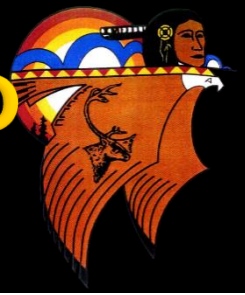


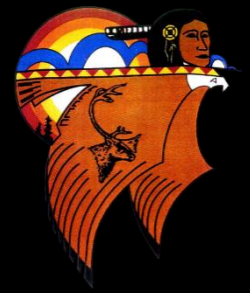
Saskatchewan Indigenous Approach to Wildfire and Firesmart



- A presentation by Cliff Buettner
Prince Albert Grand Council
National Indigenous Fire Safety Council
October 25, 2024



Overview



- **Saskatchewan First Nations Wildfire Protection Services (Response Service Agreement)**
- **Canadian Forest Fire Danger Rating System(CFFDRS)**
- **Community Training and Fuel Hazard Reduction**
- **Cultural Burning – wearefire.ca**
- **Canadian Prairies Prescribed Fire Exchange**
- **PAGC Wildfire Task Force - Guardians Initiative**
- **PAGC Wildfire Task Force – Forest Resilience Bond**



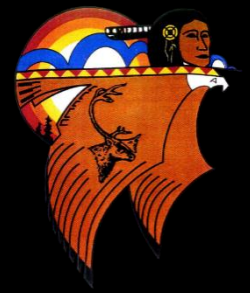
Saskatchewan First Nations Wildfire Protection Services Agreement



- The Saskatchewan First Nation Wildfire Protection Services Agreement (1992) was the first agreement of its kind in Canada to provide community fire crews for fire prevention and suppression.
- It was signed between the Federal and Provincial governments and 22 First Nations in Saskatchewan.



Saskatchewan First Nations Wildfire Protection Services Agreement



- Letters of Understanding were signed by the Prince Albert Grand Council (PAGC), Meadow Lake Tribal Council (MLTC), Agency Chiefs Tribal Council (ACTC), and Beardy's and Okemasis Cree Nation (Independent).



SPSA Long Term Response Service Agreement



- The current contract from 2022–27 is a Response Service Agreement to provide All Emergency Response.
- Currently PAGC has 36, 5-person community crews for fire prevention and suppression. 5(16 week),30(20 week) and 1(22 week) contract crews.



Canadian Forest Fire Danger Rating System (CFFRS)



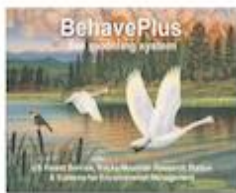
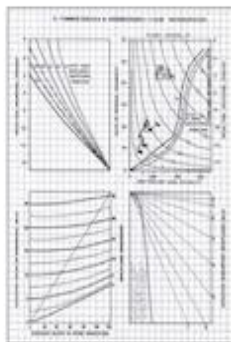
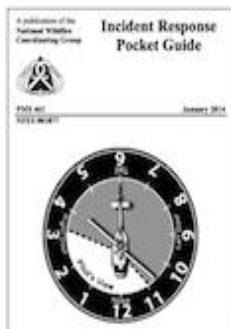
- Fire Intensity Classification
- Fire Danger Levels



Canadian Forest Fire Weather Index (FWI) System



FWI



Fireline Tools & Sensitivity Analysis

Steady State
Homogeneous fuel bed
No Spotting or Crowning
Surface fire

Fuel moisture Q_{ig}
Size of particle ϵ
bulk density ρ

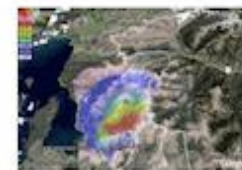
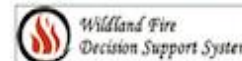
$I_p = R \rho \epsilon Q_{ig}$
 $I_p = \int_0^z R dz$
 $I_p = \omega h \pi / \pi$

$I_2 = \omega h \pi / \pi$
 $R = \frac{I_2 \pi (1/\epsilon \rho)}{\rho \epsilon Q_{ig}}$

$\frac{dI_x}{dt} + \frac{dI_z}{dz} = R \rho \epsilon Q_{ig}$
 $I_x + \int_0^z R dz = R \rho \epsilon Q_{ig} z$
 $R = \frac{I_x + \int_0^z R dz}{\rho \epsilon Q_{ig} z}$
 $R = \frac{I_p}{\rho \epsilon Q_{ig}}$

RC Redmond
3/5/90

Geospatial Analysis

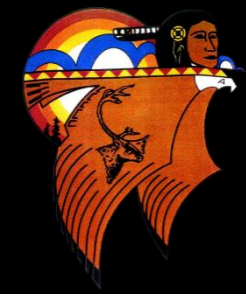


IFTDSS Can Help You...

- Develop a Burn Plan
- Conduct a Risk Assessment
- Model Fire Behavior



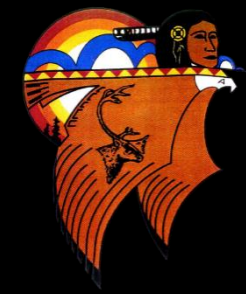
Sandy Bay, Saskatchewan



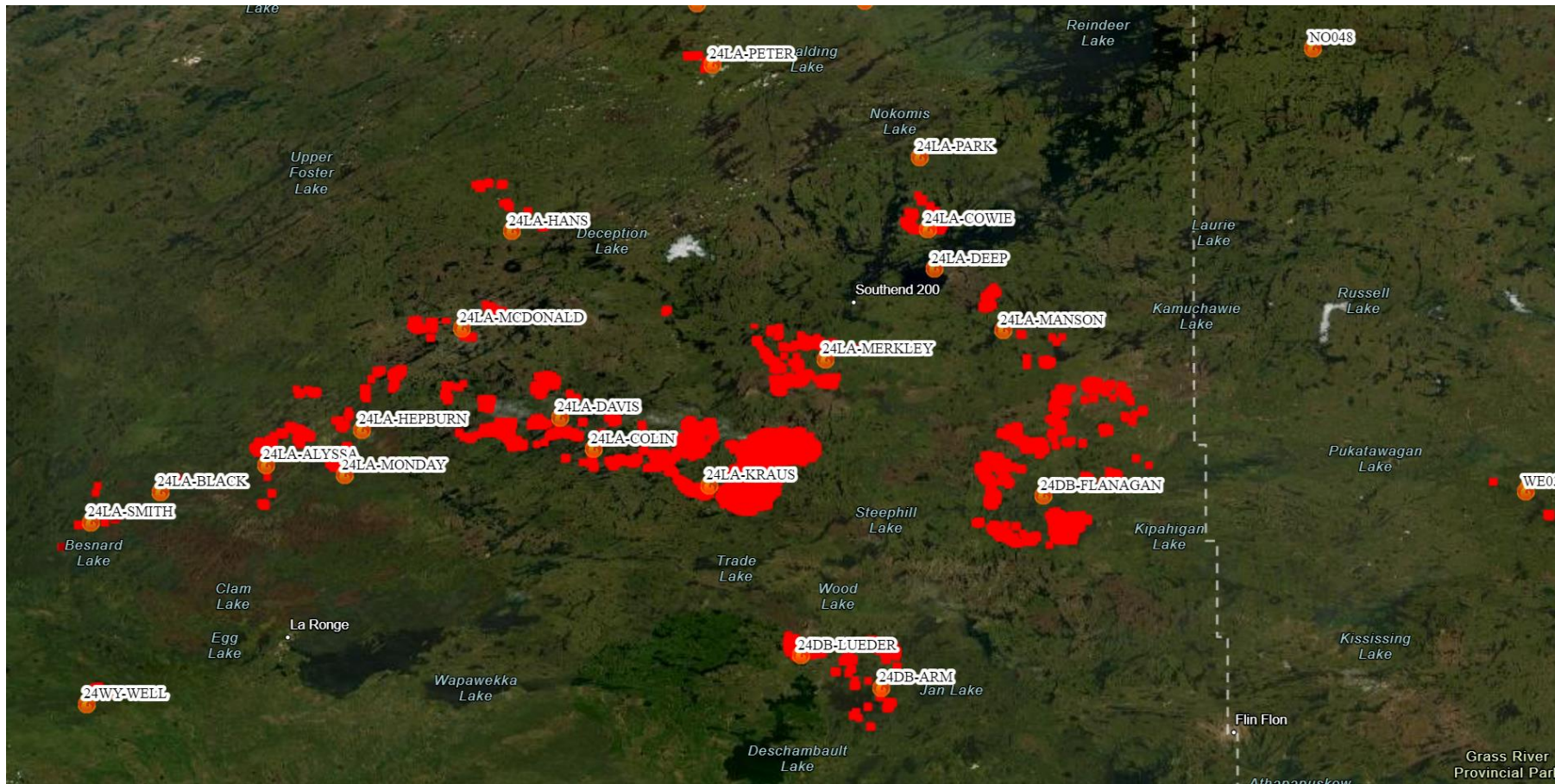
Date Valid	Temp	RH	Dew Point	Wind Speed	Wind Dir	Wind Az.	Rain (24 hr)	FFMC	DMC	SDMC	DC	ISI	BUI	FWI
2024-09-03	22	50	11	18	NNW	344	0	90	144	197	691	10	189	38
2024-09-02	25	44	12	10	WSW	250	0	89	142	193	685	6	187	29
2024-09-01	20	49	9	9	SSW	200	0	89	139	189	678	6	183	26
2024-08-31	18	49	7	18	NW	317	0	89	136	186	673	9	181	35
2024-08-30	20	53	10	17	WNW	288	0	88	134	182	666	8	178	33
2024-08-29	18	64	11	4	NNW	329	0.1	87	131	178	659	3	175	18
2024-08-28	22	50	11	12	SSE	163	0	89	129	176	652	6	173	28



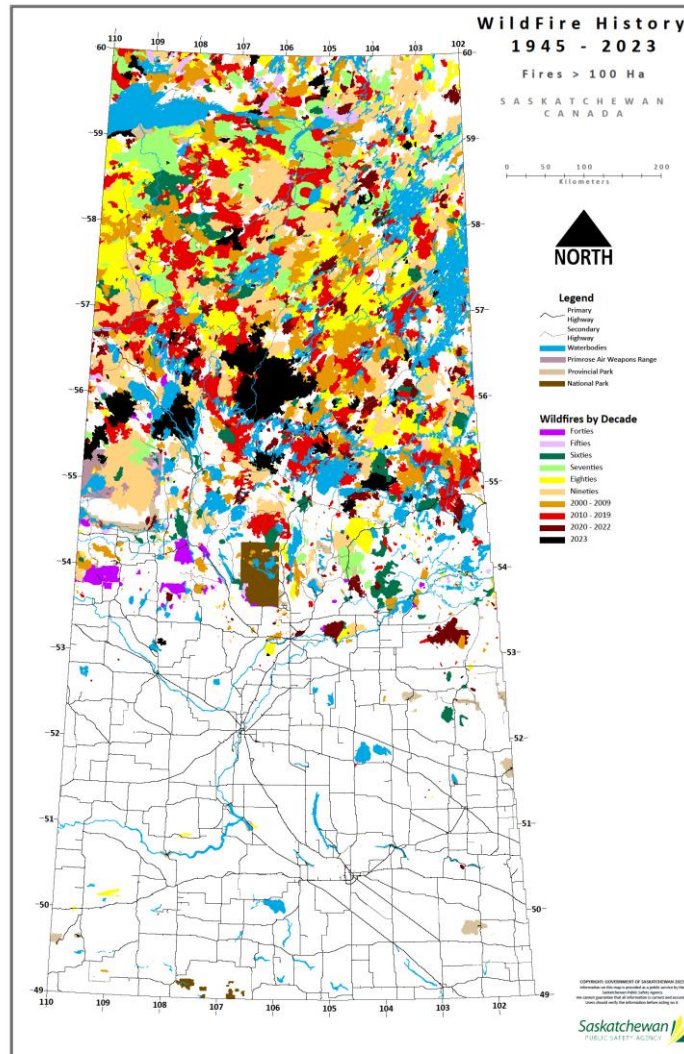
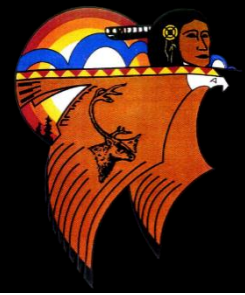
September 3, 2024.



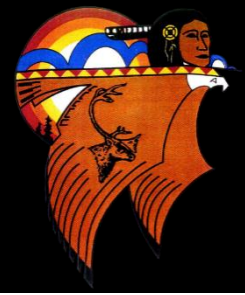
■ Modis Firms



Saskatchewan Fire History 1945- 2023



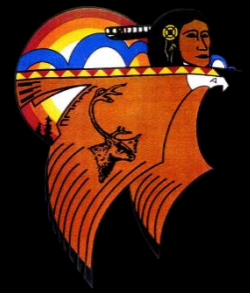
Wildland Firefighter Certification



- Training and fitness standards were established under this Agreement that provided for Type 2 sustained-action, wildland firefighters who meet the national standards of the the Canadian Interagency Forest Fire Center (CIFFC).
- As of 2024, 58 Type 2 sustained-action, First Nation contract crews meet the Provincial standards.
- In addition, there are 22 ‘Northern Works Crews’ that are supported by the Saskatchewan Public Safety Agency (non-First Nations).



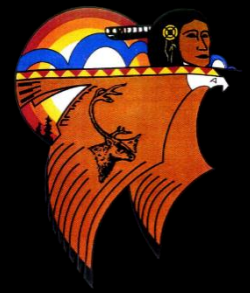
Wildland Firefighter Certification



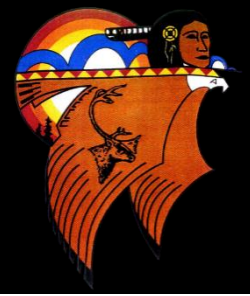
- **Emergency Fire Personnel (Type 3)**



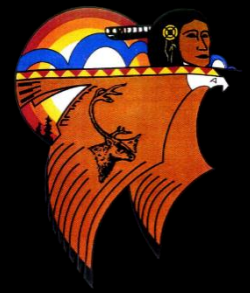
What are we concerned about



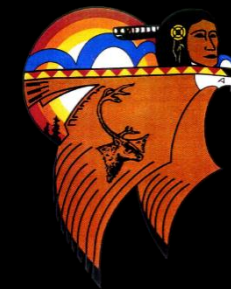
Fuel Hazard Reduction



Fuel Hazard Reduction



Fuel Hazard Reduction



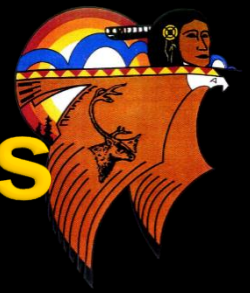
Community Fuel Management Plans



- **PAGC Spiritual Healing Lodge**



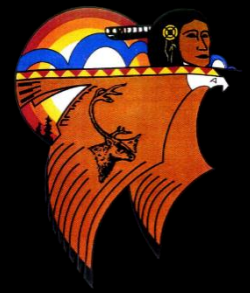
Community Fuel Management Plans



- **PAGC Yausni Lodge**



Cultural Burning

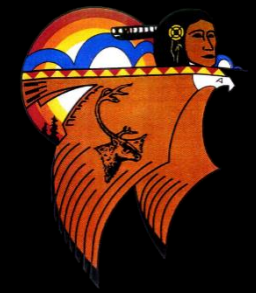


- ***“Fire has been one of man’s single most greatest discovery and one of nature’s most destructive forces.***
- ***At times, it seems to be our worst enemy and at others our dearest friend.***
- ***Two sides of the same coin, two sides of fire.”***

<http://nrfirescience.org/resource/15594>



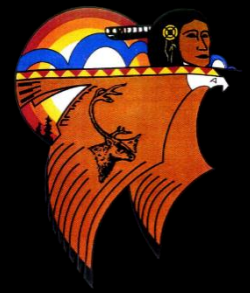
We Are Fire



- **“Fire, they teach, if managed properly is a healer and helper, not a foe. The secret lies in understanding when and where to burn, to read the country.”**



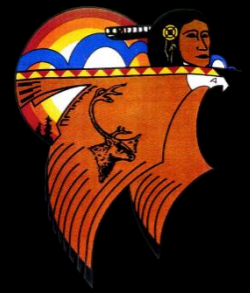
We Are Fire



- The *We Are Fire* Toolkit is an online [knowledge product](#) that invites you to learn about and explore uses of fire on the land.
- Indigenous Peoples have used fire on the land as a lifestyle and as a form of [regenerative land management](#).



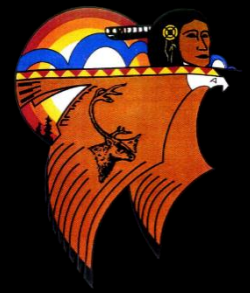
We Are Fire



- Regenerative land management involves communities, organizations and practitioners applying fire to the land to achieve certain objectives.
- Wearefire.ca



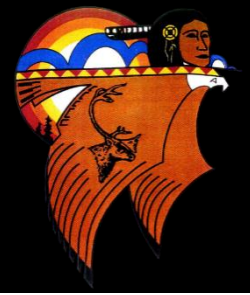
Prairie Interagency Prescribed Fire Initiative



- Through a concept paper submitted to The W. Garfield Weston Foundation, approval was received to submit a full proposal to fund this joint venture for up to 5 years.
- Partners include:
 - Environment Canada/Canadian Wildlife Service
 - Parks Canada
 - Meewasin Valley Authority
 - Nature Conservancy of Canada (AB, SK, MB Regions)
 - Prince Albert Grand Council
 - Saskatchewan Ministry of Parks, Culture, and Sport
 - University of Saskatchewan
 - Wanuskewin Cultural Heritage Site



Canadian Prairies Prescribed Fire Exchange



Environment and
Climate Change Canada



Canadian Prairies Prescribed Fire Exchange



- 1) Collaboration between multiple agencies and First Nations
- 2) Education and training opportunities for on-the-ground delivery of prescribed fire
- 3) Information sharing through a centralized system, facilitating opportunities for research and development



Canadian Prairies Prescribed Fire Exchange



- **4) Communication with the public to encourage understanding, acceptance, and endorsement of prescribed fire.**
- **5) Standardize training, planning, and execution of prescribed fire. This will build capacity by allowing practitioners to participate in prescribed fires with multiple agencies across multiple jurisdictions.**



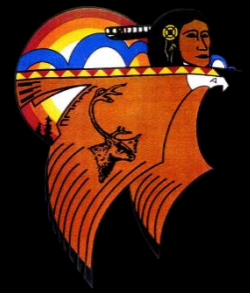


PAGC Wildfire Task Force

- **PAGC Task Force was established in 2017 through a resolution passed at the Federation of Sovereign Indigenous Nations (FSIN) Assembly in response to wildfires that affect Treaty and Aboriginal rights.**
- **PAGC is committed to improving conservation efforts, community protection and suppression of wildfires that affect Treaty and Aboriginal rights.**
- **First Nations must be given opportunities to provide input on strategies as well as to document Traditional Knowledge perspectives.**



PAGC Wildfire Task Force



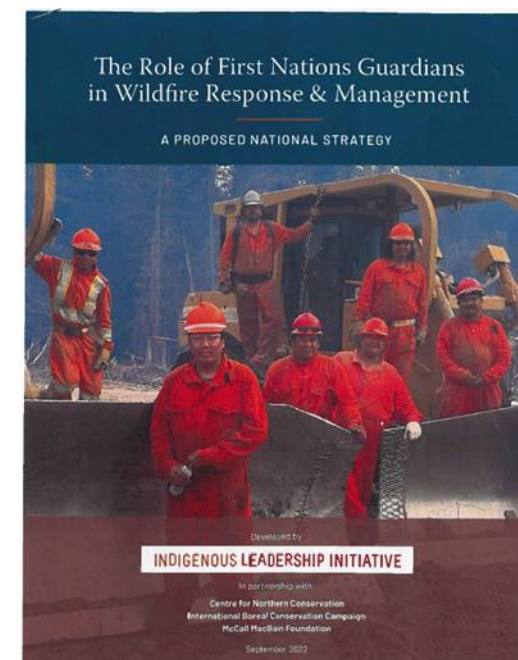
- **First Nations peoples have historic experience with the suppression of wildfires.**
- **Prairie and Forest Fires Act 1910 repealed 2015**
- **Moving Forward - Cultural Burning (wearefire.ca)**
- **Ka mamawi – yak (Coming Together) Build and Mobilize Foundational Knowledge Program**

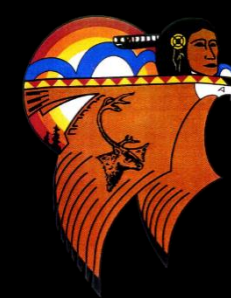




PAGC Wildfire Task Force

- **Natural Resources Canada (NrCan) Contribution Agreement – Managing Wildfire in a Changing Climate - Guardians Initiative**
- **Determining the interest in development of Indigenous led firefighting and response programs;**
- **Identifying the roles and responsibilities for PAGC with regards to [Guardian Program](#) development;**



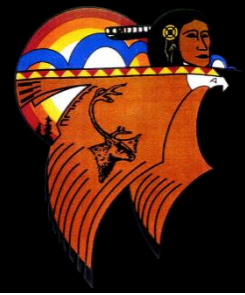


PAGC Wildfire Task Force

- **Black Kite – Queen’s University, Yukon First Nations Wildfire, Prince Albert Grand Council, REDFire Lab (NrCan) Reciprocity Ecology and Diversity in Fire**
- **To provide critical near source data on wildfire smoke chemistry**
- **To provide imperical evidence that Indigenous led cultural burning and Indigenous Fire Stewardship are effective Wildfire Management strategies**
- **The objective is to get data that shows how the composition differs and revitalize the autonomy to burn**



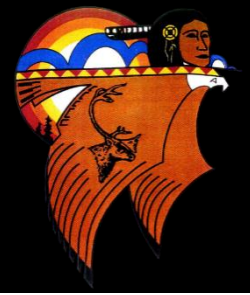
PAGC Wildfire Task Force



- **Circular Bioeconomy Alliance - the Forest Resilience Bond Model**
- **Wildfire Resilience Landscape Network**
- **Project development with Prince Albert Model Forest**
- **To provide financial investment support for indigenous Fire Stewardship**



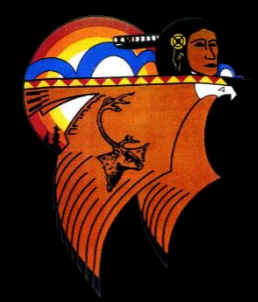
Guardians of the North



First Nation Emergency Fire Personnel



Dedication: Our Priority



- Bringing Everybody Home at the end of the day

