FireSmart Canada is pleased to release *Blazing the Trail: Celebrating Indigenous Fire Stewardship*, a beautiful, bound publication that recognizes the contributions to wildfire prevention of Indigenous communities in Canada.

The glossy, 56-page book is the culmination of a FireSmart Canada partnership with Natural Resources Canada and Alberta Agriculture and Forestry. Thanks to the Province of Manitoba for funding distribution of the book to Indigenous Peoples across Canada.

*Blazing the Trail* is both a resource and a treasure; its detailed, first-person stories provide insight and context about Indigenous Peoples and fire stewardship, and the narrative encourages celebration and sharing of wise practices and lessons learned across generations.

Artwork, photos, and writings throughout the book acknowledge the significance of storytelling and expressive arts as ways of sharing knowledge about the roles and uses of fire in Indigenous communities.

The publication acknowledges that Indigenous communities have been leading, in many ways, fire mitigation and prevention.

An important outcome of Indigenous fire stewardship is wildland fire risk reduction, which aligns with FireSma

The project engaged technical writers and peer reviewers across Canada. According to project managers Dr. Amy Cardinal Christianson (Métis) and Dr. Natasha Caverley (Algonquin/Jamaican/Irish), 80 per cent of Canada's Indigenous communities are in forested regions and therefore are at risk from wildfires.

"Many Indigenous communities are already carrying out valuable work in the areas of destructive wildfire prevention and risk reduction," says Christianson. "We wanted to highlight those contributions in this book."

*Blazing the Trail: Celebrating Indigenous Fire Stewardship* is designed for leaders at all levels in Indigenous communities, from local youth to elders, fire-keepers, fire knowledge-holders, elected officials, fire chiefs, and senior community managers/administrators.

For more information contact FireSmart Canada at general@firesmartcanada.ca.

FireSmart™ Canada

# Blazing the Trail:

## Celebrating Indigenous Fire Stewardship

# GIVING OF THANKS

FireSmart Canada embarked on a national initiative to develop *Blazing the Trail: Celebrating Indigenous Fire Stewardship*, highlighting stories of fire stewardship in Indigenous communities in what is now called Canada. Therefore, FireSmart Canada gives thanks to the following individuals and organizations who were instrumental in developing this Booklet:

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### Trinda Cote

*Trinda is an Indigenous youth who shows the impact that wildland fires have on animals and the forest and how we must respect wildland fires as living entities. As Trinda shares with us, "…there is a dark figure, representing both the Creator who protects the forest and the fire itself, having a mind of its own. Humans cause slightly more than half of all wildland fires in Canada; hence, the fire also being human-like."*

# OVERVIEW

In many Indigenous cultures in Canada, fire is a sacred and powerful element that can help on landscapes and in ceremony. We also know that some fires on the land can be destructive to communities. Eighty percent of Indigenous communities in Canada are in forested regions and therefore are at risk to "interface fires."[1] It is important to recognize that many Indigenous communities across Canada are already carrying out valuable work in the areas of destructive (wildland and structural) fire prevention and risk reduction. Therefore, specialized and culturally relevant information is necessary for Indigenous communities who want to reduce wildfire risk.

*Blazing the Trail: Celebrating Indigenous Fire Stewardship* highlights stories of fire stewardship in Indigenous communities in what is now called Canada. These stories celebrate themes and topics on Indigenous fire stewardship and leadership. An important outcome of fire stewardship is wildland fire risk reduction, which also aligns with FireSmart Canada's organizational mandate (refer to Section #12). An Indigenous fire risk reduction toolkit (refer to Section #8) and a complementary FireSmart Canada "at a glance" overview (Appendix A) are also provided in the Booklet to support fire stewardship activities in Indigenous communities now and in the future. These Booklet sections focus on FireSmart Canada and related programs and resources in wildfire prevention and risk reduction.

As ways of sharing knowledge in Indigenous communities across Canada, illustrations, photos, creative writing, and stories are featured throughout the Booklet, acknowledging the significance of storytelling and expressive arts about Indigenous fire stewardship wise practices, lessons learned, and resources.

The title, *Blazing the Trail: Celebrating Indigenous Fire Stewardship*, recognizes that Indigenous communities have in many ways been leading wildfire mitigation and prevention in Canada since time immemorial, relying on local Indigenous knowledge systems. As well, burning to create and maintain trails for travel is a practice used by many Indigenous communities. Therefore, we showcase select stories to reflect Indigenous communities' various current and emerging fire stewardship practices in support of cultural revitalization, resilience and pride, and (emergency) preparedness.

This Booklet is designed for leaders at all levels in Indigenous communities across Canada, from local Youth, Elders, Fire Keepers, Fire Knowledge Holders to Indigenous elected officials, Fire Chiefs, and senior community managers/administrators. In the spirit of allyship, non-Indigenous agencies who work alongside Indigenous communities across Canada will also benefit from reading *Blazing the Trail: Celebrating Indigenous Fire Stewardship*.

Collaboration is particularly important as Indigenous communities across Canada will most likely be in different stages of readiness in planning and implementing wildfire prevention and risk reduction strategies. Therefore, we encourage you to get in touch with FireSmart Canada (www.firesmartcanada.ca) and work with neighbouring Indigenous communities and orders of government[2] to engage in interagency collaborations and develop customized wildfire safety (prevention and risk reduction) approaches in your community, based on cultural values, wise practices, and protocols.

[1] http://www.nafaforestry.org/ff/download/volume_5_topic_29_.pdf

[2] Includes municipal/regional, provincial/territorial, and federal levels of government.

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## STORIES

# 3. DISCLAIMERS

- *Blazing the Trail: Celebrating Indigenous Fire Stewardship* serves as a resource for and prepared by Indigenous Peoples in Canada with support from non-Indigenous agencies and allies. FireSmart Canada recognizes that there is a need for Indigenous-informed resources that acknowledge the unique cultural, jurisdictional, and home/land ownership topics and issues for Indigenous communities in Canada.
- The views, opinions, conclusions, and recommendations expressed in this Booklet are intended to share themes, lessons learned, and wise practices that are representative of a variety of Indigenous communities across Canada. The information presented in *Blazing the Trail: Celebrating Indigenous Fire Stewardship*, however, will not fit every community, nor is it a complete list of all fire safety activities, programs, and services occurring in Indigenous communities in Canada.
- Although we recognize the importance of structural fire prevention and home fire safety, the Booklet focuses on the wildland areas surrounding homes and buildings in Indigenous communities as well as wildfire prevention and risk reduction.
- We recognize that for many Inuit communities, wildland fires in the Arctic regions of Canada are not an elevated or critical hazard in comparison to other climate change and emergency management issues in the tundra ecosytems.
- Cultural burning is a practice of some Indigenous cultures to manage the plants, trees, and/or related vegetation on a landscape and are considered "good fires." However, fire suppression, climate change, population growth, and invasive species have changed our environment since the times our ancestors practiced this type of burning on the land. Now, the risk is too high to easily re-introduce cultural burning without complex community planning and guidance from our Elders, Fire Keepers, and Fire Knowledge Holders in our Indigenous communities along with our working allied agencies. Any youth who are interested in learning about and/or participating in cultural burning will need to engage in this process under the supervision and guidance of Elders, Fire Keepers, and Fire Knowledge Holders in their Indigenous communities.
- In the Booklet, wise practices and resources (including websites) are current as of the date of publication.
- FireSmart Canada accepts no responsibility of liability for any loss or damage that any person may sustain as a result of the information in, or anything done or omitted pursuant, to this Booklet.

**Stacey Rose Orr**

*Entitled "Fire Sage," Stacey's art piece is "a symbolic representation of wildland fire burning…the Golden Eagle is featured in a protective nature by encompassing his wings to cradle the fire, allowing it to burn. Amongst the flames are spiritual native art representations of the spirits within the forest and within the eagle itself to release the natural Indigenous beliefs of each living being, living alongside the fire."*

# 4. FOREWORD

***Joe Gilchrist (Secwepemc Nation and Nlaka'pamux Nation) and Harry Spahan (Coldwater First Nation) are Indigenous Fire Keepers - here they share their thoughts on Indigenous Fire Stewardship.***

Fire use by Indigenous Peoples was so prevalent across Turtle Island that the plant life evolved needing fire. Over the ages, cultural burning on the homelands shaped the lives of humans, plants, animals, and Mother Earth herself. Consider fire as a cleanser, like water but for Mother Earth.

Chaos is what naturally happens. Each area has its dominant plants such as grass, sage, ponderosa pine, fir, lodgepole pine, spruce, cedar, and subalpine fir. These dominant plants communicate with each other as well as other competing species. Some of the interaction is like war between the plants with some plants using chemicals against other invading plants, while others refuse water and nutrients for unwanted neighbouring plants. Where Indigenous cultural burning comes in is the need for food and medicine for humans and animals. Fire is used to cleanse the area of the dominant species creating a new area in the burned land for wanted plants to grow. A good example is huckleberries. More to the importance of Indigenous fire use is fire regimes and cycles of fire use that bring balance to competing dominant, co-dominant, and sub-species battles. Through repeated burning practices, the Indigenous Peoples of the land were able to shape their own environment to their own specific needs.

During our modern times, fire use has become illegal and nearly forgotten. Gone are the times where fire could be lit and left to burn until it goes out on its own, as the encroachment of human beings on the land has significantly changed things. Through these modern times and the complete halt of cultural burning practices, plant life continued on, dominant plant stands over-age and die over the decades. Some forest have become so thick and overgrown that ponds and creeks dried up. With fire regimes gone, forest fuel builds up as each fire cycle is missed.

A fire cycle is the period of time between fires which is measured in years. A fire cycle for grassland is burned every one to two years.

For ponderosa pine, it is seven to fifteen years. For lodgepole pine, it is 60 to 100 years and so on. Each dominant species has its own fire cycle. When each cycle is missed, disease, plant encroachment, and pest insects are able to move in as the plants become unhealthy. The chaos of nature takes over and wildland fires during the summer have approximately 10 or more missed burned cycles of fuel accumulation to burn as well as dead, over-aged, over stocked, diseased, and bug infested wildlands to burn. When a fire burns in the wildland during unwanted times of the year, a wildland fire becomes very dangerous in all aspects of earthly life.

For our own safety and well-being, Indigenous fire use is needed to bring back balance in the forest. Fire Keepers' knowledge and use of fire must now include fire control, fire management, and other new disciplines to ensure fire is used in a safe way. Communication of each burn must occur so various people are informed and not surprised by the smoke and flames. The public needs to become educated that fire is needed to reclaim fire safety of the surrounding forests by burning built up forest fuels. Fire is needed to enhance and rejuvenate the land for human, animal, and plant benefits.

**Indigenous Peoples are the stewards of the land, fire is a cleanser of Mother Earth and cultural burning is a tool of the Fire Keeper. A new call to bring back the balance in the forest and the need to enhance the fire safety of communities is a much needed breath of fresh air. Revive cultural burning practices, bring back burn cycles, and restore the land so all can thrive.**

*From left to right – Joe Gilchrist and Harry Spahan, Indigenous Fire Keepers from British Columbia.*

▲ *Cultural burning in Xwisten. Xwisten Fire Knowledge Holders working alongside the First Nations' Emergency Services Society (FNESS) and BC Wildfire Service. Photo credit: FNESS*

# 5. INTRODUCTION

Through the use of storytelling and expressive art, *Blazing the Trail: Celebrating Indigenous Fire Stewardship* celebrates Indigenous fire stewardship and the weaving together of Indigenous and non-Indigenous learnings in relation to wildfire safety (prevention and risk reduction) for Indigenous Peoples, their homes, and their communities. As Indigenous authors, we acknowledge that Indigenous worldviews are of equal weight and complement non-Indigenous worldviews. Cultural ways of knowing influence how we see ourselves in our environment. There is much diversity amongst Indigenous languages, lifestyles, teachings, and perspectives. Therefore, readers are encouraged to recognize that various Indigenous Peoples may have their own distinct cultural views and beliefs relative to their family lineage or community connections, particularly as it relates to roles and uses of fire.

Fires, in our ecosystems and communities, can be viewed as either "good fires" or "bad fires"—sometimes called the "two faces of fire."[3] In *Blazing the Trail: Celebrating Indigenous Fire Stewardship,* "good fires" are typically culturally informed burns that are planned, controlled, fulfil specific cultural objectives, and involve comprehensive engagement and guidance from Elders, Fire Keepers, and Fire Knowledge Holders—often in partnership with interagency collaborators (e.g., local fire departments, provincial/territorial governments). "Good fires" have long-term benefits such as food and medicinal plant gathering and access (e.g., hunting, harvesting, growth); cultural and language revitalization (e.g., use of traditional knowledge); and forest product access (e.g., firewood collection) and pest reduction, with limited negative effects on livelihoods and communities. On the other hand, "bad fires" are unwanted, out of control fires that can threaten lives, livelihoods, and damage properties or communities.

***Wildfire Trends and Indigenous Communities***

*The number and size of wildfires are expected to increase in Canada due to climate change and forest practices. "Bad fires" are occurring every year in Canada, with some wildfires having major effects on communities and ecosystems. These effects can include severe socio-cultural, economic, and ecological effects that are difficult for communities to recover from. Indigenous Peoples in Canada are disproportionately affected by wildfires as their communities are often located in areas that are prone to forest fires or grass fires. First Nations, Métis, and Inuit Peoples comprise approximately 5% of the population of Canada, but 33% of wildfire evacuation events occurred in Indigenous communities.[4] As well, 83% of smoke evacuees in Canada were from Indigenous communities. The Canadian Forest Service says that 60% of First Nations reserves in Canada are located within or intersect the wildland-urban interface.[5] As well, some Indigenous communities are remote fly-in only, affecting community members ability to evacuate from wildfires in a safe and timely manner.[6]*

[3] http://gfmc.online/iwfc/sevilla-2007/Keynote-Myers.pdf

[4] https://cfs.nrcan.gc.ca/publications?id=32886

[5] McGee, T.K., Mishkeegogamang Ojibway Nation, & Christianson, A.C. (2019). Residents' wildfire evacuation actions in Mishkeegogamang Ojibway Nation, Ontario, Canada. *International Journal of Disaster Risk Reduction, 33*:266–274.

[6] Asfaw, H.W., Sandy Lake First Nation, McGee, T.K., & Christianson, A.C. (2019). Evacuation preparedness and the challenges of emergency evacuation in Indigenous communities in Canada: The case of Sandy Lake First Nation, Northern Ontario. *International Journal of Disaster Risk Reduction, 34*: 55-63.

## 5.1 FIRE CREATION/ORIGIN STORY

*Note: Every Indigenous community in Canada is unique, with distinct languages, stories, cultural protocols and practices. Fire origin/creation stories vary between communities. We share the following fire creation story with you with that in mind.*

# How Coyote Brought Fire to the People

***As shared by Nklawa – Storyteller from the Upper Nicola Band***

Where I'm from, the Okanagan people, we call ourselves Syilx. Coyote was the shapeshifter, he was the one responsible, he was sent down by the creator down to earth to get everything ready for the coming of the human beings. There were only animals, it was very beautiful. There were no real humans here yet, they would just gradually drift into this country. It was very beautiful, and the people were like animals, they relied on instinct to survive, they didn't have that ability to think or make decisions, to make choices. They were just basically animals like the rest of the animals.

So, the Creator in his mighty wisdom, he decided to give all the animals a job. That was Sinkilp (Coyote). He was sent down by the Creator to make everything ready for the coming of the humans. He got here, it was kind of the edge of winter, getting cold. He noticed some of the human beings, they had no fur on. It was getting kind of cold, but they stayed indoors where they lived in their pithouses or wherever they lived. They were always cold.

So Sinkilp talked to some of the people, and they mentioned fire. "What is this fire stuff?" "Where is fire?" He questioned the Elders and they told him about fire. They said "you have to go to the top of the mountain over there, Iron Mountain. There's three people up there that are protecting fire. They won't allow it to go anywhere. It just stays up there on top of the mountain. The monsters, that's what they call them. The fire monsters. They protect it, they won't allow fire to go anywhere."

So Sinkilp said “I’m gonna have a look at this fire stuff. See what I can do.” So he went up there on the mountain, he went up there on a scouting mission, looking around. Right away, the monster saw him coming, they heard him coming, and they were very suspicious about him. And then the one monster said “oh, he’s nothing, just a coyote, he’s just looking around, he’s harmless.” So they left him alone. And he went back there, every day for a couple of weeks, scouting, watching. He wanted to figure out what their schedule was, how they worked to protect the fire. So he watched everyday.

So he noted what the schedule was in his mind. There were three of them. And they took shifts looking after the fire. Two would sleep and one would stay up during the night. Two of the monsters were guys, and one was a girl. So he figured that out. He said “I’ll follow this schedule really close, and when I get the opportunity, I will steal the fire. When the girl is by herself, I’ll run in there and steal fire. I’ll run with it and leave.”

So one day, he went over there, she was waking up her brothers to go and take their shift on the fire as it was her turn to go to sleep. While she was doing that, Sinkilp ran to the fire, and he made a little bowl out of clay with a lid on it, and he took that bowl and threw some sparks in there. Then he started running with it. They spotted him, and started chasing him. He ran and he ran.

As he was running, he had a bushy tail back then. And his tail was kind of hitting the clay pot. Pretty soon his tail caught fire on the tip. And the tip of his tail turned white. That’s why today coyote’s tail has a little white tip on it.

But they continued to chase him. He ran and he ran, but he was getting tired. He had planned it earlier that he was going to relay this fire. So the next one in line was possum. He was a pretty fast runner. So he took the Staeekw (Spark) and he started running. He ran and ran. He had a bushy tail back then, but as he was running the Staeekw (Spark) kind of sparked up and his tail caught fire, and then all the hair burned off his tail. That’s why today, the possum has no hair on his tail.

So he passed it to the next person that was in line, that was the squirrel. The squirrel said, “I can outrun these guys.” So he passed the bowl to the squirrel and the squirrel started running with it. He ran and he ran. He had the bowl on his back, and he stopped. He could feel his skin kind of burning on his back from the bowl. And he said, “that’s not good.” When he stopped, his tail went up and covered that spot on his back. That’s why today, squirrels have their tail on their back all the time.

So squirrel got too tired. He said, “what am I going to do with this Staeekw, the spark.” So he threw it and xaxchee (Wood) caught it. He grabbed that Staeekw and he swallowed it. He couldn’t run. So xaxchee and the Nalisqe (monsters), caught up. They said “xaxchee has the fire now, how are we going to get it back from him?” So they tried everything. They tried beating him, shaking him up. xaxchee (Wood) would not let the fire go. Finally they gave up and said, “we lost this piece of fire.” So they went home.

So xaxchee said “okay, I’m ready to bring the fire to the people now.” So he took Staeekw with him, and they went up to the village where the people were very cold. He said, “I’m going to show you something, come around here.” So he gathered all the human beings. He took two pieces of stick off of Wood, and he started rubbing and pretty soon fire came out. “That’s one way, that’s how you can have fire. You take two sticks, and you rub them together, fire will come out. The other way is, I’m going to sharpen this stick, I’m going to put a piece of wood on the ground, and I’m going to spin it in my hand, and I’m going to make fire come out”, he said. So that’s what he did. He showed the people how to make fire.

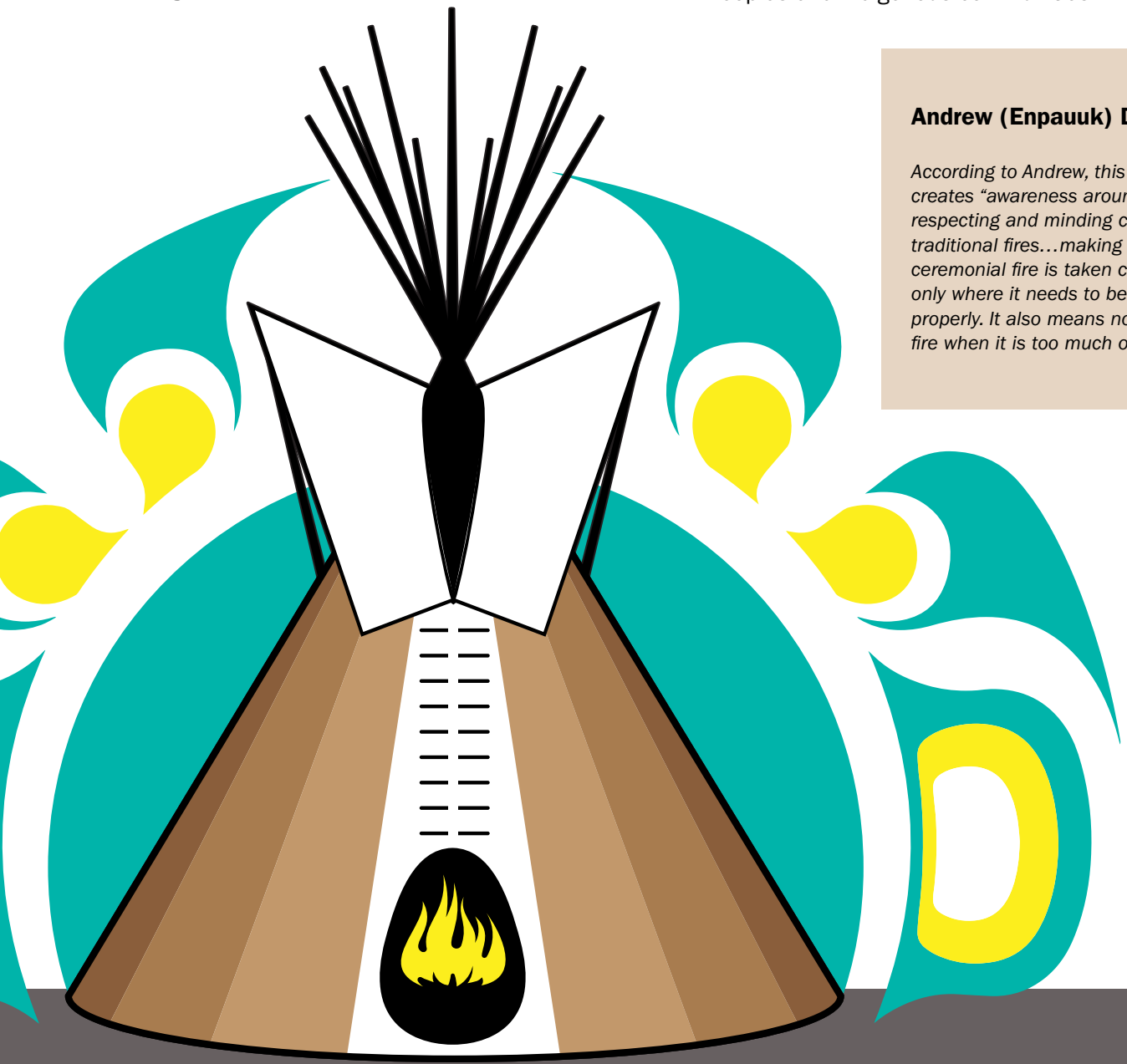
That’s why today, people have fire. xaxchee showed the people how to make fire, and we still have fire today.

**We loved fire. We never feared it. We respected fire. We never got scared of it. We need fire.**

## 5.2 FIRE STEWARDSHIP AND RESILIENCE

Many Indigenous Peoples believe that we have an inherent responsibility to care for the Earth and that the physical, mental, emotional, and spiritual health of many Indigenous Peoples is tied to the health of the natural world. It is understood that we cannot be resilient Peoples without healthy ecosystems in which to live and practice our cultural ways. Indigenous approaches and corresponding ways of knowing related to well-being are often linked to the land through songs, stories, ceremonies, language, and writing. Land is a fundamental dimension of cultural identity and health (physical, mental, emotional, and spiritual) for many Indigenous Peoples across Canada, thereby, playing an important role in promoting resilience—linking identity and place with cultural renewal and revitalization. Therefore, opportunities for Indigenous Peoples to connect (or reconnect) with their identities include, but are not limited to, being on the land, speaking traditional language(s), and/or learning ways to live with and practice culture through the sharing of cultural skills and stories by Elders and Traditional Knowledge Keepers. For many Indigenous Peoples, one of the ways of advancing cultural renewal and revitalization is through the return of fire to the land and engaging in cultural burning and related fire practices in their respective communities.

During evacuation alerts and orders in response to "bad fires," resilience is higher when Indigenous communities have training, experience, and knowledge to navigate these incidents. Also, part of community resilience in action is how cultural knowledge of fire and teachings of "good fires" can help heal the land and Peoples. Sharing experiences through storytelling about personal lessons encountered during evacuations helps with the resilience and preparedness of Indigenous Peoples and Indigenous communities.



**Andrew (Enpauuk) Dexel**

*According to Andrew, this image creates "awareness around respecting and minding ceremonial/ traditional fires…making sure your ceremonial fire is taken care of, kept only where it needs to be and put out properly. It also means not lighting a fire when it is too much of a risk."*

## 5.3 HARMONIZATION OF INDIGENOUS AND NON-INDIGENOUS KNOWLEDGES

Mi'kmaw Elder Albert Marshall brought forth the practice of Etuaptmumk/Two-Eyed Seeing (Mi'kmaw word) as a way of using multiple perspectives. In general, Etuaptmumk refers to looking at a subject from one eye with the strengths of Indigenous knowledges and ways of knowing and from the other eye with the strengths of mainstream (or non-Indigenous) science knowledges and ways of knowing. With this concept to guide our work as authors in developing *Blazing the Trail: Celebrating Indigenous Fire Stewardship*, we learn to use both perspectives for the benefit of all. Indigenous fire stewardship involves traditional knowledges, but Indigenous knowledge systems are not static. Our current Indigenous knowledge systems have been influenced by non-Indigenous concepts of fire management. Etuaptmumk is used by many Indigenous Peoples and partners for various topics and disciplines—supporting an important increase in integrative, cross-cultural, and collaborative work.[7]

The authors were also guided by the concept of "braiding" sciences and knowledges, based on the work of Dr. Gloria Snively and Dr. Wanosts'a7 Lorna Williams.[8] This metaphor shows us how Indigenous and non-Indigenous ways of knowing can be used in a manner that is both mutually respectful and reciprocal.

> *"We braid cedar bark to make beautiful baskets, bracelets and blankets. When braiding hair, kindness and love can flow between the braids. Linked by braiding, there is a certain reciprocity amongst strands, all the strands hold together. Each strand remains a separate entity, a certain tension is required, but all strands come together to form the whole. When we braid Indigenous Science with Western Science, we acknowledge that both ways of knowing are legitimate forms of knowledge. For Indigenous peoples, Indigenous Knowledge (Indigenous Science) is a gift. It cannot be simply bought and sold. Certain obligations are attached. The more something is shared, the greater becomes its value."*[9]

[7] For more information about Two-Eyed Seeing, visit www.integrativescience.ca.

[8] https://pressbooks.bccampus.ca/knowinghome/

[9] https://pressbooks.bccampus.ca/knowinghome/ p. 4.

**Darren Matasawagon**

*Since 2008, Darren has been an artist using acrylic paint on canvas. He also paints woodland art on canvas. Darren's painting is called "WE'LL PROTECT U MOTHER NATURE."*

# 6. FIRE AS MEDICINE - INDIGENOUS FIRE STEWARDSHIP

## 6.1 HEALING OURSELVES THROUGH FIRE AND CEREMONY

As Indigenous Peoples, "good fire" is a powerful and sacred force in our lives. Many Indigenous cultures speak of "good fire" as one of the four sacred elements of the Earth. Through the burning of sacred medicines, we purify ourselves and the spaces around us. The keeping of ceremonial fires connects us to Earth's deepest workings.

*Mi'kmaw Elders have said,*

*"Fire will have to be equated as equal as any other element that we depend on because of this interdependence/ interconnection with our natural world. If you have that understanding that this is a life's energy, and if you rely and depend on it for the benefit of all, then I believe that the fire will also respond in that way."* ***Albert Marshall***

*"And the sacred fire served its purpose. All the young people gathered around here, around the fire. It kept going all night and all day. And there you get stories and lessons."* ***Murdena Marshall***

Each Indigenous community has specific protocols around fire. In some communities, Indigenous women have a leading role in maintaining relationships between the people and fire. For example, historically, Mi'kmaw women tend to fire embers held carefully in shells over the three winter moons. At the end of the winter, those fire embers were then viewed as sacred, and a ceremony was undertaken as the women celebrated the fire, their caretaking, and each other.[10]

**Karen Erickson**

*Karen has been making art for approximately 30 years using abstract, realistic, and texture techniques while being inspired by nature, animals, and people. Entitled "Elders Way," Karen acknowledges that "Elders are respected members of Indigenous Peoples. They have so much knowledge and wisdom to share. Teaching our families on how to respect and protect the land and wildlife is beneficial. While learning about traditional medicines and healing practices, communities are healthier."*

[10] Joudry, S. (2016). *PUKTEWEI: Learning from Fire in Mi'kma'ki (Mi'kmaq territory)*. Unpublished Master of Environmental Studies thesis. Halifax, NS: Dalhousie University. https://bit.ly/2RZ8pW1

## 6.2 HEALING OUR LAND THROUGH STEWARDSHIP

Since time immemorial, various Indigenous communities throughout Canada have been using cultural burning practices on traditional territories for different reasons specific to each community. For some Indigenous communities, the act of cultural burning is a sacred stewardship activity related to the health of the territory, an inherent responsibility given to Indigenous Peoples, and therefore, a vital cultural practice.

Many Elders, Fire Keepers, and Fire Knowledge Holders have expertise in cultural burning practices that include having specific teachings about fuel conditions, weather, fire behaviour, and burning techniques. Common cultural reasons for burning include, but are not limited to, improving berry patches, collecting firewood, encouraging medicinal plant growth, improving hunting grounds, encouraging new grass growth to attract ungulates, supporting fisheries, reducing pests (e.g., wood ticks and mosquitoes), lengthening the growing season, and reducing wildland fire risk.

However, over the past 100+ years since European colonization, government regulations and legislation around fire suppression were enforced, resulting in centuries of Indigenous knowledge and ways of knowing being excluded from non-Indigenous fire management practices. It is interesting to note that many current firefighting techniques practiced by wildfire management agencies (like the use of drip torches) are based on Indigenous knowledge and techniques.

> *"Our people didn't have no tiger torch and never had that. They just use the pitch, like the fir. You take a fir tree and the center of that there's usually a pitch, you could see rot in a fir and then you'll see that pitch there. Sometimes you get the right kind and it'll be just that colour of that brown right there and then it just looked like syrup and that's just like gasoline…and they use that is a torch. You know sometimes they're, maybe 6-8 feet long and they'll make it and they'll just hold and start their fire right… just burn yeah." Jim Toodlican*[11]

Indigenous Elders, Fire Keepers, and Fire Knowledge Holders have been calling for the return of Indigenous-led cultural burning ("good fire") practices to their traditional territories, both to manage fuel and reinvigorate cultural practices. Burning is seen to "clean the land" and can connect (or reconnect) Indigenous Youth and Elders to the land and revitalize cultural burning practices from an educational perspective. Gradually, dialogue and projects are underway in various parts of Canada to revitalize Indigenous fire stewardship knowledge and practice and acknowledge the important role Indigenous Peoples play in fire management in Canada.

There are modern risk factors that complicate the reintroduction of "good fires." After decades of fire suppression, there is now extra fuel built up in our ecosystems, which increases the risk of high intensity "bad fires," such as out-of-control wildfires. Climate change is also increasing the frequency and intensity of wildfires. As well, invasive species, which were not there when our ancestors burned, are present. All together, these factors have changed our landscapes and the ways that "good fires" are used. Fortunately, Indigenous knowledge systems are not static and constantly evolve. The reintroduction of cultural burning will take complex community engagement and planning, guidance from our Elders, Fire Keepers, and Fire Knowledge Holders in our Indigenous communities and partnerships with fire management agencies and collaborators.

[11] Excerpt from Shackan Indian Band – Executive Summary for *Revitalizing traditional burning: Integrating Indigenous cultural values into wildfire management and climate change adaptation planning.* Authors - Shackan Indian Band; Sharon Stone, Tmix$^{w}$ Research; Amy Cardinal Christianson, Natural Resources Canada; Natasha Caverley, Turtle Island Consulting Services Inc.; Brent Langlois, First Nations' Emergency Services Society (FNESS); Jeff Eustache, FNESS; Darrick Andrew, FNESS.

STORY #1

# THE WORK OF HENRY LEWIS WITH THE DENE AND WOODLAND CREE PEOPLES

▲ *A "good fire" - cultural burning in action. Photo credit: Amy Cardinal Christianson*

In Northwestern Alberta, numerous prairies and meadows were kept open by cultural burning practices, such as the areas of Grande Prairie, Valleyview, High Prairie, Spirit River, Fairview, Grimshaw, and Peace River. Cultural burning was an important influence on the Northern Alberta landscape as late as the 1940s. In the 1970s and 80s, researchers Lewis and Ferguson[12] conducted extensive interviews with Fire Keepers and Knowledge Holders in Northern Alberta. They found that Indigenous Peoples in this area did not regard fire as a hazard—rather, fire was recognized and used as a tool for maintaining meadows, opening up grasslands, burning deadwood, obtaining firewood, improving settlements and campsite areas, making and maintaining trails, opening up animal habitat, increasing berry production, reducing pests, practicing spiritual ceremonies, and promoting aesthetic benefits.

The most important resources to Indigenous Peoples were the early succession species that appeared soon after a fire, such as bison, moose, deer, elk, rabbits, grouse, grass seeds, legumes, berries, and bulbs. Natural fires, mainly lightning-caused, were too irregular to be relied upon and usually occurred as destructive wildland fires in the summer. One of the main reasons for burning in Northern Alberta was to increase the growing season. Spring fires resulted in the warming of the soils and melting of frost, thus allowing the growing season to begin earlier. Fire was also used each spring to reduce risk to the settlement areas.

The people had a sound understanding of fire, and burning was conducted based on seasonality, fuel conditions, wind, general weather conditions, and the frequency of burning. Knowledge and burning skills were likely passed on from generation to generation through the sharing of traditional knowledge. All burning took place in the first two weeks of spring, never in the summer, as this was acknowledged as a dangerous time for burning.

A participant in Lewis' study (1977) commented, "Fires had to be controlled. You couldn't just start a fire anywhere, anytime. Fire can do a lot of harm or a lot of good. You have to know how to control it."[13]

For more information about the works of H.T Lewis, view *Fires of Spring* at www.youtube.com/watch?v=XX0rhYqkC4Q.

***Story #1: Lessons Learned***

*Since time immemorial, Indigenous Peoples in Northern Alberta have burned for various cultural reasons. Using fire as a tool, they have extensive fire stewardship knowledge.*

*When working with Indigenous communities on wildland fire risk reduction, fire stewardship knowledge should be acknowledged, incorporated, and respected.*

[12] Christianson A. (2011). *Wildfire risk perception and mitigation at Peavine Métis Settlement.* PhD Dissertation. Department of Earth and Atmospheric Sciences, University of Alberta.

[13] For example, see Lewis, H.T. (1977). Maskuta: The ecology of Indian fires in Northern Alberta. *The Western Canadian Journal of Anthropology, 7*(1): 15-52.

# STORY #2
# REVITALIZING CULTURAL BURNING

**A Community Plan to Integrate the Xwisten's Cultural Values into Wildfire Management and Climate Change Adaptation Planning**

## CLIMATE CHANGE & WILDLAND FIRE

Annual area burned, fire severity, and length of fire season are likely to increase as a result of climate change (Flannigan, Cantin de Groot, & Wotton, 2013; Hager, 2017; Moritz et al., 2012).

Decades of wildland fire suppression result in extensive forest fuels accumulation and increase the likelihood of large wildland fires (Agee & Shinner, 2005; Donovan & Brown, 2008).

## XWISTEN - THE SMILING PEOPLE

Also known as the Bridge River Indian Band, Xwisten is a St'át'imc community located in south Central British Columbia, northwest of Lillooet, at an important convergence of the Bridge River and the Fraser River.

## CULTURAL BURNING PRACTICES

**Xwisten had extensive fire burning practices** prior to European contact. Fire is used as a tool, not only to reduce risk to their settlements, but also to achieve cultural outcomes. However, over the past century, government regulations around fire suppression were strictly enforced. As a result, there was a **significant loss of Indigenous knowledge in favour of Western practices**. In the past, St'át'imc community members were incarcerated when trying to conduct cultural burns. Today, climate change, the Mountain Pine Beetle infestation, and a build-up of forest fuels have caused **unhealthy forest conditions and increased the wildland fire risk** to the Xwisten community. St'át'imc conducted a forestry survey in the territory and found that there is an increase in impacts from other forest pests—Douglas Fir Bark Beetle, Spruce Bud Worm, and others.

## FNESS INITIATIVE: A MULTI-YEAR COMMUNITY-BASED PROJECT

Goal: To advance climate adaptation when reducing the impacts of extreme weather events (wildland fires and drought) and integrate Indigenous cultural values and knowledge into wildland fire management planning.

## PROJECT METHODOLOGY

Our team conducted qualitative interviews in Xwisten, documenting oral histories on climate change and cultural burning practices.

We helped to establish the Xwisten Fire Council, where Elders with burning experience met monthly and discussed Xwisten values, needs, issues, priorities, and local knowledge about cultural burning. Our team then developed a community-based burn plan framework.

Authors: Xwisten Nation; Gerald Michel; Brent Langlois, First Nations' Emergency Services Society (FNESS); Jeff Eustache, FNESS; Darrick Andrew, FNESS; Amy Cardinal Christianson, Natural Resources Canada; and Natasha Caverley, Turtle Island Consulting Services Inc.

# THE BURN PLAN FRAMEWORK

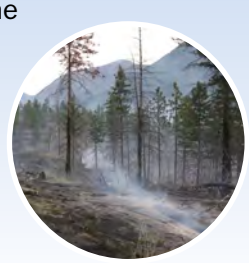
The Burn Plan Framework incorporates local Indigenous values, knowledge, and climate change concerns with weather conditions and prescribed burning science to reduce climate change impacts on the community.

The Framework outlines goals and objectives for a planned burn, regulatory processes, proposed area selection (includes land designation for Xwisten), topography, timber types, local ecology, weather considerations, partnerships, and required resources.

# KEY FINDINGS

**Key Locations** - On-reserve and 21 specific off-reserve locations were identified as burn areas on Xwisten traditional territory.

**Time to Burn** - An ideal time to burn is early spring when the snow recedes and the leaves are not out yet.



**Burn Intensity** - Fires are kept low to only disturb the top few centimetres of soil. This is what's considered a "good fire."

**Cultural Significance** - Burning is an activity that brings families and community together and promotes medicinal plant growth.

**Grassland Management** - Burning reduces undergrowth and stimulates grass growth, which is a better habitat for ungulates.

**Forest Management** - Burning reduces wood tick infestation.

**Food Production** - Burning improves berry production, mushrooms, wild onions, and mountain potato harvest.

# ELDERS' CONCERNS

Forest overgrowth means there is too much fuel for a "good fire." Hand-thinning is needed first to ensure soil and plants are not damaged.

Elders are also concerned about lack of Youth interest and engagement.

***Story #2: Lessons Learned***

*Xwisten Elders and members are highly knowledgeable about the interplay between fuel conditions, weather, fire behaviour, and cultural burning practices that impact land-based activities (e.g., berry harvest, picking, fishing, and hunting).*

*Opportunities should be explored for Indigenous communities to enhance their resilience in wildland fire prevention and risk reduction using Indigenous knowledge.*

*Strategies that revitalize cultural practices and use Indigenous knowledge to better plan for and adapt to climate change impacts should be supported and funded.*

# 6.3 Healing Through Storytelling

*Indigenous storytelling is a way to share and pass on cultural values, history, practices, protocols, relationships, and ways of living. Following the spirit and intent of Indigenous storytelling, Shalan Joudry (Mi'kmaw storyteller, poet, ecologist, and mother) shared a modern-day story with all of us.*

Back when the landscape was coming into existence, fire came with it. Together the fire beings helped breathe energy into the lives of the people and the people helped feed the fire beings to keep them well.

Then there was a time when trickster came and thought it would be wonderful to have a great fire, but they didn't know how to communicate with fire and so the fire beings spread everywhere. Many animals fled to water's edges along streams and lakes or out to seashores. Some small critters climbed underneath the ground to wait for the fire to be finished burning. Except for the large encampments, many of the people's camps were destroyed. In these places, their wi'kuoms, drying racks, birch canoes – all burned into ash. Across the land, even some animals didn't make it through the smoke and flames. The fires simmered for a few more moons, going underground, burning slowly through strands of fibers, later making its way back up to ground to sprout a new flame in a dry area.

People were so frightened by the big fire that could do so much harm that they stopped carrying fire. They no longer fed it, warmed themselves by it, prayed with it, or sang its praises in the evening. As much as they could, the people replaced fire with other tools and elements. When the Thunders brought fire, the people raced to trample it and suffocate it from growing wild and fierce.

Over time the land became hungry and tired. The berries grew sparse; the people's grassy gathering spots spread over with thickets; and eventually even the people stopped making time to gather and share stories and song anymore. Now that there was no fire to worry about, the people spoke less and less about fire and so the children didn't learn the words and names of fires. Without the people taking care of fire it could no longer take care of them. Soon, the people were also losing energy, their spirits became hungry.

While walking with her grandfather one evening, a young girl was so entranced by a lightning bug flickering across the forest floor that she chased it and chased it until she captured it in her cupped hands. Excited, she brought the bug to her grandfather to see. She slowly opened her hands and, in a darkness, there was a flicker of light. It made Grandfather remember. He remembered his ancestors caring for embers of fire through the long moons of winter. Good thoughts of the gifts of fire came back to the old man.

As the girl let the bug go, the two of them watched the fleck of light ignite and dissipate through the forest, the man remembered a dance the old ones used to dance. As he danced with his granddaughter along the trail back home something was powering-up in him.

Later, around the empty hearth of rock, the old man was retelling the story of the fire bug. His granddaughter added, "E'he, and the fire bug made Grandfather happy!" The village Elders spoke among themselves for quite a while that night and in the morning, it was decided that a small group of travellers would go find embers of fire to bring back to the people. They went to the place they knew the old ones went for fire. Carefully they carried the embers back to their village.

The people now had earth fire, the original fire. They reminded each other about how and when to use which fires. Now the villages and land were remembering and healing.

# 7. BRAIDING FIRE STEWARDSHIP

## 7.1 OVERVIEW

Indigenous fire stewardship involves traditional knowledges, but Indigenous knowledge systems are not static. Our current Indigenous knowledge systems have been influenced by non-Indigenous concepts of fire management. The braiding of Indigenous fire stewardship with concepts like wildfire suppression (firefighting), emergency management, and strategic planning resulted in Indigenous leadership in wildfire risk reduction across Canada. Leaders are at all levels in Indigenous communities—from local Youth, grassroots leaders, Elders, Fire Keepers, Fire Knowledge Holders to Fire Chiefs, Indigenous elected officials, and senior community managers/administrators.

***Did You Know?***

*The First Nations' Emergency Services Society (FNESS) Forest Fuel Management Department works with First Nations communities across British Columbia and provincial and federal levels of government to assist with wildland fire prevention and risk reduction activities. For more information about FNESS, visit* www.fness.bc.ca.

***Did You Know?***

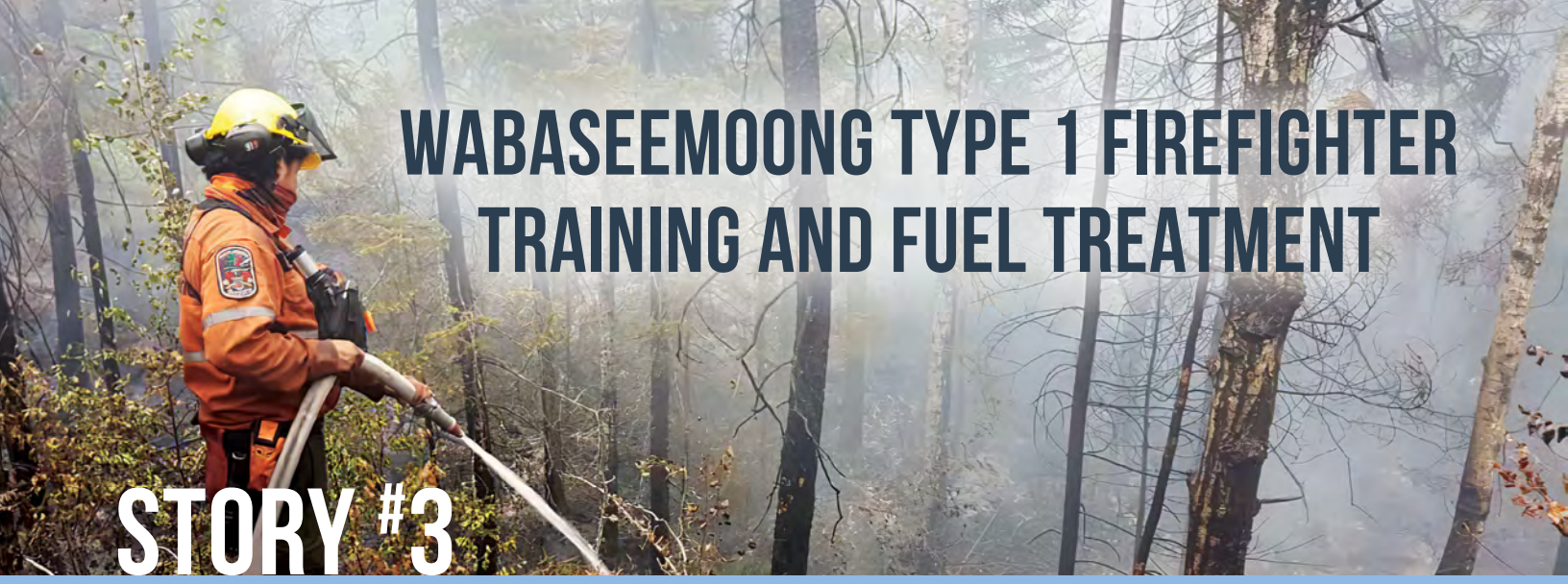
*According to the Natural Hazard Mitigation Saves: 2017 Interim Report, research has shown that spending money on mitigation can reduce the costs of future disaster events. For example, in the United States of America, it is estimated that every $1 spent on hazard mitigation can save $6 in future disaster costs. For more information on the cost benefit of hazard mitigation, visit* www.nibs.org/page/mitigationsaves.

## 7.2 FUEL TREATMENT

In Canada, many Indigenous communities are affected by the threat and risk to community structures and values due to "bad fires." You can manage the vegetation load around your community by involving the members in managing plants (aka vegetation management) and developing a "good fire" burn plan. A few examples of fuel treatments are mechanical or hand thinning, fuelbreaks, and removing brush cover. Other than risk reduction, benefits of fuel treatments include:

- engaged community members through the recruitment and training of local Indigenous fuel management crews, thereby providing economic benefits and career opportunities to families and communities, and potentially in other industries as well; and
- increased number of Indigenous communities using fuel management treatments. Together, this will improve wildland fire response in and around communities if fires occur.


◂ *Shackan Indian Band Recognition Ceremony 2015*



# WABASEEMOONG TYPE 1 FIREFIGHTER TRAINING AND FUEL TREATMENT

## STORY #3

The Kenora Fire Management Headquarters of the Ontario Aviation Forest Fire and Emergency Services (AFFES) and Wabaseemoong Independent Nations are working together towards taking a multi-pronged approach to promoting community safety, building capacity, and further developing their relationship. Some of the highlights from this partnership include

- Successfully completed year six of the AFFES led-Wabaseemoong Hazard Reduction Low Complexity Spring Prescribed Burn;
- Continued development and expansion into year five of the Wabaseemoong Type I Wildland Firefighting Training Initiative; and
- Completed the Fuel Modification Project (FireSmart) on fire susceptible residences as identified by Community Fire Officer (CFO) and area residents.

The goal of the Wildland Firefighting Training Initiative was to assist Wabaseemoong Independent Nations with realizing their vision of having Type-I wildland firefighting crews available to suppress fires in the community and surrounding areas. The seasonal firefighter training positions were advertised in advance of the hiring date at various locations throughout the community. The program proved successful as there was little difficulty in finding interest in the community. Through this rigorous and comprehensive training program, the participants were self-motivated and had a sense of pride that enabled them to help each other and succeed during actual wildland fire responses. One of the goals of the Training Initiative was to hand over the Wabaseemoong Hazard Reduction Prescribed Burn to the community. In 2017, 2018, and 2019, trainees from the community were hired by the community and conducted burning operations to make areas directly adjacent to residences and infrastructure fire safe.

▲ *For the Wabaseemoong Independent Nations, community safety is carried out by Type-I Fire Ranger wildland firefighting crews who aid in suppressing "bad fires" in the communities of Wabaseemoong and the surrounding areas. Capacity development is one of the important aspects of their work. Photo credit: Waylon Skead*

The fuel treatment project was a joint initiative undertaken by the Nation and Kenora Fire Management Headquarters. Targets for fuel treatment were identified by the Community Fire Officer, Chief and Council, and were updated on a continual basis. The work was completed by the Type I Training Initiative Crews. The primary focus was on Zone 1 (0 to 10 metres) and the removal of fine grass fuels adjacent to residences. Work was completed on five structures in 2017 and another five structures in 2018. In 2019, 30+ residences were identified by the Community Fire Officer and community residents, and fuel modification work was completed during that summer. The removed fuels were taken to a predetermined fire-safe location and firewood was made available to Elders. The fuel treatment project was well received by the community.

Future project activities will explore opportunities for all staff who are involved in the project to participate in cultural ceremonies associated with the initiative to improve information sharing, community involvement, and understanding.

***Story #3: Lessons Learned***

*Unique partnerships formed between Indigenous communities and wildfire management agencies can reduce community wildfire risk and create employment opportunities.*

*Projects should be created around local cultural values.*

# STORY #4 MUSKRATS AND FIRE – INNOVATIVE LEARNING STRATEGIES FOR USING FIRE ON THE LAND

Renée Carrière is a teacher and researcher in Cumberland House, Saskatchewan. As part of her scholar-practitioner work, Renée is keen on developing and implementing innovative teaching strategies and engaging students in learning about the environment. Funded by the McDowell Foundation, Renée embarked on conducting research in the use of fire as a traditional land management tool and exploring the corresponding outcomes of using fire on the land. The study assisted researchers, orders of government, curriculum developers, and science teachers in bridging the gap between Indigenous and Western Science knowledge. The results of this research on the use of fire on the land were three-fold:

- The research led Renée to present the findings of trapline burning, plant picking, and muskrat trapping in a children's book entitled, "Muskrats and Fire," available on the McDowell Foundation website. This book has numerous curriculum connections and can be used as a teaching resource.

  http://mcdowellfoundation.ca/isl/uploads/2019/04/8240-01-Muskrats_and_Fire_web.pdf

- In 2019, the fire research led Renée, with the assistance of Northern Lights School Division (N.L.S.D) #113 consultants, to design a locally developed and provincially approved Wildland Firefighting course titled Iskotew 10/20. This course has been delivered to Charlebois Community School students of Cumberland House, Saskatchewan for two semesters. You can find the course on the N.L.S.D #113 website.

- Fur trappers from N-28 and N-90 Fur Blocks in Saskatchewan are working with the Saskatchewan Ministry of Environment on a six-year pilot fire burning project to burn off phragmites to promote the increase in a variety of vegetation for the improvement of habitat for wildlife.

All of these exciting outcomes highlight and celebrate the use of the traditional land management tool of using fire on the land.

***Story #4: Lessons Learned***

*Indigenous children and Youth should be given opportunities to learn about local Indigenous fire knowledge.*

*Support for local people and initiatives can make a big difference in reducing wildfire risks.*

▼ ▶ *Students from Charlebois Community School in Cumberland House, Saskatchewan working with N-28 trappers in learning about the traditional land management tool of fire. Photo credit: Solomon Carrière*

## 7.3 EMERGENCY MANAGEMENT

Emergency planning is vital to ensuring human safety during wildfire events. One of the main issues in many Indigenous communities in Canada is that there is typically no full-time emergency manager position, an individual who is responsible for creating and updating emergency plans. This is often due to a lack of government funding to create such a position. In general, the emergency manager is a volunteer position in many Indigenous communities. However, there is often outside assistance available from external emergency management agencies through memoranda of understanding with the Department of Indigenous Services Canada. Culturally relevant emergency plans, including who stays behind and provides evacuation directions, are encouraged to be customized, based on the community's values, expertise, and needs. It is a wise practice for plans to be annually updated, with a focus on ensuring contact details are up to date.

For Indigenous community leaders, it is important to ensure that cultural safety practices are part of emergency management in Indigenous communities with a particular emphasis on cultural and physical safety of Indigenous children, Youth, Elders, and community members with medical conditions. There is much to learn from past experiences of evacuations of Indigenous communities, removal of Indigenous Peoples to unfamiliar surroundings, separation of family and friends, disruptions to cultural land-based practices and literacy barriers. This history can be traumatic for Indigenous Peoples attempting to access emergency management services, resources, and supports.

Large wildfires can quickly overwhelm staff and max out emergency management equipment and supplies. Therefore, it is vital for Indigenous communities to work alongside neighbouring communities and agencies to plan and prepare for emergencies.

▼ *First Nation engaging in wildland fire prevention – specifically on-reserve fuel reduction. Photo credit: FNESS*

STORY #5

# 2014 INITIAL EVACUATION OF STANLEY MISSION, LAC LA RONGE INDIAN BAND

- **"'Unprecedented' wildfires force out 13,000 Sask. Evacuees"** was the headline reporting on the largest wildfire in Saskatchewan's history. These fires started many discussions about how First Nations Peoples are treated during emergencies.
- Discussions occurred about First Nations firefighters, protocols, procedures, services, agencies, and how we can be better prepared for large scale emergencies.
- Lac La Ronge Indian Band is in north-central Saskatchewan and has 10,152 members and 20 reserves. The most populated reserve is Stanley 157, located 305 kilometres north of Prince Albert.
- **The Band is represented by the Prince Albert Grand Council (PAGC), the largest tribal council in Canada**, representing 12 First Nations with over 30,000 First Nations members. For more information about PAGC, visit www.pagc.sk.ca/forestry
- The Lagoon Fire occurred to the southwest of the Stanley Mission community in May 2014.
- **A partial evacuation of Stanley Mission was instated**, followed by a full evacuation order due to fire proximity while the provincial wildland firefighting agency worked to suppress the fire. The main threat was the access road to the community and power lines.
- Evacuees were sent to Saskatoon, Prince Albert, and La Ronge.
- Government agencies commented that the community was well prepared to handle the evacuation. The evacuation lasted only a few days, but those at high risk did not return to the community for approximately one week.
- Wildland fire mitigation work that had been conducted to the west of the community allowed the fire crews to stop the fire from entering the community.

▲ *Lagoon fire near Stanley Mission: Lynn Roberts*
◂ *Lagoon fire from Stanley Mission: Larry Fremont*

**Residents in the community found out about the evacuation in various ways:** radio, door-to-door alerts by RCMP, and/or the community siren.

- Departure times for the buses from the Band Hall were announced over the radio.
- Participants mentioned that misinformation about the evacuation swirled on social media on the local community page.

**Staff at the band office in Stanley Mission called the various departments** (e.g., public works, health centre, school) to inform them that an evacuation was issued and to begin preparing. Essential staff were required to go to the band hall in Stanley Mission to begin intaking evacuees.

- At first, the evacuation only included children under two (and a parent), people with chronic conditions, and Elders.
- Soon after, the evacuation order expanded, and all residents were asked to go to the band hall to register and indicate whether they would require transportation or if they were leaving in their own vehicles.
- Children were sent home from school.
- Staff from the band office and the health clinic began to prepare the band hall to register evacuees.

*Indigenous firefighters during 2015 wildfires working with the Canadian military. Photo credit: Chico Halkett*

**The band hall was organized with various essential staff at different check-in tables.** Each table contained various lists, including a list of individuals in the community with chronic conditions.

- Some of the essential staff prepared food (including sandwiches) that were provided to waiting evacuees.
- Evacuees with their own transportation were told to go to the Jonas Roberts Memorial Community Centre (JRMCC) Hall in La Ronge and register again with the Canadian Red

**Evacuees noted that some people had their gas paid** for by the Lac La Ronge Indian Band at the local gas bar.

- Most evacuees did not have their own transportation and waited at the band hall in Stanley Mission to board school buses organized by the Band, which also took them to the JRMCC Hall in La Ronge to re-register with the Canadian Red Cross.

**Community members who took buses to evacuate were only able to bring minimal items with them**, like a small bag.

**The community has an Elders' care centre** that required additional coordination to evacuate.

- Eight Elders reside there, with various physical and mental ailments. Several Elders were confined to wheelchairs.
- When the evacuation was ordered, all staff who work at the Elders' centre were called and expected to accompany the Elders during the evacuation.
- Once staff arrived, they packed up a small bag for each Elder, including medication.
- Staff and the Elders were loaded into a community van and a taxi, which took them to the JRMCC Hall in La Ronge.

**In January 2018, Prince Albert Grand Council initiated a Wildfire Task Force** with clear terms of reference to review and provide recommendations to the Saskatchewan Ministry of Environment—Wildfire Management Branch.

***Story #5: Lessons Learned***

*A culturally-based evacuation plan can reduce stress for evacuees.*

*Fuel reduction activities on reserve can help firefighters to gain control on the fireline and better protect the community.*

## 7.4 INDIGENOUS FIREFIGHTERS

Indigenous firefighters play important roles in their communities. For many Indigenous communities across Canada, community protection continues to be one of the most pressing concerns due to human and natural occurring activities particularly wildfires, which are becoming larger and more intense throughout various regions of Canada.

Indigenous Peoples in Canada have a long and proud history of firefighting, both in their own Indigenous communities and for wildfire management agencies.

When fire suppression efforts first began in earnest in the early-mid 1900s due to factors such as public safety and forest management (timber and lumber supply protection), forestry officials came into communities and conscripted Indigenous Peoples to firefight under threat of fines or jail time. Over time, firefighting became a proud employment opportunity and career path for Indigenous Peoples across Canada. Indigenous Peoples across genders would go to the fire line to fulfil roles such as wildland firefighter, cook, or camp boss. Many family members were on the fire line together; often living in remote camps, they would be set up for weeks at a time. Indigenous knowledge about fire was often harmonized with non-Indigenous firefighting techniques on the fire line.

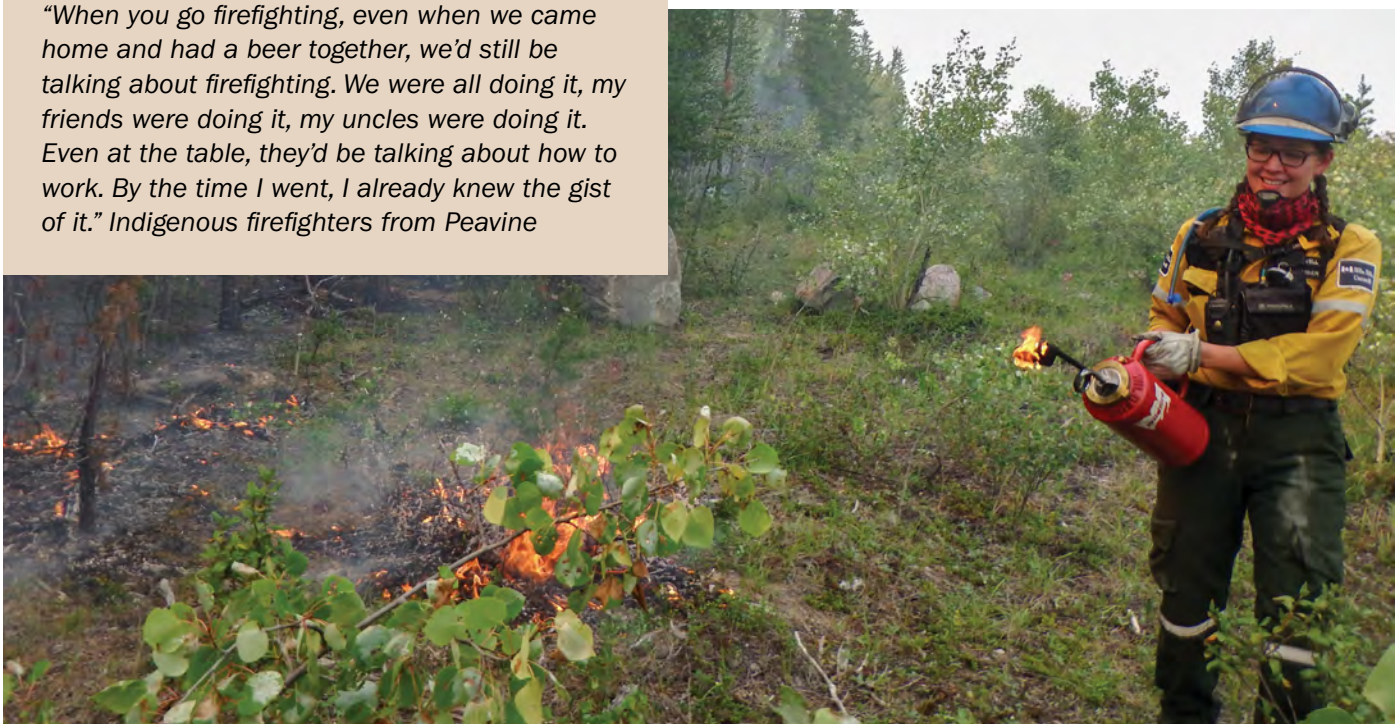
*"When you go firefighting, even when we came home and had a beer together, we'd still be talking about firefighting. We were all doing it, my friends were doing it, my uncles were doing it. Even at the table, they'd be talking about how to work. By the time I went, I already knew the gist of it." Indigenous firefighters from Peavine*

### 7.4.1 Challenges and Barriers

In the 1990s, as a result of an emphasis on safety standards, fitness requirements, and crew structure, changes to firefighting practices reduced the number of Indigenous Peoples working for wildfire agencies across Canada. For Indigenous firefighters that continued firefighting for wildfire agencies, the tactics shifted to predominantly non-Indigenous fire suppression. Many Indigenous wildland firefighters are now employed on temporary or contract-based roles such as seasonal Type 2 firefighters. Given the long history and land-based lived experiences in fire stewardship along with the realities of wildfire effects on Indigenous communities, there are not enough Indigenous firefighters in Canada currently employed in permanent and/or management positions. This is likely due to the requirement by wildfire management agencies of post-secondary/technical education over lived "on the ground" fire experience.

As noted above, public safety hazards such as wildfire impacts tend to be more severe and longer-lasting in Indigenous communities, as they are usually more remote, have less-developed infrastructure, and have higher rates of poverty. These characteristics were notable realities in the series of increasingly catastrophic wildfire events in recent years.

▼ *Indigenous women have played and continue to play important roles in wildland firefighting and prescribed burning across Canada. Photo credit: Parks Canada*



## 7.4.2 Benefits and Opportunities

As previously mentioned, it is important to recognize that many Indigenous communities are already carrying out valuable work in the areas of destructive (wildland and structural) fire prevention and risk reduction. Additional specialized and culturally relevant information is important for Indigenous communities who want to reduce wildfire risks. Now, more than ever, collaboration is needed between local Indigenous and non-Indigenous communities in wildfire prevention and response efforts. Local support, collaboration, and capacity development includes additional Indigenous forestry professionals and resource managers, Indigenous wildland fire managers, local Indigenous knowledge liaisons, Indigenous equipment operators, and Indigenous wildland firefighters.

▲ *A wildland fire ranger using a drip torch for hazard reduction burning in the Gift Lake Métis Settlement. Photo credit: Paul Courtoreille*

***Did You Know?***

*As noted in the Standing Committee on Indigenous and Northern Affairs' June 2018 Report, From the Ashes: Reimagining Fire Safety and Emergency Management in Indigenous Communities:*

*"…collaborative agreements are necessary and important, as long as the First Nations are meaningfully engaged at the time they are negotiated" (p.13).*

*"Preparing for future events is cost-effective. According to the federal government and the Canadian Red Cross, each dollar invested in preparedness and prevention saves four dollars in response and recovery" (p.14).*

*"Capacity building and training are essential components of preparedness. Capacity building involves training community members so they know how to respond during an emergency as well as training and accrediting Indigenous emergency management officials. Ensuring that qualified officials are given the appropriate training in First Nation communities would build capacity so that First Nations are equipped to respond during an emergency" (p.16).*

*For more information about this Report, visit* https://bit.ly/3mYVWjp

## 7.4.3 Call to Action

*To sustain the longstanding history of Indigenous fire stewardship, how will you support increasing the recruitment, retention, and engagement of Indigenous wildland firefighters in your communities and across Canada?*

Extensive knowledge exists in many Indigenous communities across Canada about firefighting. In support of engaging more Indigenous Peoples (particularly, Indigenous Youth) to become involved in wildland firefighting as a viable career path, the following principles serve as a call to action for leaders at all levels in Indigenous communities across Canada from local Youth, Elders, Fire Keepers, Fire Knowledge Holders to Indigenous elected officials, Fire Chiefs, senior community managers/administrators, and non-Indigenous agencies who work alongside Indigenous communities across Canada:

- **Deliver meaningful, flexible, experiential-based training, skills development, and employment programs that use holistic approaches** (e.g., culturally-congruent, strength-based, learner-centered adult learning curricula) to aid Indigenous Peoples (particularly, Indigenous Youth) in developing relevant qualifications to participate in wildland firefighting throughout various regions in Canada.

- **Engage in strategic partnerships with third party organizations** (preferably, Indigenous-controlled entities) **to implement cohesive and effective Indigenous-specific training, skills development, and employment programs** (includes pre-employment training preparation, skills assessment, workplace-based training, and personal supports such as mentoring and coaching).
- **Strengthen wildland firefighting skills of Indigenous Peoples** (in particular, Indigenous Youth) for subsequent sustainable employment, including the revitalization of Indigenous cultural burning practices and use of Indigenous fire knowledge systems and protocols alongside non-Indigenous wildfire suppression techniques.
- (For wildfire management agencies and Indigenous and non-Indigenous wildland fire contractors)[14] **Use the Etuaptmumk/Two-Eyed Seeing approach and "braid" (Indigenous and non-Indigenous) sciences and knowledges to transform wildland firefighting human resource management strategies** by (i) implementing recruitment practices that recognize Indigenous knowledge and lived experiences of fires across all levels of wildland firefighting positions (entry-level to management level); (ii) providing technical, financial, and human resource support to Indigenous communities in recruiting and training Indigenous wildland firefighters; and (iii) developing initiatives that support Indigenous career pathing in wildland firefighting (includes cultural safety and total compensation).

▼ *A back burn during a 2018 grass fire in Peepeekisis Cree Nation. Photo credit: Michelle Vandevord*

[14] In addition to wildland fire management agencies in Canada, employers may also be Indigenous and non-Indigenous wildland fire contractors who provide crews to wildfire management agencies.

***Did You Know?***

*Wood Buffalo National Park has a long history of Indigenous women filling many fire management roles including radio operator, fire management officer, towermen, and firefighters. In the 1980s, female towermen would support themselves by bringing their children to the tower in the backcountry for their shifts, lasting approximately two weeks. Recently, a resurgence of young Indigenous firefighters has come back to the Park, particularly young women, filling roles that are typically seen as masculine. The women work together, and this allowed them to connect to the proud history of Indigenous firefighters.*

***FireSmart Canada – Local FireSmart Representative Training Program***

*FireSmart Canada's Local FireSmart Representative Training Program aids Indigenous Peoples and non-Indigenous people with the self-organized implementation of FireSmart principles in and around their respective communities. Central to the success of the FireSmart Canada Neighbourhood Recognition Program is the Local FireSmart Representative (LFR). The LFR is a person who must be well versed in FireSmart principles, fully conversant with the FireSmart Canada Neighbourhood Recognition Program process, and experienced with wildland urban interface (WUI) hazard mitigation protocols. The LFR has a variety of responsibilities—meeting with residents, conducting assessment procedures, facilitating resident activities and liaising with program administrators. A principal function of all LFRs is to recruit, train, and support FireSmart Neighbourhood Champions.*

*Champions are persons willing to step forward to organize local FireSmart Neighbourhood Boards and independently work with those Board members to develop FireSmart community plans and implement FireSmart community events to ultimately achieve FireSmart Neighbourhood Recognition Status in their communities.*

# STORY #6
# WHITEFISH LAKE FIRST NATION 459 - SAVING OUR COMMUNITY

- Whitefish Lake First Nation is in the boreal forest in Treaty 8 territory of northwest Alberta, covering 20,509 acres. There are 2,920 registered band members; 1,297 live on the reserve. The reserve has two main settlement areas: Atikameg and Whitefish River.
- The Utikuma Complex fires were a group of five fires that started near Whitefish Lake First Nation between May 14 and 15, 2011. Four of the fires were started by trees falling on power lines, and one of the fires was a holdover fire from winter burning.
- At the time Whitefish Lake First Nation was affected by fire, there were many fires burning in the Province of Alberta, such as the Flat Top Complex fires, which burned into the community of Slave Lake, 137 km to the southeast of the main settlement of Whitefish Lake First Nation.
- At one point, fires surrounded Whitefish Lake First Nation to both the southeast and northeast. The fire approaching from the northeast crossed the highway and began coming closer to the community.
- One of the Indigenous firefighters who remained behind to protect the community tells the story.

*After it crossed the highway, there was about seven of us, we took shovels, everything to clear that road so we could access [the fire]...we started fighting fire that morning along that Whitefish River Road along to 88 over there...That day that we fought fire was actually the very last day, like this was severe. We just did a wicked night shift because the community was just full of smoke. I could probably hardly see you that's how thick the smoke was and there was only a handful [of us who had to look after the whole reserve] and we'd do our own checks and everything.*

*That morning I got a call just as the sun was coming up, I would say close to 5 o'clock from one of the guys on the other road that we got to go fight fire on Whitefish River, so we went out and fought fire till 3 o'clock... I'm telling you I literally went in, like there was kind of a lake like this, me and this fellow here...where we were using Wajax. I went in the bushes, he disappeared, I couldn't see him, all of the sudden fire right around me, I didn't know where to go, so I couldn't even see up nothing, just smoke, I'm choking, I think I almost bit it. And at the split second, I turned and just went this way and all of the sudden that guy is standing there, that guy I was with and he was like 'fire' and I just turned around and he just pointed this way and if we had went this way we would have burnt...Plus we were hauling Wajax probably from the lake over there, we had a guy on a quad with a 5 gallon pail and then we had a firewall probably from the band office in kind of a circular shape like this and that's where the fire was going this way. So he's over here filling these Wajax with a five gallon pail, filling them, taking a lot of time, another two guys on quads running them back and forth to the guys that are putting it on the fire and this is going on for, geez I don't know how long, at least four hours.*

*We got that field out and that chopper came finally - after they put it out and that was it. That day they put it out. Probably another 600 meters Whitefish River probably would have burnt...The whole community, yeah. So that was a hell of an experience.*

▲ *Start of the Utikuma Complex Fire and the Utikuma Complex Fire seen from the highway. Photo credit: Jimmy Grey*

***Story #6: Lessons Learned***

*During a wildland fire event, many Indigenous Peoples have local knowledge and experience firefighting that can benefit the wildland fire response.*

# STORY #7

## YUKON FIRST NATIONS WILDFIRE

▲ *Members of the Type-1 Yukon First Nations Wildfire unit crew "in action." Photo credit: Yukon First Nations Wildfire*

In 2019, Yukon First Nations Wildfire (YFNW) became a limited partnership of eight Yukon First Nations. YFNW is the Yukon's largest contractor of wildland firefighters and First Nations Youth. YFNW runs "Beat the Heat" Bootcamp, which is responsible for producing the most highly trained firefighters every season. At its core, YFNW instills traditional beliefs and values, creating more than just firefighters, but future Indigenous leaders.

The standard of training in this boot camp is the same as S-131, S-231, and S-215 courses that are held by the Yukon Government. After the intensive training, non-stop exercises are then held until the wildland fire season begins. Whether the firefighter is seasoned or brand-new to firefighting, they are ready for action. These repetitive exercises consist of

- Timed pump setups and configurations
- Chainsaw training
- FireSmart
- Teamwork and rapport building
- Structure protection training
- Prescribed burns
- Equipment preparation and refurbishment
- Physical training

In July 2018, YFNW's first Type-1 unit crew was called to action in Watson Lake, Yukon to aid Yukon Fire Management. The following month, Tahltan First Nation was devastated by one of the worst wildland fires in history. YFNW's Type-1 unit crew was the first on the scene to protect the community while the fire continued to pass through.

In summer 2019, YFNW operated two Type-1 unit crews, along with eight Initial Attack Crews. The vision of YFNW is to create and provide the highest trained resources. YFNW is ready to help fight fire whenever needed in Canada and across North America. YFNW would like to become the largest employer of First Nations in the country. By continuing to explore opportunities to partner with other First Nations in the Yukon and out of the territory across the country, YFNW hopes to become "First Nations Wildfire."

YFNW prides itself in hiring First Nations Youth. Over half of its employees come from different communities across the Yukon. YFNW gives unique opportunities to First Nations Youth who want to battle wildland fires and protect their homeland. For more information about YFNW, visit https://www.yukonfirstnationswildfire.ca.

◀ *Yukon First Nations Wildfire logo*

***Story #7: Lessons Learned***

*Indigenous-led wildland fire initiatives can create employment opportunities, but also provide individuals with a meaningful way to learn about their culture. It is more than just firefighting.*

## 7.5 STRATEGIC PLANNING AND PARTNERSHIPS

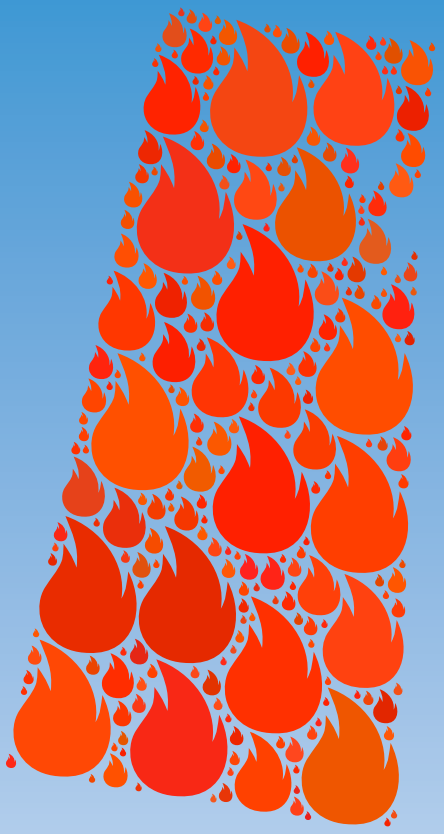
When wildfires threaten Indigenous communities, the response can be complex and involve multiple agencies working together to protect Indigenous Peoples and lands. Indigenous Services Canada (Government of Canada) has different agreements with every province and territory to provide emergency management services for Indigenous communities, so the process varies across Canada. Also, many Indigenous communities lack adequate funding to train, prepare for, and respond to emergencies.

Strategic partnerships (aka interagency cooperation) between Indigenous communities and the federal government, provincial/territorial governments, local governments (e.g., municipalities and regional districts), and emergency response agencies need to be established before wildfires ("bad fires") occur.

By working together, Indigenous communities have an opportunity to tap into resources that may not be found in our communities while also sharing our cultural knowledge and ways of knowing with others, resulting in strategic, resilient, and sustainable partnerships that benefit all of us.

STORY #8

# SASKATCHEWAN FIRST NATION COMMUNITIES: WILDFIRE VULNERABILITY PROJECT



Saskatchewan's Ministry of Environment Wildfire Management Branch developed a standard method of assessing communities at risk of wildfires ("bad fires") known as the **Saskatchewan Community Wildfire Risk Assessment Project.**

A 2004 Risk Assessment that looked at fire suppression capabilities, high ignition density, and wildfire preparedness **quantified the wildfire risk for 104 communities in Saskatchewan** within or adjacent to the boreal forest.

Information gained was then used to prioritize where FireSmart activities take place, with the higher at-risk communities receiving immediate attention.

The Project engaged community Elders, Youth, and leaders to **reduce the number of human-caused wildfires ("bad fires")** on First Nation lands.

The Risk Assessment Project supports customized and strategic delivery of wildfire prevention and **risk reduction training:**

- Ground fire planning and ignition training to promote wildfire risk mitigation using prescribed fire;
- Wildfire suppression training for select First Nations structural fire crews who respond to grass and brush fires; and
- Local FireSmart Representative training.

It is also the intent of the Project to **engage with Tribal Council emergency management personnel** in discussing and collecting community level information on wildfire vulnerability, prevention, and risk reduction.

A direct outcome of the Project is how the fuel management treatments were successful in **reducing wildfire intensity** when a wildland fire starts to burn into the treatment areas, providing an opportunity to control the fire spread and protect homes.

▲ *Renée Carrière (Cumberland House, Saskatchewan) is a leader in land-based education. She often takes her students on the land to learn about muskrats and their habitats. "Good fire" as shown in this photo is often used as a wise practice to support and protect local muskrat habitats. Photo credit: Solomon Carrière*

***Story #8: Lessons Learned***

*The reduction of wildfire risk is a big job. Community and fire management agency partnerships are important for increasing training opportunities.*

*Engagement with Indigenous communities is vital to ensuring wildfire risks are reduced. This does not mean one meeting; rather a collaborative and sustained effort is needed. It is all about relationships.*

# 8. INDIGENOUS FIRE RISK REDUCTION TOOLKIT

Like preparing for other natural disasters and related emergency events, leaders at all levels in Indigenous communities across Canada may benefit from developing and/or adapting a resource (e.g., checklist) as a quick reference to support community resilience during emergencies. The following is a Top 10 checklist to support fire resilience and Indigenous fire stewardship. Feel free to customize this checklist for your communities!

## TOP 10 ACTIVITIES TO SUPPORT INDIGENOUS COMMUNITIES TO BE FIRE RESILIENT AND FIRESMART ✓

1. Hold a gathering in your community, preferably around food, and find other community members who share similar concerns about wildfire ("bad fire") risks. Invite Elders and Youth and work to ensure their voices are heard. Determine if there is enough interest or a need to have a Local FireSmart Representative come and share FireSmart ideas for helping to protect your community from wildfire risks. ☐

2. Take note of any words and phrases about fire ("good fires" and "bad fires") in your traditional language(s). Speak with Elders to see how "bad fire" risks were reduced in the past. Ensure that knowledge from Elders, Fire Keepers, and Fire Knowledge Holders is reflected in any wildland fire plans for your community. ☐

3. List and map the important places in your community: structures; archaeological, cultural, and spiritual sites; and recreational areas like campsites. List and map during a community gathering or as individual surveys. Put maps of your territory on tables and have community members circle and note important places. Use the map(s) of important places to clearly make it known that these areas need protection if a wildland fire threatens your community. If you can, work with a GIS technician to digitize the maps. ☐

4. Network and share! Reach out to neighbouring Indigenous communities to see what they are doing. Consider also contacting FireSmart Canada to have a Local FireSmart Representative complete a Neighbourhood risk assessment in your community. Use the risk assessment to identify priorities for future action. ☐

5. Think about applying for funding to begin taking actions to reduce wildland fire risks such as hiring a local fire crew to carry out vegetation management and outreach activities (e.g., home ignition zone assessment). It is a wise practice for Indigenous wildland firefighters in your communities to be considered first for these opportunities. Also, a Local FireSmart Representative can help identify funding options. ☐

6. Identify organizations that can assist your community in the event of a wildfire and make arrangements to meet. Consider hosting a cross-training event with local emergency responders and nearby fire department staff to practice and identify how to meet your community's priorities. Think about how your community can help support neighbouring communities and develop a long-term partnership. ☐

7. Complete a Community Action Plan that lists tasks for each year. Identify steps that individual community members can take to reduce the wildfire ignition around their priorities, includes identifying community members who may need additional assistance in the event of an evacuation. Tackling everything at once may be overwhelming. ☐

8. Reach out for assistance. Any planning will need to reflect your community's knowledge (Indigenous and non-Indigenous) of wildland fire and fire uses. *Blazing the Trail: Celebrating Indigenous Fire Stewardship* provides examples for your community to review and consider. Host community gatherings around your cultural values. Use ideas from this booklet. For example, bring community members together to clean up Elders' yards in the spring and fall. Borrow equipment, like rakes and big garbage bins, from your Public Works Department. ☐

9. Develop, review, and update bylaws, policies, and building codes for your community, following both community values and FireSmart Canada recommendations. ☐

10. Begin to develop an evacuation plan for your community. If you don't have a dedicated emergency manager, reach out to external emergency management agencies for support. The plan should be customized to your community needs, and be regularly updated. Also, ensure that your plan includes support for Elders or other vulnerable residents and what to do with pets or livestock. ☐

***Did You Know?*** *As a collective, FireSmart Canada working with provincial, territorial, and federal agencies offer various programs and resources (includes workshops) for residents, neighbourhoods, and communities across Canada in developing actions that support wildfire risk reduction. For more information on FireSmart Canada's current programs and workshops, view "At a Glance – FireSmart Canada Programs and Resources" in Appendix A of this Booklet.*

# STORY #9
# PEAVINE FIRESMART PROJECTS

Peavine Métis Settlement is in northwestern Alberta, 56 kilometres north of High Prairie, in the boreal forest. The Settlement covers nine townships, which is a large base of approximately 213,117 acres covered primarily in forest.


- Peavine now resembles an acreage community, as most residents live in well-kept modest-sized homes on large pieces of land.
- This community resulted from the complex system of home and land ownership on the Métis Settlements.
- Peavine Métis Settlement owns all the land, homes, and other buildings on the Settlement.
- There are three ways that members of Peavine can hold land (including the structures), all of which have various rules and regulations that must be followed by the landholder and the Settlement.

In 2004, the forestry coordinator at Peavine began a program called Peavine FireSmart Projects that involves wildfire mitigation activities conducted by the Settlement on both residential properties and public land.

- This program has been funded primarily by the Settlement.
- Many wildfire mitigation activities focus on vegetation management. Peavine FireSmart Projects mitigation activities include both year-round mitigation activities and "community projects."

## YEAR-ROUND ACTIVITIES

There are six year-round wildfire mitigation activities at Peavine. All these activities aid Settlement members, either through employment opportunities or financial reimbursements for mitigation carried out by individuals on their properties.

1. In the **lawn tractor program,** the Settlement pays for half the cost of a lawnmower.
2. In **Agriculture 50/50**, individuals are reimbursed for half the cost of reducing fuel load on their property by converting forest to agriculture land.
3. In the **New Homes program**, the Settlement clears around the future site of new homes 20 to 30 metres from the building site, and vegetation is thinned further out (30 to 100 metres).
4. **Fuelbreaks** are a fourth mitigation activity in Peavine FireSmart Projects. Fuelbreaks are present in some high hazard areas of the Settlement, usually in areas where future roads are planned.

5. **Aboriginal Junior Forest Rangers** contribute to Peavine FireSmart Projects each summer.
6. The final mitigation activity is the **volunteer fire department**; the Settlement has a fire hall area for the fire truck and equipment and a radio system. Volunteers are actively recruited.

# COMMUNITY PROJECTS

**Community projects occur twice a year at Peavine, generally in the spring and winter, primarily to provide employment and training.**

- Employment in community projects provides Settlement members with temporary wages and work experience to increase the likelihood that they can find full-time employment.
- Other benefits of community projects are the improvement of the aesthetics of the Settlement and the implementation of seasonal wildfire mitigation activities. These activities are chosen by the forestry coordinator, approved by the Settlement Council, and implemented by the wildfire mitigation foreman (temporary leaders chosen by the forestry coordinator) and workers.

## COMMUNITY-LEVEL VEGETATION MANAGEMENT IN RECREATION AREAS

- Informal recreation areas were identified by the forestry coordinator as high wildland fire risk and have since been converted into permanent recreation areas with metal fire rings, gazebos, and picnic tables under the community projects program.
- During each community projects session, a different recreation area is picked by the forestry coordinator and vegetation is thinned, high hazard trees removed, and the resulting firewood is available to Settlement members.
- One participant described how the work carried out in the recreation areas has increased pride in the community: "We did FireSmart, we thinned around all the recreation areas, you know, and people let us build these gazebos...and it makes that recreation area, people are proud of that stuff. And they look after it more."

## ELDERS ASSISTANCE PROGRAM

- During this program, Elders (as well as persons with disabilities) can apply for community project workers to complete various activities on their property, such as home cleaning, house painting, construction, and yard clean up. During yard clean up, community project workers conduct residential-level mitigation activities by cutting grass, removing dead vegetation and trees, and removing trees at high risk for windfall.

## YARD BEAUTIFICATION PROGRAM

- The forestry coordinator conducts wildfire hazard assessments on individual properties in the community.
- The forestry coordinator then approaches residents living in moderate to high risk areas and asks if they would like to participate in the yard beautification program, which would involve workers thinning vegetation on the property where they live.
- Residents can decline the service, but participants commented that it is extremely rare for someone to turn it down.

**Community-Level Wildfire Mitigation Activities Around Public Settlement Buildings and Along Roadways**

- Grass around public buildings, such as the Settlement office and the water treatment plant, is cut in the spring.
- Ditches are mowed and deadfall is removed in the spring.
- Settlement grazing lands are burned in the winter.
- These activities are all primarily conducted to reduce the high risk of grassfires at Peavine prior to green up in the late spring.

Preference for vegetation management may include cost and relative ease of implementing vegetation mitigation measures. At Peavine, the preference for vegetation management also likely comes from the experience of Settlement employees and members in forestry and firefighting.

***Story #9: Lessons Learned***

*Wildfire risk reduction programs that are locally developed, based on cultural values, and benefit local people are generally the most successful at receiving community support and reducing wildfire risks.*

# STORY #10

# ENTERPRISE, NORTHWEST TERRITORIES – THE NWT'S FIRST RECOGNIZED FIRESMART COMMUNITY

▲ *Aerial shot of the Hamlet of Enterprise, NWT. Photo credit: Blair Porter, Enterprise Fire Chief*

*Photo of Hamlet of Enterprise sign with FireSmart Community sign. The first community sign you see when entering the NWT. Photo credit: Blair Porter, Enterprise Fire Chief* ▼


## BACKGROUND

Enterprise, Northwest Territories (NWT) is located an hour's drive north of the Alberta/NWT border, and is the first community that you see when entering the NWT. Enterprise is a small hamlet of 125 people, with over half the population identifying as Indigenous (First Nation, Métis, and Inuit). In 2015, the community had a close call with a wildfire burning a kilometre away from the community across the Hay River.


▲ *Left to Right: Tammy Neal, Senior Administrative Officer for the Hamlet of Enterprise; Blair Porter, Fire Chief of Enterprise. Photo credit: Amber Simpson, Government of Northwest Territories*

## FIRESMART IMPLEMENTATION

They began implementing FireSmart disciplines in 2016, starting with cross training, by offering a chainsaw training course to their local fire department. They also began the process of becoming a FireSmart Community. A Local FireSmart Representative from the Department of Environment and Natural Resources (GNWT) visited the community to help them assess hazards. The community then created a FireSmart board that developed a FireSmart plan for the community. In 2017, the community hired their own crew to start implementing the plan by completing fuel reduction work.

They held a community BBQ to educate the community on the work they were doing, as well as what residents could do in their own backyards to help mitigate risk. They also had staff from the fire department attend a Local FireSmart Representative workshop so they could help community members complete their own home assessments.

The community continues to implement FireSmart work and update their plan annually to maintain their FireSmart Community status. Other communities in the NWT are following suit, and it is the goal to have all 29 forested communities in the NWT become FireSmart communities!

◀ *FireSmart crew completing fuel reduction treatments around the community. Photo credit: Blair Porter, Enterprise Fire Chief*

***Story #10: Lessons Learned***

*A local FireSmart event can spark interest in wildfire risk reduction. Good relationships between local Indigenous Peoples and wildfire management agency employees can result in creative solutions.*

# STORY #11:

# BLACK LAKE INDIAN BAND FIRE: MAY 15, 2015

▲ *Photo credit: Government of Saskatchewan Wildfire Management/Larry Fremont*

The Black Lake Indian Band Fire was reported on Friday, May 15, 2015. The fire's origin was 3.8 km north of the First Nation community of Black Lake in northern Saskatchewan. The fire was ignited when post cutters left a campfire going while they worked nearby.

- When they noticed that the campfire burned out of the fire pit, they tried to put it out with some water but were unsuccessful.
- Hot, dry, and windy conditions allowed the surface fire to quickly transition into a full crown fire.
- Burn patterns indicate that the fire took some significant runs within a short period of time after ignition.

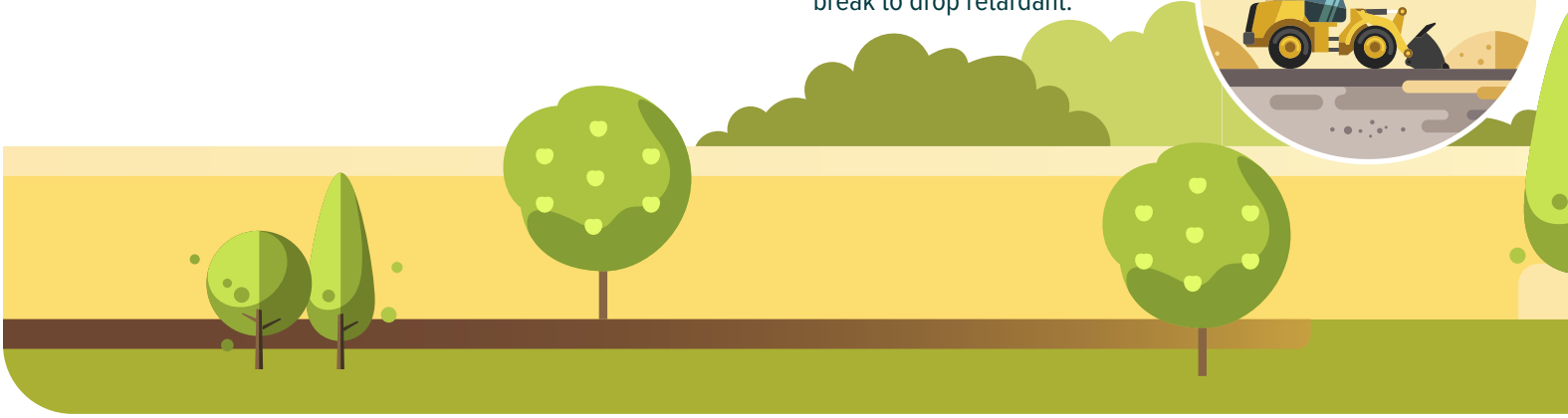
Crews working to protect Camp Grayling had to pull out for safety reasons at 17:53 hrs. and by 17:54 hrs., the fire was reported to be at Camp Grayling.

- The fire burned over the retardant lines and Camp Grayling itself at 18:00 hrs. where 20 buildings were burnt, leaving only one main building standing.

After burning through the outfitting camp, the fire continued to spread as a full crown fire towards the community of Black Lake. The Air Attack Officer with the firefighters using the air tankers then focused their attention on the protection of the community.

The community of Black Lake had a fireguard constructed around the perimeter of the community in 2006 when it was threatened by another wildfire. The fireguard was constructed using dozers where the trees were windrowed in the middle of the break.

- The fireguard had grown up somewhat from when it was constructed; there was a moss/lichen layer along with some scattered Black Spruce and Jack Pine seedlings that were less than one metre tall.
- Very little to no other slash was present, as the area was stripped to mineral soil by the dozers to build the break.
- The Air Attack Officer targeted the community side of the fire break to drop retardant.



## Timeline for May 15, 2015 Black Lake Indian Band Fire

| | |
|---|---|
| 20:48 hrs: | Fire staff who are monitoring the fire in a helicopter recommend the evacuation of Black Lake. |
| 20:52 hrs: | Fire staff in helicopter report that the fire is still burning at a fire intensity class 5. |
| 21:04 hrs: | Fire is reported to have hit the Black Lake fireguard. |
| 21:09 hrs: | Fire staff look to see if they can back burn from fireguard. |
| 21:33 hrs: | Fire staff report that the fire started to jump the fireguard. |
| 21:36 hrs: | Ground crews action the jump fires. |

A vehicle trail along the edge of the fireguard provided safe access to the head of the fire for the fire crews. The crews used the guard to start a small-scale backfire of the fuels before the fire reached the fire break.

- When the fire did reach the guard, ground crews and helicopter support were able to see the spot fires that crossed the guard and were able to safely and successfully suppress them before they built up any intensity.
- The crews also used the break as an anchor point to build a cat guard up the west flank of the fire line.

Burn patterns show that the fire was still burning as a full crown fire when it hit the fire break in multiple locations over a 1.25 km front. The fire burned through the break in a couple locations, but wet areas combined with the retardant drops helped to limit further spread.

- The fire crews were able to safely access and suppress the spot fires where the fire started on the community side of the guard.
- The brush pile in the centre of the fire break caught on fire, but there was enough cleared area to limit any further spread from the piles.
- Fire crews stationed themselves within the community of Black Lake and patrolled the area for spot fires from 22:00 hrs. to 23:00 hrs.
- Two spot fires, both approximately 15 square metres in size were located the next morning, approximately 200 metres north of the community edge.

The fireguard played a significant role in the protection of the community of Black Lake.

- Although burning conditions were quickly deteriorating by the time the fire hit the guard, the fire was still burning as a full crown fire, and there would have been no way that the available suppression resources would have been able to slow the fire if the fire break was not present.

Considering the extreme fire behaviour and the distance of the spot fires that were observed on this fire, the fireguard would not have been as effective if the fire had hit it a couple hours earlier.

- A consideration to make the fireguard more effective would have been to thin the community side of the guard so that any spot fires that start across the guard would be slow to build up intensity and therefore be more easily suppressed by air and ground crews.

*Note: This story was summarized from the report "BLIB FIRE: May 15, 2015 Case Study: How Fuel Treatment Areas Affect Wildland Urban Interface Fires." We thank Larry Fremont (RPF) and the Saskatchewan Public Safety Agency for giving us permission to share this story.*

***Story #11: Lessons Learned***

*An out-of-control wildland fire can quickly threaten a community. An existing fire break can make a big difference for crews in suppressing the wildland fire.*

*It is important for fire breaks to be maintained. This means that vegetation which quickly regrows must be regularly removed.*

▲ *Youth from the Keepers of the Land Program attending the annual Forest Ecology Camp held by the Government of the Northwest Territories, Department of Environment and Natural Resources. Photo credit: Government of Northwest Territories*

# 9. CONCLUSION

*Blazing the Trail: Celebrating Indigenous Fire Stewardship* acknowledges the various roles and faces of fire ("good fires" and "bad fires") in Indigenous communities across Canada. By utilizing the Etuaptmumk/Two-Eyed Seeing approach and "braiding" Indigenous knowledges and cultural values with non-Indigenous wildland fire science, we shared stories, wise practices, and lessons learned that highlight wildfire prevention and risk reduction strategies for "bad fires." As authors of this Booklet, we believe Indigenous communities will be more fire resilient through cultural revitalization (linking identity and place), emergency management, Indigenous firefighting (aka cross training and education), strategic planning, and partnerships—all important dimensions of Indigenous fire stewardship.

This Booklet is the first Indigenous-informed resource published by FireSmart Canada. Therefore, we are interested in your ideas and comments about future Indigenous-informed wildfire prevention and risk reduction resources for Indigenous communities in Canada. This includes the invitation to share your community's stories with us for wider circulation and learning across Canada. You are welcome to contact FireSmart Canada by telephone at 780.718.5355 or by email at general@firesmartcanada.ca.

***FireSmart Canada welcomes fire stewardship collaborations with Indigenous communities across Canada.***

# 10. INDIGENOUS FIRE STEWARDSHIP AND RELATED RESOURCES

The following is a list of Canadian and international Indigenous fire stewardship and related resources.
*Note: This is not intended to be an exhaustive list of resources.*

## CANADA

- Assembly of First Nations: www.afn.ca/policy-sectors/housing-infrastructure-water-emergency-services/emergency-services
- Congress of Aboriginal Peoples: http://www.abo-peoples.org/en/3762-2/
- From the Ashes: Reimagining Fire Safety and Emergency Management in Indigenous Communities - Report of the Standing Committee on Indigenous and Northern Affairs (June 2018): www.ourcommons.ca/Content/Committee/421/INAN/Reports/RP9990811/inanrp15/inanrp15-e.pdf
- Indigenous Cultural Burning: Shackan: https://www.youtube.com/watch?v=zWge9APm6Uw
- Indigenous Cultural Burning: Xwisten (Bridge River): https://www.youtube.com/watch?v=2njz-wBmDnU
- Inuit Tapiriit Kanatami: www.itk.ca/national-inuit-climate-change-strategy
- Métis National Council: www.metisnation.ca/index.php/news/metis-nation-meets-with-forest-ministers
- National Indigenous Fire Safety Council Project: https://indigenousfiresafety.ca/
- Native Women's Association of Canada: www.nwac.ca/policy-areas/emergency-management
- Saskatchewan First Nations Emergency Management - Live Burn Training Event: https://www.youtube.com/watch?v=Buo8NAVd4OI

## INTERNATIONAL

- Djandak Wi: Traditional Burning Returns: https://www.youtube.com/watch?v=akeB6uVKwWE
- Firesticks Alliance Indigenous Corporation: http://www.firesticks.org.au/about/
- Karuk Climate Adaptation Plan: https://www.karuk.us/images/docs/dnr/FINAL%20KARUK%2CLIMATE%20ADAPTATION%20PLAN_July2019.pdf
- Indigenous Peoples Burning Network: http://www.conservationgateway.org/ConservationPractices/FireLandscapes/Pages/IPBN.aspx
- Tending the Wild: Cultural Burning: https://www.kcet.org/shows/tending-the-wild/episodes/cultural-burning
- The Victorian Traditional Owner Cultural Fire Strategy: https://knowledge.aidr.org.au/media/6817/fireplusstrategyplusfinal.pdf

# 11. KEY TERMS

**Backfiring.** According to the Canadian Wildland Fire Management Glossary, backfiring is a form of indirect attack where extensive fire is set along the inner edge of a control line or natural barrier, usually some distance from the wildland fire and taking advantage of indrafts, to consume fuels in the path of the fire, and thereby halt or retard the progress of the fire front.

**"Bad Fire."** These fires are unplanned, unwanted, out of control wildland fires, including interface fires. These fires threaten infrastructure and people's lives, homes, communities, and livelihoods.

**"Braiding."** Based on the work of Drs. Gloria Snively and Wanosts'a7 Lorna Williams in the 2016 book, *Knowing Home: Braiding Indigenous Science with Western Science,* this metaphor articulates how Indigenous and non-Indigenous ways of knowing can be used in a manner that is mutually respectful and reciprocal in nature.

**Cultural Safety.** Cultural safety is a mindset or a way of being that is created by trusting, respectful people and communities. It involves a transformation of relationships where the needs and voices of Indigenous Peoples across the generations (children to Elders) take a predominant role through the analysis of power imbalances, institutional discrimination, colonization, and colonial relationships as they apply to social policy and practice. Cultural safety involves actively exploring and challenging complex power relationships including the ways that implicit bias, stereotyping, discrimination, and racism show up in our shared context.

**Disaster Risk Reduction.** According to the UN Office for Disaster Risk Reduction, disaster risk reduction is aimed at reducing existing and preventing new disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

**Emergency Management.** Emergency management is planning that ensures a community's capacity to deal with emergencies and structural and wildland fires.

**Etuaptmumk/Two-Eyed Seeing.** Mi'kmaw Elder Albert Marshall brought forth the practice of Etuaptmumk: seeing from one eye with the strengths of Indigenous knowledges and ways of knowing and from the other eye with the strengths of mainstream (non-Indigenous) science knowledges and ways of knowing, and then learning to use both eyes together for the benefit of all.

**Fireguard.** A strategically planned barrier, either manually or mechanically constructed, intended to stop or retard the rate of spread of a fire, and from which suppression action is carried out to control a fire.

**Fire Hazard.** A general term to describe the potential fire behaviour, without regard to the state of weather-influenced fuel moisture content, and/or resistance to fireguard construction for a given fuel type. This may be expressed in either the absolute (e.g. cured grass is a fire hazard) or comparative (e.g. clear-cut logging slash is a greater fire hazard than deciduous cover type) sense. Such an assessment is based on physical fuel characteristics (e.g. fuel arrangement, fuel load, condition of herbaceous vegetation, presence of ladder fuels).

**FireSmart.** These evidence-based guidelines and practices are intended to protect homeowners and communities from wildland fires. These guidelines were produced by Partners in Protection, a national-based coalition of professionals representing national, provincial, and municipal associations and government departments responsible for emergency services, land use planning, and forest and resource research and management. FireSmart principles are as follows: emergency planning, cross training, education, legislation, interagency cooperation, development, and vegetation management.

**First Nations.** First Nations are the First Peoples of Canada, both Status and Non-Status. Status (or registered) Indians are individuals who are registered according to the *Indian Act* and members of a band (aka First Nations community). Status Indians receive supports and related services (e.g., housing assistance and financial assistance for post-secondary education) from the Department of Indigenous Services Canada. Non-Status Indians are individuals that are not recognized as Indians under the *Indian Act.* At present, there are over 600 First Nations communities in Canada representing more than approximately 50 Nations and language groups.

**Fuel Management.** Fuel management is the planned manipulation and/or reduction of living or dead forest fuels for forest management and other land use objectives (such as hazard reduction, silvicultural purposes, wildlife habitat improvement) by prescribed fire, mechanical, chemical or biological means and/or changing stand structure and species composition.

**Geographic Information System (GIS).** A GIS is a computer-based system used to input, store, retrieve, and analyze geographic data sets. The GIS is usually composed of map-like spatial

representations called layers that contain information on attributes such as elevation, land ownership and use, crop yield, and soil nutrient levels.

**"Good Fire."** Good fires are cultural burning and prescribed fires that are planned, controlled, fulfil specific cultural objectives, and involve comprehensive engagement and guidance from Elders, Fire Keepers, and Fire Knowledge Holders and often in partnership with interagency collaborators (e.g., local fire departments, provincial/territorial governments). In general, a "good fire" has long term benefits such as food and medicinal plant gathering and access (e.g., hunting, harvesting, growth); cultural and language revitalization (e.g., utilization of traditional knowledge); forest product access (e.g., firewood collection); and pest reduction (e.g., wood ticks) with limited negative effects on livelihoods and properties. Good fires leave behind healthy fire dependent plants and trees and reset the soils to support continued health and growth of the land, which, in turn, supports the people living on it.

**Indigenous Fire Keepers.** In general, these Fire Keepers are individuals with traditional fire stewardship roles in their Indigenous communities. In some Indigenous communities, these roles are passed down through family members across generations and may be held across genders. For example, an Indigenous Fire Keeper may be a community member who is tasked with lighting a fire and keeping it lit for cultural purposes. *Note: We recognize that there are hundreds of Indigenous communities in Canada—all of which have diverse ways that fire is integrated into their respective communities. Therefore, we further acknowledge terms (including titles and accompanying roles) that are used to identify important community roles around fire may vary across Indigenous communities and geographic regions in Canada.*

**Indigenous Fire Knowledge Holders.** Typically, these Holders are Indigenous Peoples who are knowledgeable about fire stewardship. For example, an Indigenous Fire Knowledge Holder may be an Indigenous person who has extensive historical memory of the uses of fire such as what, when, and where to burn using slash and burn preparation for planting and/or forest and plant revitalization. Depending on the Indigenous community, Indigenous Fire Knowledge Holders may also use the title of "Fire Keepers." *Note: We recognize that there are hundreds of Indigenous communities in Canada—all of which have diverse ways that fire is integrated into their respective communities. Therefore, we further acknowledge terms (including titles and accompanying roles) that are used to identify important community roles around fire may vary across Indigenous communities and geographic regions in Canada. As such, there may be cases where there are no formal community role(s) in relation to fire.*

**Inuit.** The Inuit are Indigenous People from Arctic Canada, particularly residing in Northern Labrador (Nunatsiavut), Northern Quebec (Nunavik), Nunavut, and the Northwest Territories. These geographic areas comprise approximately 40% of Canada's total land mass. The Inuit population is generally much younger than the non-Indigenous population. The traditional language of Inuit People is Inuktitut.

**Memorandum of Understanding.** This formal agreement is made between two or more parties indicating a common understanding of key activities and processes.

**Métis.** Métis People are individuals who are of historic Métis ancestry—specifically, individuals who have historical lineage rooted in the areas of land in west central North America. Métis People were important players in shaping Canada, particularly western Canada. The traditional languages spoken by Métis People include Michif and Cree.

**Prescribed Fire.** Any fire utilized for prescribed burning; usually ignited according to agency policy and management objectives.

**Resilience.** Resilience is the ability of a natural and/or human system to flourish and adapt to situations or environments with minimal negative effects during and after the change, hardship, or crisis. Resilience emphasizes the individual or group's ability to effectively use positive attributes and capabilities more than focus on weaknesses or pathologies.

**Traditional Ecological Knowledge (TEK).** TEK is local and culturally specific knowledge that Indigenous people gain through generations of social, physical, and spiritual understanding of the world and associated practical experience. TEK is unique to a given culture, location, or society.

**Wildfire.** An unplanned or unwanted natural or human-caused fire, as contrasted with a prescribed fire.

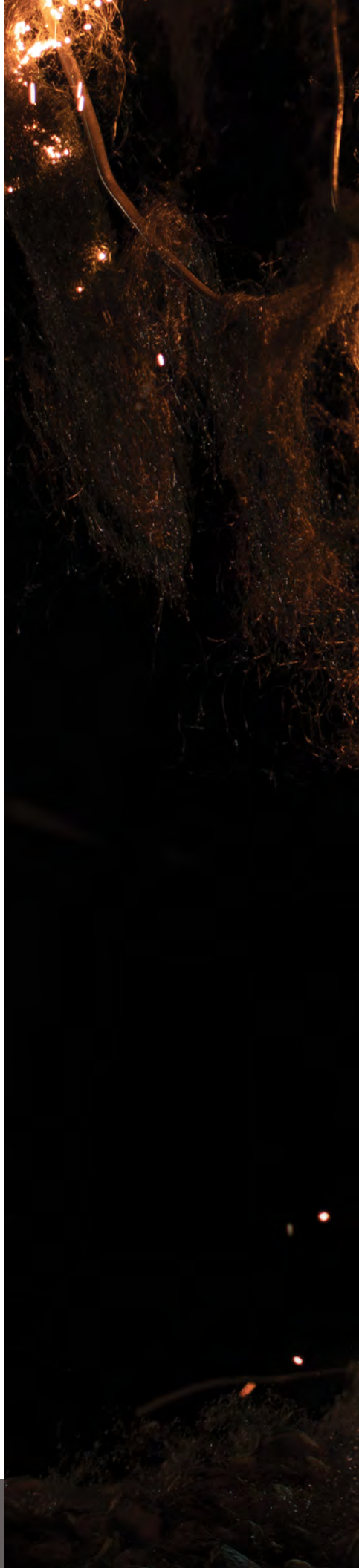
**Wildland-Urban Interface.** The area where homes and other human development meets or are intermixed with wildland fire fuels. In this booklet, we refer to fires that occur in this area as interface fires.

**Worldview.** A worldview is a set of principles, values, and beliefs that organize a way of knowing, being, and interacting in the world. Every person and society has a worldview. Worldviews influence how we locate or see ourselves in our environment.

# 12. FIRESMART CANADA

FireSmart Canada leads the development of resources and programs designed to empower the public and increase community resiliency to wildfire across Canada.

For more information about FireSmart Canada, visit www.firesmartcanada.ca.



**Daniel Harrington**

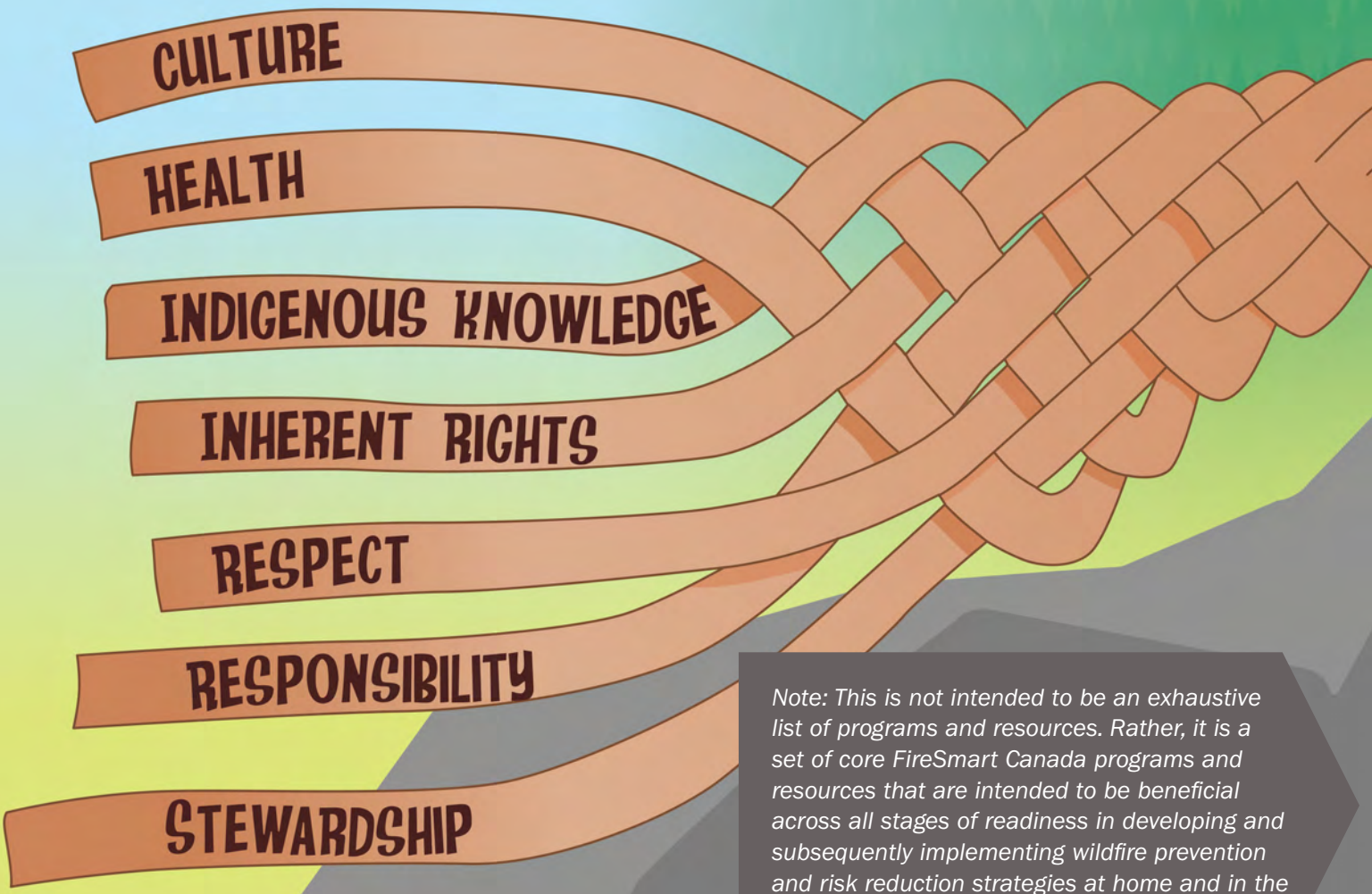
*Inspired by how the "Raven Stole the Sun," Daniel explains that the "diorama depicts the moment after Raven stole the sun before he has been blackened by smoke….I wanted to show one of the many things fire can be used for (now that Raven stole it for us)."*

# APPENDIX A: AT A GLANCE – FIRESMART CANADA PROGRAMS AND RESOURCES

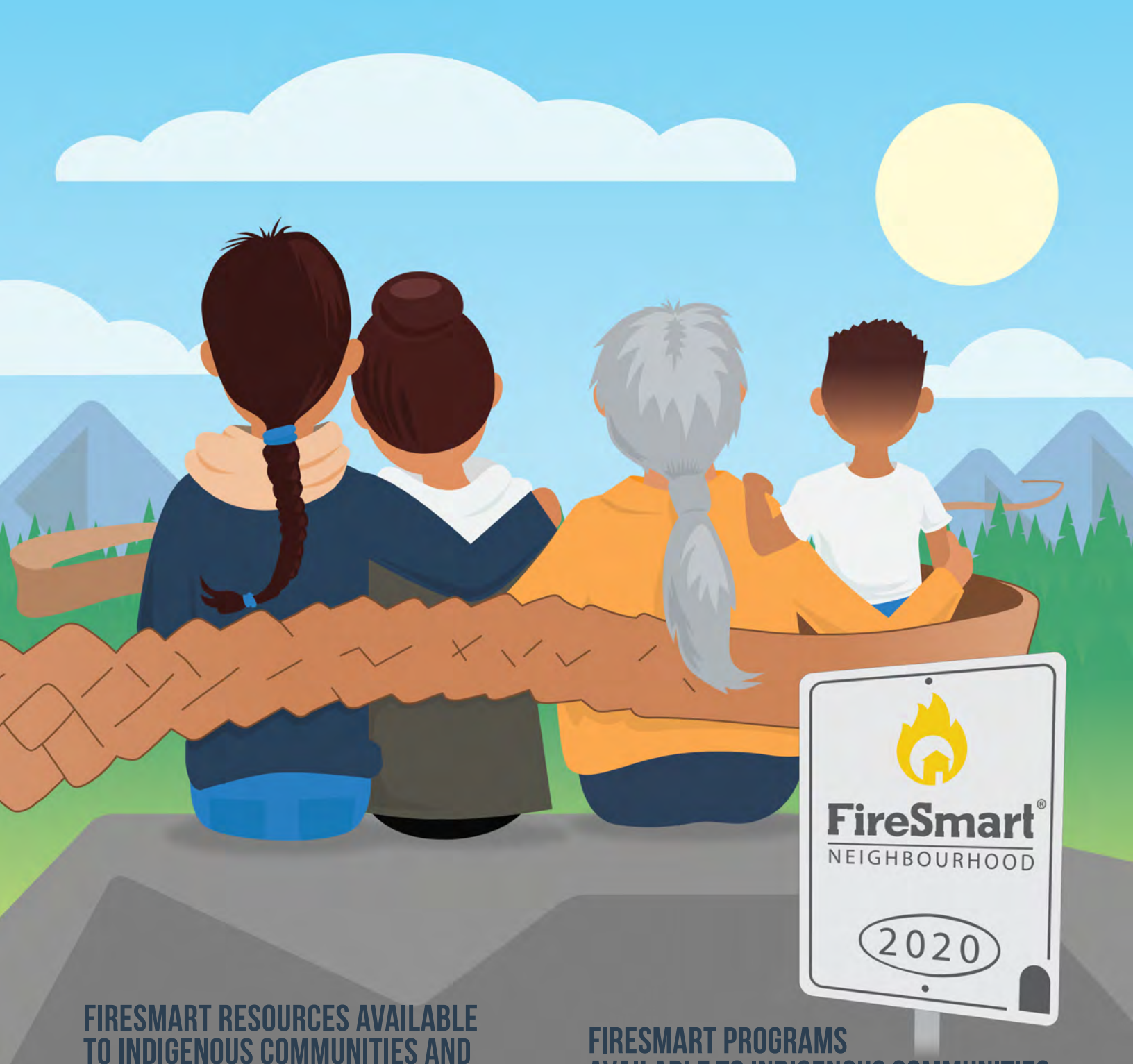
Recognizing that Indigenous communities across Canada will most likely be in different stages of readiness in planning and implementing wildfire prevention and risk reduction strategies, we compiled a suite of notable FireSmart Canada programs and resources that you are invited to access and navigate via the FireSmart Canada website (www.firesmartcanada.ca).

## BRAIDING INDIGENOUS FIRE STEWARDSHIP

Each of the following strands represents an Indigenous-informed value for a safe and healthy community. Indigenous-informed values can be woven with FireSmart disciplines to prevent "bad fires" surrounding Indigenous communities and reduce wildfire risks. Overall, as a collective, the strands acknowledge how to live close to the Earth and heal the Indigenous lands in which we work and live - respecting fire based on the interconnection between the animal world, people, and the environment.




*Note: This is not intended to be an exhaustive list of programs and resources. Rather, it is a set of core FireSmart Canada programs and resources that are intended to be beneficial across all stages of readiness in developing and subsequently implementing wildfire prevention and risk reduction strategies at home and in the broader community.*




## FIRESMART RESOURCES AVAILABLE TO INDIGENOUS COMMUNITIES AND COMMUNITY MEMBERS

- FireSmart Begins at Home Manual
- FireSmart Begins at Home Mobile Application
- FireSmart Home Ignition Zone Assessment Scorecard
- FireSmart Guide to Landscaping

## FIRESMART PROGRAMS AVAILABLE TO INDIGENOUS COMMUNITIES

- FireSmart Home Partners Program (Wildfire Home Ignition Zone assessment)
- FireSmart Neighborhood Recognition Program (Neighbourhood engagement)
- FireSmart Community Wildfire Preparedness Day (Community and community group engagement)

For more information about these above program and resources, visit https://firesmartcanada.ca.