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# THE BATTLE CREEK GRASSLAND

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## Background

The Battle Creek grassland, approximately 78 acres in size, is adjacent to Battle Creek Regional Park in Maplewood, MN. It is bounded by the park on the north and west, by Century Avenue on the east, and by the Ramsey County Correctional Facility on the south. The grassland is owned by Ramsey County and managed by the Corrections Department. It was farmed by inmates at the Correctional Facility with plantings of brome grass and alfalfa. Other than occasional mowing, the grassland has not been farmed for perhaps ten years.

## Why is the grassland important?

The grassland is not “vacant” but a significant habitat and nesting site for rare and declining bird species. (See Appendix A.)

The avian survey conducted by Midwest Natural Resources, Inc., during the 2021 nesting season identified eight Species of Greatest Conservation Need (SCGN), including the Minnesota-endangered Henslow’s Sparrow. [The MNR report](#) summed up



the significance of the bird species as follows: ***“Taken individually, the SGCN birds ... are regionally uncommon.... Collectively, they represent a biological assemblage more typical of western grasslands, which is unique for Ramsey County and the greater Twin Cities metropolitan area.”***

Grasslands are one of the most threatened ecosystems. More than 98% of Minnesota’s grasslands have been [lost to agriculture](#) and development. (Unlike wetlands, grasslands have no protection in Minnesota.)

The biodiversity of the grassland is important for ecosystem services, *e.g.*, carbon sequestration, cleaning the air, cooling the urban heat island, and stormwater management as well as for the beauty it provides. (See Appendix B: Ecosystem Services.)

The Bobolink, a species of Greatest Conservation Need in the Battle Creek grassland. Photo by John Zakelj.

Nature is important for human mental and physical health. During the pandemic people are spending more time outdoors and in Nature. The Metropolitan Council reports park visitation was up 6.3% from 2018 to 2019. More than one million species are predicted to go extinct in the next few decades; the extinction crisis is real.

## Media coverage

The Star Tribune published articles about the grassland on [7/17/21](#), [8/25/21](#), [10/16/21](#) and [1/28/22](#). The St. Paul Pioneer Press published on [3/3/21](#), [3/13/21](#), and [2/1/22](#). Bring Me the News published an article on [2/1/22](#).

## County actions

Ramsey County issued a [Request for Developer Interest](#) on 8/16/21 (more than a month before the eco-survey report was created) for the grassland as well as the nearby golf course. The developers’ proposals were due 10/4/2021. No proposals

were received for the grassland. Three proposals were received for the golf course. After a closed board meeting on 1/18/22, Board Chair Trista MatasCastillo stated: "While none of these proposals were ultimately selected to continue forward, we remain optimistic about the potential of both sites and look forward to further discussions with Maplewood about future use." Ramsey County staff have indicated that the grassland "will be maintained consistent with past practice pending a future decision on development." Ramsey County commissioners are concerned about the affordable housing crisis, and they are looking for county-owned properties to develop. But, in the words of the River Corridor Program Director of the Friends of the Mississippi River, "We can't make the mistake of responding to our housing crisis by worsening our environmental crisis."

## City actions

The Battle Creek grassland is currently zoned by the city of Maplewood as farm/residential. In addition, the city's Comprehensive Plan anticipates continued institutional use. Before any housing can be developed, the county and/or developer must submit an application to rezone the grassland. The city would have to approve the rezone and amend its Comprehensive Plan. In anticipation of this request, the city conducted a community engagement process from November 2020 to June 2021. A description of the process and a link to the planners' final report is available [here](#). It is not clear when a rezoning request will be submitted. There will be an opportunity for the public to participate in the city's rezoning and plan amendment process.

## Benefitting people and the birds

The grassland is unique: it is highly diverse, already adjacent to a much-loved regional park, can help offset the urban heat island, clean the air, sequester carbon and manage stormwater. The Battle Creek grassland could provide life-enhancing experiences for people with low vision or mobility challenges. The national organization Birdability.org has expressed support for enhancing our Battle Creek grassland by providing sites on the periphery where people with vision or mobility challenges could enjoy the sounds and/or sights of the grassland birds.

Declaring the grassland an Environmental Natural Area and managing it as a grassland ecosystem within Battle Creek Regional Park is the "highest and best use" providing benefits for the entire community.



Minnesota's state butterfly, the Monarch on Goldenrod in the Battle Creek grassland. Photo by John Zakelj.

## Appendix A: Some of the bird species documented in the Battle Creek grassland and their population status.

Species	MN Endangered <sup>1</sup>	Greatest Conservation Need <sup>2</sup>	Area-Sensitive <sup>3</sup>	MN Stewardship Species <sup>4</sup>	Population Trend 1966-2019 <sup>5</sup>	
					Minnesota	U.S & Canada
Grasshopper Sparrow		●	●		-97%	-74%
Clay-colored Sparrow					-37%	-35%
Field Sparrow		●			-56%	-69%
Henslow's Sparrow	●	●	●		-67%	-63%*
Savannah Sparrow			●		-66%	-52%
Bobolink		●	●	●	-58%	-43%
Eastern Meadowlark		●	●		-68%	-74%
Dickcissel		●			-82%	-27%

\*Henslow's Sparrow is not found in Canada; the trend is for the U.S.

<sup>1</sup> MN DNR, Minnesota's list of endangered, threatened and special concern species (Aug 19, 2013), [https://files.dnr.state.mn.us/natural\\_resources/ets/endlist.pdf](https://files.dnr.state.mn.us/natural_resources/ets/endlist.pdf), viewed Oct. 26, 2021

<sup>2</sup> MN DNR, Appendix B: Tomorrow's habitat for the wild and rare, species in greatest conservation need (Apr 2006), [http://files.dnr.state.mn.us/assistance/nrplanning/bigpicture/cwcs/chapters\\_appendix/appendix\\_b.pdf](http://files.dnr.state.mn.us/assistance/nrplanning/bigpicture/cwcs/chapters_appendix/appendix_b.pdf), viewed Oct. 26, 2021.

<sup>3</sup> Herkert, J. R. The effects of habitat fragmentation on Midwestern grassland bird communities. Ecological Applications 4 (3):461-471 (1994).

<sup>4</sup> Audubon Minnesota, Stewardship birds of Minnesota, <https://mn.audubon.org/conservation/stewardship-birds-minnesota>, viewed Oct 26, 2021

<sup>5</sup> USGS, Patuxent Wildlife Research Center - Bird population studies, BBS trends 1966-2019, <https://www.mbr-pwrc.usgs.gov/>, viewed Oct. 26, 2021.

# Appendix B: Ecosystem Services<sup>6</sup>

## Carbon sequestration

According to a collaborative study published in Nature Geoscience, major changes in land use from grasslands to urban areas have been estimated to contribute a 12.5% increase in carbon emissions between 2000-2009.<sup>7</sup> Native prairie grassland systems have extensive root systems and most of the biomass in prairies is below ground. A recently completed study from the US Department of Agriculture indicates a locally restored prairie can effectively sequester an average of 1.14 metric tons of carbon per acre per year.<sup>8</sup> Using this estimate, the grassland's approximately 76 non-wetland acres<sup>9</sup> could sequester 96 tons of carbon per year. The University of Minnesota's Department of Soil, Water and Climate wrote the mean household carbon emissions are approximately 8.7 tons per year per residence.<sup>10</sup>

## Mitigating the urban heat island, water regulation

Ameliorating the urban heat island, water retention and filtration of water are other important ecosystem services. The Natural Capital project at the University of Minnesota's Institute on the Environment recently did a study comparing the ecosystem services provided by various land uses in the Twin City metro area. They found that natural spaces such as the prairie grassland would maintain nighttime temperatures approximately 0.2 degrees F cooler than an urban residential development.<sup>11</sup> The prairie grassland would retain approximately three times as much nitrogen and phosphorus run-off as an urban residential development and pollinator abundance would be at least twice as much depending on the amount of pavement, buildings, flora, grasses and pesticides used.<sup>12</sup>

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<sup>6</sup> Information compiled by Catherine Zimmer, MS, Environmental Health, Coordinator, Legacy of Nature Alliance

<sup>7</sup> Friedlingstein, P et al, Update on CO2 emissions. Nat. Geosci. 3, 811–812 (2010).

<sup>8</sup> Markland, T., Carbon Balance and Evapotranspiration Rates of a Restored Prairie and a Conventional Corn/Soybean Rotation, University of Minnesota Digital Conservancy, <https://hdl.handle.net/11299/206697>, (2019).

<sup>9</sup> Magnuson, C. Ramsey Washington Watershed District, GIS calculation of wetland acres equal to 1.6 of the grassland total.

<sup>10</sup> Fissore, C. et al, Carbon, nitrogen, and phosphorus fluxes in household ecosystems in the Minneapolis-Saint Paul, Minnesota, urban region, Ecological Applications, 21(3): 619–639, (2011).

<sup>11</sup> Lonsdorf E. et al. Assessing urban ecosystem services provided by green infrastructure: Golf courses in the Minneapolis-St. Paul metro area, Landscape and Urban Planning: 208 (2021).

<sup>12</sup> Ibid.