THE *Nature* OF BUSINESS

CORPORATE CONSERVATION REPORT

ARIENS | CO

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Among sustainability efforts, nature and biodiversity are too often overlooked in favor of higher-profile initiatives like reducing greenhouse gas emissions.

But protecting nature and biodiversity through corporate conservation needs a closer look.

We have always operated our manufacturing business as a journey of continuous improvement in reducing waste, and with as little impact on the environment as possible. Those efforts to reduce waste and minimize impact expanded outside our plant walls when we looked at the total footprint of our business operations.

We have been citizens of Brillion, Wis. for over 130 years when in January of 1893 Henry Ariens arrived to open his foundry business. Now with our family firmly planted in the green industry of outdoor power equipment, I considered the 200-plus acres of property behind our manufacturing operations as a possible restoration project to symbolize our commitment to the nature of our business.

In 2017 this property was covered in overgrown and unwanted trees and debris, and certainly more unkempt than the insides of our buildings. This outside acreage was out-of-site, out-of-mind with fill dumped from previous building projects and underutilized farming, causing drainage challenges and invasive plant overgrowth.

But what if it could be put to good use for the reclamation of native local biodiversity? Our mission was simple. At the core is restoring native habitat. Once native plants are restored, the premise goes, the native wildlife will follow.

One of the challenges of corporate conservation is that measurements are not widely defined. For us, the Wildlife Habitat Council (now Tandem Global) provided the guidance we needed to apply best practices to manage ecosystems – similar to how we apply management principles to our manufacturing business. After many seasons of dedicated work by a cross-section of employees and local experts, the area is an on-going native restoration success and we are happy to share a few stories in the following report. Personally, it has been astonishing how quickly habitat can begin transformation with dedicated focus and attention. By 2022 the company had received the Conservation Certification from Tanden Global at the highest Gold Level. And as I write today, we continue to nurture this land, including the discovery of a federally endangered species of bumble bee.

Protecting nature and biodiversity is a long-term goal that will likely require generations of commitment. However, beyond the impact of local biodiversity, businesses may find any number of additional reasons to get involved with corporate conservation efforts. For us it was community engagement, talent acquisition, employee engagement and wellness. And, most importantly, we wanted to make an impact on the generations that will follow our path.

The core of the AriensCo Conservation effort is simple.

Native Habitat
The prairie oak savanna, upland forests and wetlands are managed for native grasses, flowering plants, shrubs and trees.

Attracts Native Wildlife
The native habitat attracts native wildlife including insects, reptiles, amphibians, birds and mammals.

A Mosaic of Native Habitats
The AriensCo conservation property encompasses about 200 acres located behind and between two manufacturing plants and the company's corporate headquarters in Brillion, Wisconsin. To date, about 150 acres are actively managed for native habitat, with the remainder in various stages of conservation management for future development. The overall conservation objectives are focused on improving and increasing wildlife habitat diversity.

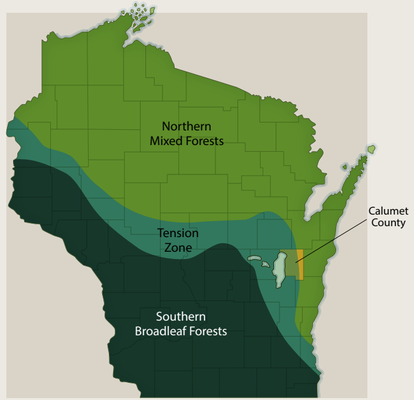
Three distinct habitats exist on the property: prairie oak savanna, upland forest and wetlands. A shallow stream intersects the property draining into the Brillion State Wildlife Area to the south. This mosaic of rich habitat attracts a wide variety of wildlife, enhancing the biodiversity and health of the local ecosystem.

Public Access
Nearly two miles of walking trails wind through the area encouraging community access with a trailhead, pavilion and parking area. The trails are open to the public and ultimately connect to the 25-mile Fox River Trail.

WISCONSIN'S TENSION ZONE

Although a Tension Zone may sound like a stressful place to exist, it actually allows for an increased amount of potential biodiversity on the AriensCo conservation property.

The Wisconsin Tension Zone divides the state into two ecological regions based on climate: the northern mixed forests of the state and the southern broadleaved forests, savannas, and prairies. Within the tension zone – represented by a band through the state – vegetation from both the northern and southern regions may exist together. Calumet County, Wis., where AriensCo is located, is one of the few counties in the state that exists almost entirely within the Tension Zone. This transition region allows the AriensCo conservation effort to incorporate into its conservation management plan design a wide-ranging and diverse mix of vegetation and habitat, drawing on species from both regions.



Monitoring and Conservation Go Hand in Hand

The practice of conservation management is heavily reliant on data collection through monitoring. It is a critical component of an informed process for making decisions. Monitoring can be as detailed as recording dissolved oxygen in a stream or can be as simple as logging the number of eggs in a bluebird nest box. Each photo or datapoint provides important insight into the health of the ecosystem and the status of our efforts — from the largest trees to the smallest insects.

Employees and volunteers who work on the project spend much of their time collecting data. Part of the requirements for conservation certification require AriensCo to monitor a number of different indicators related to both the habitats and the species of focus on the property. The resulting data is the source for the tracking information included in this report.

Citizen Science Contributions

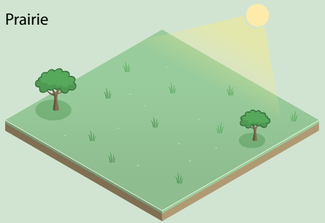
Citizen science is research conducted with participation and collaboration from the general public to increase scientific knowledge. Through citizen science, amateur volunteers contribute to data monitoring and collection programs in a wide range of areas of study including ecology, biology and conservation. When setting priorities for conservation projects, AriensCo evaluates the opportunity to contribute to relevant citizen science projects by submitting data collected by staff.

By collecting and classifying data, employees working on the AriensCo conservation project are part of the effort help enhance the scientific community's capacity to conduct research.

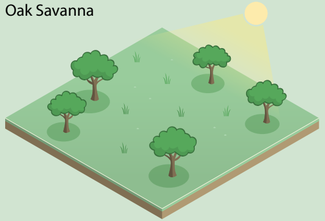
Employees have collected and contributed data to the following citizen science projects:

- Bluebird Restoration Association of Wisconsin (BRAW)
- Purple Martin Association
- Bumble Bee Brigade (Wisc. Department of Natural Resources)
- Journey North
- Monarch Watch
- Wisconsin Butterflies.org
- Monarch Larvae Monitoring Project

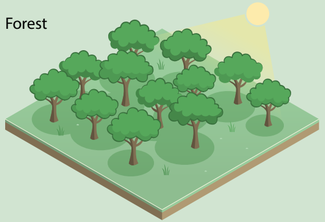
Prairie



Oak Savanna



Forest



OAK SAVANNA

A Rare *Opportunity* for Heritage Conservation

An oak savanna is characterized by open-grown, fire-resistant oaks surrounded by prairie grasses and flowering plants. In contrast to a forest, which has a closed canopy, the oak savanna canopy ranges from about 10% - 50%. In such a habitat, the ground layer receives sun and shade, which permits growth of a wide diversity of grasses and flowering plants, resulting in a wide variety of plant and animal diversity.

AriensCo has been working to establish oak savanna habitat on the conservation property since 2014 with an initial 12-acre restoration project alongside the original walking trails. By 2022, after prepping and seeding two formerly-rented farm fields, more than 75 acres of the property have been planted with a combination scattered trees — bur oak and white oak — and diverse prairie seed mixes that include grasses and flowering plants.

Fire ecology is a dominant part of this unique ecosystem. The habitat can exist and persist only where there is regular fire. Without fire, the prairie areas fill in with brush, shrubs, and fire-intolerant trees and ultimately become a forest. AriensCo works with the Wildland Fire Program at the local Technical College to burn the established prairies in early spring.

Prairie Plant Variety for Continuous Bloom

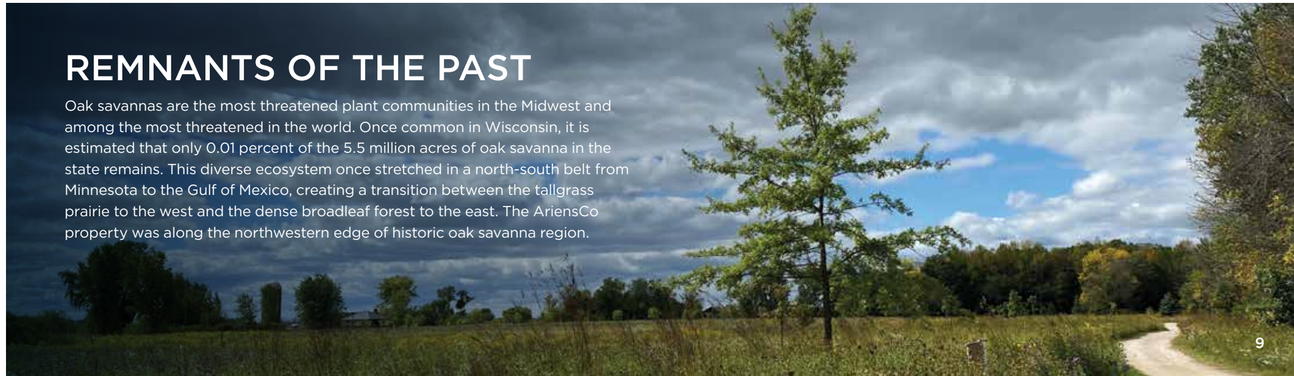
Because a mature oak savanna with open-grown trees supports sun-loving prairie plants, shade-tolerant woodland plants, and unique savanna specialists, plant diversity is very high compared to other habitats. This is why the current prairies of the oak savannas on the AriensCo property are managed for maximum diversity of native species. Since 2014 the company has planted more than 130 species of flowering plants and grasses, and made a significant effort to prevent, reduce and remove non-native invasive plants. And the efforts are showing positive results.

Based on annual monitoring of the prairies, the current native vegetative cover ranges approximately anywhere from 85-97 percent of the prairies on the property.

Native prairie wildflowers bloom at different times throughout the season and only for short periods. AriensCo management strategy focuses on having a continuous bloom of wildflowers from early spring through late autumn as different species provide food, shelter or breeding resources for numerous insects and wildlife. This diversity attracts a larger variety of insects, including butterflies, moths, beetles, flies, ants and bees which, in turn, attract and support a wide variety of birds.

REMNANTS OF THE PAST

Oak savannas are the most threatened plant communities in the Midwest and among the most threatened in the world. Once common in Wisconsin, it is estimated that only 0.01 percent of the 5.5 million acres of oak savanna in the state remains. This diverse ecosystem once stretched in a north-south belt from Minnesota to the Gulf of Mexico, creating a transition between the tallgrass prairie to the west and the dense broadleaf forest to the east. The AriensCo property was along the northwestern edge of historic oak savanna region.



Building Up the Layers

Upland forests are dynamic habitats teeming with plants, insects, birds and mammals. The dominant oaks, maples, basswood, ash and many other tree species provide important den and nesting habitat for a diverse amount of wildlife. The AriensCo conservation property includes 35 acres of existing forest and 37 acres of reforestation area.

Management of the existing 35 acres of upland forest has focused on preserving and enhancing the diversity of each layer that makes up the forest:

- Practice timber stand improvement to enhance the species mix of the mature deciduous trees that form the Tree Canopy.
- Allow native species to thrive in the Understory made up of a dense layer of smaller trees and shrubs.
- Seed and divide non-woody spring-flowering plants that make up the Ground Layer along with grasses, mosses and lichens.

Reforestation efforts on an additional 37 acres have focused on reconnecting existing individual forest segments separated by agricultural land to create movement corridors for wildlife.

Since 2022, AriensCo employees have planted more than 40,000 seedlings in an effort to establish one continuous forest corridor in the future.

The seedling mix consists of 22 species, including 5 different species of oak, sugar maple, white pine, shagbark hickory and tamarack.

Spring Woodland Flowers
Spring ephemerals thrive in moist, rich, undisturbed woodlands. These delicate flowering plants appear in the upland forest from March to May taking advantage of the available sunlight before the tree canopy fully develops. Though spring ephemerals are short-lived, they are some of the earliest to bloom, providing crucial early-season nectar sources for native bees.

Digging In for Marshland Species

In fall of 2022, AriensCo added two shallow marshes to the property, dug to a depth of three and a half feet. The marshes are located on one of the previously-leased farm fields on the west side of the conservation property. The two marshes combined cover approximately 1.5 acres.

Though the size of the marsh area is relatively small, the long-term impact on biodiversity on the property will be significant. The marshes enhance the overall conservation efforts on the property by creating wildlife habitat that did not previously exist. The marshes are surrounded by newly-planted prairie and reforestation area, creating habitat for wildlife species that are dependent on both uplands and wetlands for survival. The wildlife supported by the marshes include blue heron, white egret, blue and green-winged teal, wood ducks, cranes, amphibians, and turtles. These species need varying habitat on the property to support their complete lifecycles.

In addition, each of the two marshes were designed to collect surface water run-off from the watershed. This design will eventually improve water quality by allowing nutrients to be captured by the marshes for utilization by the aquatic vegetation, protecting and improving the water quality in downgradient surface waters.

A Complete Food Web

The AriensCo property is managed for diversity of wildlife species. To date, more than 400 animal species have been identified and logged on the property including the sample listed here. Many of the different species are dependent on each other for survival and all of them together make up the local food web.

The interconnected relationships within the food web support the function of the ecosystem. The more complex and diverse the food web the more stable and resilient the ecosystem.

Mammals
Common Raccoon (Procyon lotor)
Coyote (Canis latrans)
Groundhog (Marmota monax)
North American River Otter (Lontra canadensis)
Red Fox (Vulpes vulpes)
White-Tailed Deer (Odocoileus virginianus)

Amphibians
American Bullfrog (Lithobates catesbeianus)
Gray Tree Frog (Dryophytes versicolor)
Leopard Frog (Lithobates pipiens)
Wood Frog (Lithobates sylvaticus)

Birds
Blue Heron (Ardea Herodias)
Green Heron (Butorides virescens)
Indigo Bunting (Passerina cyanea)
Red-Headed Woodpecker (Melanerpes erythrocephalus)
Sandhill Crane (Grus canadensis)

Reptiles
Common Garter Snake (Thamnophis sirtalis)
Painted Turtle (Chrysemys picta)

Insects
Black Swallowtail Butterfly (Papilio polyxenes)
Goldenrod Soldier Beetle (Chauliognathus pensylvanicus)
Red Spotted Admiral Butterfly (Limenitis arthemis)
White-Spotted Sable Moth (Anania funebris)
Yellow Bumblebee (Bombus fervidus)

THE ENDANGERED RUSTY PATCHED BUMBLE BEE

Bumble Bees

Supporting pollinators has been a priority for AriensCo since the conservation project began. Because bumble bees are one of the state's most important native pollinators, employees participate in a statewide bumble bee monitoring effort, called the Bumblebee Brigade (BBB), coordinated by the Wisconsin Department of Natural Resources (WDNR). In Wisconsin and throughout the world, many bumble bee species are in decline but relatively little is known about the genus. The goal of the statewide project is to use long-term monitoring to gather information on species distributions, habitat requirements, phenology, and population status, in an effort to improve conservation planning for bumble bees.

Participating in the BBB requires monitoring by identifying and submitting photo records of bumblebees. Since 2020, AriensCo employees have uploaded 1,462 individual records via 168 surveys conducted on the property. To date, of the 20 native bumble bee species in the state, 12 have been identified on the AriensCo property. The variety of bumble bee species identified is testament to the company's efforts to restore native habitat that meets all the lifecycle needs of these important pollinators.

The Endangered Rusty Patched Bumble Bee
Historically, the rusty patched bumble bee (Bombus affinis) was abundant across a broad geographic range of 28 states. But since the 1990s, its population has been reduced to only 8% of its historical extent.

Wisconsin is now only one in nine states where the rusty patched is found.

Because of this decline, it was the first of only two bumble bees listed by U.S. Fish & Wildlife Service as an Endangered Species.

In 2022 AriensCo staff identified a rusty patched bumble bee on the property. This was the first record of the species in Calumet County where AriensCo is located, providing new information regarding the species current distribution. In 2023 staff identified a rusty patched nest on the property. This was only the sixth rusty patched bumble bee nest recorded in Wisconsin in the previous 20 years. Due to the research significance of this discovery, once it's seasonal cycle was complete, nest materials were removed by the WDNR and distributed to expert entomologists throughout the Midwest for research.

AriensCo Apiary & Honey Bee Ambassadors
AriensCo has operated an apiary since 2015 when it was established to assist with pollination on the original trailside prairie planted in 2014. Honeybees from the AriensCo Apiary forage the pollinator prairies on the conservation property. Employees manage and maintain the bees throughout the season and collect, process and jar the honey when it is ready to harvest. The number of hives in the AriensCo Apiary has expanded over the seasons and it is not unusual for employees to collect 600 pounds of honey per year from the hives.

Although honey bees are not native to the US, the honey bees kept on AriensCo property, and their honey, serve a significant role in outreach because of their appeal. They help communicate the critical role of pollinators and importance of preserving habitat so that both honey bees and native bees can thrive. The honey is sold at the AriensCo Museum retail store with information on the label about the wider conservation project — and all proceeds from honey sales are used to help support the conservation efforts.

Butterflies

Butterflies are flagship species in conservation and reflect the ability of a habitat to meet the various lifecycle needs of the insects. They are beneficial to ecosystems, not just for pollinating plants but for providing food (as larval caterpillars) for other species within the local food web, including birds.

On the AriensCo conservation property, butterflies are a good indicator of prairie progress and plant diversity status.

Many Wisconsin butterfly species have very specific host plants or plant families. Attracting a wide variety of native butterfly species requires both a wide diversity of plants to meet those specific needs and plants that bloom in succession from early spring to mid-autumn.

Through monitoring efforts, employees have identified 39 species of native butterfly species on the property. In the last two years, employees have submitted 1,581 butterfly records via 55 surveys to a website that records Wisconsin butterflies by location and date in order to track populations over time.

Monarchs, Migration and Milkweed

AriensCo participates in efforts to support and collect information on monarch butterflies throughout their lifecycle and tracks information about milkweed plants. Monarch caterpillars feed exclusively on the leaves of milkweed — without it, they cannot complete their life cycle and populations decline. Four different species of milkweed on the AriensCo conservation property attract and support monarch butterflies.

In late spring, employees monitor the arrival of the spring migrating monarchs and presence of milkweed on the property. Through summer, the monarch eggs and larvae are documented. And in late summer and early fall, AriensCo employees catch, tag and release monarch butterflies that will make the annual migration to Mexico as part of the Monarch Watch program. In the last few years, 150 migrating monarchs have been tagged on the AriensCo property. This citizen science project is aimed at understanding the dynamics of the monarch's unique lifecycle and migration. The information is submitted to a multinational database that tracks migrating monarchs.

INDICATOR SPECIES

Birds

AriensCo partners with the birding group at a local nature center to conduct quarterly bird surveys on the property since 2021, helping gauge the quality of the habitat and impact on bird populations over time. Wisconsin is home to about 440 species of birds. To date, more than 100 native bird species have been identified on the AriensCo property as part of the surveys. The list encompasses grassland species, forest species and wetland species, as well as birds that benefit from forest-prairie edge habitat. The list also includes 16 of the state's 37 native warbler species. These small, colorful songbirds migrate through the state and help control insect populations.

Five of the eight woodpecker species native to Wisconsin have been identified on the AriensCo property. Woodpeckers are a good indicator species of forest ecosystem dynamics as they increase forest turnover and decomposition rates. As master carpenters of the bird world they are known as "keystone species" for their crucial role in creating habitat — or tree cavities — suited to other woodland wildlife. Abandoned woodpecker cavities become nests or roosts for wood ducks, bluebirds, swallows, small owls and other birds.

Nest Boxes: Addressing a Housing Shortage
One of the biggest challenges to bird populations is habitat loss, including suitable locations to build a nest, lay eggs, and raise a brood with ample food sources nearby. The hollow cavities in standing dead trees provide important natural bird nesting habitat for many species of migratory birds known as "cavity nesters."

Nest boxes provide important alternative nesting habitat when dead tree cavities are not plentiful enough to support a population, or where tree cavities are monopolized by aggressive non-native birds. Nest boxes are designed and sited specific to the different needs of each cavity-nesting species. For some species, nest boxes are critical to survival. Purple martins in eastern North America, for example, now nest almost exclusively in birdhouses versus natural habitat.

NEST BOX LOCATIONS

AriensCo staff have installed nest box structures for blue birds, tree swallows, purple martins, wood ducks, and American kestrels. The boxes are monitored by employees during the nesting season, logging information on nest progress, eggs, hatchlings and fledglings. The information collected by employees is then submitted to citizen science groups tracking data by species.

Since 2019 the AriensCo nest boxes have provided nesting habitat for more than 550 fledging birds:

- Bluebirds: 34 birds fledged
- Tree Swallows: 378 birds fledged
- Purple Martins: 45 birds fledged
- Wood Ducks: 93 birds fledged
- American Kestrel: 5 birds fledged

Carbon Sequestration

In 2023, the engineering firm of McMahon Associates of Neenah, Wis. calculated the approximate annual carbon sequestration on the current AriensCo conservation property. The calculation was based on the area that encompasses approximately 150 acres. This includes 78 acres of prairie oak savanna, 35 acres of existing forests (50-150 years old) and a 37-acre reforestation area. Annual carbon sequestration will continue to increase in the future as the prairies develop and the trees in the reforestation areas mature.

According to the calculations, approximately 190 metric tons or 418,874 pounds/year of carbon are sequestered on the current conservation property.

The carbon is removed from the atmosphere and stored in the soil primarily and on the ground surface. The prairie sequesters more carbon than the forests with roots that grow to depths of 5 to 15 feet deep. Prairie plants replace one-third to one-half of their prairie roots every year with the dead roots adding to carbon storage. Annual carbon sequestration will continue to increase in the future as the prairies develop and the trees in the forests mature.

Control of Invasive Plants

In addition to planting and seeding native vegetation, AriensCo staff work to reduce the impact of invasive plant species on the property. An invasive plant is a non-native plant that can spread quickly and damage a local ecosystem. Eliminating invasive plant species is an ongoing effort because many invasives are prevalent in surrounding roadsides or fallow fields. Seed is carried onto the site by wind, stream water and runoff and some of the species have seeds that remain viable in the soil for many years. AriensCo employees and service providers continually scan the property for more than 25 different species of invasive plants. Once identified, they are cut, removed or treated based on standard protocol.

Are Invasives Really THAT Bad?
Invasive plants can rapidly spread and form dense patches that outcompete native plants for resources like sunlight, water, and nutrients. This alters the habitat, impacting the wildlife that relies on native plants for food and shelter. The resulting disruption to the food web can displace native species and significantly alter the natural balance of an area.

TIMELINE

2008
Mike Ariens Trails installed.

2014
Seeded and planted 12 acres along trail to establish prairie oak savanna.

2015
Bee hives established and honey sales introduced.

2017
Joined Wildlife Habitat Council (WHC), now Tandem Global.

2018
Collected baseline wildlife monitoring data.

2019
Installed first bird boxes. Continued to collect baseline wildlife monitoring data.

2020
Received Conservation Certification from WHC. Committed additional 100 acres to future conservation.

2020
Seeded and planted additional 14 acres of farmland to establish prairie oak savanna.

Established Stone Prairie event site on conservation property.

2021
Extended trail system.

2022
Received Gold Level Conservation Certification from WHC. Committed additional 50 acres to future conservation.

2022
Planted 10,000 seedlings on former farm field to connect forest fragments.

2022
Dug two shallow marshes to add habitat diversity. Seeded and planted additional 47-acre farm field for establishment of prairie oak savanna.

2023
Planted 30,000 tree seedlings to create wildlife corridors.

Awards and Recognitions

The company's conservation efforts have received several awards and recognitions:

Wisconsin Business Friend of the Environment Award for Environmental Stewardship
WISCONSIN MANUFACTURERS & COMMERCE
2018

Conservation Certification
WILDLIFE HABITAT COUNCIL
2020

Lake Michigan Champions of Conservation
LAKE MICHIGAN STAKEHOLDERS
2021

Wisconsin Business Friend of the Environment Award for Environmental Stewardship
WISCONSIN MANUFACTURERS AND COMMERCE
2021

Gold Level Conservation Certification
WILDLIFE HABITAT COUNCIL
2022

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Based in Brillion, Wisconsin, AriensCo is a privately-owned manufacturer of outdoor power equipment for both consumer and commercial markets. Established in 1933, the company manufactures equipment under the Ariens®, Gravely®, and AS-Motor® brand names. Its RapidCare® division provides service and support to dealers with parts, a call center and trained field service technicians. It started Henry's Parts & Equipment in 2023, a will-fit aftermarket parts business. AriensCo Hospitality began in 2020 with two luxury event venues, Stone Prairie and Round Lake Farms. It opened Ariens Nordic Center in December 2022. These venues are part of the mission to create reasons to visit the Brillion community.

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Like us on Facebook. Subscribe to our YouTube channel.