Updating the State of the Watershed Report with the Bow River Basin Council

BOW LAKE, AUG 2023 / PHOTO CREDIT: MIKE MURRAY

WHO IS THE BRBC AND WHAT IS A SOW?

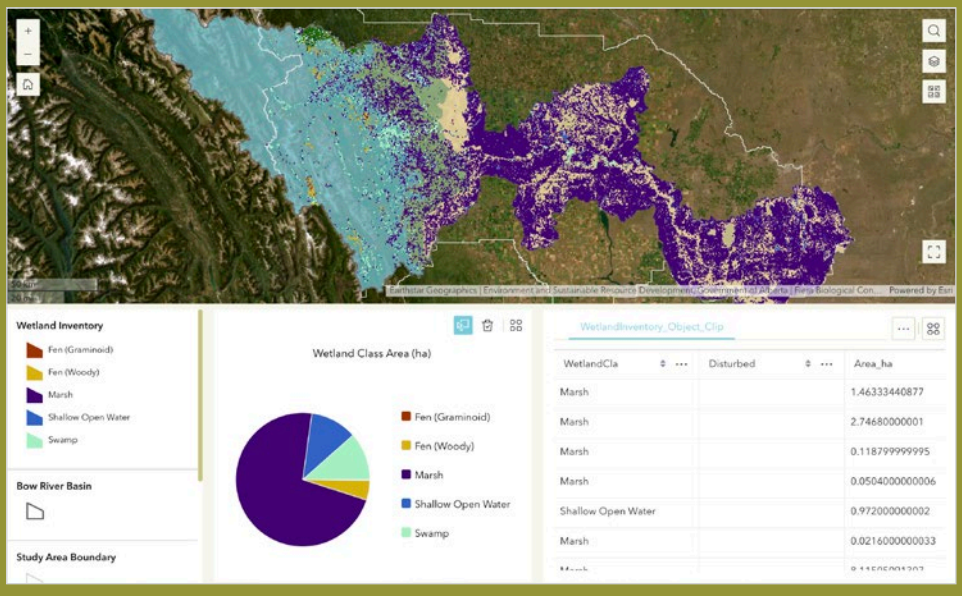
The Bow River Basin Council (BRBC) is one of Alberta's 11 Watershed Planning and Advisory Councils (WPAC). They are a collaborative, science-based non-profit working to nurture, share, and protect the waters of the Bow River Basin. With over 700 members and partners, the BRBC supports planning, reporting, and stewardship activities to promote a healthy watershed. Together we can help preserve our precious lifeline - Water.

A State of the Watershed Report (SOW) outlines the basin's natural features, human impacts, and overall health. These reports support decision-making, identify data gaps, and guide watershed planning. The BRBC has produced SOWs since the 1990s. These reports are designed for everyone—government, resource users, Indigenous rights-holders, and residents—offering accessible, science-based insights for both technical and non-technical readers.

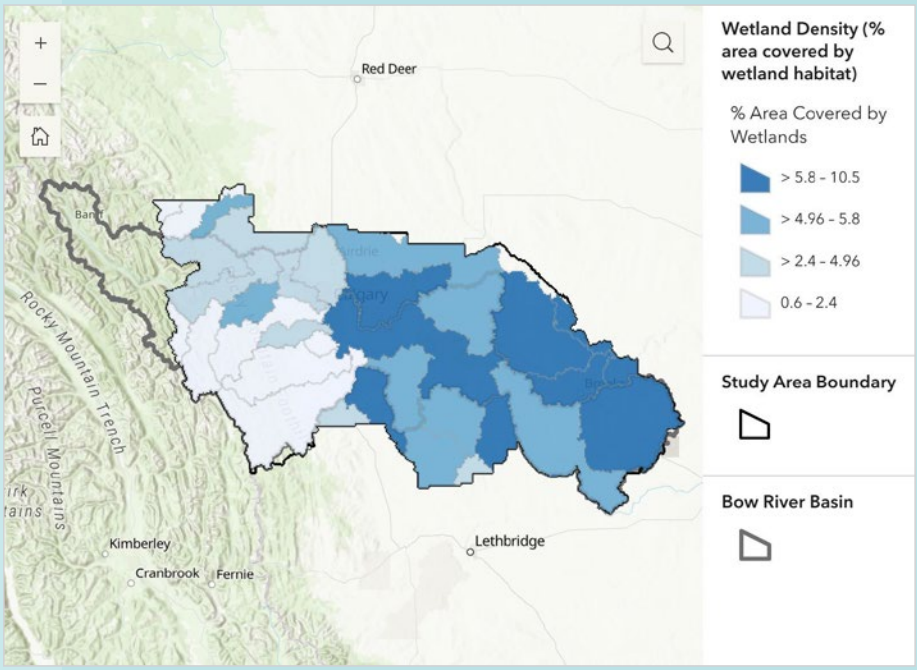
The latest version of BRBC's State of the Watershed Report was released in 2024 using an ArcGIS interactive online platform so the SOW can be updated with most recent datasets. You can view the SOW report on their website at www.brbc.ab.ca/

WHAT ABOUT THE WETLANDS?

The SOW report features all four datasets from the Bow River Regional Wetland Datasets Project: wetland inventory, historical, and restorable wetlands, and landcover. It allows users to interactively explore the wetland layers and also presents an example of how the data can be used in analyses to ask more specific questions about wetlands in the watershed. Like, are there spatial patterns to the current densities of wetlands and potentially restorable basins in the watershed?



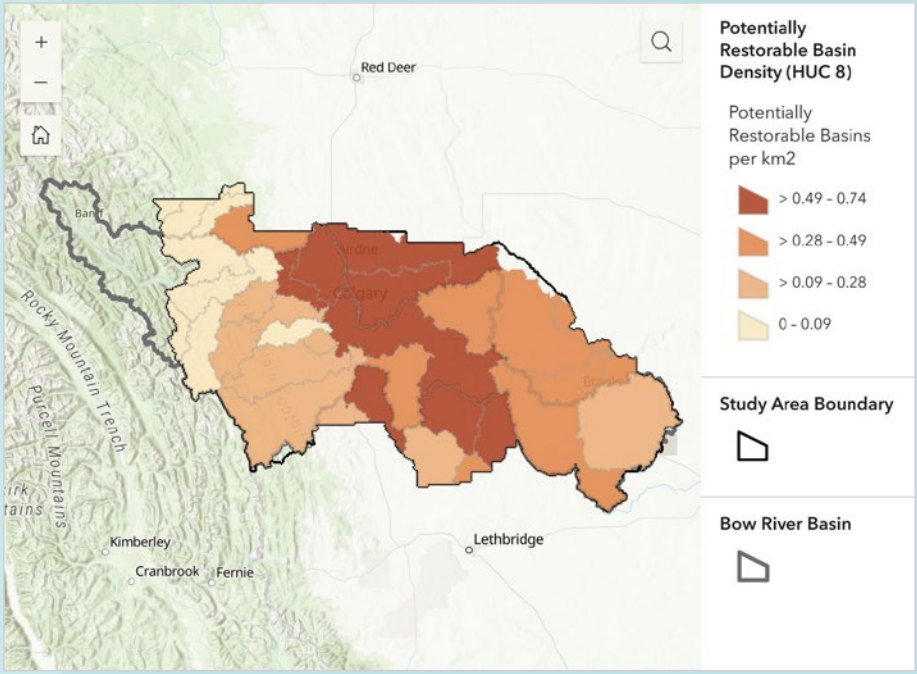
Screenshot of the wetland inventory on the online State of the Watershed Report. The wetland inventory is used to summarize the area of wetlands across the watershed, the comparative areas of the five wetland classes, and show spatially where wetlands are present in the basin.



WETLAND DENSITY BY HUC8 WATERSHED

This map shows the average proportion of wetland habitat in each HUC8 watershed, grouped into four quantiles from highest (dark blue) to lowest (light blue). Dividing the region into hydrologic units helps highlight areas where wetlands may play a greater role in water filtration, flood mitigation, and habitat connectivity. Patterns reflect natural variation—like the high densities in the prairie pothole region in the east, as well as human influence and limitations of remote sensing (e.g., detecting forested wetlands).

Unexpectedly low wetland densities may warrant further investigation to ensure these areas remain resilient and continue providing vital ecosystem services.



NUMBER OF RESTORABLE BASINS STANDARDIZED BY HUC8 AREA

Complementing the first map, this map highlights restoration potential by measuring restorable basins relative to HUC8 watersheds, enabling equitable comparison across watersheds. The resulting map not only highlights areas where intervention could yield ecological benefits but also helps prioritize where resources might be most effectively allocated for watershed rehabilitation.

This case study illustrates how these datasets can be taken a step further to understand spatial variability across the whole Bow River Basin.

For more information, please visit
www.bowregionwetlands.ca

FUNDERS AND PARTNERS

miistakis institute

Bow River Basin Council

Funding was provided by The City of Calgary and an Anonymous Funder

Datasets were developed in partnership with Fiera Biological Consulting