

Best Practice

Riverhurst Wetland

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Project Date: **April 1, 2021 – March 31, 2023**

Project video: <https://youtu.be/jObXArJbccY>

THE PRACTICE

What was the issue?

Prairie wetlands are powerful and important ecosystems.

Often called the “kidneys of the planet”, wetlands filter and recharge water and provide habitat for millions of migratory and native birds. They mitigate droughts and floods and contribute to wildlife biodiversity, carbon capture and climate regulation.

On the prairies, unfortunately, these wetlands are disappearing at an alarming rate. Familiar species – ducks, geese, shorebirds and more – are having a harder time finding suitable nesting sites, and other wetland plant and animal species are struggling. Loss is due to urban sprawl, industrial encroachment, agricultural use, and climate change.

The future impact of this loss of habitat is hard to overestimate.

What was the project?

A once-healthy wetland had devolved into an unsightly, unfunctional weed-filled section of land, symbolic of wetland habitat loss. The village council recognized that the area could once again become a healthy wetland and provide education about the value of this type of prairie ecosystem. It also has beautified the village entrance, driving inspiration, and drawing people in to contribute to the village resurgence.

THE PROCESS

In the village, the Communities in Bloom committee is a sub-committee of the village council, comprised of community volunteers and council members. Council itself was ultimately responsible for signing off on the application and providing key administrative functions such as accounting and insurance. Planning and execution of the Riverhurst Wetland project was undertaken by a smaller volunteer team that regularly reports to Council in order to keep them apprised of progress and to brainstorm solutions.

The scope of work needed to achieve this objective was beyond the means of a village and an application for funding was submitted to [Environment and Climate Change Canada's \(ECCC\) Environmental Damages Fund](#). This fund is a source supported through fines levied on polluters, making the match with the project ideal. A team was convened and submitted a proposal that involved a two-year project to restore the site at the Village entrance to what it was previously: a healthy, functioning, beautiful wetland that will provide both environmental and economic benefits. In late 2020 notice was received that the application for the ECCC fund was successful, with actual work to begin at the start of April 1, 2021.

This opportunity was based on education and stewardship with the goal of helping residents and visitors learn the value of prairie wetlands, now and into the future. At the same time, the development includes a flood-control system to protect nearby properties during wetter-than-average years. The wetland will be an attractive draw to the community, which is undergoing an overall revitalization. Riverhurst is enjoying an increase in young families and new businesses, tourism, and community beautification.

Apart from the direct project funding from ECCC, several individuals and groups came forward with pro-bono and contractual provisions of expertise and services. Experts from the University of Saskatchewan provided survey design and interpretation for our community outreach; Ducks Unlimited provided both contracted and pro-bono provision of expertise in biological assessment, as well as educational and communications assistance. Shand Greenhouse provided hundreds of tree seedlings. MPE Engineering provided engineering and hydrology assessments and recommendations. A local irrigation company provided expertise in designing a flood-control system, and many local farmers and businesspeople have lent equipment and expertise in mapping out the site, moving dirt and preparing the site. Many local volunteers helped with tree planting, maintenance, watering, and other tasks.

Primarily, the ECCC funding (\$104,000) made the project possible, however many local donors (mostly in-kind) allowed the project to continue, including the project coordinator who donated her time. The application process for the ECCC grant was designed in a way that it essentially required a full project plan complete with budget and timelines to be part of the submission. Community outreach and expert assessments combined to inform decisions made throughout execution of this plan. A key component was contacts at Ducks Unlimited and various Watershed Authorities who shared their knowledge and expertise. This led to the development of best-practice strategies, including deepening the slough bed to establish consistent water levels, installing flood mitigation systems, planting hundreds of native trees and other plant species, developing a site plan that includes accessible walking paths, pollinator-friendly plantings, and trailside educational signage to highlight aspects of the ecosystem so that visitors can learn close-up about the life of a wetland.

Hard-working volunteers have already begun the work, by planting of hundreds of native tree saplings and pollinator-friendly plantings. As the completion of the construction phase gets closer, familiar wetland plant species will be re-established to support the return of a diverse range of aquatic birds and animals, such as leopard frogs, boreal chorus frogs, cattails, bullrushes and sedge.

You can view a video of a portion of the progress as of November 2021 at the link below:

<https://www.facebook.com/riverhurstcommunitiesinbloom/videos/914075305880071>

THE RESULTS

Before the project began, the site was largely overgrown with weeds. With no mechanism for flood control, the site occasionally flooded residences in the area during high rainfall events. Through the spring and summer of 2021, most of the work being done was behind the scenes and focused on the biology, hydrology, and engineering assessments as well as installation of driplines to ensure trees survived the drought of 2021. Starting in September 2021, earthmoving began, and the initial stages of the flood mitigation system were put into place. Interest from the community started to grow, and people were increasingly interested and supportive of the project. The project has

rapidly become a source of pride for the community. Volunteerism increases as people learn about the concept and potential of the project.

The project is still in development, however, a formal evaluation that includes a follow-up community survey will be done.

The maximum amount of funding available through ECCC was received for this project (\$104,000) however, flood mitigation is an expensive proposition. Through intensive research and outreach, a solution was reached that fit both the budget and the need of the community. Flooding is an occasional circumstance so an 'as needed' system was developed that will roll out only in anticipation of flooding. This saved well over \$100,000 in project costs and enabled it to move forward.

Other challenges involve the nesting cycle of some of the wetland populations – the construction phase could not be done while the migratory waterfowl are nesting.

Another challenge was the extreme heat and lack of rainfall from 2019-2021. There were some concerns about the water table in the wetland area but when the process of moving earth began in September 2021 the water table was just below ground level, indicating that regeneration and refilling of the wetland is a realistic expectation.

LESSONS LEARNED

The absolute value of forethought and planning. A quarter-by-quarter planning document was developed that included budget and deliverables. Having this done before shovels hit the dirt was crucial for this project and kept it both on time and on-budget. This was important in terms of maintaining a good relationship with Village council.

Working with a funder such as ECCC is demanding and must be thorough. There is significant time invested into putting together an application and reporting on the program.

There are many people across Saskatchewan who are really willing to share their expertise, learnings, or advice. Don't be afraid to reach out, it is easier than ever in today's connected world.

Reaching out to the community to involve them early on is important for generating buy-in and support. Outreach also needs to be done in a way that is relevant to the community and should include a variety of channels such as online, in person, and print.

Saskatchewan people have incredible community spirit. This project benefited greatly from volunteer efforts, and could not have been completed without that energy.