xcel Energy sites since 1989



$730 million

contributed through the Xcel Energy Foundation's Environmental Sustainability focus

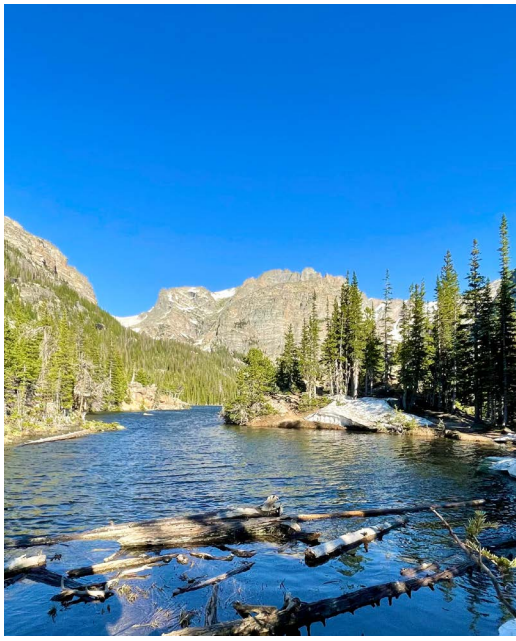
NOTEWORTHY

South Clear Creek Improvement
In the mountains west of Denver, at the Cabin Creek pumped-storage hydroelectric plant, Xcel Energy replaced an underground concrete culvert with healthy habitat for brown, rainbow and cutthroat trout and other species.

The South Clear Creek Stream Channel Improvement Project, completed in 2019, removed barriers to fish passage and enhanced stream health and aquatic habitat. Partner agencies included the U.S. Forest Service, Colorado Parks and Wildlife and the Colorado Water Quality Control Commission.

The project removed 300 feet of buried culvert and a flume dating to Cabin Creek's construction in the 1960s. Crews restored the channel, created resting areas and habitat diversity with small boulders in the stream, and successfully revegetated with native seed and riparian plantings — some rooted from cuttings taken at the site.

South Clear Creek originates near the Continental Divide and joins Clear Creek at Georgetown. The creek is a key water source for metro Denver and agriculture, and is popular with river runners and anglers.



Avian Protection Plans

Transmission and distribution lines and equipment can attract birds to roost and build their nests, which can pose collision or electrocution hazards. Xcel Energy's Avian Protection Plans, developed with the U.S. Fish and Wildlife Service, are essential to keep birds safe and meet federal wildlife protection standards.

Under the plans, we identified facilities that pose higher risks for bird injuries or deaths and retrofitted them with roosting deterrents, flight diverters that make lines more visible, and other protective equipment. We design facilities to meet industry standards that prevent or reduce the likelihood of avian incidents.

Reporting and monitoring are ongoing steps in complying with federal avian protection laws and acting responsibly to protect birds. Employees use a required online form to report injured birds or fatalities. We monitor those locations and add avian controls as needed to reduce future risk.

Managing Renewable Energy Projects

Our clean-energy vision, including widespread adoption of solar and wind energy, is the biggest contribution we can make to preserving the natural world. But utility-scale projects come with their own environmental challenges. We take seriously our obligations to manage siting, construction and operations to limit their impact on wildlife and rural land use.

Responsible Wind Energy

To achieve their full environmental benefit, wind farms must be properly located, constructed, operated, monitored and managed through their life cycle. To that end, we develop detailed bird and bat conservation strategies for all company-owned wind energy facilities, which provides a handbook for best management practices from early project conception through operation.

Project Siting and Development
We use the U.S. Fish and Wildlife Service's Land-Based Wind Energy Guidelines to inform site selection of company-owned wind energy facilities. The guidelines provide a consistent framework to assess wildlife protection strategies for potential sites. As part of this, we work with wind project developers and state and federal agencies to minimize impacts to wildlife and habitat as much as we can.

Construction
Best management practices for wildlife and habitat protection are put in place during construction and repowering of Xcel Energy's wind projects. To protect lesser prairie chicken leks while building our Sagamore Wind Farm in New Mexico, during the breeding season we reduced traffic speed and volume, controlled access where we could, and avoided off-road travel in rangeland and planted grass. Construction contractors receive site-specific environmental training to identify and report wildlife issues. For example, we incorporate Minnesota Department of Natural Resources recommendations to avoid impacts to the threatened Blanding's turtle. These include species-specific contractor training and wildlife-friendly erosion and sediment control.

Wind Farm Operations
Once in operation, we evaluate how our projects affect wildlife. We conduct post-construction avian and bat mortality monitoring at all our sites to decide if we should make operational changes or take other measures. This decision-making process is coordinated with federal and state wildlife agencies. We report avian and bat loss at our facilities to these agencies under the terms of our federal and state permits.

At our Crowned Ridge II project in South Dakota, we're conducting a multi-year study on movements of prairie grouse in and around wind farms. Sharp-tailed grouse are tagged and tracked to better understand how wind energy development affects their seasonal habitat selection and demography. This information could inform future siting and design decisions to reduce impacts to prairie grouse species.

We are partners in a University of North Dakota research project focused on detecting avian and bat carcasses at wind energy sites. The research team is developing machine learning algorithms to identify avian and bat species via drone-mounted cameras. This technology could help the wind industry evaluate and address wildlife impacts at our facilities.

Responsible Solar Power

Large-scale solar projects require approximately four to seven acres of land per megawatt of capacity, depending on the technology. We've aimed to make the most of the property that supports our company-owned community solar gardens in Boulder and Denver, Colorado. The solar arrays are located at the sites of two retired coal-fueled power plants, on land planted with a seed mix to attract bees, butterflies and other beneficial species.

Xcel Energy plans to establish the largest solar sites in Minnesota to provide beneficial habitat to native birds, insects and other wildlife. Sherco Solar 1 and 2, under construction in Becker, will have capacity for up to 460 megawatts of solar power on over 3,000 acres. Another 1,700 acres is in development as Sherco Solar 3 near Clear Lake, Minnesota.

We will establish native and pollinator-friendly vegetation across these sites to qualify for the Minnesota Habitat Friendly Solar Program. The project team is coordinating with multiple state agencies and native plant specialists to prepare for implementation.

Renewable Energy Wildlife Institute

The Renewable Energy Wildlife Institute, an independent nonprofit, works to solve challenges associated with wildlife and renewable energy through sound science and collaboration. Xcel Energy provided significant financial support to the organization, previously known as the American Wind and Wildlife Institute, which encouraged its broader research on mitigating environmental challenges at wind and solar energy projects.

Our project funding also supports the organization's technology and research studies to help improve monitoring and avoid or minimize impacts to birds, bats and other wildlife at wind and solar sites. Examples of current or recent projects that we actively participate in include:

- A study to evaluate the impacts wind farm projects have on the displacement of lesser prairie-chicken populations.
- A project that evaluates the effect of wind turbine size on bird and bat mortalities.
- A project related to wildlife abundance and use of utility-scale solar facilities in agricultural environments.

Through these projects and others, we are gaining valuable insights to minimize the impact of renewable energy for our company, industry and the environment.

NOTEWORTHY

Bird Cams and Nesting Boxes

Supporting our communities means more than just human communities. With the 1989 installation of a falcon nest box at the Allen S. King plant, we were the first power company in the world to host birds of prey, according to our partners at the Raptor Resource Project. With RRP's help, Xcel Energy installed webcams that have broadcast live nests since 1997 from plant locations in Colorado and Minnesota.

At the bald eagles' nest at the Fort St. Vrain plant in Platteville, Colorado, two solar-powered cameras capture a world most humans never see. Viewers on YouTube observe the massive nest (9' by 8' by 8' deep) as the parents take turns keeping the eggs and eaglets warm, bring home prey and fend off intruders.

Bird programs like ours were key to the peregrine falcon's survival. Once down to 324 nesting pairs across North America, peregrine populations recovered after humans bred and released them, including nests at our High Bridge, King, Sherco and Riverside plants. Through 2022, approximately 440 peregrines were born at Xcel Energy facilities since our nesting program began.

Peregrines like to live in high places close to water, so power plants make ideal locations. The falcons spot their prey in flight, fold themselves into feathery missiles and dive at speeds of 200 mph or more, making them the fastest animal in the world.

At the Bay Front plant in Ashland, Wisconsin, Xcel Energy and the Raptor Resource Project are teaming up in 2023 with the local newspaper and school district. As the falcons hatch, local kids will propose names for them and Daily Press readers will vote for their favorites.

Across our service regions, Xcel Energy volunteers help band the falcon chicks, maintain the cameras and clean up nesting sites after the young fledge. When the tree branch supporting the Fort St. Vrain eagles' nest collapsed in 2021, volunteers worked with RRP to install an artificial limb and rebuilt the nest. The eagles returned in 2022, and the nest is still actively used by the nesting pair. The birdcam network has attracted up to a million website views in a year, including TV meteorologists, classroom teachers and homeschoolers. Along with our own bird habitats, we support the Minnesota Department of Natural Resource's EagleCam in St. Paul and awarded 2022 focus grants to HawkQuest, the Audubon Society, EagleWatch and other avian nonprofits.

Eagle Protection

Xcel Energy takes seriously wind energy's potential impact on eagles. Because of the unique habitat around each wind project, we apply a site-by-site approach to evaluating eagle risk. Before construction, we conduct eagle use and nest surveys to understand what eagles are doing at each potential wind farm site. Results are used to adjust turbine siting and decide whether more eagle risk minimization should be added to a facility's bird and bat conservation strategy.

We own several wind farms where risk factors — including the presence of eagle nests or high eagle use — required us to develop site-specific eagle conservation plans with the U.S. Fish and Wildlife Service. They serve as supporting documents to incidental take permits that Xcel Energy holds, which allow a limited amount of eagle collision mortality at permitted facilities. These permits require rigorous eagle monitoring, regular coordination with USFWS and continued adaptive management to reduce risk to eagles as much as possible.

Lesser Prairie Chicken Conservation

Rangelands in our Colorado, New Mexico and Texas service area provide important habitat for the lesser prairie chicken. In March 2023, the USFWS listed two Distinct Population Segments of the species as threatened or endangered under the Endangered Species Act. In advance of the decision, we worked with federal and state officials to avoid, minimize and mitigate potential impacts from Colorado's Power Pathway project in the eastern part of the state. We are enrolling portions of the transmission project in the Renewable (Wind and Solar) Energy, Power Line and Communication Tower Habitat Conservation Plan for the lesser prairie chicken to offset any impacts to the bird's habitat. Mitigation under the plan supports protecting and expanding existing strongholds and other areas of relatively high-quality habitat to protect viable lesser prairie chicken populations and restore unsuitable habitat.

Since 2014, we have voluntarily spent more than $9.5 million on minimizing and mitigating impacts and improving habitat for these birds. At Sagamore Wind Farm in eastern New Mexico, we committed to invest in over 2,000 acres of preservation and restoration credits from the Lost Draw Conservation Bank — the first USFWS-sanctioned lesser prairie chicken conservation bank. With Xcel Energy as an anchor tenant, the bank is working to expand, improve and protect significant high-quality habitat south of Sagamore. Lost Draw partnered with a local ranching family to permanently protect and manage the property — all while accommodating sustainable ranching operations.

Through this partnership, Lost Draw is restoring thousands of acres by reconverting agricultural fields and removing tall woody species, such as mesquite. The bank is also eliminating existing fragmentation, such as pivot irrigation, windmills and other tall structures, and will protect the conservation footprint for the prairie chicken through permanent easements held by a New Mexico land trust. The strategic location of Lost Draw also contributes to the goal of securing a lesser prairie chicken stronghold and potentially a future focal area.

Support for Pollinators

According to the U.S. Fish and Wildlife Service, more than 75% of our food crops rely on pollinators to survive. Pollinators — bees, butterflies, some birds and even bats — are vital to flowering plant reproduction but their populations are shrinking. Xcel Energy has worked with partners to develop and maintain pollinator habitats for more than 30 years.

We have more than 40 active sites ranging from less than one acre to almost 800 acres, covering nearly 1,400 acres of pollinator habitat, in Colorado, Minnesota, North Dakota and Wisconsin. These include various company properties — under transmission lines and around substations, generating plants, office buildings, community solar gardens and even wind projects. We support and initiate projects that make a difference in the survival of pollinators, restoring native prairie ecosystems and targeting special species of concern including the monarch butterfly, rusty-patched bumblebee and Karner blue butterfly.

In 2022, an employee volunteer group seeded five acres adjacent to Fort St. Vrain Station near Platteville, Colorado, with a pollinator-friendly mix to enhance habitat along the St. Vrain River. We expanded our pollinator initiative to Colorado several years ago, and this project brings our total acreage seeded for pollinator habitat to nearly 80 acres in the state.

In our vegetation management practices for controlling brush, trees and weeds, Xcel Energy and the contractors we employ do not use chemicals that are harmful to beneficial insects on our rights of way and properties. We eliminated the use of neonicotinoids, which is of special concern to people working to improve bee populations.

As we move forward with the pollinator initiative, we are focusing on developing habitat that can be sustained, allowing time for the sites to develop. Our primary goal is to continue educating the communities we serve on the importance of pollinators in their daily lives while using company property to make a difference.