INDIGENOUS

FIRE STEWARDSHIP
Research Report

JULY 2023 // PREPARED BY TWO CROW CONSULTING

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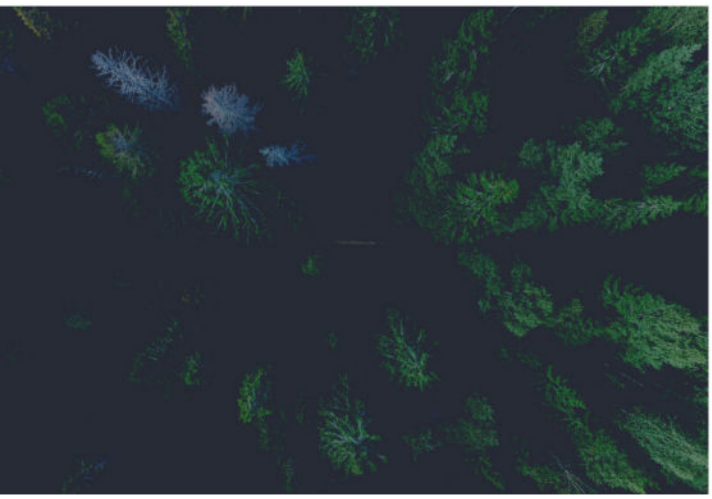
Disclaimer

This is a background research report only. It includes information from published materials as well as previously recorded interviews with Yukon Southern Lakes Indigenous Knowledge Holders. These documents arise from a variety of sources, most of which were not specific to the topics of fire and fire management. In addition, the earliest observations of traditional use of fire were written by non-indigenous visitors and were often uninformed or misinformed. For these reasons, the research findings discussed herein are limited and provide general understandings only. Further Indigenous Knowledge research and community engagement will be required for any specific wildland fire reduction activities on the land.

Kwanlin Dün First Nation and Carcross/Tagish First Nation accepts no responsibility of liability for any loss or damage that any person may sustain, or anything done or omitted pursuant to, or because of this information in this report.

Any information provided by Indigenous Knowledge Holders remains their intellectual property. Ownership of any shared Indigenous Knowledge remains with the Nations.



Acknowledgements

GIVING THANKS

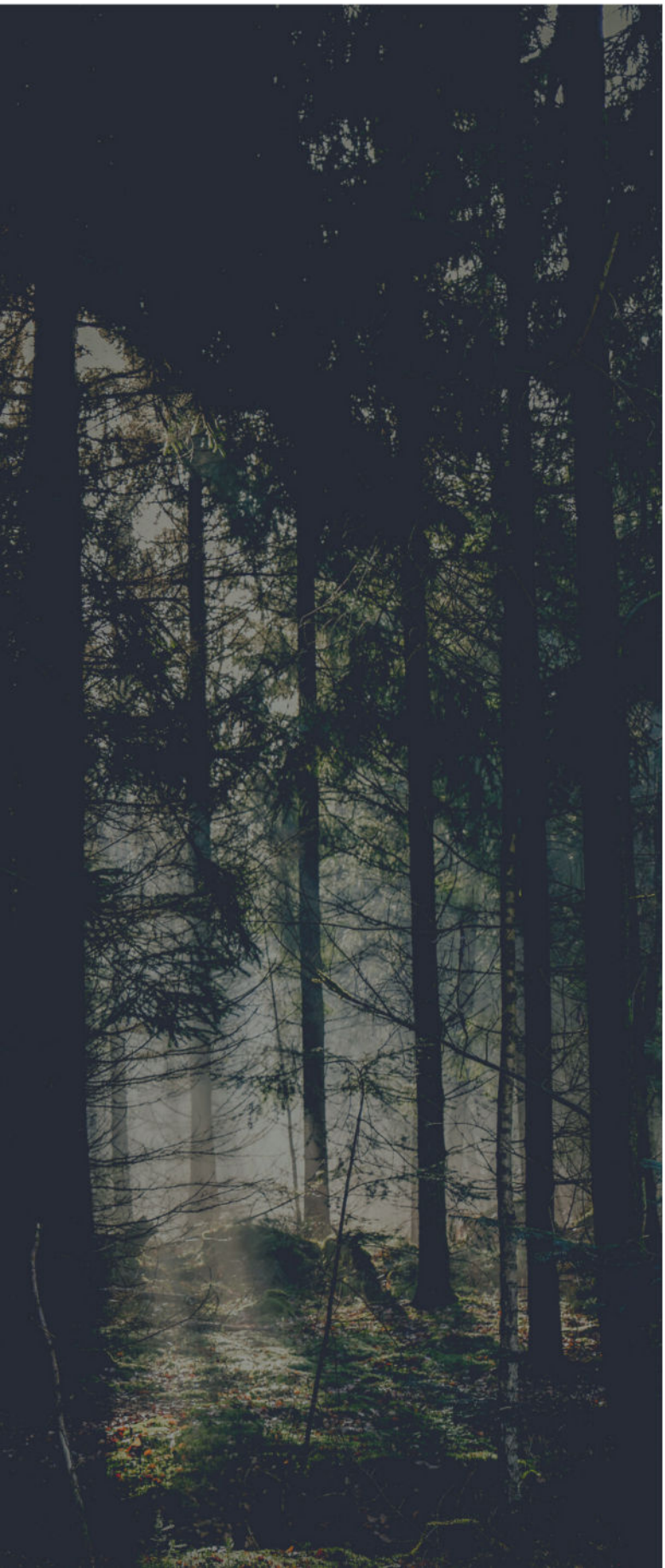
Kwanlin Dün First Nation and Carcross/Tagish First Nation recognize, honour, and give gratitude to their Elders and citizens who for generations have contributed and permitted use of their knowledge for Indigenous cultural and resource stewardship.

As the researcher and author of this report, I acknowledge that I am a non-indigenous settler trained in western academic disciplines of anthropology and archaeology. I have spent the last years developing a relationship with the land and water and people of the Southern Lakes. Over those years, I have had the privilege of being taught and mentored by the Elders and Indigenous Knowledge Holders of the Yukon Southern Lakes. I carry their teachings with me, and I hope that they have helped guide me in this research.

I am thankful that the Nations of the Southern Lakes have worked to create resources that allow us to continue to learn from Elders who are no longer with us. Completing this background research, accompanied by scientific research related to fire on the landscape, will allow for more informed interviews with Knowledge Holders as we move forward.

In gratitude,

Jennifer Herkes,
Two Crow Consulting



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Overview

INTRODUCTION

The Indigenous Peoples of the Yukon Southern Lakes have always been diverse in their languages, cultures, and origins. Today there are four distinct languages spoken, including Tlingit, Southern Tutchone, Tagish, and more recently English. To acknowledge and respect the connection between language and culture, 'fire' will be referred to as Fire X̲'aan · Kwän · Kòn' throughout the document. X̲'aan is the Tlingit word for fire; Kwän is the Southern Tutchone word, and Kòn' is the Tagish word. It is interesting to note, that there are no specific words for 'wildfire' or 'wildland fire' in these languages.

Fire X̲'aan · Kwän · Kòn' has always been a part of life for the people of the Yukon Southern Lakes: it is part of the land, a necessity, and a tool used in ceremony and for warmth and cooking. This research explores the cultural connection of Fire X̲'aan · Kwän · Kòn' as represented through story; the different ways that landscape fire has been used in the Southern Lakes; how colonial approaches to wildland fire have altered the landscape; and how Indigenous/Traditional Knowledge can help us understand how to relate to Fire X̲'aan · Kwän · Kòn' in a good way.

In the past, landscape fire was left to burn naturally and contributed to the health of the land. Resources and values were dispersed across the landscape, people were more mobile and would move away from the Fire X̲'aan · Kwän · Kòn' as needed. Fire X̲'aan · Kwän · Kòn' was respected, even at the landscape level. As people started staying in one place for longer, resources and values became more restricted, people started developing a fear of Fire X̲'aan · Kwän · Kòn'. A fear of loss and a fear of lack of control developed.

In general, there is a sense of managed Fire X̲'aan · Kwän · Kòn' being helpful - Fire X̲'aan · Kwän · Kòn' that is planned, controlled, meets the needs of the land and people, and can provide long-term benefits. On the other hand, there are landscape or wildland fires that are dangerous—Fire X̲'aan · Kwän · Kòn' that is out of control; threatens life and values and causes irreparable damage on a large scale. It is important to understand and respect such personal and collective feelings about Fire X̲'aan · Kwän · Kòn'.

The research conducted for this project has provided a limited understanding of the traditional use of Fire X̲'aan · Kwän · Kòn' based on sometimes conflicting information available. It is difficult to gauge whether Indigenous Knowledge has been lost because of generations of residential school

FLINT STORY
How People Got Flint

Angela Sidney, 1982

"Bear was the only one that had flint one time. There was no flint, they say. People were having a hard time—sometimes fire would go out, you know. Mice are the ones that really got it. They say Bear tied it under his tail where he had long hair under there. So, one time, mice tried to get fur from him. 'What are you doing?' 'My kids all froze up on me,' Mouse said. 'I want some of your fur.' 'Well, get it from under my tail. There's lots.' So, he did. In the meantime, he chewed that flint off. The bear noticed right away. Mouse threw it to the animals.

Fox ran away with it. Oh, he crossed two valleys and here the bear can't catch him. Finally Bear gave up. Fox threw it down to a big rock and here that flint broke up. He threw pieces around and said, 'Go all over the world. People need you. Make lots of flint for people.'"

assimilation and Fire X̲'aan • Kwän • Kòn' suppression, or if it was a lesser cultural practice in the region. As there are examples of the traditional use of landscape-scale Fire X̲'aan • Kwän • Kòn' stewardship in neighbouring British Columbia and Alaskan First Nations, it is likely that Yukon Southern Lakes First Nations were familiar with Fire X̲'aan • Kwän • Kòn' stewardship practices because of their trading and familial connections with their neighbours.

A better understanding of an Indigenous traditional relationship with Fire X̲'aan • Kwän • Kòn' will help to inform best practices for modern Fire X̲'aan • Kwän • Kòn' stewardship and management. It is not necessarily the specific places where traditional burning may have occurred that are important, it is the values and customary practices that led those activities that should be considered. Namely, an understanding of when and where Fire X̲'aan • Kwän • Kòn' should be lit to fulfill cultural, ecosystem, and wildfire risk reduction objectives.

FIRE X̲'aan • Kwän • Kòn' IN STORY

Story is the traditional way of sharing information and teaching people. In the past, time in the evenings would be spent telling and listening to stories - it was their radio or T.V. Johnnie Smith (1993) explains, "That's the reason old Indian People like my mom, my dad, they always talk about story, you know. And my mom, she sit down tell a story just like a radio. [...] We want to listen to the story so at evenin' time, she tell a story. And that's how I learned from my mom, all this story". Such stories continue to be shared and provide information and teaching.

Fire X̲'aan • Kwän • Kòn' is represented in several traditional stories of the Southern Tutchone, Tagish, and Tlingit traditions. These stories explain the relationship with Fire X̲'aan • Kwän • Kòn' in general. In these stories, Fire X̲'aan • Kwän • Kòn' is a symbol of protection as well as a connection (or buffer) to the spiritual (animal) world.

There are traditional stories about how Fire X̲'aan • Kwän • Kòn' came to the world in the first place. In the Southern Lakes, this was achieved by Crow, who was also responsible for bringing the sun and moon. Susie Pringle (1948), A Champagne and Aishihik Elder, shared the story How Crow Gets Fire:

At Salt Lake there was a fire.
Tsürk'í [Crow] didn't have any fire.
He wanted some.
He can't get there by himself.
He is too high-toned.
So he tells the bird to go get it.
It was a little hawk. He had a long bill.
Tsürk'í tied a piece of willow—it was green willow—around his bill.
And he put a piece of wood in the bill.
The little hawk stuck his bill with the wood into the fire.
The wood caught fire.
The fire was a green wood fire.
Then the little bird got the fire and flew back to Ts'ürk'í.
On the way back, he got burned all brown around his nose.
And he had just a little bit of bill left.

Another story that connects Crow with Fire X̲'aan • Kwän • Kòn' is how Crow became black in

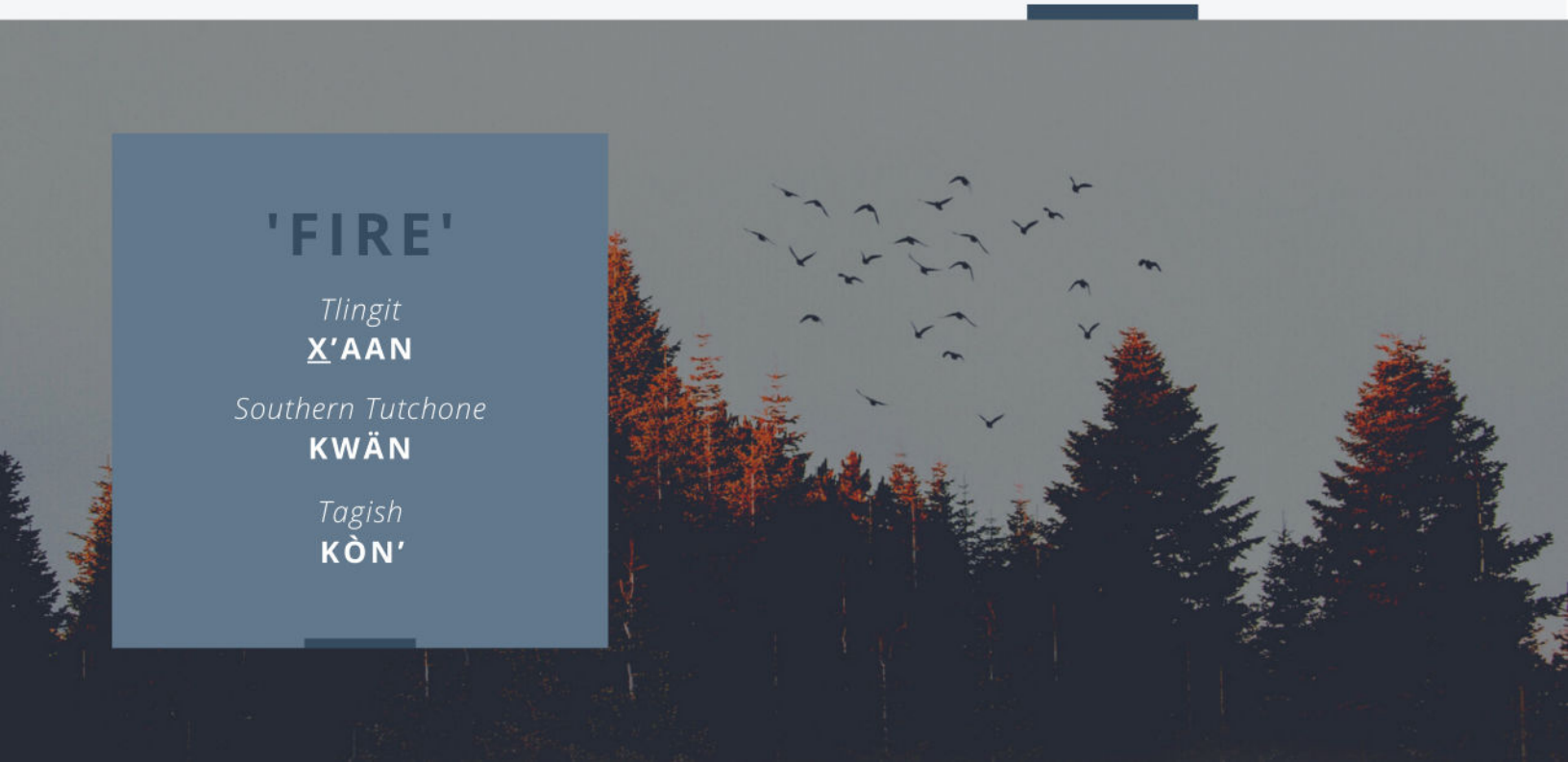
colour. There are several different iterations of the story where Crow becomes trapped in some black smoke that changes his colour. Jimmy Scotty James describes in the story Crow Loses His Nose and Becomes Black (1950-McClellan 2007:360):

> *That's the time Crow gets smoked up. Soon as it [the nose] drops off, he just pulls it off quick. He starts to fly up and he say "q'a". and he flies up.*
> *That Crow, he just flies up in there.*
> *He was white-white as kogoos (cloud).*
>
> *And after that man says, "get pitch wood." He's got some of that, and he burns [it] underneath. Crow's got hard time to fly over that place. He just flies in one place and they smoke him up black. Finally he get tired of it and he got away.*

Such stories reflect an important and powerful connection with Fire X̲'aan · Kwän · Kòn' and reveal its power of transformation. Fire X̲'aan · Kwän · Kòn' did not harm either Hawk or Crow, it changed them. Many of the stories use Fire X̲'aan · Kwän · Kòn' as a theme for protection. People are encouraged to light fires to protect themselves in dangerous places. Fire X̲'aan · Kwän · Kòn' is mentioned in stories to represent making a camp, finding comfort, preparing food, being safe, and honouring the dead.

Another identified theme is of Fire X̲'aan · Kwän · Kòn' being a connection (or buffer) to the spirit/animal world. Julie Cruikshank (1990) explains, "animals disguised as humans reveal their true nature by sleeping on the opposite side of fire from humans". In these stories, Fire X̲'aan · Kwän · Kòn' is typically placed between people and a spiritual or powerful person or creature. It acts as protection from the being while allowing for the interaction. Fire X̲'aan · Kwän · Kòn' helps support the relationship between humans and animals.

None of the recorded stories speak to landscape-scale fires, or the relationships between large-scale Fire X̲'aan · Kwän · Kòn', people, and animals.

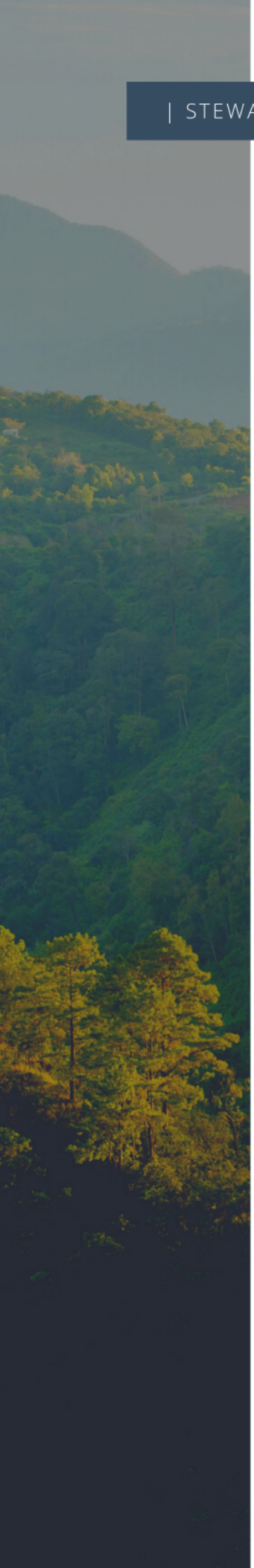


'FIRE'

Tlingit
X̲'AAN

Southern Tutchone
KWÄN

Tagish
KÒN'



TRADITIONAL FIRE X̲'aan • Kwän • Kòn' STEWARDSHIP PRACTICES

The available stories teach us that Fire X̲'aan • Kwän • Kòn' can change things as well as the power to provide safety and comfort. The relationship that people have with Fire X̲'aan • Kwän • Kòn' is different in different places. And the relationships change depending on circumstances, particularly with large-scale Fire X̲'aan • Kwän • Kòn' .

The background research showed that people in the Southern Lakes used Fire X̲'aan • Kwän • Kòn' for several reasons, including signal fires, clearing, protecting assets, and encouraging regrowth on the land. There were also concerns about landscape-scale fire and their effect on habitat, wildlife, and harm to important heritage resources. These concerns were often associated with fires burning out of control.

The research shows that there is a strong respect for Fire X̲'aan • Kwän • Kòn' and how to keep it under control. One Elder spoke clearly about the importance of knowing the appropriate locations to light a Fire X̲'aan • Kwän • Kòn' to avoid uncontrolled wildfire:

"Lots of people don't know where to make fires. When we were growing up, we don't make fire where moss is. We have to have where there is gravel or sand. If you make fire in moss, it will burn all winter and start in the springtime again. You make a forest fire in the springtime. Old people will tell you don't make fire here, don't make fire there. You ask them. If you don't understand what they are talking about, you can ask them. They will tell you. Even in the winter you don't make fire in moss, because you will start a forest fire" (KDFN Elder Charlie Burns 2017).

COMMUNICATION WITH FIRE X̲'AAN • KWÄN • KÒN'

Using Fire X̲'aan • Kwän • Kòn' to create smoke for communication was noted by early observers (Lutz 1959, Beers 2014, Krause 1956, Swanton 1908). To send messages across vast distances, such fires needed to be large, produce a lot of smoke, and be set in an area that is elevated or visible (Beers 2014). Schwatka mentions the use of signal fires in the Southern Lakes. Fire X̲'aan • Kwän • Kòn' was used to let residents know that people had entered

the territory or were approaching an area. One example was the lighting of a Fire Xʼaan · Kwän · Kòn' on Bove Island, which was answered by the Tagish people (Lutz 1959).

Charlie Burns (2003), Kwanlin Dün First Nation Elder, further explains using signal fires to communicate:

"We make a big fire. One way to tell people that we're at the other side of the river, sometimes we have to shoot a couple of shots or something like that. The people would come out, and they'd see a big smoke on the other side of the river, and then they'd come over and get you. That's one of the ways we can communicate. At that time we didn't have no phones or anything telling them to come over here, you know. So, they have to make big smoke."

Ida Calmegane (2013), a Carcross/Tagish Elder, explains using smoke signals to let people know of their arrival in Teslin:

". . . and when we got to Teslin, close to Teslin, this end of the lake, him (dad) and my mom, they made smoke signals. They used a certain wood and stuff you know and then they had a big blanket and they set fire to it and the smoke went out out like, they sent puffs of smoke up, they'd put a blanket over it and then puffs of smoke went up there. And the people in the village say that, and they wanted to know what was going on so they send somebody down there, some young guy with a boat down there. And they picked us up, so they saved us about 20 miles".

These stories show that Fire Xʼaan · Kwän · Kòn' was often used as a tool for communications. It is hard to tell exactly how big these fires may have been; however, it is clear that they were controlled and managed for specific purposes.

CLEARING OF TRAILS AND CAMP AREAS AND PROTECTION OF RESOURCES

Another way that Fire Xʼaan · Kwän · Kòn' is used as a tool is the clearing of large areas of underbrush, that improves visibility and accessibility. Lutz (1959) implies that landscape fire was used in the past for clearing because of a lack of more efficient tools prior to the introduction of metal tools. Traditional Knowledge tells us that the tools used by First Nations in the area met the needs of the people and the environment, but also that Fire Xʼaan · Kwän · Kòn' was one of those tools.

The need to protect from Fire Xʼaan · Kwän · Kòn' (akin to modern FireSmart™ activities) was only mentioned a few times in interviews but those mentions show us how people feel about Fire Xʼaan · Kwän · Kòn' . There is a sense that Fire Xʼaan · Kwän · Kòn' is a natural phenomenon, often caused by lightning, and that it is unavoidable.

Joan Viksten (2017), KDFN Elder, explains traditional fire smarting:

"I know one of the things that was really important to her was keeping the, you know traditional fire smarting. So, the underbrush was gone from around your cabin and stuff. That was a safety concern with bears not being able to sneak up, kinda like marking your territory too".

There is no mention of the use of Fire Xʼaan · Kwän · Kòn' to achieve the clearing, but there is support that areas were cleared around camps.

Charlie James describes traditional logging

practices that included removal of the larger trees that were coning out as well as any trees that may be a Fire X̲'aan · Kwän · Kòn' risk because of friction. This is also supported by the practice of cutting standing dead for fuelwood.

ENHANCE GROWTH OF SELECTED PLANTS

One common benefit of Fire X̲'aan · Kwän · Kòn' that was mentioned is the opportunity for new growth. Lutz (1959:42) wrote, *"Destruction of timber and other values has been enormous but the boreal forest has generally shown a remarkable capacity to recover, rise again, phoenix-like, from its own ashes".*

Carcross/Tagish Elder, Charlie James (2017), explains, *"after a fire, that's when the animals start coming in, because of the new vegetation."* Hank Henry (1996), Kwanlin Dün First Nation Elder, said, *"after it burnt up, they go back there . . . it is moose place after."* These comments support the benefit of Fire X̲'aan · Kwän · Kòn' on the landscape.

In contrast, Ted Hall (1995), Carcross/Tagish First Nation Elder, explained that in the case of wildfire, where much of the forest was burnt, the results could be the opposite, *"game after a burn, they have a tendency to change, change where they can. I guess what it amounts to is where their feed is and then hardly anything likes to travel through windfall and short jack pine that grow up after a bad fire."*

The ecosystem science and archaeology support the Elder's understanding of regrowth after a Fire X̲'aan · Kwän · Kòn' . (Main Johnson 1999, Turner 1999, Lepofsky and Lertzman 2008). Chapin et al (2003) noted that the vegetation succession after a Fire X̲'aan · Kwän · Kòn' provides improved habitat for moose and furbearers for 10 to 30 years. This could be a substantial benefit to the hunters in the region. Furthermore, Natcher (2004) noted that the people if the Yukon Flats in Alaska traditionally used Fire X̲'aan · Kwän · Kòn' to promote habitat development for muskrat, moose, and waterfowl.

Other benefits of Fire X̲'aan · Kwän · Kòn' include improved access to resources, notably fuelwood, berries, and, as mentioned earlier, hunting. With fuelwood, people noted that dry wood could be accessed in a burn for up to 10 years before it rots. This resource is seen as a potential economic resource that is often mismanaged.

PURPOSEFUL BURNING

In some interviews in the past, people were asked about burning areas on purpose. Most people did not remember it being a tool that was used. There were a few exceptions of people who remembered stories from their Elders about using Fire X̲'aan · Kwän · Kòn' . Albert James (2017), a Carcross/Tagish First Nation Elder, explained, *"I do know they used to use fire to enhance the habitat, like the moose habitat and stuff like that. They would do a selective burn. They would burn willow growth down, and then all the different things would come back like willows and then the moose would come to that area. That is one way that they used the fire."*

The literature supports the use of Fire X̲'aan · Kwän · Kòn' to enhance the growth of plants, however, this background research shows that there is not a lot of supporting traditional knowledge about use of Fire X̲'aan · Kwän · Kòn' in this way in the Southern Lakes. This could be the result of a lack of research, a loss of knowledge, or a lack of these practices within the region.

There is a definite need to conduct more in-depth research to pursue the existence of the use of Fire X̲'aan · Kwän · Kòn'. Opportunities include investigating Fire X̲'aan · Kwän · Kòn' frequency through soil testing, sediment deposits, and Fire X̲'aan · Kwän · Kòn' scar dating. Most importantly is gathering specific Traditional Knowledge related to this. The valuable contribution that traditional understanding of Fire X̲'aan · Kwän · Kòn' and Fire X̲'aan · Kwän · Kòn' management have on modern Fire X̲'aan · Kwän · Kòn' management is discussed below.

WILDLAND FIRE MANAGEMENT

X̲'aan • Kwän • Kòn'

LANDSCAPE FIRE
Any fire burning in natural and cultural landscapes.

WILDFIRE/WILDLAND FIRE
A large, destructive fire that spreads quickly over woodland or brush.

A Fire X̲'aan • Kwän • Kòn' that occurs in undeveloped areas outside of communities, where human assets and structures are few and far between, is typically referred to by wildfire management agencies as a *wildland fire* (CIFFC 2022). When such fires are unplanned or unwanted, they may also be called a *wildfire* (Cardinal Christianson et al, 2020). Concerns about Fire X̲'aan • Kwän • Kòn' burning out of control, as described in the previous section, are related to such wildfire. Alternatively, when Fire is used in a deliberate, planned, and knowledgeable manner to meet specific management objectives for a specific area, like the beneficial practices described in the previous section, is typically referred to by wildfire management agencies as *prescribed fire* (CIFFC 2022) (Cardinal Christianson et al, 2020).

The Southern Lakes Yukon is a natural Fire X̲'aan • Kwän • Kòn' environment. Lightning strikes cause 141 wildfires annually, burning an average of 160,000 hectares of forest (Kochtubajda et al 2010). This will likely increase as the climate change makes the environment hotter and drier (Hallett et al. 2003). Research found that the different relationships with Fire X̲'aan • Kwän • Kòn' were the result of cultural adaptations to the environment of their territories (Natcher et al. 2007). People living in a landscape that is naturally prone to Fire X̲'aan • Kwän • Kòn' would adapt and find ways to mitigate the dangers of Fire X̲'aan • Kwän • Kòn' . When people lived in more temporary camps, and gathered their resources from their entire territory, it was easier to move away. Today, people live in permanent dwellings, and impacts to the land have decreased the resources on the land.

There has been a change in the relationship that people have with wildfire over time. Sean McDougall (2022), Carcross/Tagish First Nation citizen, explains, *"back in the old days, fires were much smaller because we let it burn naturally so we would not have the amount of fuel for a large fire"*. Research in Northern Alberta found that people who were more mobile could easily move to avoid the impacts of Fire X̲'aan • Kwän • Kòn' , while more sedentary groups had more to lose (Lewis and Ferguson 1988).

The people of the Southern Lakes typically moved across the land following a seasonal round to access resources. There were, however, places that were returned to annually such as the M'Clintock River for the harvesting of salmon. Permanent villages were established after contact in response to new trading activities with the white settlers, however, camps were often reused in areas with reliable resources. The people of the Southern Lakes practiced the mobility that suggests that they may be more likely to use Fire X̲'aan • Kwän • Kòn' , but, they also had areas with plentiful resources that would dissuade the use of Fire X̲'aan • Kwän • Kòn' (Lewis and Ferguson 1988).

The few people in the research who had stories related to using Fire X̲'aan • Kwän • Kòn' to enhance or manipulate habitat all have family areas in the more southern part of the Southern Lakes, into B.C., as well as strong Tlingit ties. Further research will help to determine if these differing perceptions of traditional use of Fire X̲'aan • Kwän • Kòn' are related to cultural differences between coastal and inland Indigenous Nations.

Over time, the relationship with Fire X̲'aan • Kwän • Kòn' changed, such that it was stopped instead of letting it burn. Colonization resulted in changes of social systems and this affected the use of Fire X̲'aan • Kwän • Kòn' (Coughlan and Petty 2012). The result is a landscape that is overloaded with fuel and could support a large-scale wildfire with extreme Fire X̲'aan • Kwän • Kòn' behaviour and more destructive than those naturally occurring in the past. The interviews provided a sense that there were both modern and traditional means of minimizing the potential damage of wildfire.

MODERN FIRE X̲'aan • Kwän • Kòn' STEWARDSHIP

Today, there is a change towards identifying ways to reduce the risks of wildfire towards specific values so that Fire X̲'aan • Kwän • Kòn' can burn naturally in some areas, and controlled in other areas. A better understanding of the traditional relationships with Fire X̲'aan • Kwän • Kòn' can help to inform modern fire management. First Nations have had a relationship with their land and water for generations and have closely observed the changes that have come with altered land use and climate change. Traditional and local knowledge, coupled with forestry and wildfire research can create place-based, socially appropriate methods for managing wildfire to protect the values of all the inhabitants.

There remains a lack of understanding of the depth of knowledge and understanding held in Story and customary practices. Indoctrination and education have led to a paradigm shift in the relationship with Fire X̲'aan • Kwän • Kòn' . There needs to be an increased focus on the teachings of stories and Traditional Knowledge that is gathered and shared over many generations.

It has been noted that management strategies need to be place-based as different environments will need different strategies (Ray et al. 2012). By taking a place-based approach we can ensure that

Windy Arm Fire 2018 Photo: Yukon Wildland Fire Management

the appropriate values are protected while applying local customary laws and practices. The local Traditional Knowledge will help to support and develop the most appropriate strategies.

There needs to be acknowledgement that a landscape where Fire X̲'aan • Kwän • Kòn' has been suppressed will affect changes in ecosystem so we can't expect the same results that happened in the past. There needs to be a focus of the values and goals that First Nations consider when using Fire X̲'aan • Kwän • Kòn' as described in previous sections: decrease fuel loads near camps, clear areas for increased visibility and ease of travel (trails) and restore and enhance the diversity and health of plants and habitat.

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TWO CROW CONSULTING INC.
305 Killoren Crescent
Prince George B.C.
V2M 6J8

KWANLIN DÜN FIRST NATION
35 McIntyre Drive
Whitehorse, YT
Y1A 5A5

CARCROSS TAGISH FIRST NATION
Box 130
Carcross, YT
Y0B 1B0