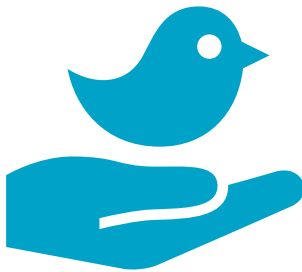


## Habitat Protection and Biodiversity



Under our Avian Protection Plans, more than 2,600 electric transmission and distribution locations have been retrofitted with equipment to protect birds.

### Our Approach

Xcel Energy has a long history of addressing wildlife protection, including avian protection, land restoration and fish management. We recognize our operations can impact wildlife and important habitat, so we take extra steps to protect these special resources.

### Avian Protection Plans

Transmission line structures and equipment can be attractive to birds for roosting and building nests and can pose a collision hazard resulting in risk of death or injury. Migratory birds and bald and golden eagles are protected by federal laws—the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). Our Avian Protection Plans (APPs) are a critical initiative to the company's compliance with the MBTA and BGEPA. In 2002, Xcel Energy operating companies entered into separate voluntary Memorandums of Understanding (MOUs) with the U.S. Fish and Wildlife Service (USFWS) to work together to address avian issues throughout the company's service territory and to develop an APP for each Xcel Energy operating company.

As part of the APP, each operating company developed a schedule for retrofitting facilities that were determined to pose a higher risk for bird injuries or deaths. Distribution and transmission designers and engineers have had great success in getting the required retrofits completed in a timely manner. All retrofits have been completed in our Colorado, Texas and New Mexico service territories. In our Upper Midwest service territory, we have finished the highest priority lines and poles and are working through the next level of retrofit projects. In Colorado, we have retrofitted almost 1,700 locations, and in our Texas and New Mexico region, we have retrofitted about 750 locations. We will retrofit an additional 546 locations in Texas and New Mexico during routine maintenance activities in the coming years. In the Upper Midwest, we have a retrofit program in place and continue to retrofit locations, with more than 200 locations completed so far. Additionally, the APP for the Upper Midwest region has been updated to reflect current design standards to ensure the continued success of these avian protection measures. The APPs for Colorado, Texas and New Mexico will be updated in 2016.

The MOUs also include Xcel Energy employees reporting injured or dead birds using the company's online reporting form. Designers and troublemen then analyze whether reasonable retrofits or marking of lines with bird flight diverters would minimize an avian incident from occurring at that location in the future. This reporting and retrofit evaluation process helps to ensure compliance with the MBTA and BGEPA and demonstrates Xcel Energy's commitment to taking responsible actions for avian protection.

## Protecting birds and bats near wind turbines

Xcel Energy works with the wind project developer, the U.S. Fish and Wildlife Service (USFWS) and appropriate state wildlife/natural resource agencies during wind turbine project siting and permitting to ensure wind turbine locations are not in major flyway areas or critical habitat for population-sensitive threatened and endangered species. For our newer projects, we ensure that the developer has prepared a detailed Bird and Bat Conservation Strategy that addresses steps to be taken to identify and mitigate impacts to avian and bat species during both construction and operation of the wind turbine project. We perform additional studies and monitoring after construction as part of the permitting process to confirm that the wind turbine operations are not causing impacts to bird populations. When protected avian species build nests in close proximity to existing wind turbines, we evaluate turbine curtailment as well as other options to avoid and minimize impacts. We also report injuries or fatalities to the USFWS and appropriate state agencies to ensure that additional mitigation measures can be developed if necessary. Xcel Energy purchases generation from wind energy companies that have performed similar permitting, reporting, reviews and/or studies.

## Osprey Nests

Ospreys are federally protected raptors that have seen recent reintroduction success in the Midwest following decades of restoration and conservation efforts. Ospreys benefit from the presence of power lines by using distribution poles and transmission structures for nesting. However, osprey nests built on utility poles may pose a threat to the birds and can jeopardize system reliability through outages and damage to electrical equipment. Xcel Energy environmental staff, linemen and field crews have been actively involved in erecting alternate nest platforms adjacent to and taller than the lines in known osprey nesting areas to provide more attractive and safer nesting sites while protecting system reliability. Xcel Energy also works closely with communities and civic group volunteers to help evaluate utility poles near high-quality osprey habitat, to identify alternate sites and to assist with building and installing safe osprey nest platforms.

## Bird Cam

Xcel Energy has installed web-based cameras in nest boxes at our generating plants to help increase awareness for conservation efforts. Our nine bird cams feature six different species: bald eagles, great horned owls, herons, kestrels, osprey and peregrine falcons.

## Karner Blue Butterfly Partnership

Xcel Energy continues to be a proud partner in the conservation and protection of the Karner blue butterfly—a small, federally endangered butterfly restricted to habitats—most prevalent in Wisconsin—that support wild lupine plants. In 1999, Xcel Energy partnered with the Wisconsin Department of Natural Resources (DNR) and other stakeholders to prepare an innovative statewide Habitat Conservation Plan (HCP). As part of the HCP, Xcel Energy voluntarily agreed to various mitigation, land management and conservation commitments. Xcel Energy's Wisconsin environmental staff continues to participate in annual meetings with the DNR and other utilities to evaluate ongoing conservation efforts. The staff also leads lupine and butterfly field surveys to ensure that company activities, such as transmission line rebuilds and new gas pipeline construction, will not result in adverse impacts to the Karner blue butterfly and its habitat.

## Pollinator Habitat Enhancement

The decline of pollinator species—including bees, wasps and butterflies—and the resulting ecological and economic consequences—such as impacts to food production—is quickly becoming a critical environmental issue. Utility right-of-ways present ideal opportunities for creating and enhancing pollinator habitat through modifying land management practices such as mowing frequency, reseeding mixtures and pesticide spraying practices while still managing to maintain system safety and reliability.

Xcel Energy actively seeks opportunities to participate in pollinator habitat restoration efforts as part of the nation's overall Pollinator Initiative established in 2014. A project team has been created to identify potential pollinator planting sites and track our progress at existing sites. We have partnered with nonprofit organizations, agencies and communities to use a diverse pollinator seed mix along portions of the CapX2020 transmission line rights-of-way in North Dakota, Minnesota and Wisconsin.

Our company has renewed its support for the St. Croix River Watershed Monarch Conservation Program. We have pledged to work with the USFWS to create or restore at least 50 acres of pollinator-friendly habitat near our facilities, including outside the Allen S. King Generating Station in Oak Park Heights, Minn.

We also are a key partner with the USFWS in conservation efforts across Minnesota for the monarch butterfly. A significant portion of the Monarch Mitigation Corridor, which essentially parallels Interstate-35 from Minnesota to Texas, coincides with Xcel Energy's northern service territory.

## Northern Long-eared Bat

The USFWS published a final rule in April 2015 listing the northern long-eared bat as a threatened species under the Endangered Species Act (ESA) due to declining populations from a widespread disease threatening the bat's health. This year, the USFWS issued a final 4(d) rule that authorizes incidental take outside of areas where the bat is known to hibernate (i.e., its hibernacula) that occurs during otherwise lawfully conducted activities within the species' range. For tree removal activities, additional conservation measures must be followed. The bat's habitat range extends across all five Upper Midwest states in Xcel Energy's service territory. We are working with our vegetation management crews to ensure right-of-way maintenance work is performed consistently with the requirements of the listing decision and interim rule.

## Greater Sage-Grouse Conservation Plan

In Colorado, Xcel Energy helped develop the Northern Eagle/Southern Routt Greater Sage-Grouse Conservation Plan and is a signatory on the plan. This plan describes and sets forth a strategy for long-term management of the greater sage-grouse in concert with other resource values and land uses at a landscape scale. It serves as the beginning of a cooperative effort between private landowners and state and federal agencies to conserve greater sage-grouse and their habitats in Northern Eagle and Southern Routt counties.

## Lesser Prairie-Chicken Conservation Agreement

Xcel Energy has voluntarily entered into a conservation agreement with the Western Association of Fish and Wildlife Agencies (WAFWA) pursuant to the Lesser Prairie-Chicken Range-Wide Conservation Plan to mitigate impacts to this species of prairie grouse in areas where we operate. The USFWS listed the lesser prairie-chicken as a threatened species in 2014 due to the rapid decline in its population over the past 15 years. In 2015, a court vacated this listing on procedural grounds.

Range lands in our Colorado, New Mexico and Texas service territories serve as important habitat for the lesser prairie-chicken, and under the conservation agreement, Xcel Energy will implement conservation measures that help protect this habitat. The company paid an enrollment fee of \$60,000, and will pay future mitigation fees based on anticipated development activities. We also agreed to follow avoidance, minimization and mitigation measures during operation, maintenance and new construction activities. These measures may include burying distribution lines within a certain distance of active breeding areas and using mono-pole construction in certain lesser prairie-chicken habitat areas.

The goal of the WAFWA conservation plan is to increase the population of the species from about 17,000 birds currently to 67,000 birds across the range states of Colorado, Kansas, New Mexico, Oklahoma and Texas. Since the program began, more than 180 companies have enrolled about 11 million acres across the five states, and have committed \$47.5 million for habitat conservation. Based on a 2015 WAFWA survey, these efforts along with abundant spring rainfall and other conservation initiatives have helped increase the lesser prairies-chicken population by approximately 25 percent from 2014 to 2015.

## Vegetation Management

Xcel Energy's Vegetation Management department manages millions of trees across approximately 50,000 miles of distribution right-of-way and 19,000 miles of transmission right-of-way throughout our service territory. For more than 20 years, the Arbor Day Foundation has recognized us as a Tree Line USA utility for our commitment to proper tree pruning, planting and care.

The department uses industry best practices such as integrated vegetation management. Integrated vegetation management encompasses a progressive system of information gathering and assists the department with developing compliant solutions to vegetation control near electric and natural gas facilities. The practice focuses on achieving such ends in an environmentally sensitive, socially responsible and cost-effective manner.

In addition, pruning methods comply with standards set by the American National Standards Institute and the Tree Care Industry Association, which are endorsed by the International Society of Arboriculture.

Our practices seek to balance our customers' need for reliable energy while respecting the natural environment that surrounds our facilities. For example, we work with landowners to determine if trees and other vegetation can be deemed compatible with safe operation of our electric lines.

In our efforts to comply with governmental regulation and to better ensure electric system reliability, our transmission line vegetation management program emphasizes the removal of incompatible vegetation to promote long-term vegetation control. In many cases, this means removing trees in areas where trees had been pruned in the past.

We employ manual and mechanized clearing where the vegetation is too tall for herbicide applications. When necessary, our contractors apply herbicides that are registered by the U.S. Environmental Protection Agency and the appropriate state regulatory agency. The herbicides are applied by licensed applicators.

## Tyrone Property Restoration

Xcel Energy originally acquired the 4,400-acre Tyrone property in Dunn County, Wis., in the 1960s and 1970s as a potential nuclear generating plant site. The plant was never built, and for more than four decades the land became home to permanent tree stands and trash sites. Areas of the property also were eroded and rutted from unauthorized off-road vehicle use.

In 2008, following a detailed field inspection of the property, Xcel Energy crews cleaned up trash sites and posted signs to keep motorized vehicles off the property. Our ongoing activities have included converting existing agricultural lands into prairie and forest, harvesting timber to promote regeneration, planting trees and monitoring grassland birds to determine if restoration practices are increasing bird nesting population.

With help from the Wisconsin Department of Natural Resources and nonprofit conservation organizations, we have worked to restore areas of the property into five kinds of land: oak savanna, floodplain savanna, sand blow prairie, dry sand prairie and goat prairie. Of the four kinds of prairie communities at Tyrone, sand barrens and floodplain savanna are considered globally rare.

In 2007, there were only 32 acres of managed prairie at Tyrone. Since then, Xcel Energy has established more than 1,000 acres of different types of prairie.