



Ki?lawna?
Okanagan nation Alliance Grizzly Bear Initiatives



Source: <https://1.amz.mshcdn.com/rDv6poJWcXpu7-GYkjl8gx6DRk=/fit-in/1200x9600/https%3A//blueprint-api-production.s3.amazonaws.com/uploads/card/image/744088/bf17f6d8-405e-4bbe-b31d-6509eb0dff62.jpg>

Topics Covered

- Chief's Executive Committee Direction
 - 2014 Tribal Council Resolution
- Joint Nation Grizzly Bear Recovery Working Group
 - Background and purpose.
 - Actions to date.
- Syilx Initiatives:
 - North Cascades Habitat Suitability Mapping
 - Manning and Cathedral Park Bear Hazard Assessment
 - COSEWIC ATK Study
 - Okanagan Population Unit DNA Population Inventory
- Big issues- Access management and road densities.

Continued presence of ki?lawna? is an indicator of the health and wellbeing of our lands and our resources



Source: <http://drivetonature.blogspot.com/2011/06/grizzly-bear.html>

ki?lawna? Grizzly Bear Recovery

Ki?lawna has been an integral and critical part of Syilx culture since time immemorial- its' presence in Syilx Territory is an indicator of the health of Syilx land and people.



Photo Credit Darryn Epp



Photo Credit Darryn Epp

At least three remnant trans-boundary grizzly bear populations within Syilx Territory need immediate action to assist them from disappearing due to low numbers and habitat isolation.

Joint Nation Grizzly Bear Recovery Working Group

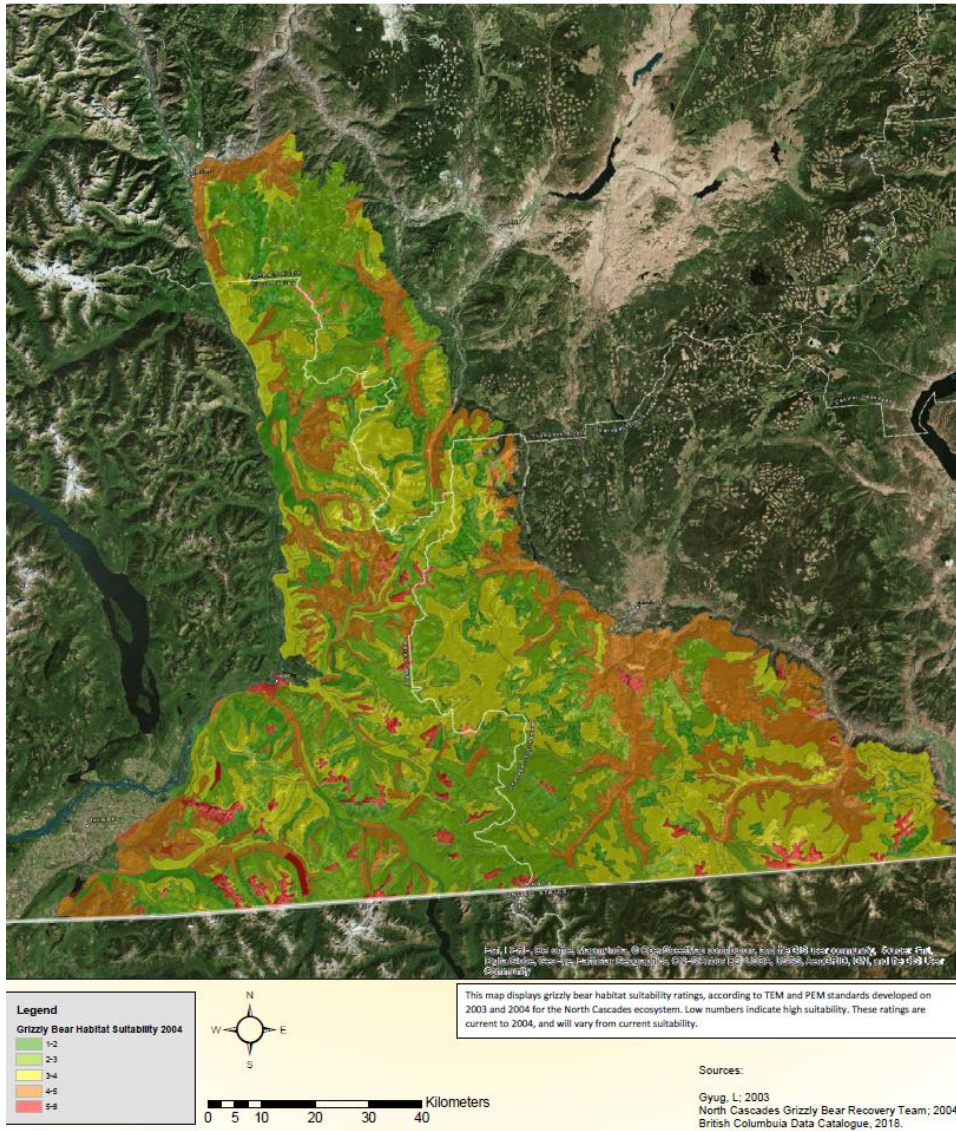
‘Collective of First Nations and Non-Government Organizations discussing actions required to ensure that Grizzly Bears are recovered and protected throughout our collective Territories’.



North Cascades GBPU Interim Actions

- Restore grizzly bear reproduction in the North Cascades GBPU by transplanting bears from ecologically suitable, more abundant populations.
- Strategically address management of motorized access on key resource roads to effectively increase and secure amount of core grizzly bear habitat and ensure landscape-level measures and support for ki?lawna? Recovery are in place.
- Investigate needs and implement methods to reduce future human-caused grizzly bear mortalities.
- Establish a process to identify and enhance key grizzly bear food production sites and habitats within the southern part of the GBPU (silviculture prescriptions, prescribed burns etc.).

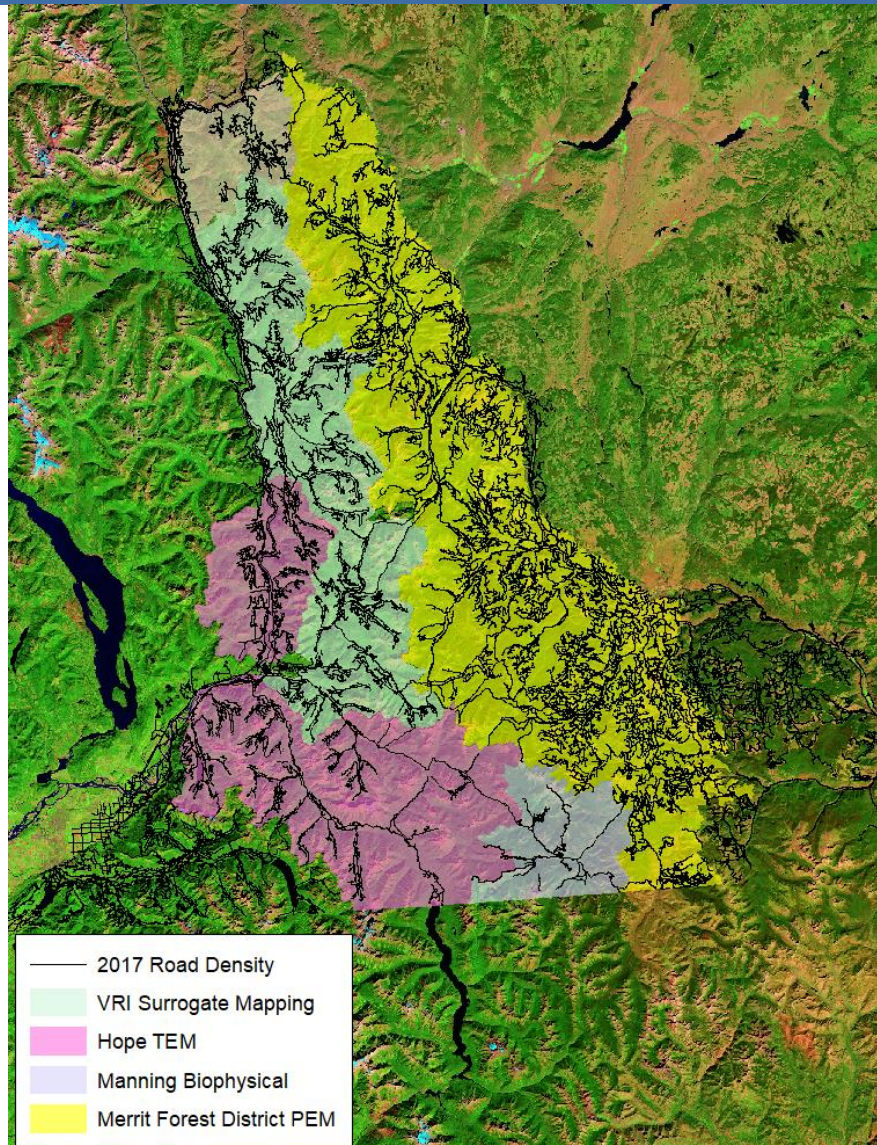
Syilx (Okanagan) Initiatives: North Cascades Habitat Suitability Mapping.



Preliminary habitat suitability map created in 2004 (Gyug and ONA).

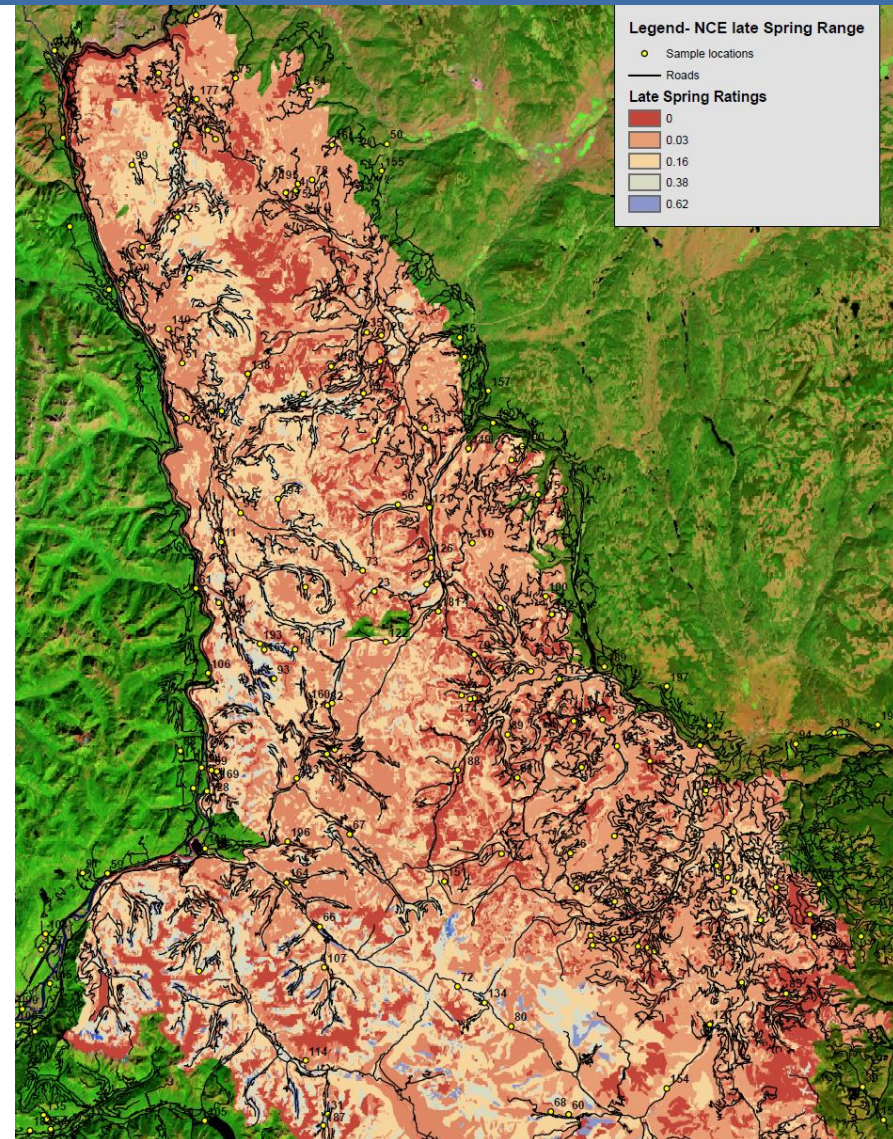
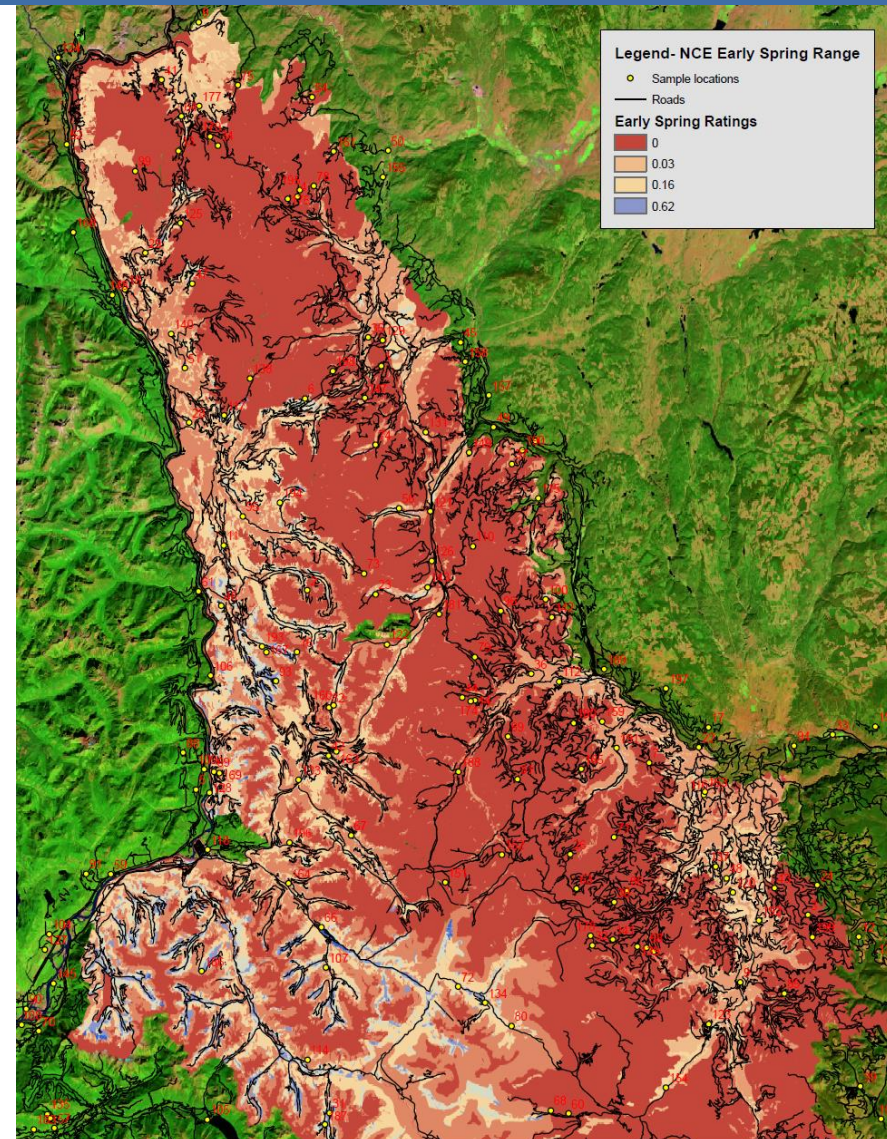
Identifying core Grizzly Bear habitat.

Syilx (Okanagan) Initiatives: North Cascades Habitat Suitability Mapping.

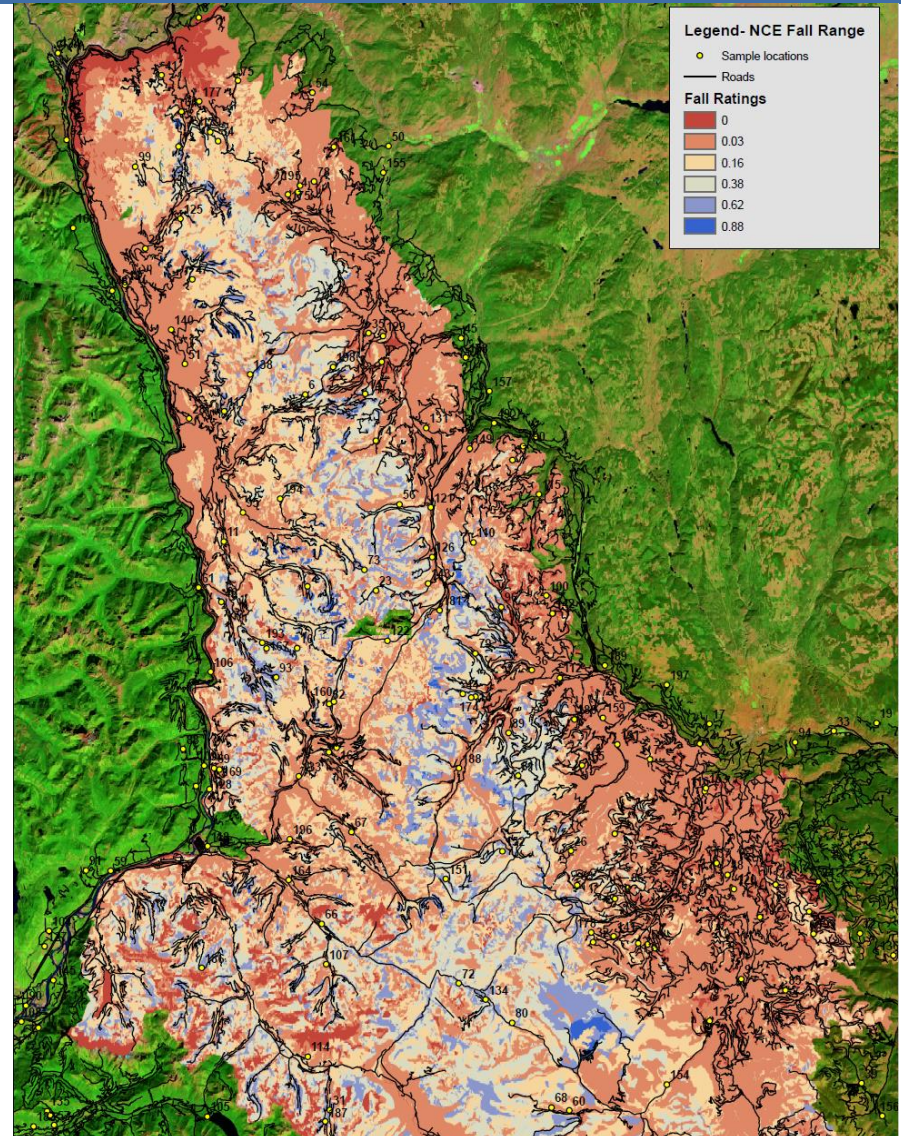
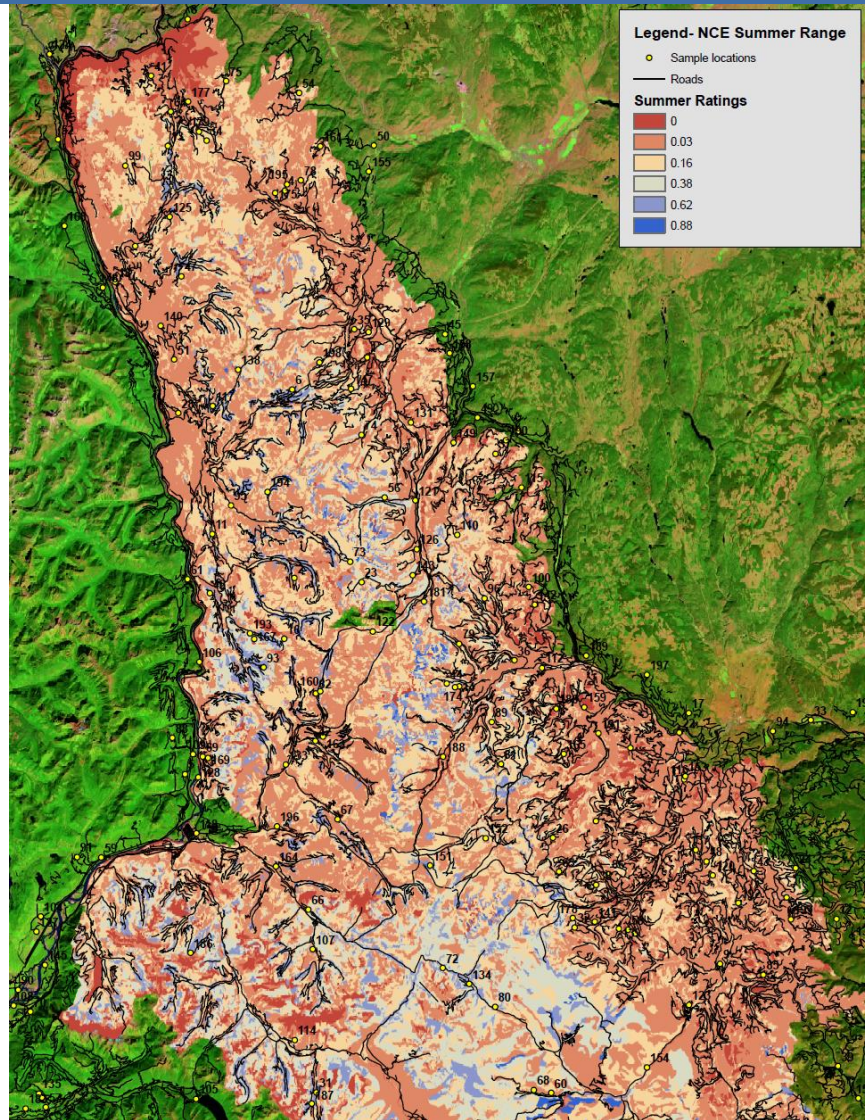


Five separate mapping projects originally applied to preliminary habitat suitability model (2004).

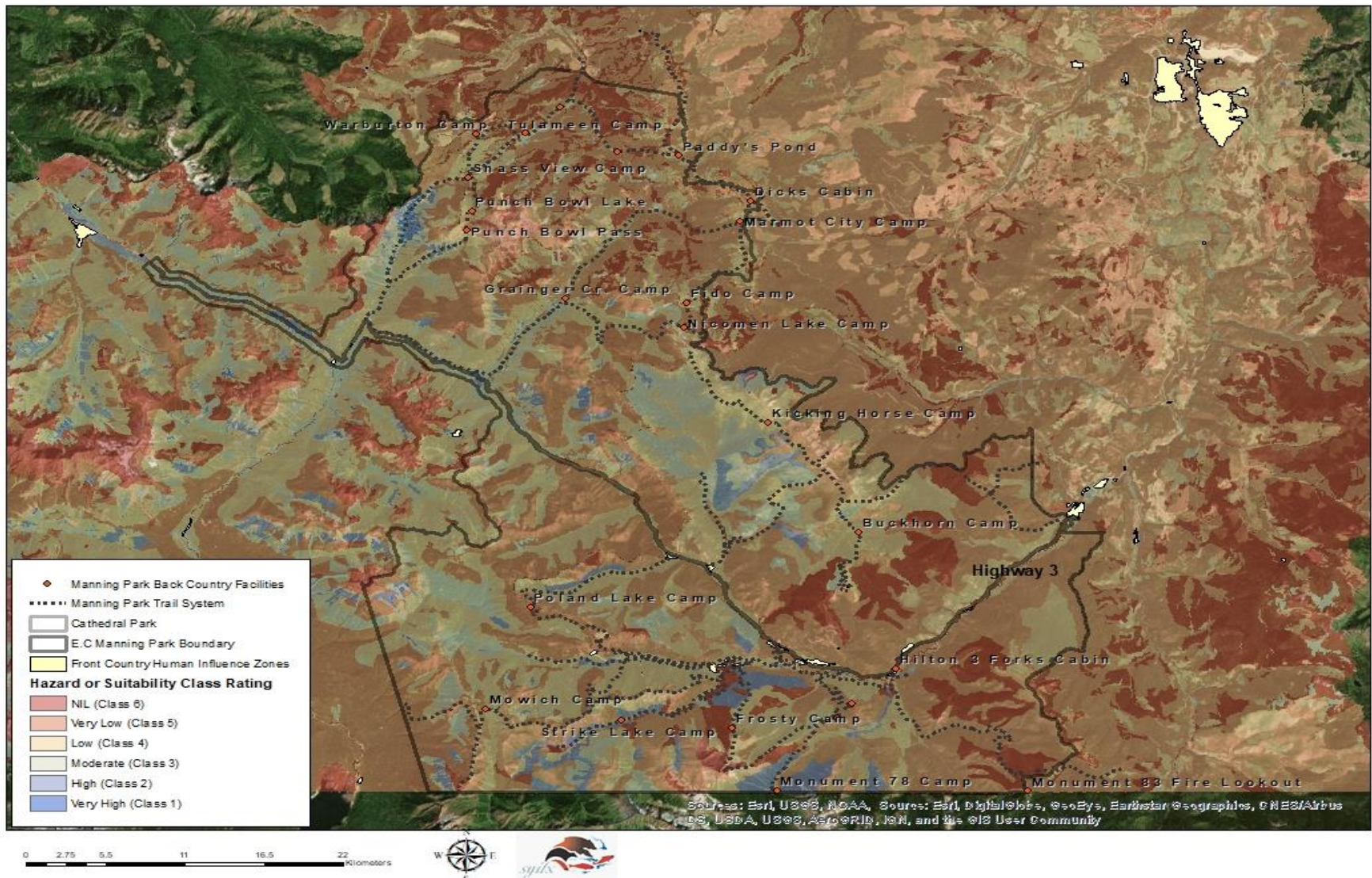
Syilx (Okanagan) Initiatives: North Cascades Habitat Suitability Mapping.



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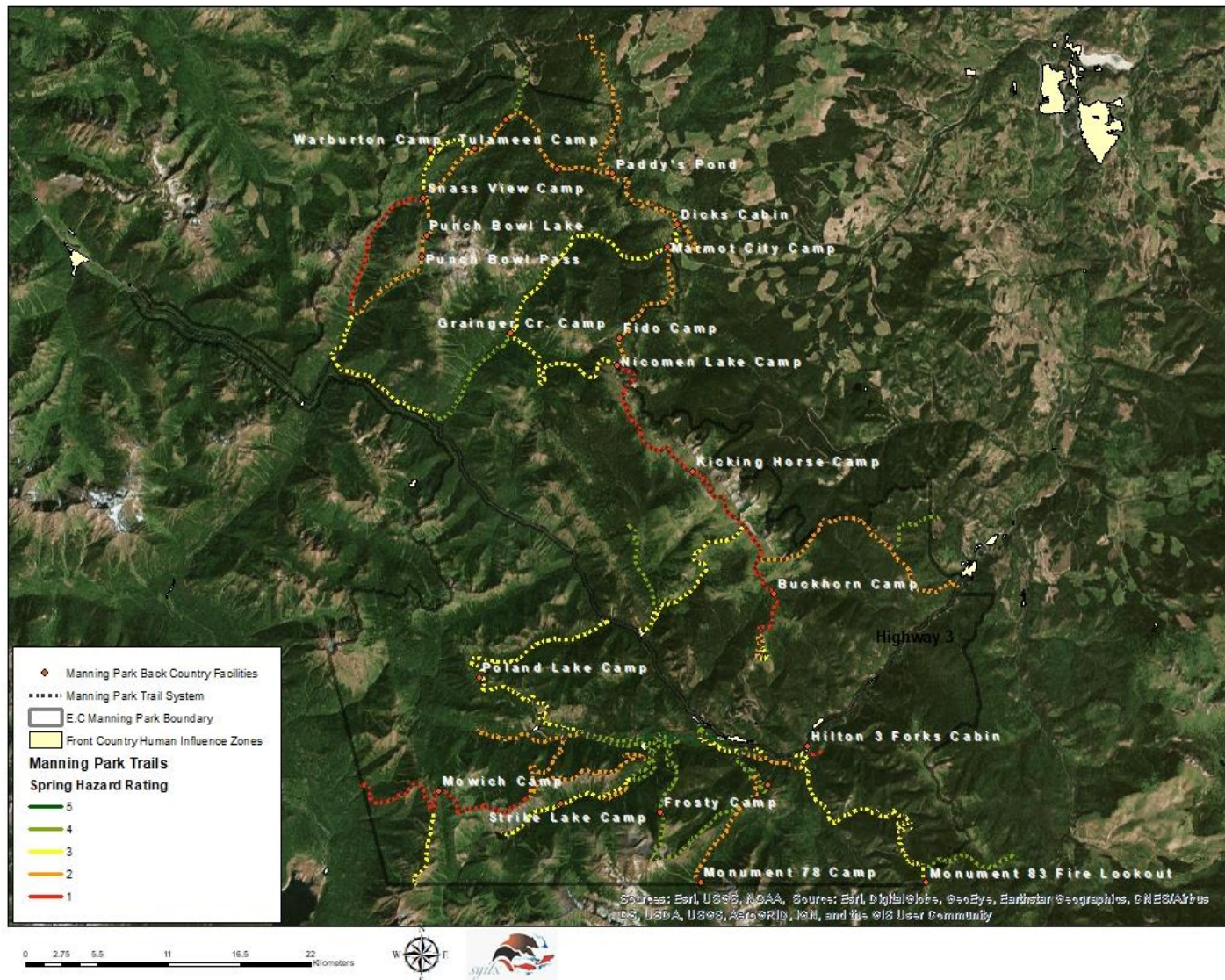
Syilx (Okanagan) Initiatives: North Cascades Habitat Suitability Mapping.

	Early Spring Area	Late Spring Area	Summer Area	Fall Area
ESSFdc				
Class 1	0.00	0.00	0.00	0.00
Class 2	0.00	0.00	0.00	0.00
ESSFdc 2				
Class 1	0.00	0.00	0.41	0.00
Class 2	0.00	0.00	1.12	0.95
ESSFm w				
Class 1	0.00	0.00	26.57	9.86
Class 2	0.00	24.80	20.75	71.24
IDFdk2				
Class 1	0.00	0.00	0.00	0.00
Class 2	0.03	0.02	0.00	0.00
MSdm 2				
Class 1	0.00	0.00	0.00	0.00
Class 2	0.00	0.20	1.16	0.00
Total (KM²)	0.03	25.02	50.01	82.04

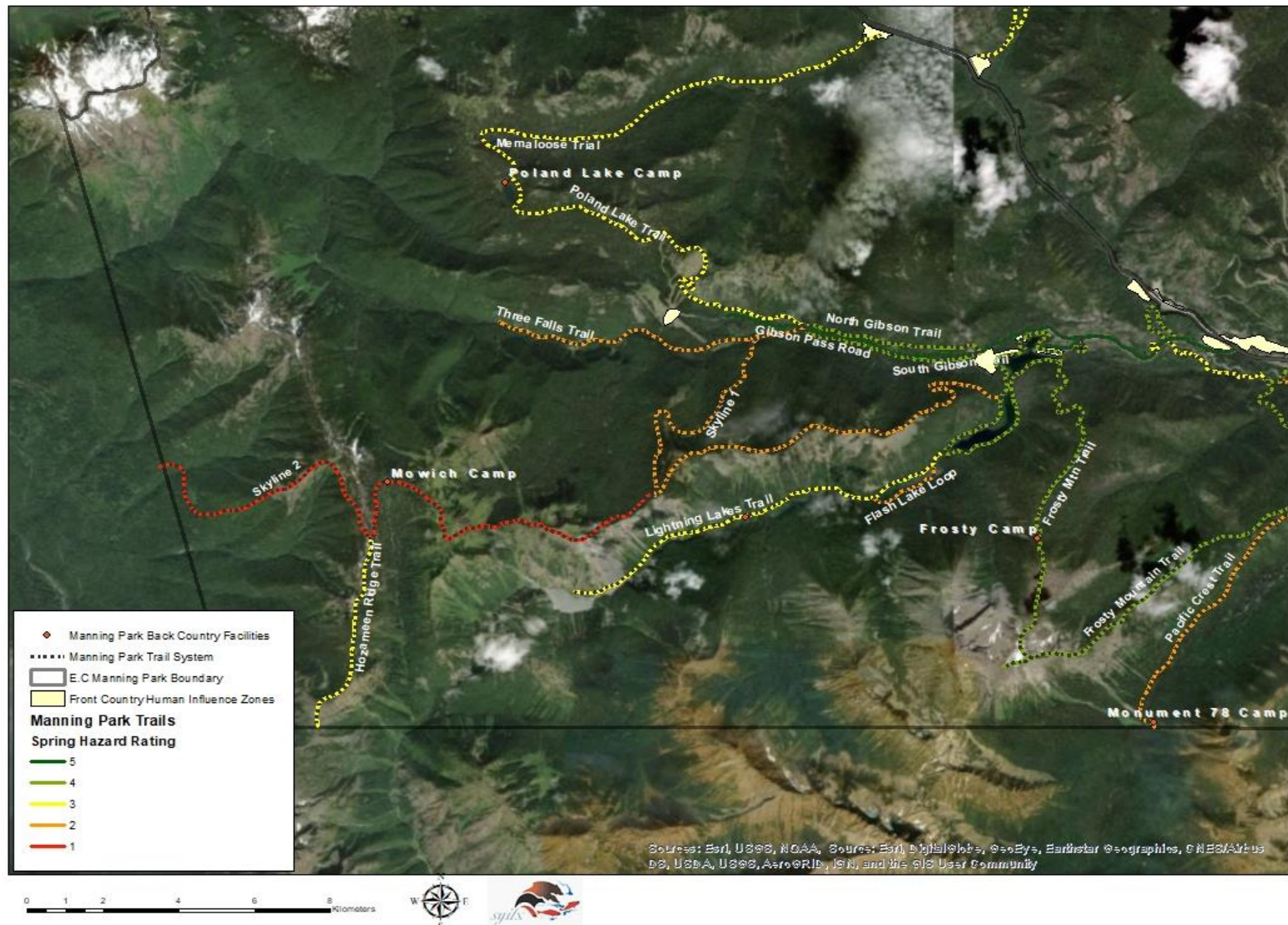
Manning and Cathedral Bear Hazard Assessment



Manning and Cathedral Bear Hazard Assessment



Manning and Cathedral Bear Hazard Assessment

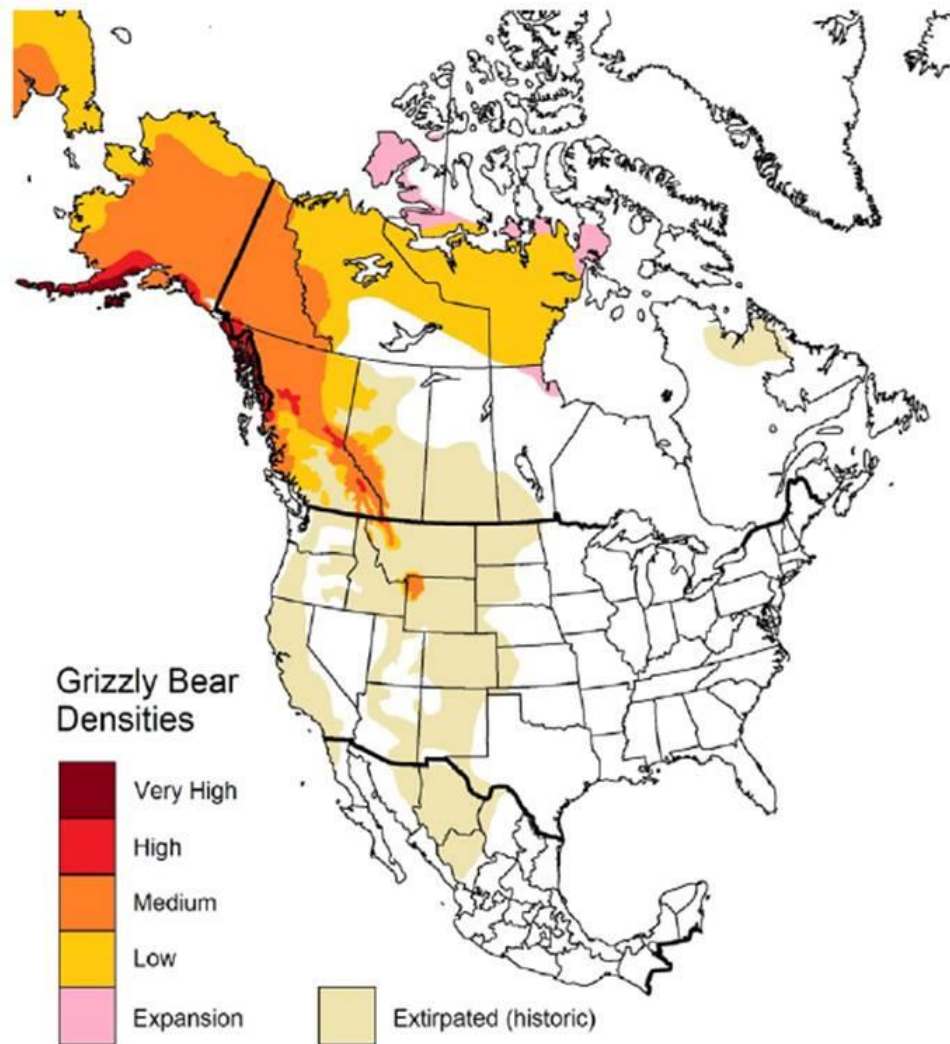


Manning and Cathedral Bear Hazard Assessment

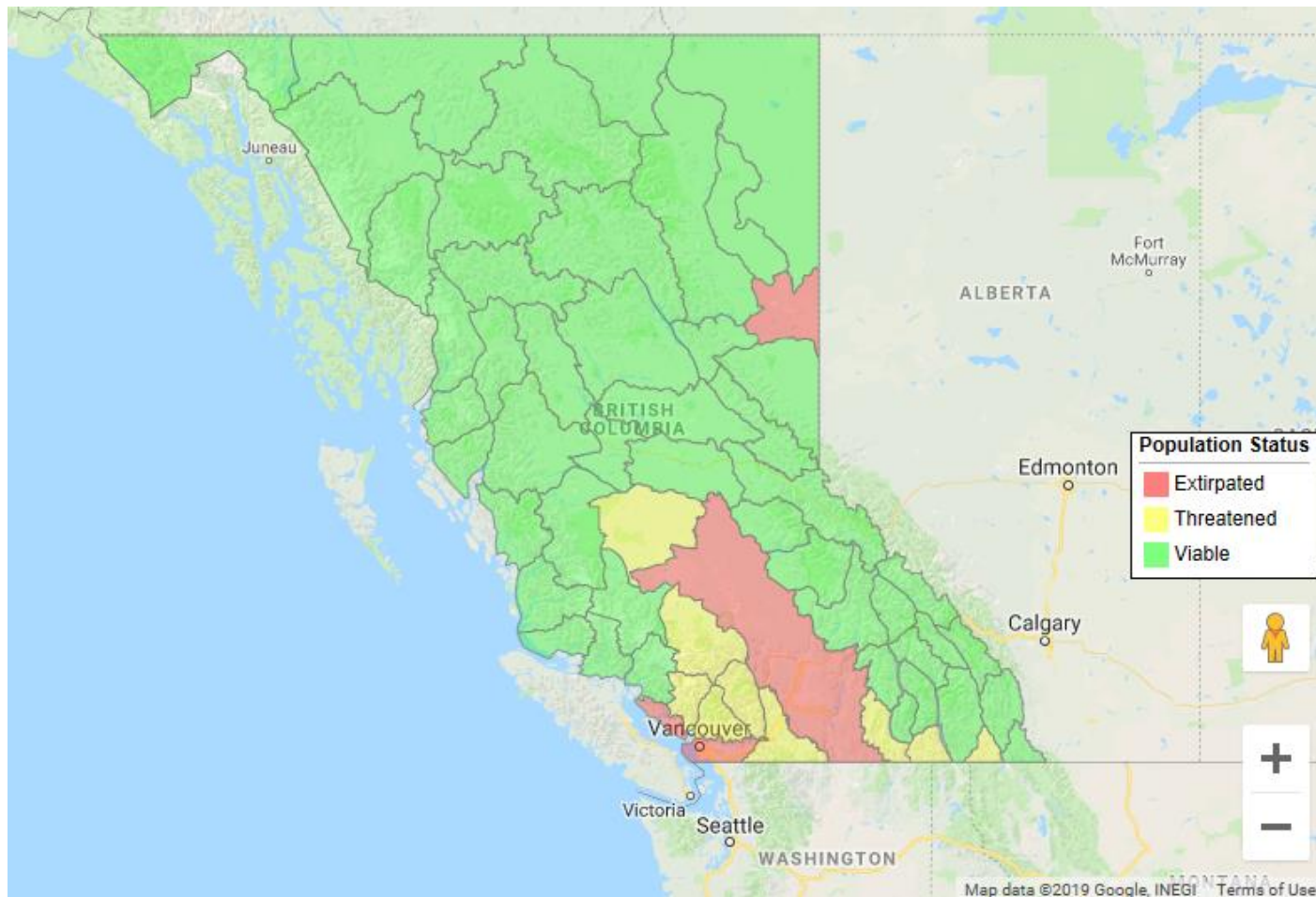


Front country attractant issues

COSEWIC ATK Study



COSEWIC ATK Study



Okanagan GBPU Inventory



CameraName

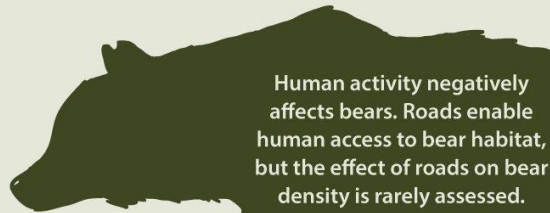
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The big issue – Grizzly bears and road access don't mix

Running out of room:

the impact of roads on grizzly bears.



Human activity negatively affects bears. Roads enable human access to bear habitat, but the effect of roads on bear density is rarely assessed.



Q: How do roads affect grizzly bear density?



We performed DNA-based, spatially explicit capture-recapture to estimate the density of a threatened grizzly bear population in British Columbia, Canada.

Road densities greater than 0.6 km/km² were associated with fewer bears.



Areas with quality habitat and few roads had the most bears.

Restricting road access is effective. Road closures boosted bear densities by 27% in areas within the closures.



This grizzly bear population has been increasing (~50% increase since 1997) after a long history of persecution, but additional reduction of road densities is needed.

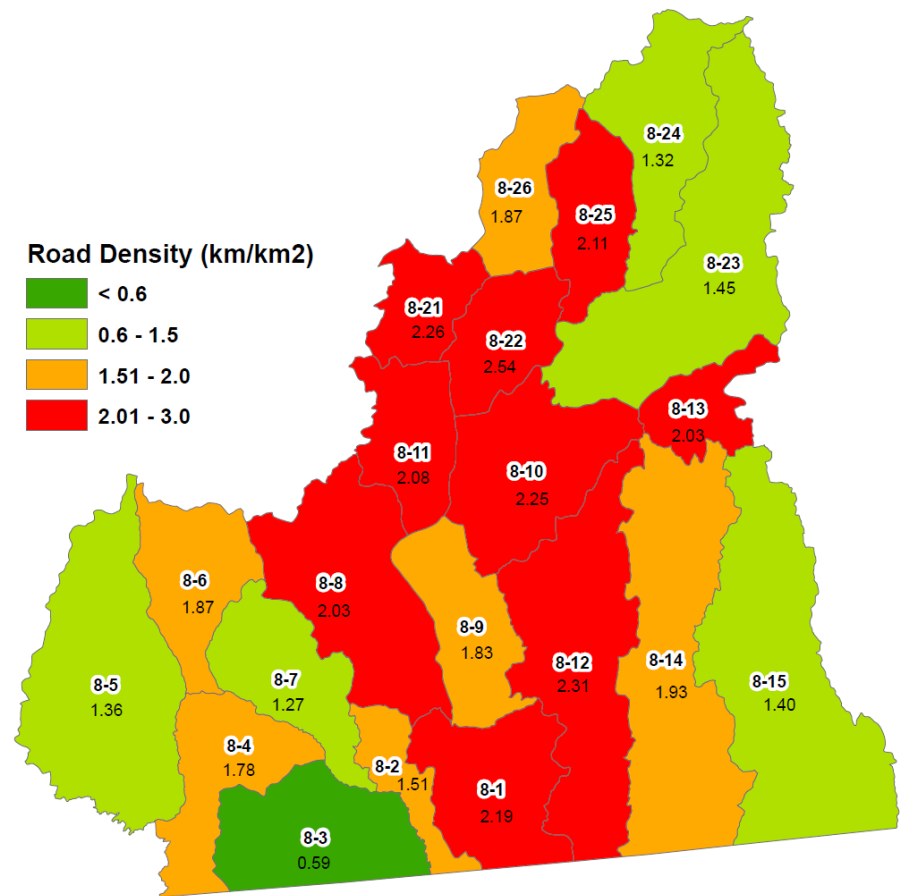
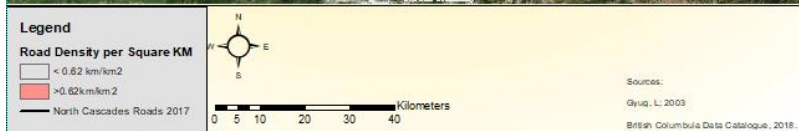
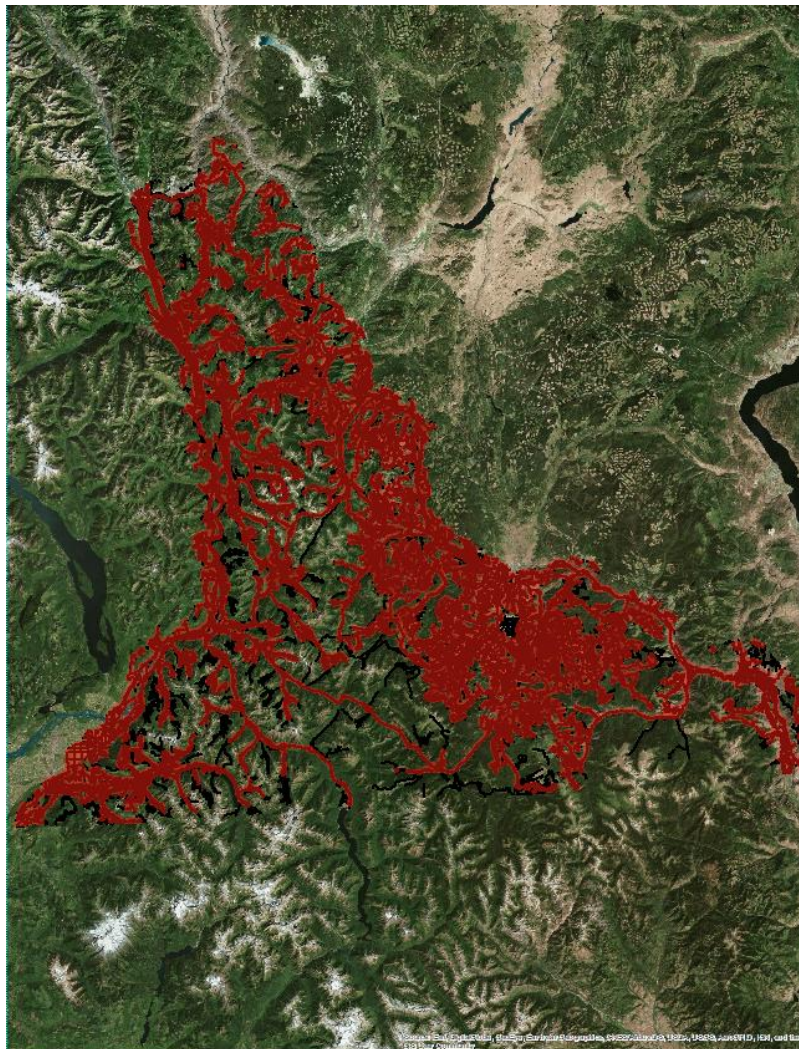


Lamb, C.T., Mowat, G., Reid, A., Smit, L., Proctor, M., McLellan, B.M., Nielsen, S.E., Boutin, S. (2018). The effect of habitat quality and access management on the density of a recovering grizzly bear population. *Journal of Applied Ecology*.

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infographic by Kate Broadley @kate_sciart

North Cascades Road Densities- 2017



Road density in the North Cascades (left), and road density by MU for Region 8 (above).

Conclusion

“Grizzly Bear is the steward of the Land. Once the stewards of our land are gone, what’s left for us?”

“Bear is my brother. When I move, I want my house to be as ready as possible.”

—Darwyn John. Joint Nation Grizzly Bear Working Group, Sta’ti’mc

Questions?

