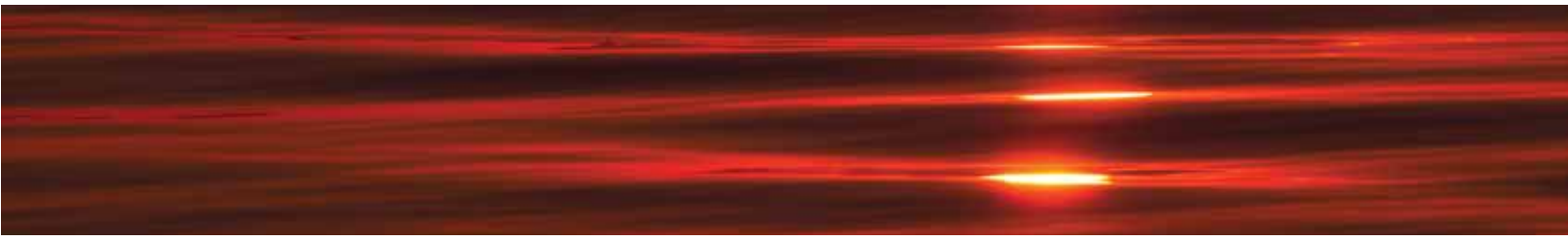
MANITOBA
HABITAT
HERITAGE
CORPORATION



ANNUAL REPORT **2014/15**

Homegrown conservation since 1986.

"American Avocets Muckin' Around", Jeff Dyck

OVERVIEW

38,386 ACRES PERMANENTLY PROTECTED IN 2014/15

"Female Wood Duck", Jeff Dyck

MANITOBA **HABITAT HERITAGE** CORPORATION

The Manitoba Habitat Heritage Corporation is a non-profit provincial Crown Corporation working to maintain biological diversity and water quality in Manitoba by offering habitat stewardship programs to private landowners.

Cover photos "*Golden Frost*" and "*Red on Whitemouth Lake*" by Scott Kroeker.

The Manitoba Habitat Heritage Corporation had a record breaking year in 2014/15.

Due in large part to a donation of the largest package of conservation agreements in Canada (see page 18), MHHC permanently protected 38,386 acres (15,534 ha) this year. The assessed value of all the conservation agreements donated or sold to MHHC this year was over $7.2 million. Combined with work in the past, MHHC's protected lands now provide annual benefits valued at over $52.5 million to society through ecological goods and services.

Continuing its expansion of conservation programming, MHHC completed the mapping of 3.5 million acres of wetlands in southeastern Manitoba. It also identified the best species at risk habitats to conserve in southwest Manitoba in order to maximize benefits to endangered species. With the successes of this year, the Corporation is well placed for opportunities that will come available in the future.

MHHC OVERVIEW

With a mandate to conserve, restore and enhance fish and wildlife habitat, the Manitoba Habitat Heritage Corporation (MHHC) has delivered significant ecosystem benefits to all Manitobans this year. In fiscal year 2014/15, Manitobans committed a total of 38,386 acres (15,534 ha) of habitat to MHHC for permanent conservation. Donations of conservation agreements by the Rural Municipalities of Lakeview and Westbourne (now known as the Municipality of Westlake-Gladstone) were valued at over $6.8 million. This keystone achievement, when combined with other project successes, helped MHHC make significant progress in all of its strategic categories.

MHHC HABITAT STRATEGIES:

WATERSHEDS
WETLANDS
SPECIES AT RISK
AQUATIC HABITAT
HABITAT MITIGATION

The **Watersheds** habitat strategy focuses on applying the resources of MHHC and its partners to maintain and improve the health of watersheds throughout southern Manitoba. This year MHHC partnered with the La Salle Redboine Conservation District and other groups to protect Pelly's Lake (page 10) and convert it to a seasonal water retention area, reducing spring runoff and increasing water recharge in the dryer summer months.

MHHC achieved a new height in the **Wetlands** habitat strategy in 2014/15. The largest conservation agreement in Canada was initiated this year and conserves over 43,000 acres (17,400 ha) (page 18) in the Big Grass Marsh, an iconic Canadian wetland. The Wetland Inventory project also completed the first block of the Manitoba Wetland Inventory (Page 17), an area larger than the country of Denmark.

MHHC has been working on the **Species at Risk** habitat strategy for 15 years in partnership with Environment Canada's Habitat Stewardship Program for Species At Risk. Manitoba currently has 51 Federally-listed at-risk species and MHHC has directly impacted 75% of these through its voluntary habitat conservation and enhancement activities. Over the years, a total of $4.4 million in payments have been made to landowners who have species at risk on their property and over 62,300 acres have been conserved for the specific benefit of individual at-risk species (page 22).

The **Aquatic** habitat strategy has been a growth opportunity for MHHC in the recent years. In 2014/15 MHHC received funding from the Habitat Stewardship Program and the Rural Municipality of Reynolds to reconstruct Medika Drain in order to improve fish habitat (page 27), particularly for the threatened carmine shiner. This project reengaged MHHC in direct aquatic habitat restoration and built new delivery partnerships in an area of Manitoba that has not been a focal point for conservation organizations.

As an MHHC strategy, **Habitat Mitigation** seeks to achieve no net loss of benefits from habitats that are being lost, by restoring and conserving equivalent or better habitats. In 2014/15, MHHC continued its partnership with Manitoba Conservation and Water Stewardship and Manitoba Infrastructure and Transportation to compensate for the loss of wetlands in a roadbuilding project by restoring a large wetland in the same watershed (page 29).

Looking at MHHC's conservation lands as a whole, the ecological goods and services of lands that MHHC has permanently protected, provides Manitoban's an estimated $52.5 million annually.

All of this would not be possible without the hard work of MHHC Board of Directors, staff, and the dedication of scores of Manitobans to conservation. MHHC's most important partnership continues to be with the landowners who entrust MHHC to conserve, enhance and restore their lands for years to come.

VISION

Natural habitats across Manitoba landscapes and watersheds are supported in ways that conserve healthy ecosystems, biodiversity and community well-being.

MANDATE

The conservation, restoration and enhancement of fish and wildlife habitat and populations throughout Manitoba, for the benefit of all Manitobans.

Staff members of the Manitoba Habitat Heritage Corporation, MHHC

ACCOMPLISHMENTS AT A GLANCE

$52.5 MILLION

The value of services provided to Manitobans by natural habitats conserved by MHHC, including such things as nutrient capture and water retention.

175,664 ACRES

The area of natural habitats permanently conserved by MHHC is 2.5 times larger than Spruce Woods Provincial Park, or 1.5 times larger than the City of Winnipeg.

52,072 ACRES

Manitobans have donated lands or perpetual conservation agreements to MHHC that when combined, would be slightly larger than Turtle Mountain Provincial Park.

Table 1: Total accomplishments by MHHC (acres)

	Prior to 2014/15 (acres)	In 2014/15 (acres)	Total (acres)
Acquired Properties	13,462	159	13,621
Perpetual Conservation Agreements	123,796	38,227	162,023
Term Conservation Contracts*	140,704	7	140,711
Total	277,963	38,386	316,355

** Includes both current and expired contracts*

MHHC CONSERVATION **OPTIONS FOR LANDOWNERS**

Purchased Conservation Agreements

MHHC's primary tool for long-term habitat conservation is the conservation agreement (CA). Essentially an easement, a CA is an agreement between a landowner and MHHC that recognizes and permanently maintains the habitat, water quality and biological diversity of the land without affecting the parcel's other land uses or ownership. Working with MHHC, a landowner may continue to use and manage the property as they have in the past while making a long-term contribution to the environment. The agreement is perpetual and is recorded on the land title, remaining in force even if the land changes hands. Landowners receive financial compensation for signing a CA in the form of a cash payment.

Habitat Enhancements

Short term habitat conservation and enhancement is available to improve wetlands and wildlife habitat. Ten year conservation contracts are available when completing a wetland restoration or installing a Hen House (waterfowl nesting structure) on private property. MHHC also offers shrub control via mowing or herbicide wicking to enhance native prairie pastures.

Donations

MHHC accepts donations of suitable habitat on a case by case basis, either by acquiring the property or by signing a conservation agreement. The Corporation has received 68 donations of land and conservation agreements and manages each in a locally appropriate manner and with respect to the donor's wishes. MHHC works with local producers to graze and hay properties for the benefit of maintaining the habitat in its care. Tax receipts are provided for the appraised value of the land.

Garter snake dens on an MHHC property, MHHC

TABLE OF CONTENTS

The Manitoba Habitat Heritage Corporation is working to fulfill its habitat conservation, restoration and enhancement objectives under a five year strategic plan framework. The sections of this annual report highlight activities conducted under each of the core "Habitat Strategies" outlined in MHHC's Strategic Plan.

Chestnut-collared longspur, Christian Artuso

MANITOBA HABITAT HERITAGE CORPORATION

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Winnipeg, Manitoba R3H 1B5
Tel: (204) 784-4350
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The Honourable Thomas Nevakshonoff
Minister of Conservation and Water Stewardship
Rm 330 Legislative Building
450 Broadway
Winnipeg MB R3C 0V8

September 25, 2015

Dear Minister:

It is my pleasure to present to you the 2014/15 Annual Report and audited Financial Statements for The Manitoba Habitat Heritage Corporation. The reporting periods for these are April 1st, 2014 through March 31st, 2015.

Sincerest Regards,

John Whitaker
Chair

Homegrown conservation since 1986.

MESSAGES

MESSAGE FROM THE CHAIR

The Manitoba Habitat Heritage Corporation has always been an organization that can quickly adapt to changing program opportunities and partnerships that enable MHHC to better fulfill its mandate. Two years ago, the Corporation was asked to begin a wetland inventory of Manitoba in partnership with Manitoba Conservation and Water Stewardship. After acquiring state-of-the-art computer hardware and hiring highly qualified staff, the first phase of this inventory is now publically available, without cost, to all Manitobans.

MHHC's traditional programming also continues to develop. The Corporation was approached by the Rural Municipalities of Lakeview and Westbourne to be the recipient of Canada's largest conservation agreement. They saw maintaining the current state of the 43,000 acre Big Grass Marsh complex, including important habitat values and grazing opportunities, as being in line with local economic and cultural values as well as national and international habitat conservation objectives.

Throughout MHHC's 29 years of existence, the Board of Directors have been instrumental in the evolution of conservation programming for the Corporation and Manitoba. The composition of the Board was changed in 1989 to better reflect programming needs, and it is in the process of being changed again on the advice of Manitoba's Crown Corporations Council. As the Chair of the MHHC Board of Directors for the past 10 years, I wish to extend my sincere gratitude to my fellow Directors for their efforts to promote MHHC and the work it does. While MHHC's mandate may be local, its influence is truly international and with a forthcoming restructuring of the MHHC Board of Directors, the Corporation will continue to evolve in its role as Manitoba's homegrown conservation organization.

John Whitaker, Chair, MHHC

Tim Sopuck, CEO, MHHC

MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

This year, it would be easy to focus on MHHC's achievements at Big Grass Marsh (see page 18). Attaining the largest package of conservation agreements (easements) ever secured in Canada is something that stands out on an organizational resume. But MHHC's conservation bread-and-butter has been, and continues to be, the many smaller projects that it completes with individual landowners."

"Small" is in the eye of the beholder: every commitment to long-term conservation, be it a 40-acre parcel or a 40,000 acre wetland of international significance, requires careful consideration and a landowner willing to forego possible development opportunities for the sake of land, water and wildlife conservation. When landowners commit to conserving natural lands that have been important to past and present generations, size does not matter. It is their statement to the importance of providing environmental benefits and pleasing landscapes for future generations.

It is my privilege to be able to thank the many landowners, funding organizations, other partners, and MHHC staff who make these achievements possible.

Cypress River, MHHC

Though we do not often realize it, flowing water connects communities.

Manitoba is at the bottom of some of the largest watersheds on the continent, flowing from the Rocky Mountains, the Great Plains and the Canadian Shield to collect in our "Great Lakes" before flowing north to Hudson's Bay. This sheer size can be intimidating: it seems that individual efforts will not have an impact. But many small, individual acts will be what it takes to heal this large watershed. It will take small projects, like farmers and ranchers managing the land beside rivers and on slopes of fields, to larger projects, like the Pelly's Lake watershed management area, to bring the watershed back into balance. These small acts, added up across the landscape, will make a difference to the health of the whole watershed.

Wetland restoration, MHHC

TEN YEAR WETLAND RESTORATION **IN ACTION**

When the Lake Winnipeg Basin Stewardship Fund provided funding to MHHC and Ducks Unlimited to restore wetlands, James and Caroline Hewson's farm came to mind. The Hewsons had already protected a number of larger wetlands on their property near Riding Mountain National Park with a conservation agreement but there were a number of small drained wetlands that fit the bill for a ten-year restoration project.

"The wetland restoration lets nature come back," said James Hewson. "This works well with our set up now, but systems can change, and it is nice to be able to rethink the project in the future."

The drains on five small wetland basins were plugged with soil and seeded down to grass on the Hewson's sheep farm in 2014. They signed a ten-year habitat conservation contract with MHHC that allows the construction and maintenance of earthen plugs, revegetation of the plugs, and property access to make sure the plugs are working well for the next ten years.

Conservation District Partnerships

Table 2: Conservation Agreements completed in partnership with Conservation Districts

Conservation District	Prior to 2014/15		In 2014/15		Total	
	CAs	Acres	CAs	Acres	CAs	Acres
East Interlake	8	371	-	-	8	371
La Salle Redboine	6	806	-	-	6	806
Pembina Valley	3	270	4	797	7	1,067
Seine Rat River	1	47	2	135	3	182
Swan Lake Watershed	2	217	-	-	2	217
Turtle Mountian	22	3,717	2	297	24	4,014
Upper Assiniboine River	1	80	-	-	1	80
Whitemud Watershed	18	10,717	2	33,175	20	43,892
Total	61	16,225	10	34,404	71	50,629

Note: Totals include any CA where the conservation district has contributed financially or through in-kind work on the project.

Pelly's Lake outlet, La Salle Redboine Conservation District

PELLY'S LAKE PROJECT OPERATIONAL

The Pelly's Lake project shows how cooperation between private citizens and conservation organizations can lead to a win-win for all. This spring (2015), water was held back for the first time on a 630 acre formerly drained wetland and will be slowly released through the summer. In the fall, the surrounding landowners will be able to hay the previously flooded area. This system provides spring flood relief, summer recharge for Stephenfield Reservoir, improved habitat for wildlife, and nutrient reductions in the water flowing downstream. Partners include the La Salle Redboine Conservation District (LSRBCD), Lake Winnipeg Basin Stewardship Fund, the Lake Winnipeg Foundation, the International Institute for Sustainable Development, MHHC, and private landowners.

"We're trying to bring back some unnatural order to the system to help it do what it originally would have done in the past," Justin Reid, Manager of the LSRBCD, said at the first opening of the gates on June 16, 2015.

"We never gave anything up," said landowner Harold Purkess, who is also Reeve of the Municipality of Victoria. "Our land stays a little more covered with water a little longer in spring, depending on the weather, but our whole pasture isn't covered."

"This land would yield very poorly if attempts were made to crop it", he continued, adding he feels Pelly's Lake is an example of a much better way to use it, with a big-picture message for how land and water is managed. "Water storage is going to be incredibly important," Purkess said. "I think at some point in time we're going to be awfully sorry if we don't do it."

The six private landowners whose properties are affected by the Pelly's Lake project all donated conservation agreements to MHHC on the lands that are temporarily flooded by the building of the project as well as additional habitat along the shores of Pelly's Lake.

Pelly's Lake spillway, La Salle Redboine Conservation District

"Manitoba Autumn Farm Pano", Jeff Dyck

SUSTAINABLE SLOPES

Once the shoreline of an ancient lake that extended eastward from the Manitoba Escarpment, almost connecting to what is now Lake Superior, the Escarpment is a distinct ecoregion within North America's Great Plains. With an average rise of about 350 feet, the Escarpment can be seen for miles as a sharp break from the flat Red River Valley to its east. Near Miami, MB, there even lies a historically significant prairie "mountain" known as Mount Nebo. It is suspected that this feature – rising to 1,390 ft (424 meters) – was used as a signal-fire location for First Nations of the region. But it wasn't only important to people: the Manitoba Escarpment serves as a habitat refuge and wildlife corridor in what is now a highly modified agricultural landscape.

While the steep slopes of the Escarpment have protected it from conversion in the past, increasing land prices and modern farming equipment are resulting in increased pressure on landowners to bring these steeply sloped lands into their annual cropping systems. Pembina Valley Conservation District Manager, Cliff Greenfield is seeing this first-hand. "We don't have the Rocky Mountains but this 600-foot drop is unique and at risk. Once you lose the habitat, it is pretty hard to get it back."

The Pembina Valley Conservation District (PVCD) and MHHC partnered to protect this unique habitat under the Sustainable Slopes program. Funded through an Environment Canada EcoAction grant, MHHC and PVCD have completed the second year of this three year project.

The Sustainable Slopes program has been hugely successful. As Scott Beaton of MHHC stated, "…there seems to be an appetite for this type of program in the area. People see it as being important, they see value in water storage rather than having the land cleared and going downstream and causing problems when it gets down into the flat land." This is echoed by Greenfield, "They [Rural Municipality of Thompson] experience real problems with roads and bridges washing out – sedimentation of their ditches – and they are wondering what they can do about it."

While only two-thirds through the program, MHHC and PVCD have already attained the three-year habitat securement objective for the program. This was due to the high level of landowner interest in habitat protection and the donation of conservation agreements on nearly 400 acres of habitat over the past two years.

With the interest in the Sustainable Slopes program, MHHC undertook an expansion of the project to include more of the Manitoba Escarpment by including the La Salle Redboine and Whitemud Conservation Districts. An additional $100,000 in funding will be available in each of the next three fiscal years from Canada's National Conservation Program. MHHC's Chief Executive Officer Tim Sopuck stated, "This new funding will do new things, it will allow conservation in this unique area to go to a whole new level."

This project truly fits MHHC's watershed stategy in that it connects these different groups and enables them to work together in a way that embodies what MHHC stands for; bringing together partnerships and people to benefit Manitoba's natural areas and wildlife.

RIPARIAN ROLLUP

In August, 2014, Manitoba Habitat Heritage Corporation's riparian habitat extension program, in all of its various iterations, came to a formal end. It was a good run.

The main project was *Managing the Water's Edge*, which was modelled after Alberta's *Cows and Fish* program, and ran from 2003 to 2011. This was funded primarily through agriculture-related grants meant to encourage the adoption of beneficial management practices that enhance riparian areas' ecological function, especially as it relates to protection of water quality. The target audience was cattle producers and other agricultural land managers. This was followed by the *Green Banks: Clear Waters* project, which was funded by the RBC Blue Water Project. The workshop events associated with this project were much more flexible and audiences ranged from kindergarten-aged children to high school and college students, to farmers, to retired cottage owners – anyone with an interest in watershed health now and in the future.

Over the years, the project approach evolved. In the beginning, most riparian workshops involved a standard classroom presentation followed by an on-site demonstration of riparian health assessment. These were always the bread and butter of the riparian extension program, but in later years, workshops involved active management with participants harvesting live willow stems and planting them to stabilize shorelines, and even artistic endeavors that allowed younger students to find different ways to connect to watersheds.

None of this would have been possible without the support and collaboration of the many agencies that shared MHHC's vision of Manitobans working together to maintain and restore the health and function of riparian areas as a vital part of the landscape and the economy of the province. From the time MHHC started delivering workshops in 2003 to the last event held in July, 2014, a total of 173 riparian workshop events engaged 4,512 participants. Of these events, 82 involved a hands-on component where participants got their shoes dirty and their faces bit by mosquitoes, but which also brought new meaning to the sights, sounds and smells they experienced while standing beside their local waterway.

A Green Banks: Clear Waters presentation, MHHC

WETLANDS

"Redneck Family Swim", Jeff Dyck

Wetlands hold water, utilize incoming nutrients, remove or transform pollutants, store carbon and provide valuable habitat for many species.

While each wetland is important and valuable to the ecosystem, together they hold back storm water, provide clean drinking water and provide breeding habitat for hundreds of thousands of ducks each year. Similarly, each project that MHHC completes is important and valuable, whether it's putting up a Hen House, protecting the family farm wetlands or completing the largest conservation agreement in Canada. Taken together, these projects build to something larger than themselves and provide great value to the citizens of Manitoba.

Canvasbacks, Fred Greenslade

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN **IS FLYING HIGH**

Over the past twenty-nine years the North American Waterfowl Management Plan (NAWMP) has been working to increase waterfowl numbers across the continent. The NAWMP program was born in the lean waterfowl days of the 1980s and sought to bring waterfowl numbers up to historical levels across North America.

Through NAWMP, over $181 million dollars have been spent in Manitoba over the past three decades to protect and improve waterfowl habitat. At the outset, Manitoba partners decided that it wanted its own homegrown conservation team to work with NAWMP. Thus MHHC took on the coordination role of NAWMP within Manitoba, and has been working with its provincial partners towards Plan goals ever since.

Through the development of NAWMP and the subsequent waterfowl research, it was discovered that the most important investment conservation organizations could make towards building healthy waterfowl populations was to conserve and enhance high-value waterfowl breeding habitats. In Manitoba that meant the southwestern portion of the province, the Prairie Pothole Region, where numerous ducks breed in the many small wetlands dotting the landscape. In 2014/15 MHHC protected 36,484 acres (14,764 hectares) with funds derived through NAWMP.

MANITOBA NAWMP PARTNERS:

Manitoba Habitat Heritage Corporation
Agriculture and Agri-food Canada
Bird Studies Canada
Ducks Unlimited Canada
Environment Canada
Manitoba Agriculture, Food and Rural Development
Manitoba Conservation and Water Stewardship
Nature Conservancy Canada

North American Waterfowl Management Plan

prairie habitat joint venture

DUCK STAMPS FOR MHHC

The North American Waterfowl Management Plan is an important conduit of funds, from United States sources for wetland conservation in Manitoba. MHHC has protected over 97,500 acres of wetlands and associated uplands through NAWMP funding and associated partnerships. In the United States, individual states are fundamental to the funding process and their contributions come from the sale of "duck stamps".

Since 1934 duck stamps have been sold to hunters and collectors to raise funds for wetland conservation. At first only US federal stamps were issued but it proved so popular that most states as well as several other countries have adopted the practice. These stamps are required to hunt waterfowl in the jurisdictions where they are issued. Funds that are raised are used by various natural resources departments and conservation organizations to protect and enhance wetlands both locally and in core duck breeding areas including the Canadian prairies. Many states see support for Canadian waterfowl habitat conservation as a good investment of their conservation dollars.

Delta Waterfowl Foundation is a crucial MHHC partner in accessing these funds. MHHC brings its expertise in on-the-ground program delivery and Delta applies for the state funding and provides grant management. Over the past fifteen years four different states have granted funds to Delta and MHHC from their Duck Stamp Programs.

From duck hunters to stamp collectors, from the United States to Manitoba, everyone shares in protecting ducks and the habitats where they breed.

WISCONSIN DEPT. OF NATURAL RESOURCES

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

MISSISSIPPI WILDLIFE, FISHERIES, & PARKS

ILLINOIS DUCK STAMP PROJECT

Northern pintail, Fred Greenslade

OUTSMARTING THE FOX

Sometimes the simplest solutions can address some of the largest problems. Being ground-nesters, mallards in the pothole region of Manitoba can have very low nesting success rates – single-digit percentages. While not providing the full range of benefits realized through habitat protection, the installation of Hen Houses are a truly effective way to reliably increase mallard populations. When mallards nest in Hen Houses, their success rate reaches much higher levels compared to those in natural nests. With success rates of between 70% and 80%, simple structures can make an immense impact on local mallard populations. Delta Waterfowl Foundation and MHHC work together to install and maintain a Hen House inventory of over 3,000 structures. Through this cost effective wetland enhancement technique for waterfowl, Delta and MHHC are able to ensure an additional 6,000 mallards are fledged each year, ducks that would likely have otherwise succumbed to predation by raccoons, skunks, or foxes.

Matt Chouinard inspecting a Hen House, Delta Waterfowl

DUCKS **AND MORE**

Gene and Debbie Pielechaty along with their daughter Jamie Rist own some of Manitoba's best prairie pothole land on their farm near Foxwarren, Manitoba. Last year they decided to protect this landscape with a conservation agreement that protects the wetlands on their property from being drained. By protecting the habitat on their land with a conservation agreement, the Pielechaty family is playing host to up to 20 duck broods each year. However, this land doesn't just protect habitat for ducks, it also provides habitat for many species of mammal, bird, plant and invertebrate life, including the threatened Sprague's pipit. Further, the areas protected are located in the headwaters of the Birdtail River watershed and will continue to protect its water quality, reduce the velocity of runoff, trap sediments and absorb contaminants and nutrients, preventing them from continuing downstream to Lake Winnipeg.

"It was important for us to protect wildlife and the future of our farm," Gene Pielechaty said. "It is nice to know that the land will stay in its current state and that our children and their families will be able to see it as it currently is."

By making the decision to protect the habitat now, the Pielechaty family is ensuring that this land will continue to produce waterfowl and other environmental benefits for generations to come.

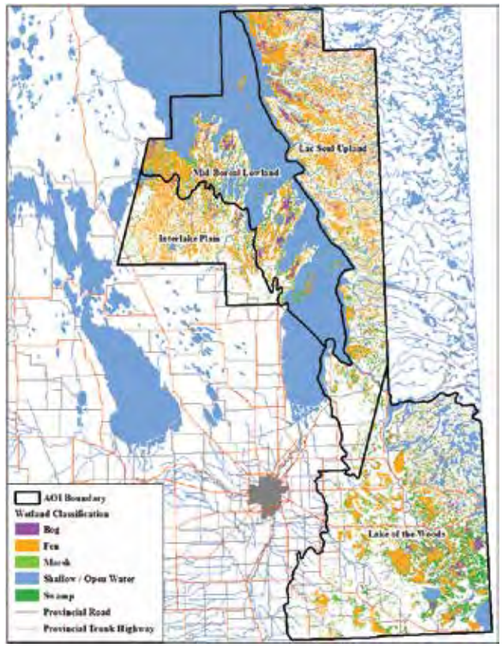
SOUTHERN PEATLANDS WETLAND INVENTORY

Wetland inventory staff mapping wetlands utilizing 3D software and aerial imagery, MHHC

In 2013, MHHC embarked on a new project: mapping wetlands remotely using satellite and aerial imagery. MHHC's Wetland Inventory Project is part of a Canada-wide wetland mapping initiative being carried out by MHHC, Ducks Unlimited Canada, the Ontario Ministry of Natural Resources, and the Saskatchewan Water Security Agency. Funded by Manitoba Conservation and Water Stewardship, and Manitoba Agriculture, Food and Rural Development this work is providing valuable baseline information about Manitoba's wetland resources, and is supporting Manitoba's Surface Water and Peatland Stewardship Strategies. The final maps are now available to the public through the Manitoba Land Initiative website.

The use of remotely sensed imagery makes mapping large, remote areas possible. MHHC has recently completed mapping of a target area called the Southern Peatlands, a 46,000 km^2 area in the southeastern boreal shield and Interlake regions of Manitoba. Mapping was carried out using specialized object-based software to classify Landsat-8 satellite imagery according Canadian Wetland Inventory standards. This software groups the image into uniform objects, similar to the way the human eye naturally separates trees from grass when observing an image. The software can then be programmed, or "trained", to recognize different wetland types using samples from known wetlands.

In all, 14,370 km^2 of wetlands were mapped. The Southern Peatlands represents an area the size of Denmark, with variable land cover ranging from bog and fen complexes with Precambrian rock outcrops, to mixed deciduous and coniferous upland forest and swamps, to calcareous glacial scour plains. Training software to correctly identify wetlands in such variable landscapes is a complex task which requires many regional refinements to classification methods. Despite this, MHHC achieved an overall wetland classification accuracy of 86%, with marsh and shallow/open water classes having the highest accuracies. Having completed the Southern Peatlands MHHC is continuing to map wetlands, now using 3D software to manually delineate agricultural wetlands in the Whitewater Lake watershed in southwestern Manitoba, before proceeding to the Assiniboine River Valley.



The Southern Peatlands Wetland Inventory project mapped over 9.5 million acres of wetlands, MHHC

CANADA'S LARGEST CONSERVATION AGREEMENT

Big Grass Marsh - 43,137 acres

The largest Conservation Agreement package in Canada was completed in 2015 on one of Canada's most iconic wetlands, the Big Grass Marsh. With these agreements, the Manitoba Habitat Heritage Corporation (MHHC) achieved perpetual protection of 43,137 acres of wetland and upland waterfowl habitat through CA donations from the Rural Municipalities of Lakeview and Westbourne.

"This is the kind of forward-thinking that ensures the protection of an iconic wetland which provides flood control, water quality enhancement, protection from drainage, carbon storage and wildlife habitat," Manitoba Conservation and Water Stewardship Minister Gord Mackintosh said at a signing ceremony in November, 2014.

This work is the culmination of decades of change in Big Grass Marsh. Following the First World War many veterans and immigrants attempted to convert this important waterfowl breeding, molting and staging habitat to arable land. Over 100,000 acres of lands were drained but due to poor soil and drought conditions, almost half of were abandoned and repossessed by RMs of Lakeview and Westbourne. Since that time, reclamation of the area has returned it to a state where many of its original waterfowl, bird and wildlife benefits are once again realized. In fact, Big Grass Marsh is considered a Marsh of Great Significance within the Prairie Habitat Joint Venture (PHJV) and is designated a Globally Significant Important Bird Area according to Bird Life International.

"As more areas become cleared and cultivated, it is important to keep land like this in its natural state and available for grazing," said Reeve Phillip Thordarson. This is echoed by RM of Lakeview councillor Richard Callendar, "…how better to preserve nature? We don't have buffalo anymore, but we can use cattle."

Through these donations, RM of Lakeview and RM of Westbourne have ensured the land will remain as wetlands and pasture lands, which will continue to support waterfowl and wildlife as well as the local grazing industry, emerging eco-tourism opportunities and a historic hunting tradition.

Valued at over $7 million and covering 43,137 acres (28,245 acres of wetland and 14,892 acres of upland), this package of easements is the largest paid or donated conservation agreement in Canada. John Whitaker, MHHC Chair, said, "With its exceptional biological diversity and watershed values, the Corporation is honoured to accept these donations on behalf of all Manitobans."

Background photo: Aeriel view of conservation agreement, MHHC. Inset photos clockwise from left: Map of Canada's largest conservation agreement, Municipal and Conservation District partners with MHHC Chair, John Whitaker at the Big Grass Marsh conservation agreement dedication, MHHC, Cattle on the conservation agreement land near Big Grass Marsh, MHHC

SPECIES AT RISK

1,000 ACRES PROTECTED

Short-eared owl, Christian Artuso

Protecting the remaining habitats of the rarest species on the landscape can yield benefits for the whole ecosystem.

For example, by conserving grasslands that are important to Sprague's pipit, habitat for at least a dozen additional species of birds, not to mention several grassland plants, insects and other life is similarly sustained. By protecting the most vulnerable species on the landscape the whole ecosystem reaps the rewards.

FUNDING SPECIES AT RISK CONSERVATION

MHHC receives funding to protect species at risk habitat from the federal government's Habitat Stewardship Program for Species At Risk. With funds from this program, thousands of acres of native mixed- and tall- grass prairie have been conserved in Manitoba. MHHC also uses these funds to conserve riparian areas to protect spawning habitats of vulnerable aquatic species at risk, like the carmine shiner (see page 27). The program is designed to support activities listed in individual species' recovery plans that will result in significant benefits for species identified as endangered, threatened, or of special concern.

Protecting the Endangered

In 2014/15, MHHC conserved 1,000 acres (405 ha) of habitat for species at risk with conservation agreements, and in doing so provided payments of over $200,000 to landowners. Overall, MHHC has signed 62,300 acres of species at risk habitat over the past fifteen years and paid out over $4.4 million dollars to Manitoba landowners.

Enhancing Habitat for Species at Risk

MHHC also receives funds for the enhancement of species at risk habitat through the Habitat Stewardship Program. Enhancement activities completed by MHHC include shrub management and prescribed burns for prairie renewal. These management activities help maintain pastures and grasslands in a condition suitable for many species at risk as research suggests that many mixed-grass prairie species prefer large areas of open rangeland. This year 1,046 acres (423 ha) of native prairie grasslands were enhanced with shrub management by MHHC to allow more grassland species to flourish in these areas.

Sprague's pipit, Christian Artuso

Sprague's pipit
45,887 acres conserved

TOP 5

Burrowing owl
15,768 acres conserved

Chestnut-collared longspur
35,390 acres conserved

Ferruginous hawk
17,196 acres conserved

Loggerhead shrike
20,233 acres conserved

15 YEARS IN THE MAKING

MHHC marked its 15 years of species at risk conservation activity with a report on the benefits accrued to endangered, threatened and species of special concern. Manitoba currently has 51 at-risk species and MHHC has directly impacted 75% of these species through its voluntary habitat conservation and enhancement activities. A total of $4.4 million in payments have been made to landowners with species at risk (SAR) on their property and over 62,300 acres (25,212 ha) have been conserved. Adding to this is an additional 153,380 acres (62,071 ha) of conserved habitat funded through additional sources that also provides ancillary habitat for targeted species. In total, MHHC has conserved an area 25 times the size of Birds Hill Provincial Park, which will benefit species at risk.

One of the groups of prairie species that have been dramatically impacted are grassland birds. "Birds that rely on native prairie have been disproportionately impacted over the past number of years", said Christian Artuso of Bird Studies Canada. "Our surveys have helped show population reductions of 30 - 40% in many grasslands birds and in some cases even much higher." While no single issue is likely the cause of this decline, habitat loss and fragmentation is a contributing factor.

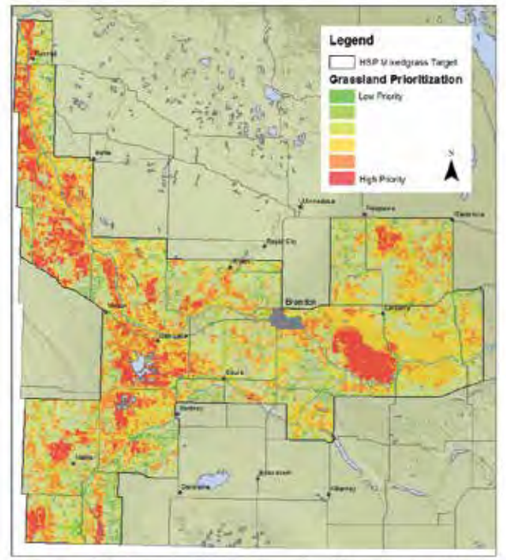
Addressing the need for the conservation of native prairies, MHHC has secured 23,404 acres of active Sprague's pipit habitat using funding from Environment Canada's Habitat Stewardship Program for Species at Risk and another 1,154 acres using other funding sources. This represents 10% of the known locations for this grassland bird species. MHHC has also secured about 10% of the known habitat for chestnut-collared longspurs and Baird's sparrows. Arguably the biggest achievement is the conservation of 56% (4,520 acres) of the known buffalo grass locations in southwestern Manitoba. This plant thrives in open grassland conditions, ones also suitable for grassland birds.

All habitat conservation activities have been completed using voluntary conservation agreements that are registered on the land title. MHHC's objective is to work with landowners to ensure the future management and stewardship of their land will continue to provide wildlife habitat in perpetuity. Over the past 15 years more than 300 landowners have voluntarily enrolled in MHHC species at risk programs. MHHC has also received donations of conservation interests for endangered species in excess of 10,000 acres.

SAR TARGETING – USING GIS TO ENHANCE DELIVERY

In an era of significantly increasing land values, efforts are required to ensure the conservation activities that do occur have the maximum benefit to target species. To this end, MHHC developed a grassland prioritization analysis for the Eastern Mixed-grass Prairie Priority Area of southwestern Manitoba. Thirteen datasets were analyzed to create a three-level prioritization scheme. This included the estimation, at a quarter section level, of 1) number of species to benefit, 2) habitat quality and 3) need for action. These three summary inputs were derived from species observations, agricultural suitability and impact data, current and potential petroleum development, adjacency to protected lands, patch size and measures of human disturbance.

An area of 15,510 km^2 was analyzed and 23,200 quarter sections were ranked. Using this ranked list, MHHC now has field-level prioritizations for grassland securement and enhancement that will provide maximum benefit for wildlife, particularly species at risk. These data are now being used in a pilot project that will offer a range of conservation actions to top priority sites.



Eastern Mixed-grass Prairie Grassland Prioritization Map

Loggerhead shrike, Christian Artuso

WORKING WITH LANDOWNERS KEY TO **NATIVE PRAIRIE PRESERVATION**

The Critical Wildlife Habitat Program (CWHP) is a partnership initiative between Manitoba Conservation and Water Stewardship (Wildlife and Fisheries Branch) and MHHC. Working with landowners to manage their native prairie to benefit both the prairie and the producer is a program priority.

"My native pasture was 30% snowberry and wolf willow. With the mowing management of CWHP, it is now productive grazing land. I really noticed an increase in the native grass species," said Chris Gerow, who has been working with the CWHP to manage the shrubs in his native pasture since 2012. "It was a tangled mess of shrubs and Kentucky blue grass. Now western wheat grass, blue grama, needle grasses, big and little bluestem dominate those areas. It has really improved my pasture and I am going to use it on other properties on my ranch." In 2014/15, a total of 941 acres (381 ha) of shrubs on native prairie were mowed on Gerow's pasture and other project lands, and 68 acres (27 ha) were burned using prescribed fire.

Gerry Bertholet, who has several grazing agreements with the CWHP, has noticed an improvement in his native pasture since implementing grazing management, "This program is excellent. It has taught me how grass grows and how to manage it. It has improved our production and our native grass," said Bertholet. "This grazing management is the only insurance policy I have that I don't have to pay for – I know I will have grass even during the dry times! There were a lot of people who broke native prairie thinking it wasn't productive. I was one of them, but now I want all the native prairie I can get. We have now put conservation agreements on this land so it will always be native prairie." In 2014/15 the project secured 1,215 acres (492 ha) of native grassland on privately owned lands under two 5-year prairie management agreements.

Surveys to identify the remaining native mixed-grass prairie in Manitoba also continued in 2014/15. Over 6,000 acres (2,679 ha) of grassland were inventoried on privately owned lands, bringing the total area inventoried to 199,876 acres (80,887 ha).

Funding to support these activities is provided in part by the Habitat Stewardship Program for Species at Risk.

Baird's sparrow, Christian Artuso

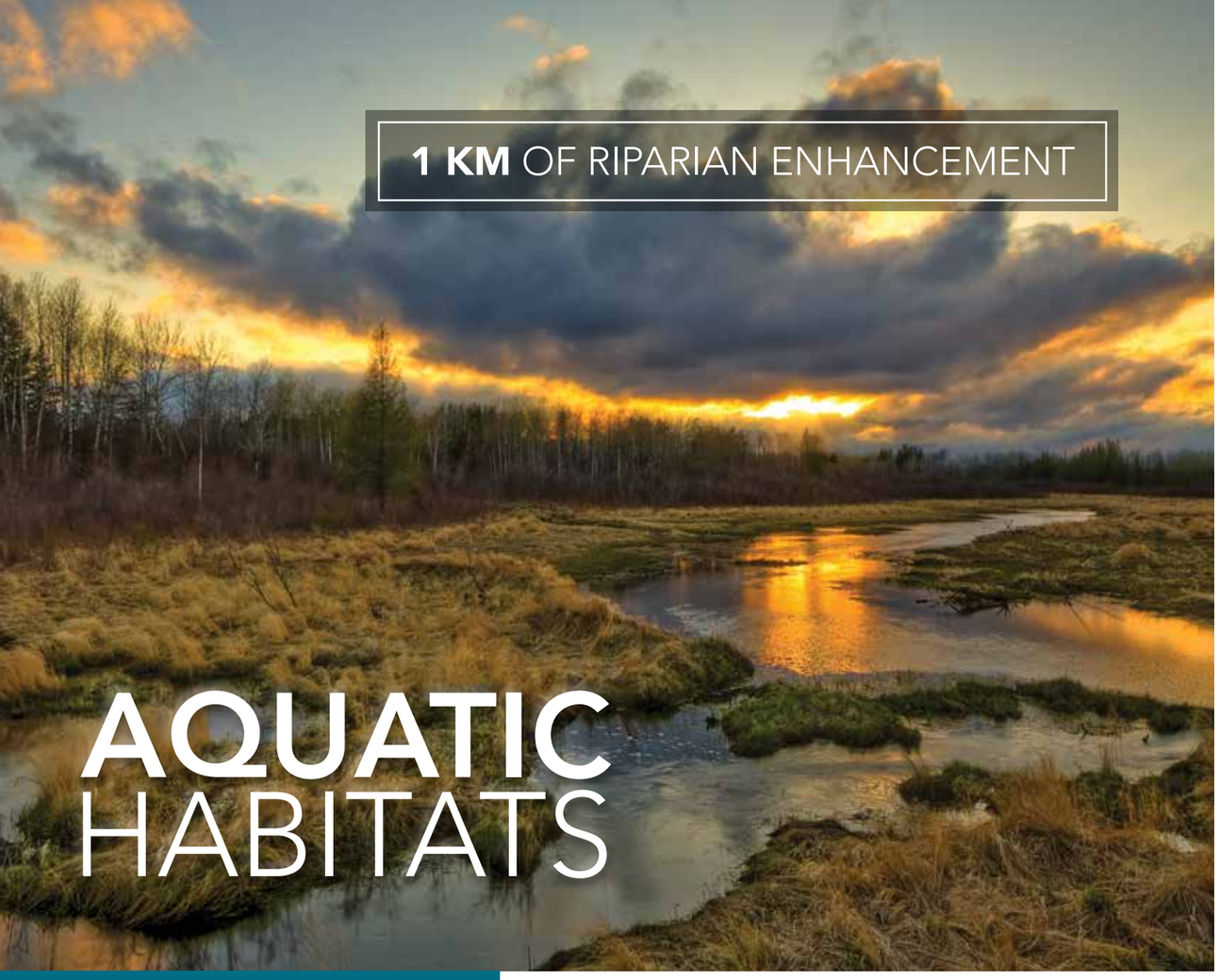
Tall grass prairie, CWHP

TALL-GRASS PRAIRIE HABITAT STEWARDSHIP

Where can you find the only Canadian location of the western prairie fringed-orchid? Or one of only a few spots in Manitoba that support the small white lady's-slipper? The Manitoba Tall Grass Prairie Preserve (Preserve) of southeastern Manitoba is the largest intact natural tall-grass community in the province and conserves habitat for these and several other endangered and threatened species as well as a number of provincially rare species. The Preserve represents the best of what remains of tall-grass prairie habitat in the province. The management of this complex landscape involves a multi-agency partnership to develop an annual work plan that is effective in maintaining the viability of this ecosystem and contains follow-up monitoring to track the impacts of local and landscape-scale threats to species at risk.

One aspect of monitoring includes detailed vegetation classification surveys completed on an approximate 5-year cycle to identify landscape changes among the various habitats, such as upland prairie, sedge meadow and forested areas. Erin Zahradka, a botanist who has worked for over 6 years at the Preserve, revisited ten Preserve properties, totalling 1440 acres (585 ha). Zahradka noted "the Preserve area has become wetter and the treed areas have expanded at a cost to the upland prairie, which has decreased in size." Species at risk monitoring for small white lady's slippers, western prairie fringed-orchids, Riddell's goldenrod, western silvery aster, Great Plains ladies'-tresses, Culver's root and other rare plants continued on Preserve lands and road allowances in 2014/15. Data collected for these species at risk is made available to the Manitoba Conservation Data Centre, Preserve partners and the Rural Municipality of Stuartburn to guide the implementation of management and maintenance activities.

Prescribed fire, grazing and haying are three examples of management tools used on a larger scale at the Preserve. However, some species that occur at the Preserve require a more direct hands-on approach. Invasive species such leafy spurge and St. John's wort are hand pulled or clipped to prevent seed dispersal. Though time-consuming, this activity appears to be benefitting the prairie as the weed patches are not increasing in size and in some cases the density of stems has decreased. Zaharadka mentioned the work of volunteers from Nature Manitoba. "Every year they hand-pull all the stems of spurge, not just the flowering ones from seven sites and in recent years these sites seem to have fewer stems compared to other spurge patches." Aspen girdling (killing by removing a ring of tree bark) is also used in selected areas to minimize encroachment of upland prairie areas.



"St. Labre Sunset", Scott Kroeker

MHHC's mandate includes the conservation, restoration and enhancement of fish and wildlife habitat.

MHHC has not always focused on the fish portion of its mandate, however. More recently, MHHC looked for new ways to protect fish habitat in Manitoba. One example of this work is the Medika Drain project. While not a very promising name for a fish enhancement project, this effort will make a difference for one species of fish, the carmine shiner, and in so doing, provides a launch point for MHHC to undertake more aquatic habitat works in the future.

THE TRUE PROVINCIAL FISH?

A little-known minnow, the carmine shiner, exists in southeastern Manitoba. While it may not have the cachet of the Manitoba's provincial fish, the walleye, it only exists in Manitoba, and only within the Whitemouth, Birch and Winnipeg River systems. Due to its restricted range and the species' sensitivity to water temperature and quality, it has been listed under the Species At Risk Act as a Threatened species and a Recovery Strategy has been developed to ensure its continued survival.

Under MHHC's role to protect and enhance fish and wildlife habitat, the Corporation undertook its first fish enhancement project in support of this truly Manitoban fish. Over a two year period, MHHC worked with the Rural Municipality of Reynolds to mitigate a water quality issue in Medika drain, a tributary to the Birch River. MHHC had previously conserved 200 acres of riparian habitat along this important waterway and wanted to enhance conditions for the carmine shiner. Not only did this project successfully resolve the erosion and resulting water turbidity concerns, it also addressed a municipal infrastructure concern.

"We needed to improve the downward end of Medika Drain for proper movement of water," said Reeve David Turchyn, RM of Reynolds. "The water was always bottle-necked and we had a lot of slumping and erosion taking place." This spot was also identified by Dana Boyter, Chair of the Carmine Shiner Recover Team, as a problem area that decreased water clarity and added unwanted sediment to the Birch River.

The RM of Reynolds and MHHC formed a partnership to carry out the project. MHHC secured funding for the required fish study and project design, and then took on the task of getting the licensing approvals, while the RM of Reynolds contributed over $40,000 to contract the work, which was done by a local contractor.

"We each had a vested interest in the project and by working together it met everyone's needs," Turchyn said. "It was a great partnership."

Before (left) and after, Medika Drain, MHHC

Riprap placed along the stream inlet to reduce erosion, MHHC

The north bank of the Medika drain after placement of an erosion control straw-mat to restore riparian habitat, MHHC

HABITAT MITIGATION

"Burning Sun", Scott Kroeker

It is not easy to put monetary values on the natural world around us.

In today's world it is easy to relegate natural systems to a status of lesser importance. However humans rely on the natural world much more than often realized. When a wetland purifies the water flowing through it, or a forest stores carbon or a walk in the park brings a release of stress-fighting hormones, these are examples of habitats providing value and benefits to humankind. To continue to live in the world it is important to see the importance of the habitat around us and continue to work to preserve and restore these very valuable assets. Habitat Mitigation is the art and science of attempting to balance inevitable habitat losses with offsetting habitat restoration.

THE ROAD TO A BETTER TOMORROW

Roads connect our communities and make major contributions to our economic and social well being. However, they can disrupt natural connectivity and break-up ecosystem communities. Manitoba Infrastructure and Transportation (MIT) has committed to a "no net loss of wetlands" policy for certain roadbuilding activities in important waterfowl areas identified in the North American Waterfowl Management Plan.

In its mitigation work, which is overseen by Manitoba Conservation and Water Stewardship, MIT follows the three main tenants of habitat mitigation, starting with avoidance. Simply put, roads and other infrastructure are positioned to go around wetlands as much as possible. When this is not possible efforts are made to minimize the impacts. This work can include the installation of culverts or the repositioning of the road so that it only affects a small portion of the wetland. Finally, once options to avoid and minimize are exhausted, any losses of wetland habitat are then compensated through the restoration of wetlands off-site.

This is where MHHC comes in. Once the unavoidable damages to the ecosystem have been assessed, MIT contracts MHHC to find a suitable project that will provide similar ecosystem benefits to the ones that were lost to the development. Standards for the compensation activity are established by Manitoba Conservation and Water Stewardship.

Recently a wetland restoration project on Cliff and Brenda Seward's property in the RM of Pembina fit the bill to replace lost benefits due to the development of the Brandon East Access road (PTH 110). By restoring a large 40 acre wetland on the Seward's farm, the services that were lost to the watershed by the roadbuilding activities have been brought back.

MHHC's mandate to conserve, restore and enhance fish and wildlife habitat is fulfilled by working with MIT and Manitoba Conservation and Water Stewardship to ensure that MIT's no net loss of wetlands objectives are effectively delivered on the ground.

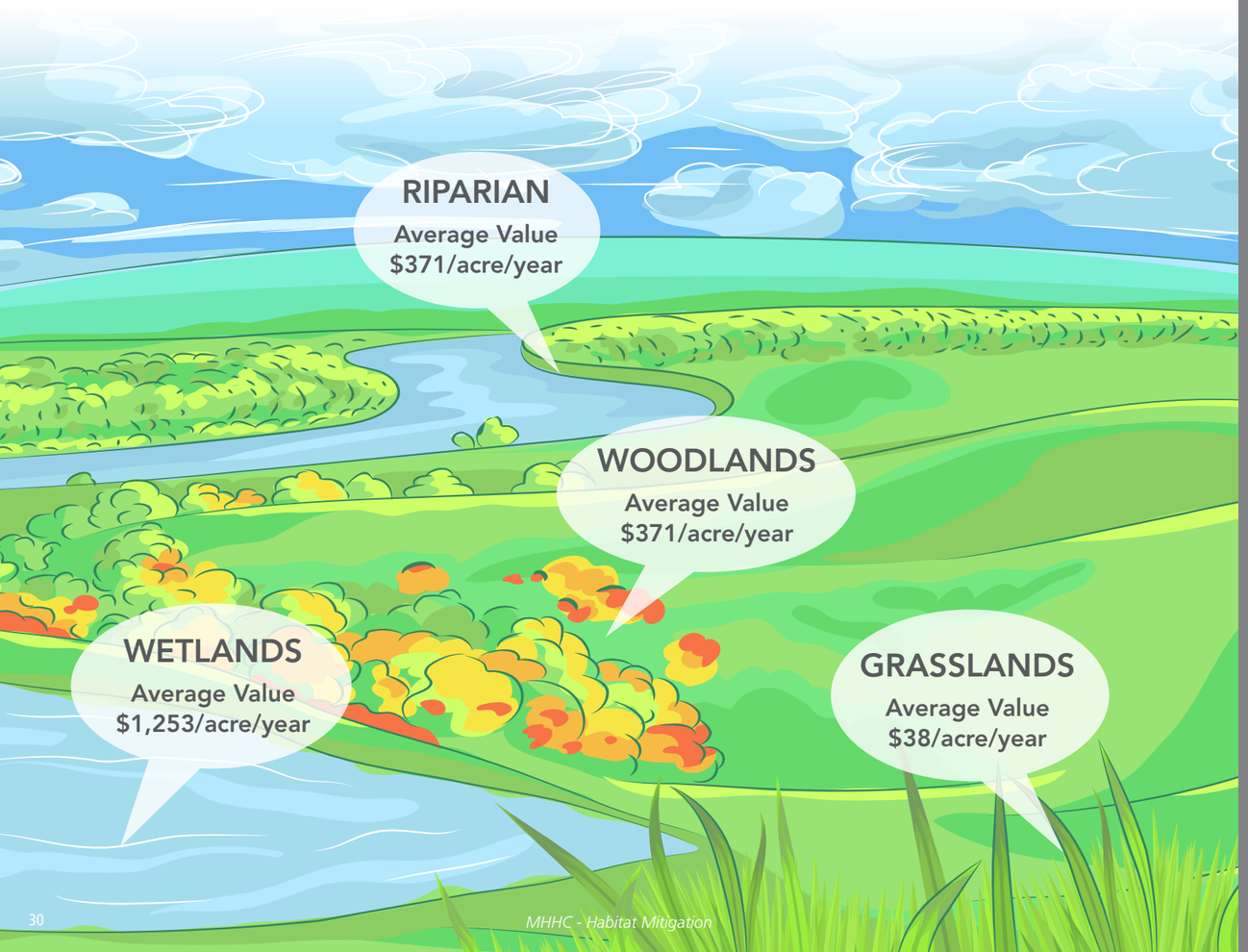
Aerial view of the Seward project, MHHC

WHAT'S THE LAND WORTH?

Each year MHHC provides a value of the Ecological Goods and Services that its conservation interests provide to Manitobans. These goods and services can include benefits to water quality, climate change and flood mitigation, biodiversity, food and raw material provision, social well-being, and environmental integrity. Each of these naturally produced benefits can be assigned monetary values that reflect what it would cost society to produce or mimic using non-natural alternatives like water treatment plants or flood prevention infrastructure. This process enables the assignment of a monetary value to each habitat type found in Manitoba.

MHHC's permanently protected lands annually contribute $52.5 million in ecological goods and services society.

Source: Voora, V and H. D. Venema (2008). An ecosystem services assessment of the Lake Winnipeg watershed: Phase 1 Report, Southern Manitoba Analysis. International Institute for Sustainable Development, 65pp.



MHHC 2014/15 PARTNERS

Agriculture and Agri-Food Canada
Association of Fish and Wildlife Agencies
Association of Manitoba Municipalities
Bird Studies Canada
Delta Waterfowl Foundation
Ducks Unlimited Canada
East Interlake Conservation District
Environment Canada
International Institute for Sustainable Development
Keystone Agricultural Producers
La Salle Redboine Conservation District
Landowners
Manitoba Agriculture Food and Rural Development
Manitoba Beef Producers
Manitoba Conservation and Water Stewardship
Manitoba Conservation Districts Association
Manitoba Forestry Association
Manitoba Infrastructure and Transportation
Manitoba Wildlife Federation
Nature Manitoba
Pembina Valley Conservation District
Prairie Habitat Joint Venture
Seine Rat River Conservation District
State of Illinois
State of Wisconsin
The Nature Conservancy of Canada
Turtle Mountain Conservation District
United States Fish and Wildlife Service
Whitemud Watershed Conservation District
Wildlife Habitat Canada

MHHC BOARD OF DIRECTORS

MHHC was established as an organization to protect, restore and enhance fish and wildlife habitat in Manitoba. Over the past 29 years, MHHC has worked with Manitobans to implement this mandate across the province. Partnership with private landowners and the wider conservation community of Manitoba were instrumental in MHHC becoming a provincial Crown Corporation with an international reputation. It was through MHHC's stakeholder-based Board of Directors that these conservation connections were realized.

The following conservation supporters have served on the MHHC Board of Directors:

Alexander, Donald
Allan, Art
Andrews, Rick
Bell, Ron
Bennett, Ron
Brueton, Diane
Chekay, Doug
Christoffersen, Neil
Coleman, Tim
Coley, Ron
Conibear, Shirley
Dubois, Jack
Dubowits, Murray
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Stewart, Dale
Swerdsfager, Trevor
Todd, Barry
Walker, Larry
Walsh, Veronica
Whitaker, John
Wilson, Roger
Wishart, Rick
Wotton, Dave

Special thanks is extended to each of these past Directors for their contribution to the Corporation as well as the numerous ex officio members.

Going forward, MHHC staff will work with a restructured governance board and newly appointed Directors. Through this Board evolution MHHC will continue in its conservation work for the benefits of Manitoba's wildlife and people.

"Morning Light Sharptail in the Grass", Jeff Dyck

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