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Wetlands and lakes of Churn
Creek Protected Area

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Upcoming Events

AGM

This year's AGM will be on Wednesday April 21, 2021 starting at 7:00 p.m. It will be a Zoom meeting due to the on-going pandemic restrictions. Brief reports and descriptions of past and planned projects will precede an election of directors. Details of how to participate in the meeting will be sent out to members via email in April. We would be very happy to welcome anyone who wishes to become a director or more involved in our projects. Please contact Peter Opie at peter&skye@telus.net for more information.

Activities Update

2020 hikes and those planned for 2021

The hikes planned for last summer had to be cancelled due to Covid restrictions.



We hope that we will be able to gather in person again by the end of this summer and enjoy at least one hike, but we will monitor the ongoing pandemic situation to determine if that is possible. If there is a part of the Protected Area that you are especially interested in exploring please let us know. At this time, we are considering offering a hike to the Goose Lakes chain or the Blackwater Lakes chain but that has yet to be confirmed. Once a potential date and location have been confirmed, information

will be sent to all members by email and placed on our Facebook page.

There are many amazing places to explore in Churn Creek Protected Area. Those of us who have hiked there for many years continue to find new places, interesting ecosystems and wildlife. We really look forward to sharing those places and observations with more members.

Membership and Donations

Society membership continues to be stable but low in number. Dedicated directors and other members continue to successfully complete a number of projects within the Protected Area each year but there is much more work that could be done. Consider encouraging a friend to join our organization as without a new and younger volunteer base, the Friends of Churn Creek Protected Area Society will be unable to continue undertaking valuable projects within the Protected Area. Both individual (\$20.00) and family (\$30.00) memberships are available. Membership forms are available on our website at: www.friendsofchurn.ca Remember that FCCPAS is a registered charitable organization and that receipts for income tax purposes can be provided for any donations other than membership, for more than \$20.

Project Updates

Sheep Flats Project Completed

In August of last summer, we restored an additional 6 ha of tree-encroached grassland and ingrown forest at Sheep Flats for a total of 47 ha treated to date. This completes our restoration efforts to improve this very important habitat for California bighorn sheep. We expect the treatments will reduce predation of migrating sheep. Funding for this project was provided by Habitat Conservation Trust Foundation, Forest Enhancement Society of BC, and BC Parks. As a result of this work, this important sheep habitat will be incorporated into BC Parks prescribed burning plans, which will provide additional benefits to the habitat.



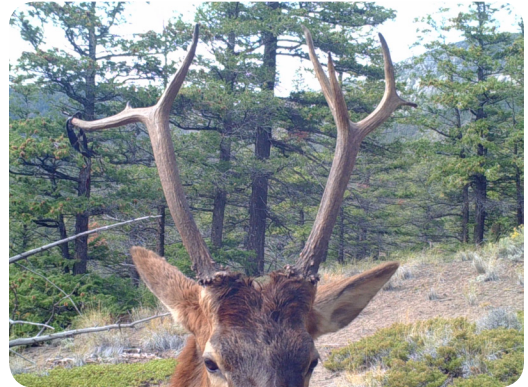
Dry Farm restoration project well underway.

We have treated over 230 ha of encroachment and forest ingrowth in an area south of the lower 2.5 km of the Black Dome Road. Financial support for this project was provided by the Cariboo-Chilcotin Ecosystem Restoration Committee (CCERC) and the Federal Priority Places program administered by the Ministry of FLNRORD. Slashing was done by crews from Stswecem'c Xgat'tem Development Limited Partnership (SXDLP). Patches of heavy slash along the Black Dome and Dry Farm roads were bucked and piled for future burning. We plan to burn these piles in the fall of 2021. Please contact Peter Opie if you wish to participate in any of our projects.



Trail cameras are producing interesting results

We have placed six trail cameras at key locations within the Protected Area in order to document wildlife use. Although some locations have proven to be more profitable than others, we have several thousand photographs to confirm the presence of various species, including mule deer, black bear, coyote, wolf, bobcat, bighorn sheep, elk, cougar and, not surprisingly, cattle, horses and humans. Viewing the photographs has proven to be an easy and interesting way to stay busy on a cold winter's day.



Feature Article

Wetlands and Lakes of Churn Creek Protected Area

Wetlands and lakes are critical ecosystems for wildlife, biodiversity, and livestock. In 2019, the Friends of Churn Creek initiated a project to inventory, map, and monitor the wetlands and lakes of the Protected Area. Our goal is to describe their attributes and diversity, assess their susceptibility to a changing climate, monitor long-term changes in vegetation and hydrology, and identify those that deserve special management considerations. We have completed a reconnaissance inventory of all wetlands and initiated a detailed monitoring of hydrology and vegetation at five wetlands. A map of all wetlands has been prepared.

Ten lakes and ponds, ranging from 0.1 to 34 ha and totalling 105 ha, have been identified within the Protected Area. All lakes are alkaline ($\text{pH} > 8.5$) and some are also saline (high electrical conductivity). Lake edge vegetation is very sparse in the saline lakes but generally well developed in non-saline lakes. Many sites that are named lakes, such as Dry Lake and Two Cabin Lake, are ecologically considered to be wetlands because maximum water depths are < 2 m.



Drone-based image of High Lake taken by BC Parks staff

Nearly 80 wetlands have been identified and mapped but have a combined area of only about 50 ha or 0.1% of the Protected Area. Most are small: 87% are < 1.0 ha and 24% are < 0.1 ha.

No wetlands are present at lowest elevations of the Protected Area in the Very Dry, Hot Bunchgrass (BGxh) biogeoclimatic subzone (generally < 750 m). Here, grassy and shrubby swales, drier than wetlands but more moist than the uplands, are common. In a wetter climate, they may have been wetlands. Standing water is

only briefly present and invasive plant species are often abundant.

At elevations above the BGxh landscapes, wetlands are mostly marshes, of 18 different types. Some are most common at low elevations and others at higher elevations. For example, in the open grassland landscapes of the BGxw subzone (generally 750 – 900 m), spike-rush (*Eleocharis palustris*) marshes and cattail (*Typha latifolia*) marshes are common but tall water sedge (*Carex aquatilis* and *Carex utriculata*) marshes are absent. In the higher elevation landscapes of the IDFdk subzone (elevations generally above 1200 m), the reverse is true, the water sedge marshes are common and the spike-rush marshes are absent .



A saline-alkaline lake with no emergent vegetation



A spike-rush marsh in a grassland landscape

Wetlands are very dynamic, depending on variations in weather, especially snowfall. Some wetland types, such as the spike-rush marshes, typically have standing water early in the summer but not later in the season. In wet years like 2020, they may remain flooded all year. Other wetland types such as the water sedge marshes and cattail marshes are flooded all season in most years. Many factors affect the amount of water in a wetland. Annual variations in the amount of snow melt runoff and ground water flow are important. The hydrology of wetlands is also related to the characteristics of their

precipitation catchment area. Large wetlands in the Protected Area generally have large precipitation catchment areas which contribute water directly to the wetland.

The waters of most wetlands are fresh to slightly alkaline. However, some wetland types are typically very alkaline and some are also saline. For example, the awned sedge (*Carex atherodes*) marshes have low alkalinity, the Baltic rush (*Juncus balticus*) marshes have low to high alkalinity and the seacoast bulrush (*Bolboschoenus maritimus*) marshes are moderately to highly alkaline. The most highly saline-alkaline wetlands have little or no vegetation and are little used by livestock. Some wetlands, such as Two Cabin Lake, have portions that are saline-alkaline and other portions that are fresh.



Two Cabin Lake has a saline-alkaline portion with little vegetation and a fresh water portion with abundant sedges. Dark green seacoast bulrush rings the saline-alkaline portion.

In this coming season, we will install instruments at selected wetlands to monitor water depths and ground water flow into wetland basins. Combined with snow measurements and detailed vegetation monitoring, we hope to provide better information on hydrological factors that effect habitat and watering values of wetlands.