

Landscape Conservation Design LT Meeting 10-10-23

Teams recording:

<https://www.sciencebase.gov/catalog/item/6525b4f8d34e44db0e2ec8dc>

Welcome & Introductions

- Entered in chat box

LCD background and concepts

- Analysis Team
 - o Working hard to finalize Phase 2!

ClimateNA data draw (Xiaosi Lai – unable to attend meeting)

- University of Montana student
- Extracted data from ClimateNA for the Crown geography
- Created an excel document as a guide/reference sheet for the climate data
 - o Under “GIS and MAPS > Climate_NorthAmerica (Western NA)” in Box
- Thank you, Xiaosi!

Crown LCD Ecological Features

- Ecological features are selected by the Crown LCD
 - o Broad representations of the landscape
 - o A select few important features on the landscape that we have data for
- Conceptual models
 - o Are fluid and can be adjusted with more information
 - o Made to generally understand the conservation situation for a specific feature based on current knowledge
 - o Literature review + science and expert review = conceptual models
 - o Where should we deliver conservation investments if we wanted to conserve:
 - 30%
 - Or 70% of the feature on the landscape
- Social, Cultural, Economic Features tabled to Phase 3

Connectivity Modeling (Kathy Zeller)

- Ecological Connectivity in the Crown of the Continent
- Kathy Zeller shared the methodology for the connectivity models
- Conceptual Approach
 - o Connectiveness metric developed by McGarigal et al. 2018
- Questions
 - o Phil

- Q: Protected areas drop in overall effectiveness in 2080 – why are they less connected?
 - A: All are being driven by climate layers
 - ClimateNA data for many features
 - Changes in the variables
 - Things changing more rapidly at higher altitudes
 - Constanza
 - Q: Kathy, can you discuss which features especially led to decrease in connectivity in valley bottoms?
 - A: Climate deficit and temp were changing more
 - Orien Richmond
 - Q: How does dispersal ability play into how we think of connectivity?
 - A: Did it at multiple scales to try to capture dispersal abilities
- America the Beautiful & Target One initiatives
 - Collectively as a society should be seeking to conserve 30% of the landscape by 2030
 - 17-18% of Crown are under IECN standards

Phase 2 Spatial Designs

- Begin with feature on landscape
- Determine driver and costs
 - Biophysical factor
 - Threat
- How does it relate to the feature value
- Species Example
 - Canada Lynx = Feature
 - Driver = Human behavior
 - Costs = oil and gas extraction (threat) causes habitat loss (biophysical factor (BF)) causes competition (BF)
 - Feature value = survival
 - Bring everything together for conservation opportunity
 - Where are lynx currently?
 - What are the pressing threats to lynx and their habitat?
 - What influences our ability to deliver conservation to ensure Canada Lynx populations persist?
- Create spatial design aka optimization model aka map

Phase 3 and 2024

- America the Beautiful Challenge funding
 - We're going to receive a subgrant from CSKT
 - Many of Phase 3 work is being funded by this grant
 - Workshops
 - Admin

- Different positions to help with capacity
 - Social, Cultural and Economic features need addressed
- Next Steps
 - Workshops
 - Land managers and feature experts review process and modeling so far
 - Go through other conservation plans and assessments
 - Who? – has the bandwidth to collaborate?
 - What? – what is the mandate (focal features)? authorities? constraints?
 - When? – is the plan’s timeframe? time-bound objectives?
 - How? – what threats will be addressed? how will objectives be achieved (strategies)? what resources are brought to bear (opportunities)?
 - Create the strategic design
 - Theory of Change models

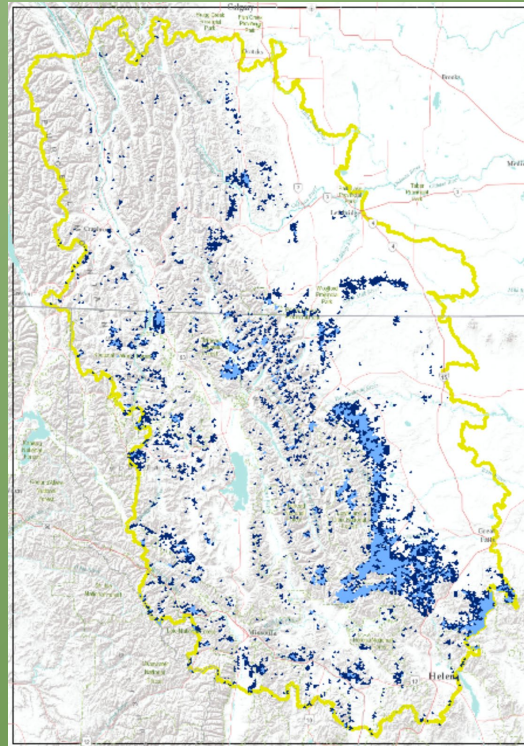
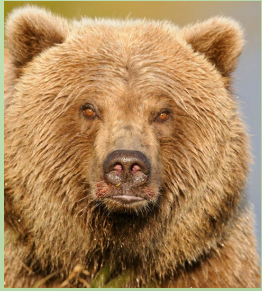
Discussion – Q&A

- Orien Richmond
 - What has worked well in this collaborative conservation work?
 - CMP< Roundtable and y2y have been operating on a cross boundary cross entity scale – this helps with resource management and planning the connectivity models
 - Technology and people together

News from around the Crown

- Constanza – Flathead Lakers – Flathead Valley – Project Wind Turbine
 - Solution summit - January
 - Bringing experts and people together
 - Creating roadmap and solutions
 - Connecting to LCD group for getting involved in this
- Amy Seaman – Montana Watershed Coordination Council
 - Trying to build watershed fund for building capacity of small watershed groups
 - Mary T McClelland
 - *It is so exciting to know that this excellent work is taking place. A small update on the community level is the West Glacier Vision Plan, will be considered by the Commissioners again on the 17th - a five year project. Will report back!*
 - Aubin Douglas
 - The Division of Realty folks (USFWS) are continuing to acquire conservation easements in the Lost Trail Conservation Area (and other western Conservation Areas).

Crown LCD - Phase 2



Leadership Team call

10 October 2023

Today's Agenda

1. *Welcome & Introductions (chat box)*
2. *LCD background and concepts*
 - *Analysis team & their great work*
3. *ClimateNA data draw (Xiaosi Lai)*
4. *Crown LCD Ecological Features*
 - *Social, Cultural, Economic Features*
tabled to Phase 3
5. *Connectivity Modeling (Kathy Zeller)*
 - *America the Beautiful & Target One*
initiatives
6. *Phase 2 Spatial Designs*
 - *Species Example*
 - *Habitat example*
7. *Phase 3 and 2024*
 - *ATBC funding*
 - *Social, Cultural and Economic*
features
 - *Workshops*
8. *Discussion – Q&A*
9. *News from around the Crown*

What is Landscape Conservation Design?

- *A partner-driven approach to achieve a sustainable, resilient landscape that meets the ecological and social needs of current and future generations*
- **iterative**
- **collaborative**
- **holistic, and**
- **transparent**
- *results in co-developed maps, analytical tools, and strategies that enable stakeholders to achieve collective landscape goals.*

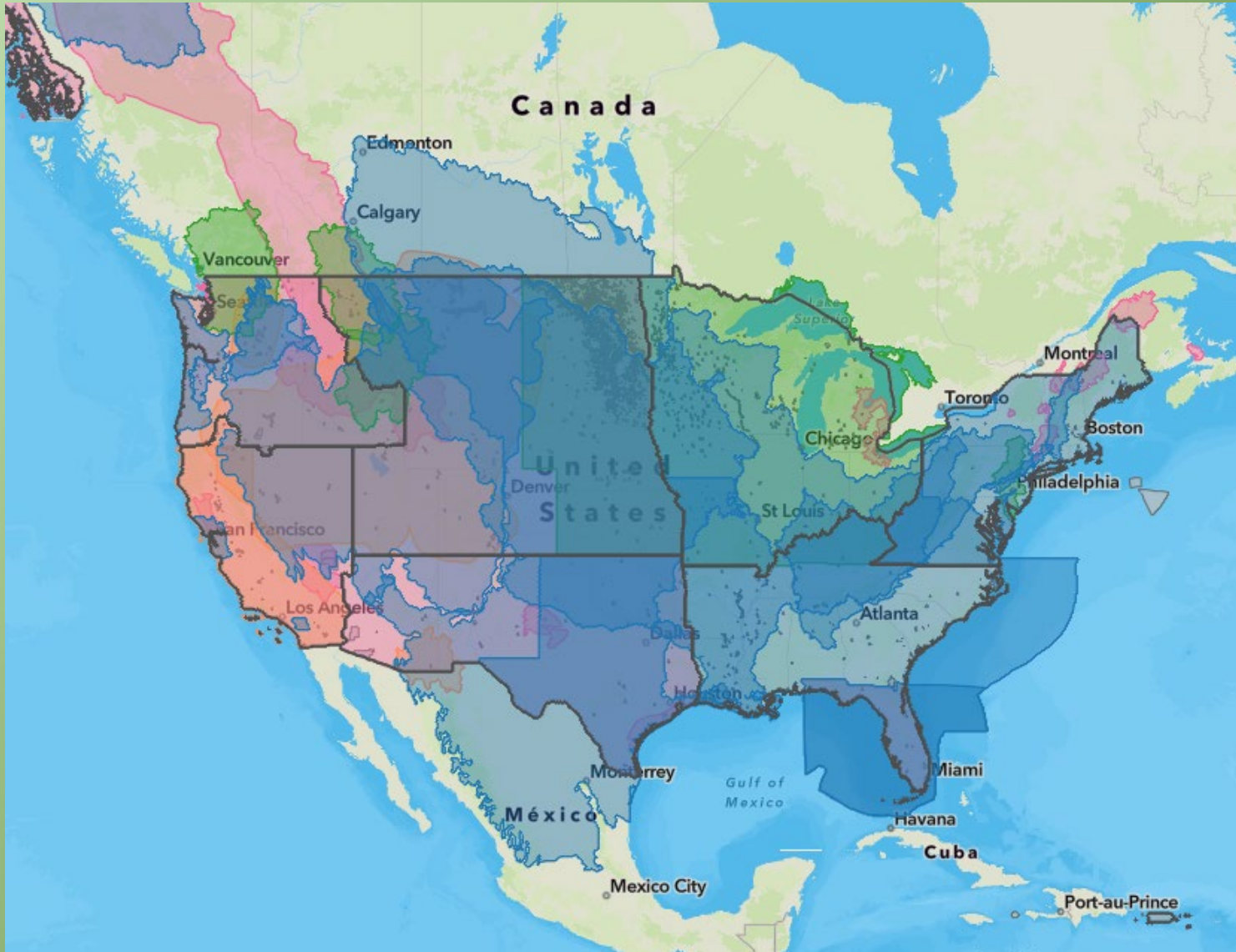
Phase 2:

Phase 3:



See: [A Primer on Landscape Conservation Design](#)

Why is Landscape Conservation Design so Cool?



Assessment of Landscape Plans (2022)

- *At least 24 LCDs that USFWS is involved with*

Appalachian NatureScape Design

Arid Lands Initiative

Boreal Ecosystem Analysis for Conservation Networks

Cascades to Coast Landscape Collaborative

Central Grasslands Roadmap

Connect the Connecticut

Delmarva Restoration and Conservation Network

Florida Blueprint

Florida Marine Blueprint and Conservation Assets

Highlands Conservation Program

Mississippi Basin Gulf Hypoxia Initiative Precision Conservation Blueprint

Crown LCD Process

INITIATE
Initiate the LCD

1



project phase

1

2019–2020

- Crown Managers Partnership convened the LCD
- Leadership Team formed (42 partners)
- Analysis and Technical teams assembled

CONVENE
Convene stakeholders & frame the LCD

2



2

2020–2021

- LCD vision created
- Project area defined
- Landscape features selected
- 63 management plans reviewed

ASSESS
Assess current & future desired conditions

3



3

2020–2022

- Social, Cultural and Economic Team initiated
- 15 conceptual models drafted
- >300 spatial data sets assembled
- 51 subject matter experts surveyed

SPATIAL DESIGN
Identify where functions & opportunities exist

4



2021–2023

- Conceptual models refined
- 55 landscape feature data sets and >60 cost data sets synthesized
- Spatial designs for 15 landscape features developed

STRATEGY DESIGN
Arrive at a design for decision making

5



2023–beyond

- Model refinement through workshops
- Strategic planning
- Implementation and monitoring plan

Crown LCD Resources

[LCD Home Page](#)

[Landscape Features](#)

[Partners](#)

[Documents & Products](#)

[Data Catalog & Repository](#)

Crown LCD Phase 2

CONVENE 2
Convene stakeholders
& frame the LCD



ASSESS 3
Assess current & future
desired conditions



SPATIAL DESIGN 4
Identify where functions
& opportunities exist



Phase 2 Goals:

- *co-developed maps & analytical tools*
- *AKA Spatial Designs*
- *AKA a “blueprint”*

Phase 3 Goals:

... strategies that enable stakeholders to achieve collective landscape vision

- *AKA Strategy Design*
- *AKA a “roadmap”*

Literature Review

Draft Conceptual Model

Elicit Expert Knowledge

Vetted Conceptual Model

Data Availability, Extent, Veracity

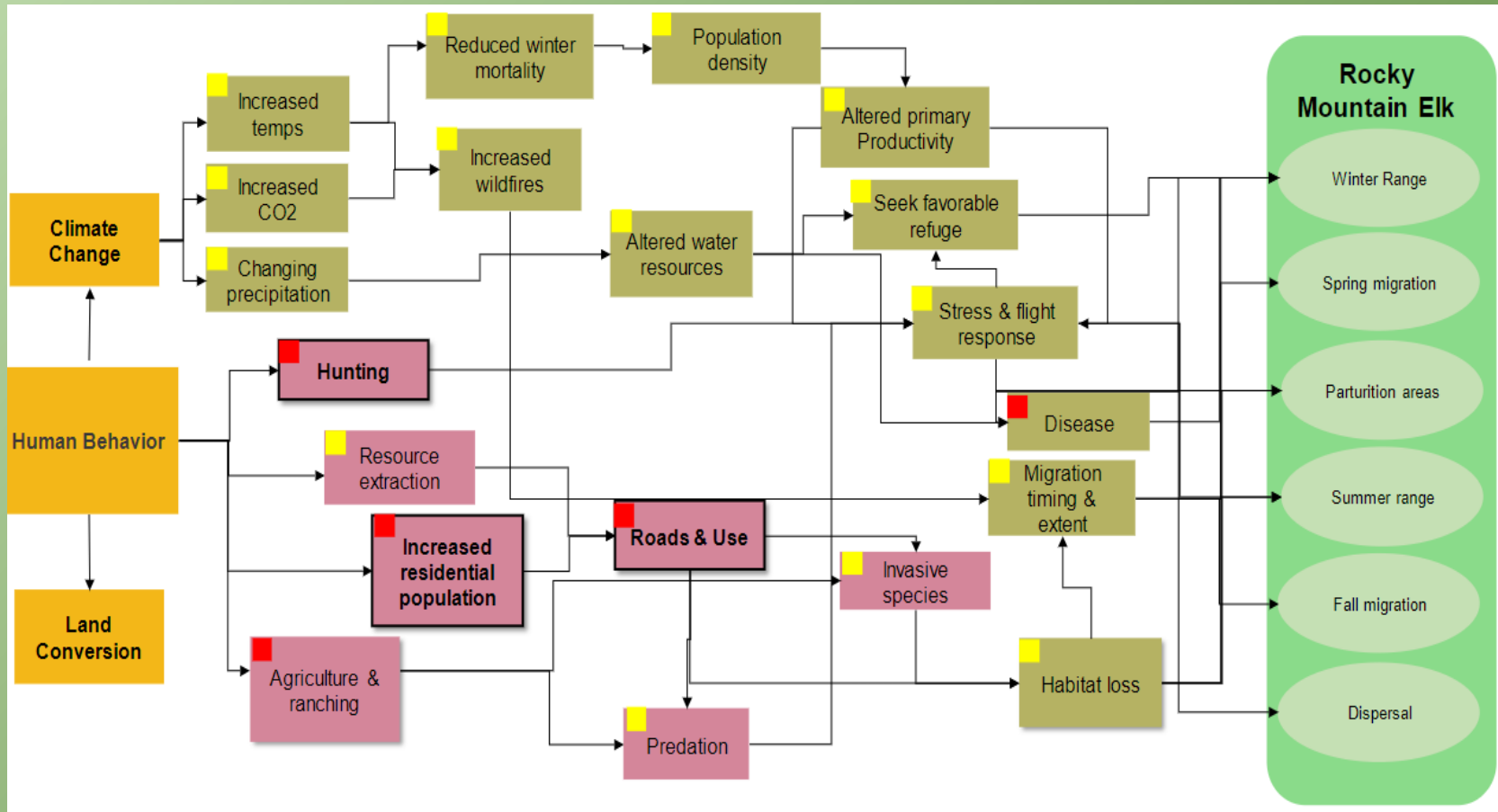
Optimization model parameterization

Conservation Opportunity Analysis

Spatial Design

Crown LCD Phase 2 Example Product:

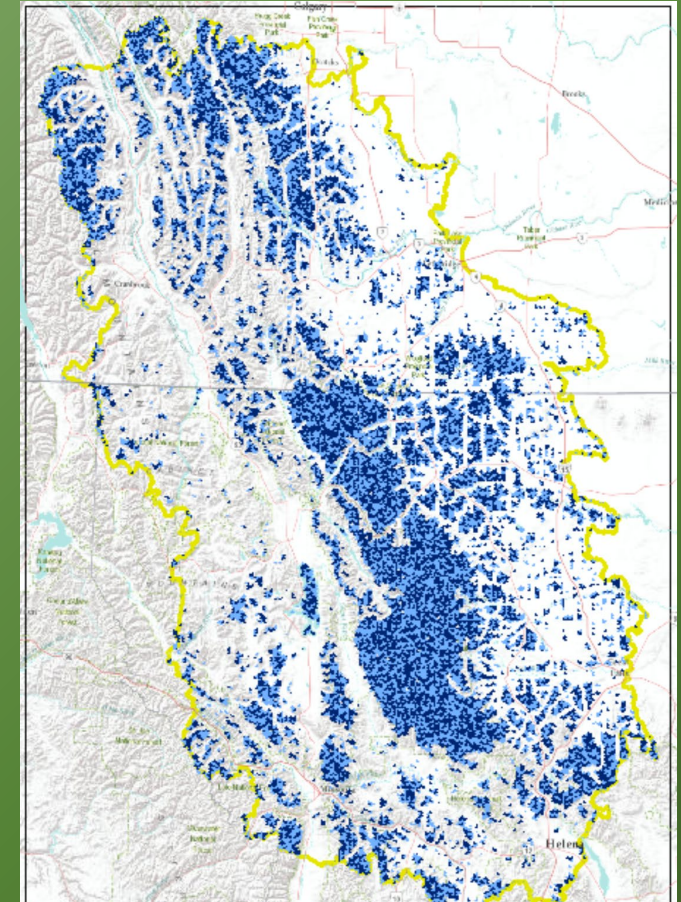
Rocky Mt. Elk Conceptual Model



Model Legend

- Driver
- Threat
- Biophysical Factor
- Data contributing to spatial design
- Landscape Feature
- Key Feature Attribute
- High Threat/Biophysical Factor
- Lower Threat/Biophysical Factor

Spatial Design:



- Retain 30% of current elk opportunity
- Retain 70% of current elk opportunity

Crown LCD Phase 2

CONVENE 2
Convene stakeholders
& frame the LCD



ASSESS 3
Assess current & future
desired conditions



SPATIAL DESIGN 4
Identify where functions
& opportunities exist



Inspirations:

- [Systematic Conservation Planning](#) (Margules & Pressey 2000)
- [Conservation Planning](#) (Game and Groves 2016)
- [Nine Principles for Landscape Conservation Design](#) (Campelone et al. 2018)
- [Pathways to Success: Taking Conservation to Scale](#) (Salafsky & Margoluis 2021)

Tools:

- *Teamwork*
- *Knowledge*
- [Conservation Standards](#) (Formerly known as the Open Standards for the Practice of Conservation)
- [Marxan](#) tools designed to help conservation decision makers find solutions



Xiaosi Lai
ClimateNA (North America)

Ecological Features



Fine Features

Whitebark Pine

Bull Trout

Westslope Cutthroat

Mule Deer

Elk

Grizzly Bear

Wolverine

Canada Lynx

Coarse Features

Forest

Grassland

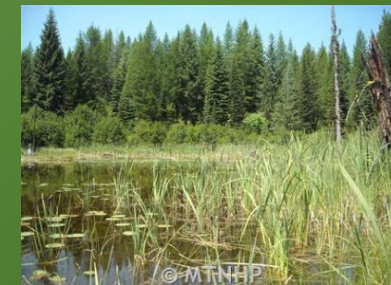
Shrubland

Wetland

Riparian

Aquatic Systems

Connectivity



Crown LCD Feature Selection Report



*Social, Cultural, Economic Features
Coming in Phase 3*

Situation Analysis

example: Wolverine



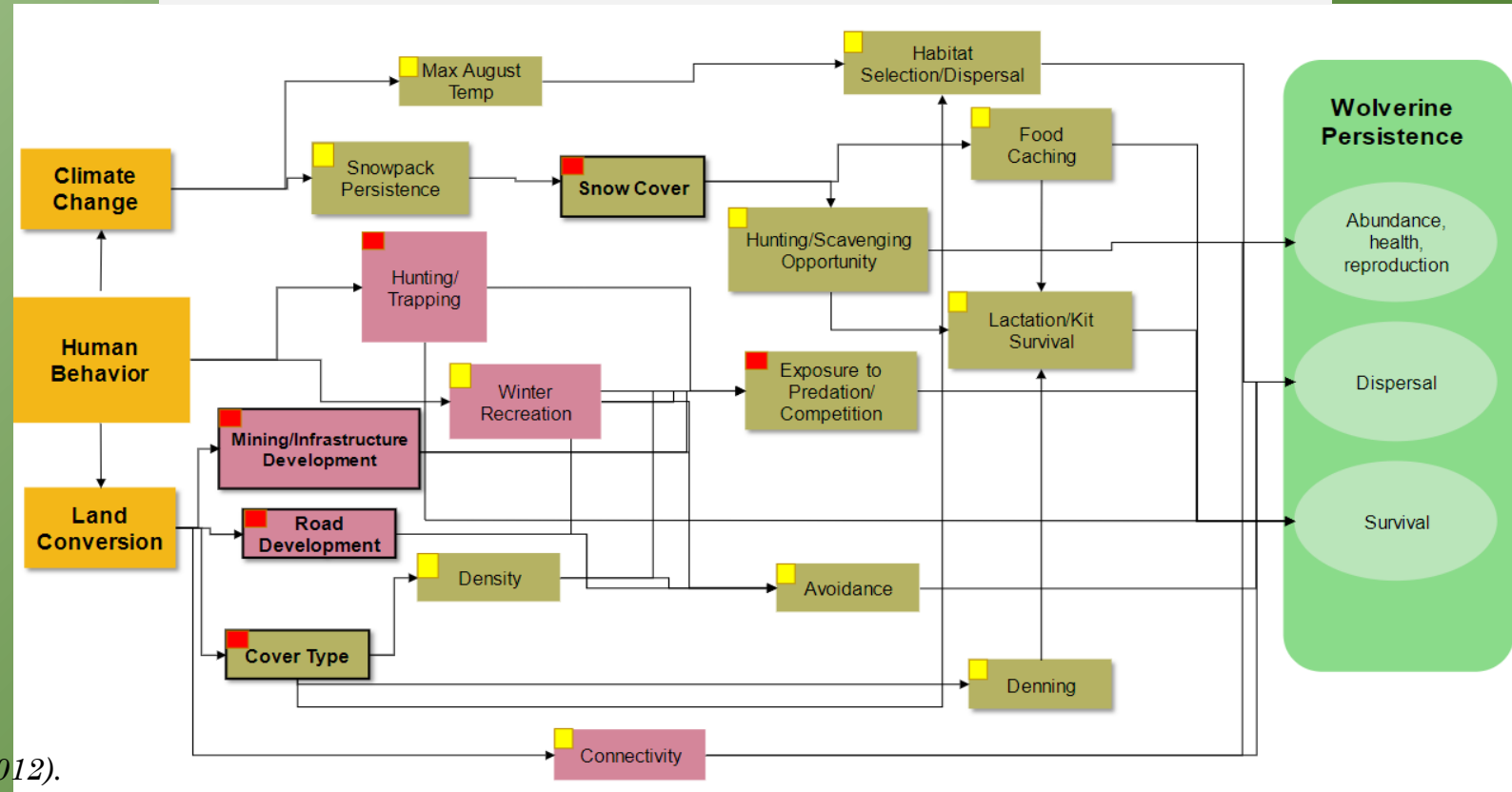
ASSESS
Assess current & future
desired conditions

3



Fine Features	Coarse Features
Whitebark Pine	Forest
Bull Trout	Grassland
Westslope Cutthroat	Shrubland
Mule Deer	Wetland
Elk	Riparian
Grizzly Bear	Aquatic Systems
Wolverine	Connectivity
Canada Lynx	

Crown LCD Wolverine Conceptual Model



Citations:

- Inman, R.M., Magoun, A. J., Persson, J., Mattisson, J. (2012).
- Carroll, C., Noss, R.F. and Paquet, P.C. (2001)
- Krebs, J., Lofroth, E. C., Parfitt, I. (2007)
- Copeland, et al. (2010)
- Rowland, M., et al. (2003).
- Krebs, J., Lofroth, E., Copeland, J., Banci, V., Cooley, D., Golden, H., Magoun, A., Mulders, R., Shults, B. (2004).

Model Legend

- Driver (Orange box)
- Threat (Pink box)
- Biophysical Factor (Olive box)
- Landscapes Feature (Green box)
- Key Feature Attribute (Light Green oval)
- High Threat/Biophysical Factor (Red square)
- Lower Threat/Biophysical Factor (Yellow square)
- Data contributing to spatial design (White square)

Situation Analysis

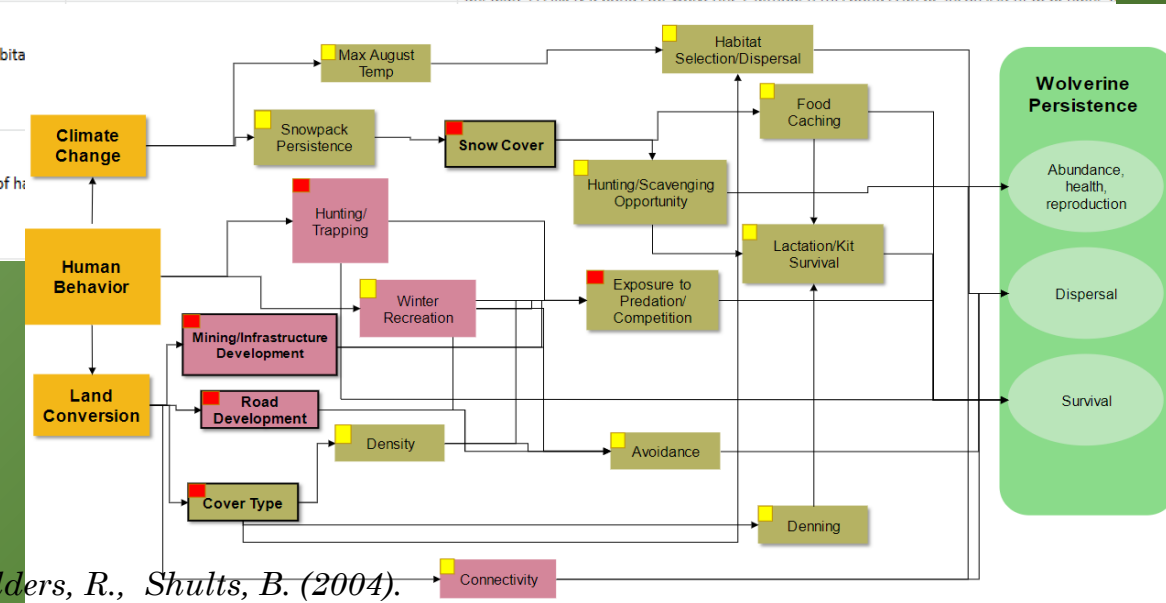
Wolverine



ASSESS 3
Assess current & future desired conditions



	A	B	C	D	E	F	G	H	I
1	Feature	Name and Affiliation/ Organization	Approximately how many years have you worked with the species/system?	What is your primary geography of interest?	Please describe your general perception of this feature conservation status in the Project Area	In your opinion, what is the single most critical threat to the long-term persistence and viability of this feature in the Crown ecosystem?	Please list 2-3 additional threats (in descending order, if appropriate) to the long-term persistence and viability of this feature in the Crown ecosystem.	Considering your answers for Questions 6 and 7 above, are you aware of spatial data that concisely describe or best approximate the key threat(s) you listed? If so, please briefly describe the data and provide a contact name or organization we should contact to acquire the data.	Please briefly critique the DRAFT Conceptual Model below. Do you see any critical aspect missing? Threat or Contributing Factor missing? Is some element in the model overstated (i.e., not relevant) for this feature?
45	Wolverine	Kevin McKelvey USFS Emeritus	25	Western NA	Apparently Secure	Climate change	Really, none.	Copeland et al. 2010, Inman et al. 2012, Aubry et al. in review	The model is very inclusive. Many of these are theoretical rather than current risks. For example, I don't believe that housing or mining really represent a risk to wolverines at this time.
46	Wolverine	Jason T Fisher, University of Victoria	18	AB, BC	Vulnerable	Human land-use development is the single greatest threat. This increases competition with coyotes and other mesocarnivores, depleting home ranges of resources. It increases why only one? Threats work in tandem with each other. Climate change is the biggest overarching threat; trapping and habitat loss to energy development exacerbate this.	Climate change, with reduced snow cover. This exposes natal dens, and makes landscapes more useable by competing lowland mesocarnivores (coyotes). The next is hunting and trapping exploitation, at least on the Canadian side.	Human land-use is best described in Alberta by the Alberta Biodiversity wall-to-wall human footprint inventory. https://abmi.ca/home/data-analytics/da-top/da-product-overview/Human-Footprint-Products/HF-inventory.html I don't know if BC has something similar. Landsat	Exposure to competitors is missing and this is a key element to wolverine persistence.
47	Wolverine	Rebecca Watters/ The Wolverine Foundation	13	MT, Crown	Vulnerable	Climate change is the biggest overarching threat; trapping and habitat loss to energy development exacerbate this.	trapping, recreation, development that reduces habitat and increases obstacles to dispersal	Rocky Mountain Research Station for climate-related habitat loss; Kim Heinemeyer at Round River Conservation Studies for recreation issues	- climate change/decreased snow cover will probably also lead to increased exposure to other threats. Both the risk of increased conflict mortality, and also increased competition for food/decline in den type and duration also leads to insecure denning; early melt-out of snow likely puts the kits at risk. Exposure to increased moisture - Wolverines, when they kill large ungulates, tend to do so in snow-stranded and tired; decreased snowpack may make these opportunities less available. Increased snowpack is likely a bonus for wolverines, although this bonus can be inconsistent depending on
48	Wolverine	Rick Yates, U.S. Forest Service-Retired	10	MT	Vulnerable	Climate-change	Trapping/Hunting, Loss of Habitat, Loss of Habitat Connectivity		
49	Wolverine	Garth Mowat	10	BC	Vulnerable	The decline in alpine habitats with climate change.	The loss of caribou as a key winter food; the loss of habitat due to human disturbance.		



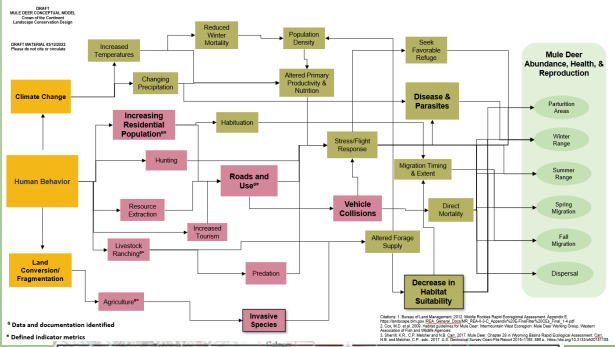
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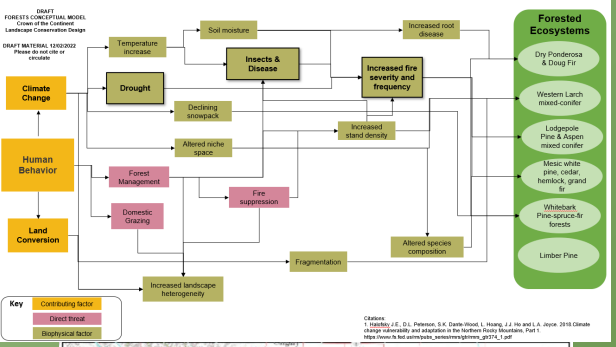
Ecological Feature Spatial Designs



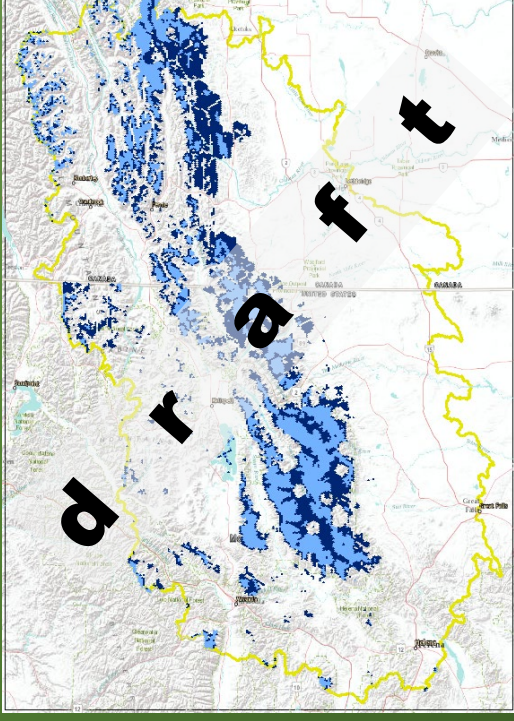
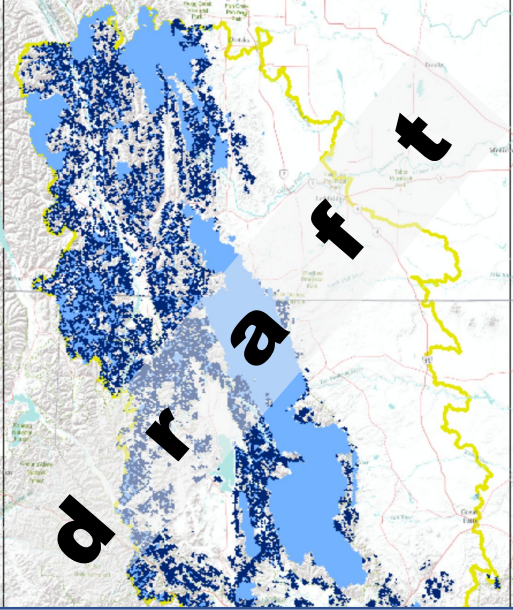
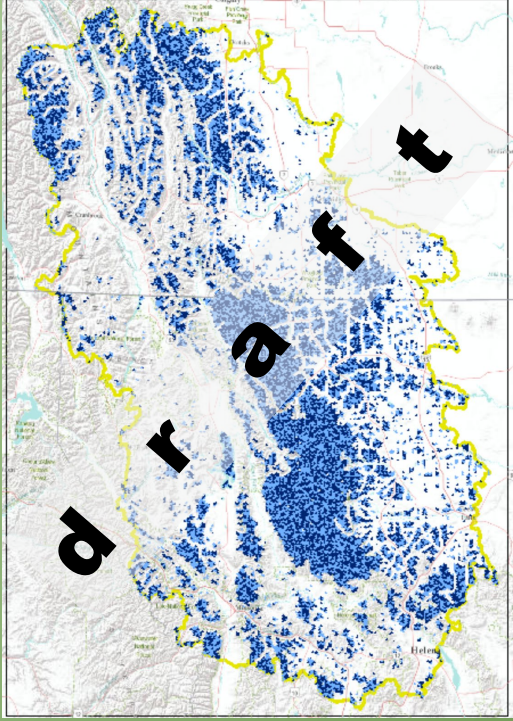
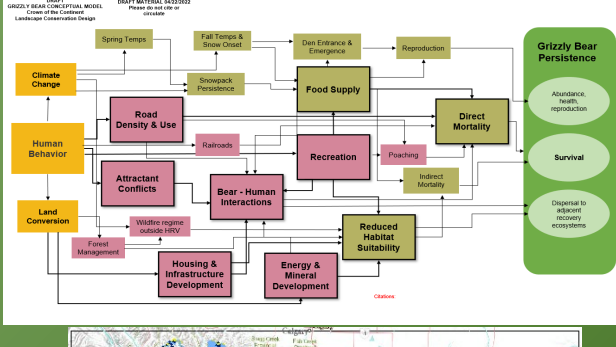
Elk





Forest



Grizzly Bear

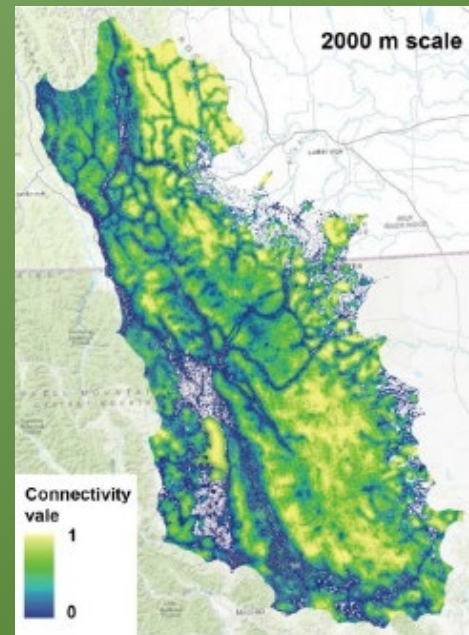


 Retain 30% of current feature opportunity
 Retain 70% of current feature opportunity

Kathy Zeller

Ecological Connectivity

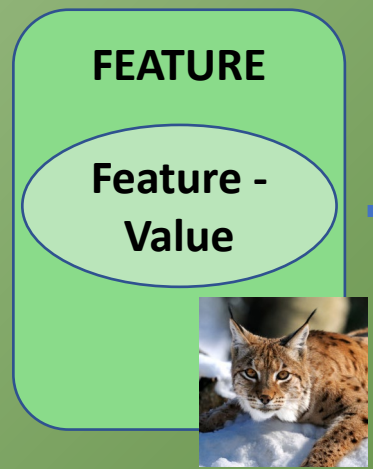
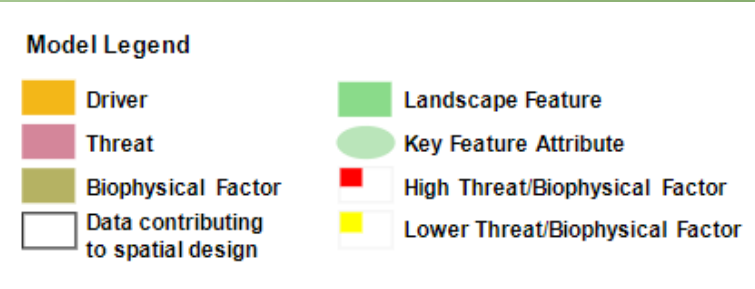
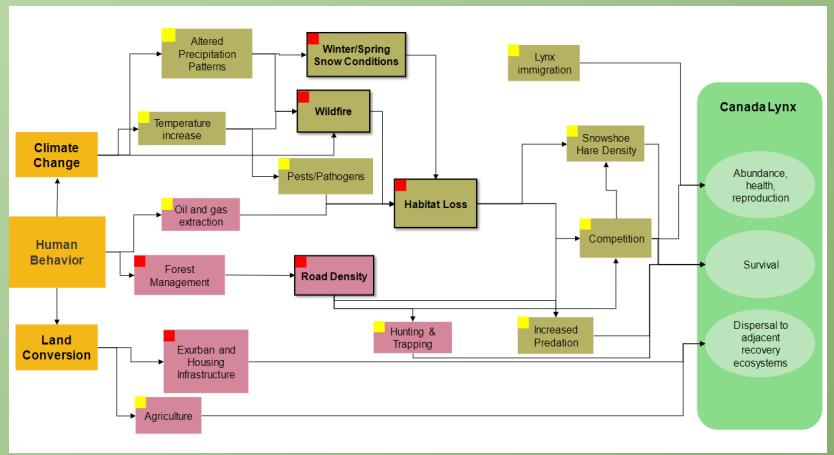
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Elk	Riparian
Grizzly Bear	Aquatic Systems
Wolverine	Connectivity
Canada Lynx	



Concepts to Landscapes



Crown LCD Canada Lynx Conceptual Model

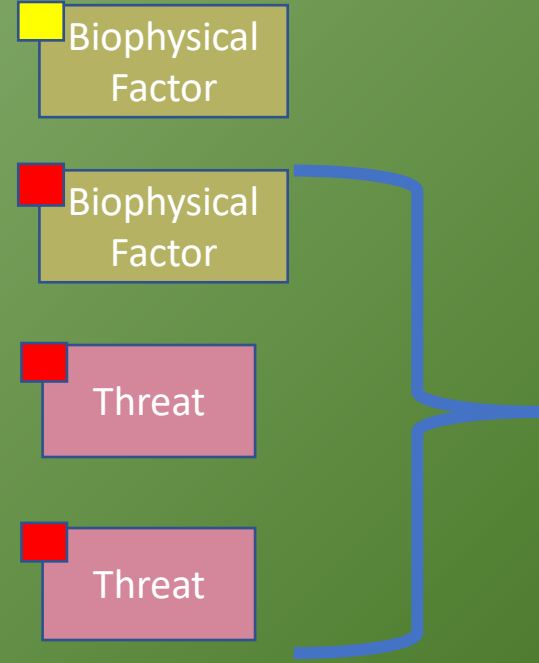


Feature

Spatial Design

AKA Optimization Model;
AKA a Map

DRIVER



COST

Only Threats and BFs that score high (red chip) and for which we have data

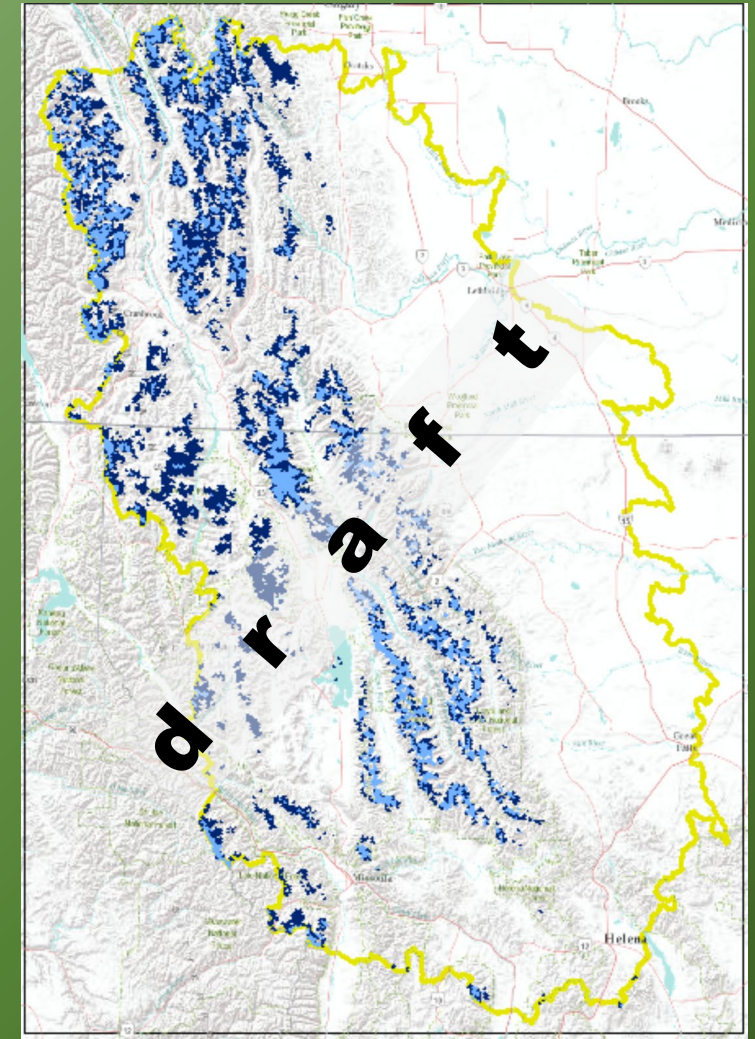
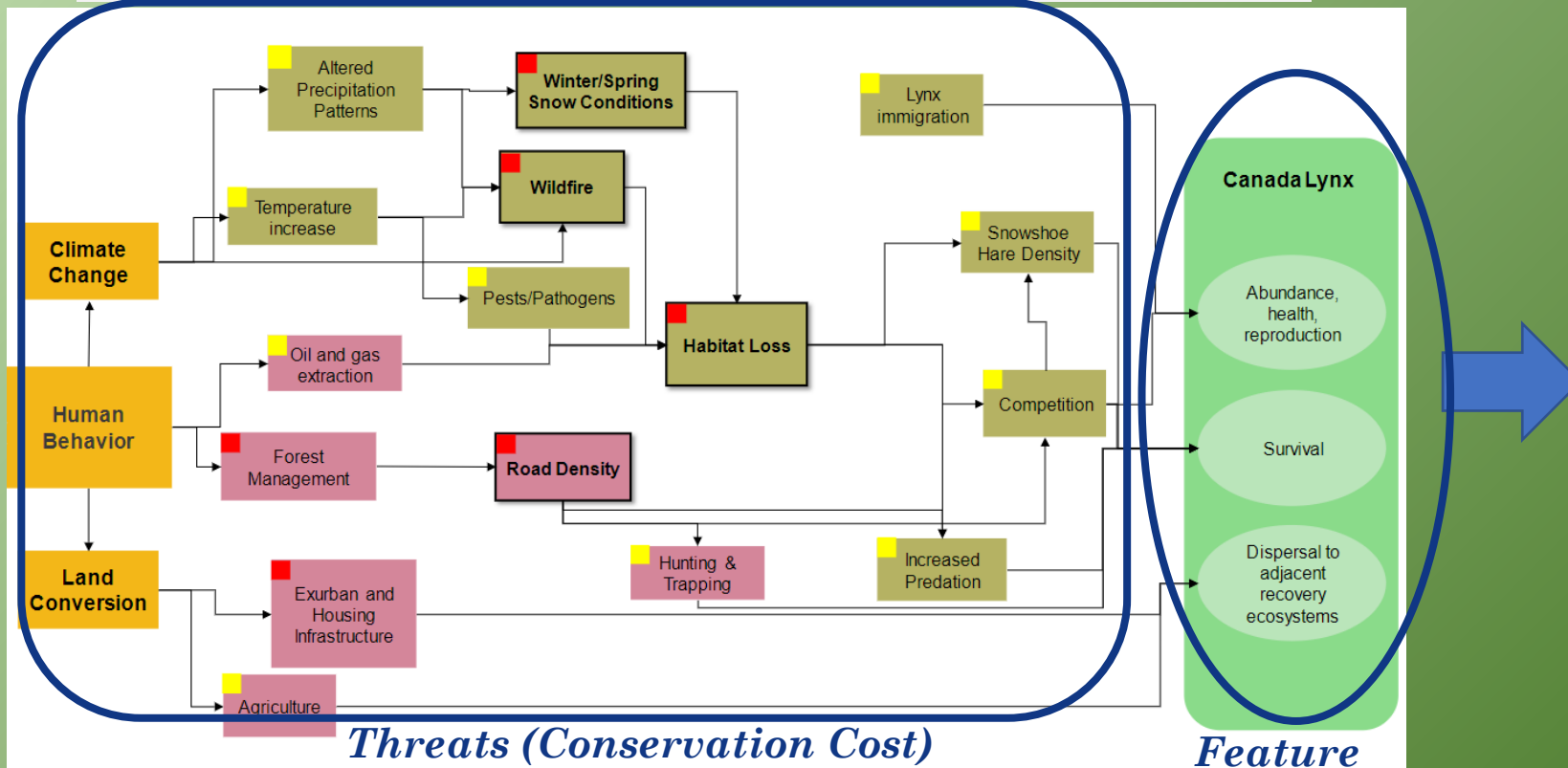
Concepts to Landscapes

Canada Lynx



SPATIAL DESIGN 4 Identify where functions & opportunities exist

Crown LCD Canada Lynx Conceptual Model



Where are lynx currently?

What are the pressing threats to lynx and their habitat?

What influences our ability to deliver conservation to ensure Canada Lynx populations persist?

Canada Lynx

“feature” data development



SPATIAL DESIGN
Identify where functions
& opportunities exist

4



Feature

Spatial Data

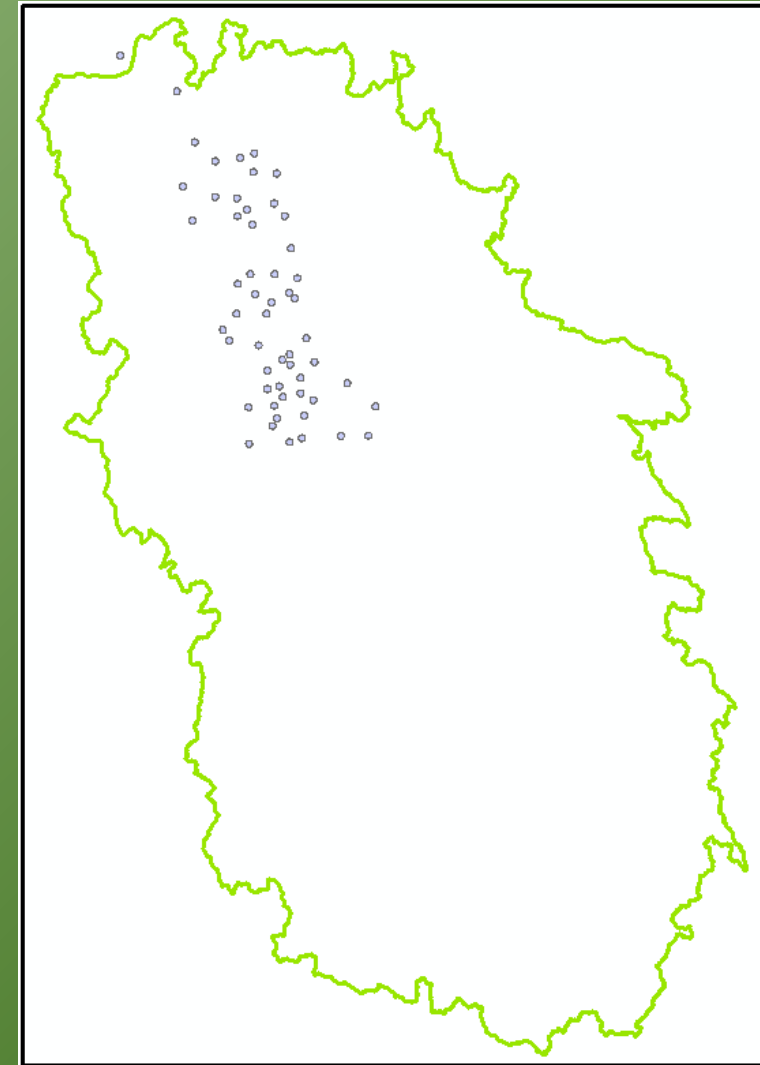
Canada Lynx

Abundance,
health,
reproduction

Survival

Dispersal to
adjacent
recovery
ecosystems

Remote Camera Database



Canada Lynx

“feature” data development



SPATIAL DESIGN
Identify where functions
& opportunities exist

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Feature

Spatial Data

Canada Lynx

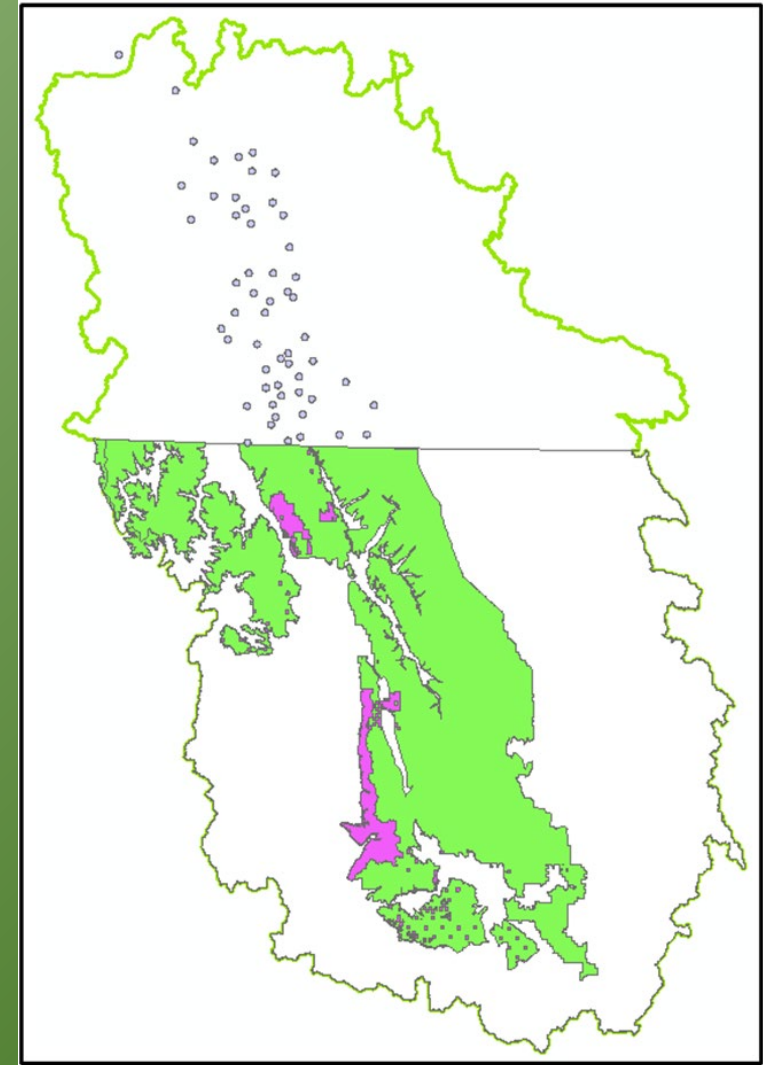
Abundance,
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Remote Camera Database

FWS Critical Habitat Designation



Canada Lynx

“feature” data development



SPATIAL DESIGN
Identify where functions
& opportunities exist

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Feature

Spatial Data

Canada Lynx

Abundance,
health,
reproduction

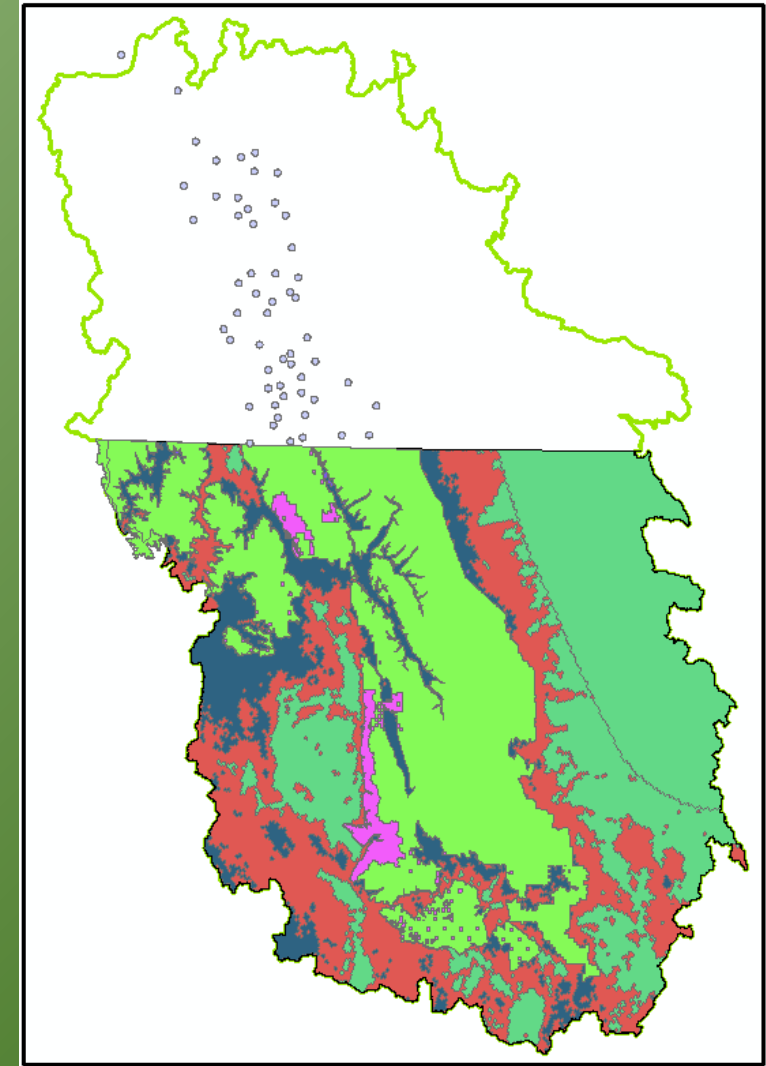
Survival

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Remote Camera Database

*MT NHP Lynx Suitability
Model*

FWS Critical Habitat Designation



Canada Lynx

“feature” data development



SPATIAL DESIGN
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Feature

Spatial Data

Canada Lynx

Abundance,
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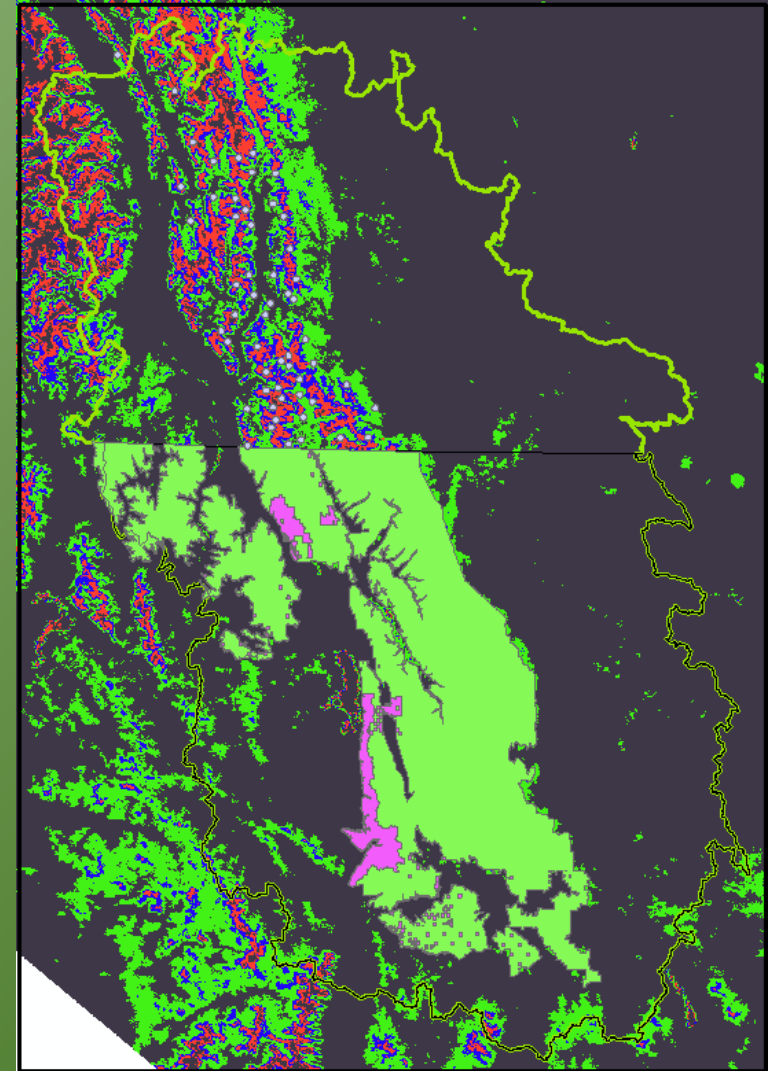
Dispersal to
adjacent
recovery
ecosystems

Remote Camera Database

*MT NHP Lynx Suitability
Model*

Spring Snow Persistence

FWS Critical Habitat Designation



Canada Lynx

“feature” data development



SPATIAL DESIGN
Identify where functions
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Feature

Canada Lynx

Abundance,
health,
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Survival

Dispersal to
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ecosystems

Spatial Data

Remote Camera Database

MT NHP Lynx Suitability Model

Spring Snow Persistence

FWS Critical Habitat Designation

Scoring

Camera	Score
Detection	10,000
None	0

Suitability	Score
Unsuitable	0
Low	2,000
Moderate	5,000
High	10,000

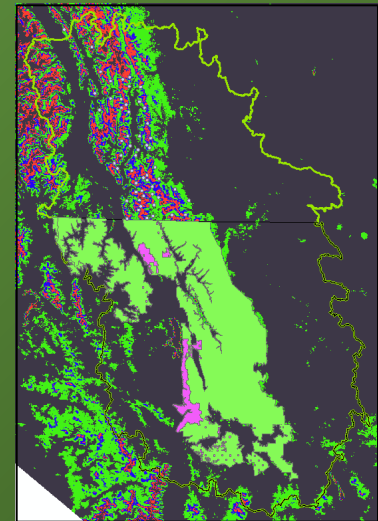
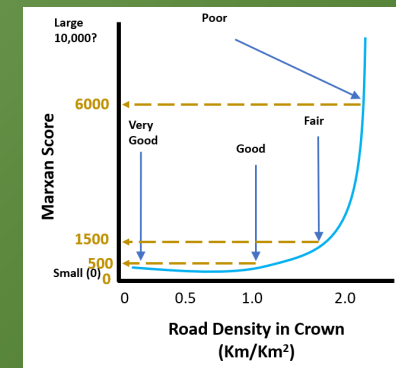
No Snow Years	Score
0	0
1-4	5,000
5-9	2,500
10-16	1,500
17	0

Habitat	Score
Critical	1,500
Not	0

Scoring based on:

- veracity of the data*
- peer-reviewed research*
- expert surveys*

Process fully documented and poised for Workshops & iteration



See: [Marxan Best Practices Handbook](#)

Assumptions, Adjustments and Iterations

*Crown Landscape Conservation Design
Partners convene to deliberate, and
address needed information and make
collaborative knowledge-based decisions
such as:*

- 1. Do we have the best data?*
- 2. How might we integrate the best data?*
- 3. .*
- 4. .*
- 5. .*

iterative
collaborative
holistic
transparent



...2023 Workshops!

Canada Lynx

a data-driven feature layer

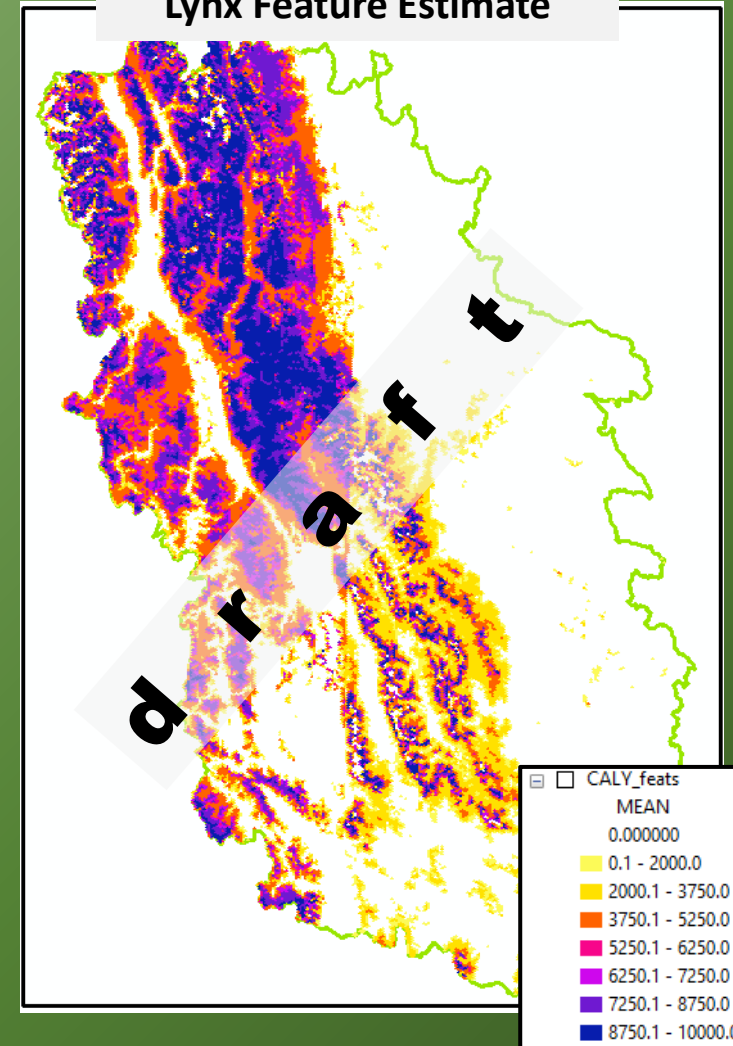


SPATIAL DESIGN
Identify where functions
& opportunities exist

4



Crown LCD – Phase 2 Lynx Feature Estimate



Feature

Canada Lynx

Abundance,
health,
reproduction

Survival

Dispersal to
adjacent
recovery
ecosystems

Spatial Data

Remote Camera Database

*MT NHP Lynx Suitability
Model*

FWS Critical Habitat Designation

Spring Snow Persistence

Scoring

Camera	Score
Detection	10,000
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Suitability	Score
Unsuitable	0
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Moderate	5,000
High	10,000

Habitat	Score
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Snow Years	Score
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1-4	5,000
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17	0

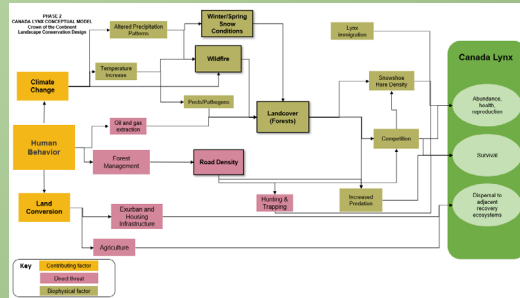
Canada Lynx

quantifying threats to Lynx persistence

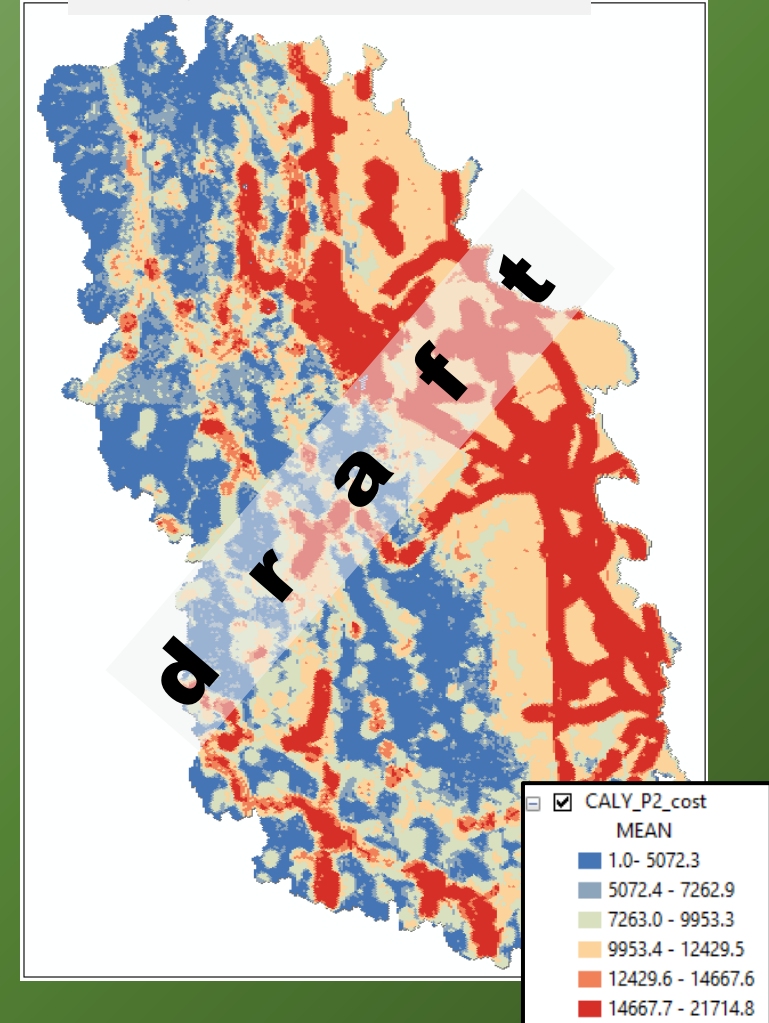


SPATIAL DESIGN
Identify where functions & opportunities exist

4



**Crown LCD – Phase 2
Lynx Cost Estimate**



Costs (Threats) Spatial Data

Winter/Spring Snow Conditions

AB_Snow_layer

Wildfire

InteragencyFirePerimeterHistory (US)
NFDB_Poly_202110707 (CAN)

Landcover (Forests)

CMP_LCD_Landcover2017
LCD_DEM_100m

Road Density

All_Roads_Crown_LCD

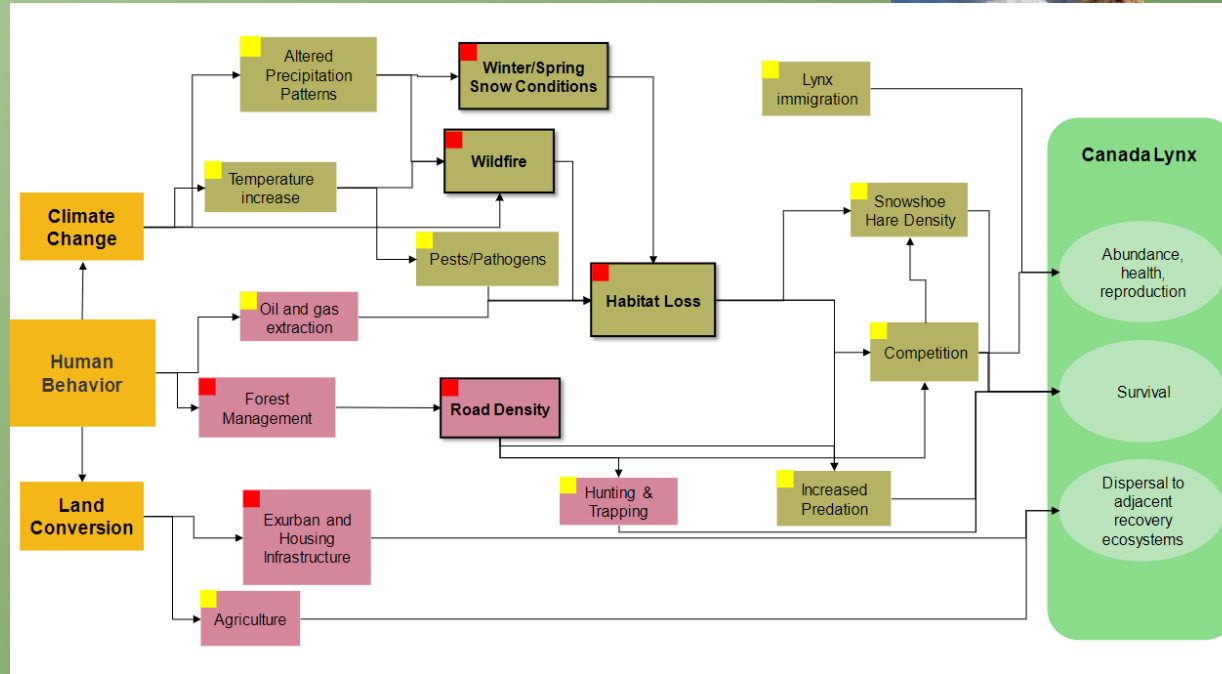
Canada Lynx

finding conservation opportunity

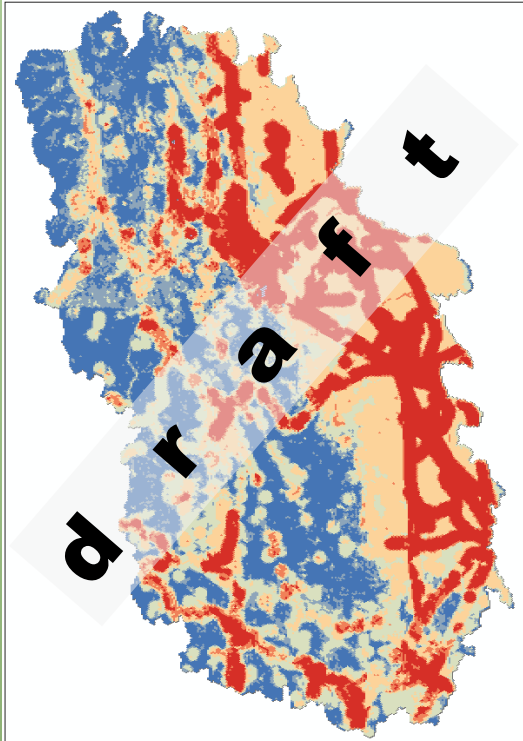


SPATIAL DESIGN
Identify where functions
& opportunities exist

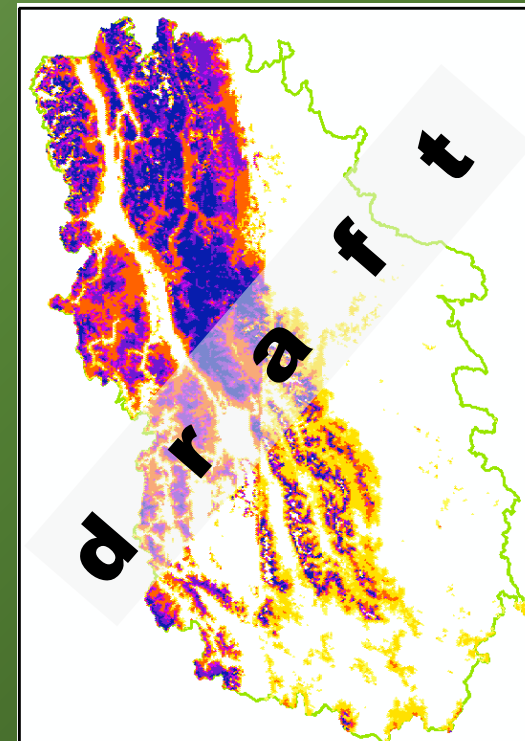
4



Crown LCD – Phase 2
Lynx Cost Estimate



Crown LCD – Phase 2
Lynx Feature Estimate



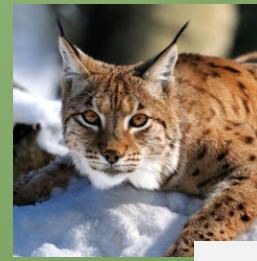
Can we find places good for [Lynx] where:

- threats are also low?*
- threats are manageable?*

In other words, can we find opportunities for lynx conservation?

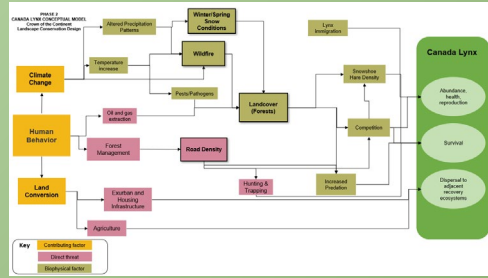
Canada Lynx

conservation opportunity

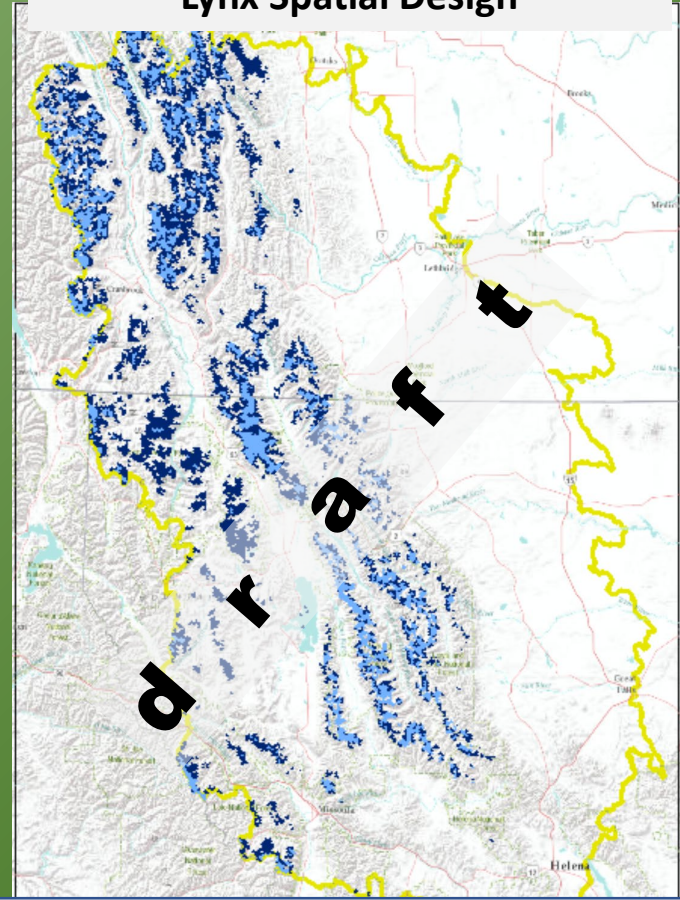


SPATIAL DESIGN
Identify where functions
& opportunities exist

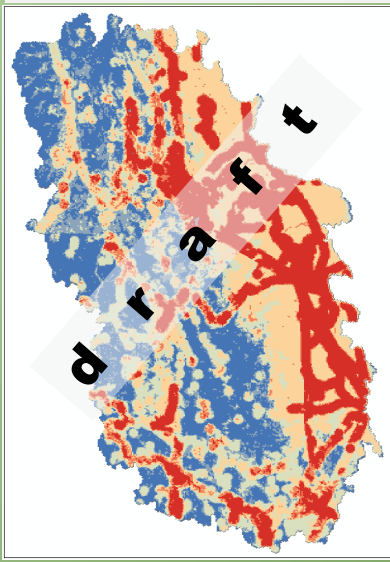
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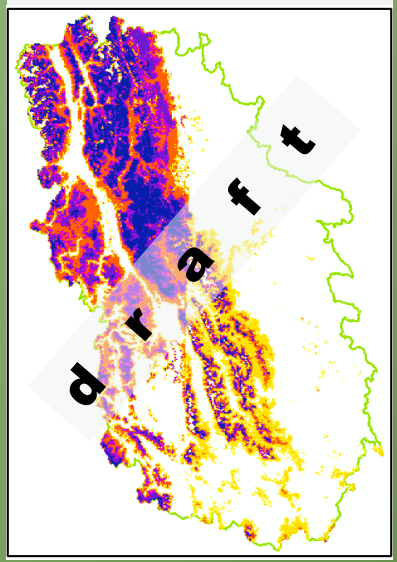
**Crown LCD – Phase 2
Lynx Spatial Design**



**Crown LCD – Phase 2
Lynx Cost Estimate**



**Crown LCD – Phase 2
Lynx Feature Estimate**



Conservation Planning Software

- Retain 30% of current lynx opportunity
- Retain 70% of current lynx opportunity

Assumptions, Adjustments and Iterations

Crown Landscape Conservation Design Partners convene to deliberate, and address needed information and make collaborative knowledge-based decisions such as:

1. Do we have the best data?
2. How might we integrate the best data?
3. How much of a feature is needed to ensure conservation?
4. What other landscape factors come into play?
5. .

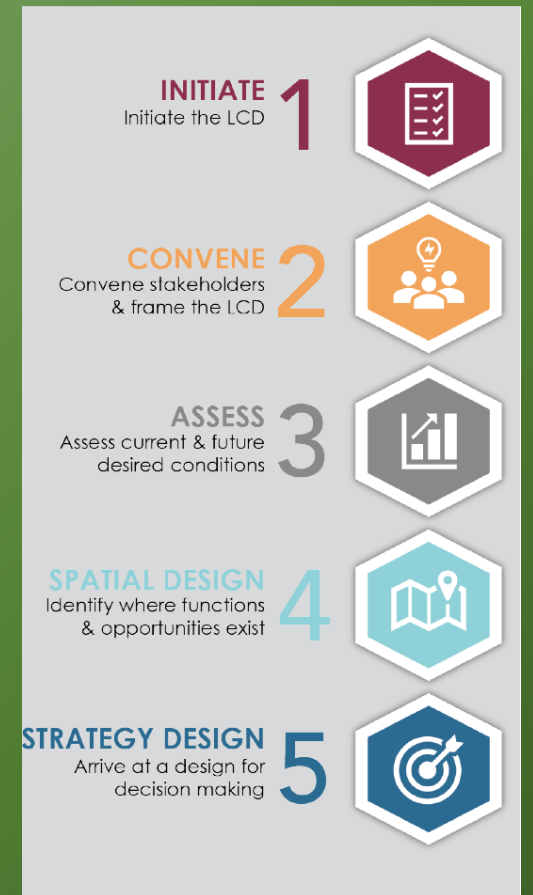
...2023 Workshops

iterative

collaborative

holistic

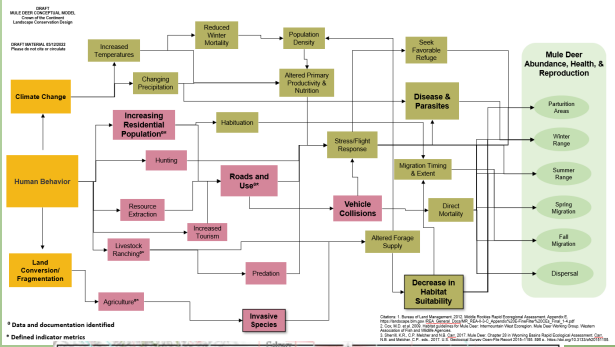
transparent



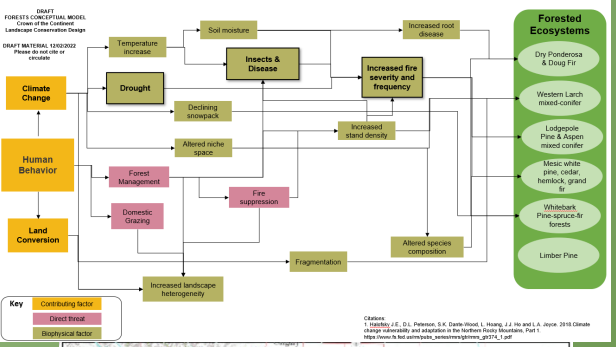
Ecological Feature Spatial Designs



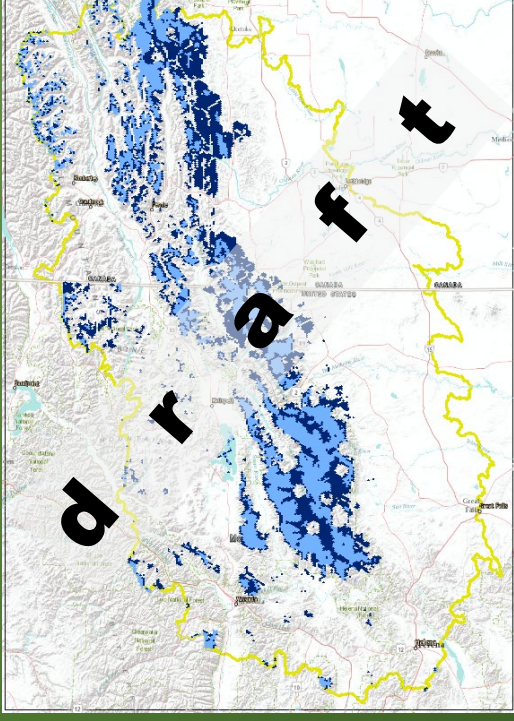
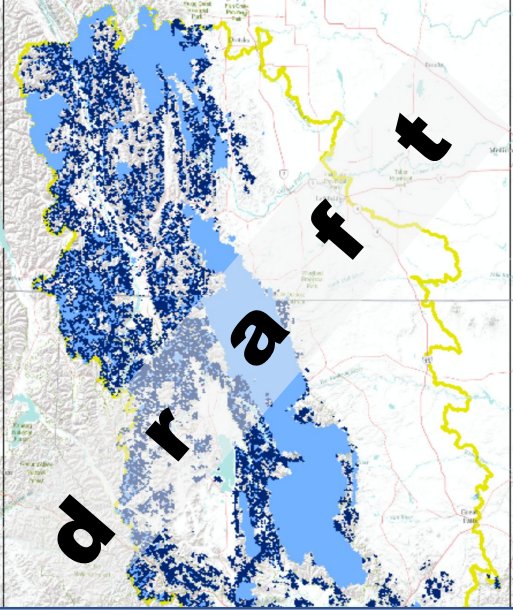
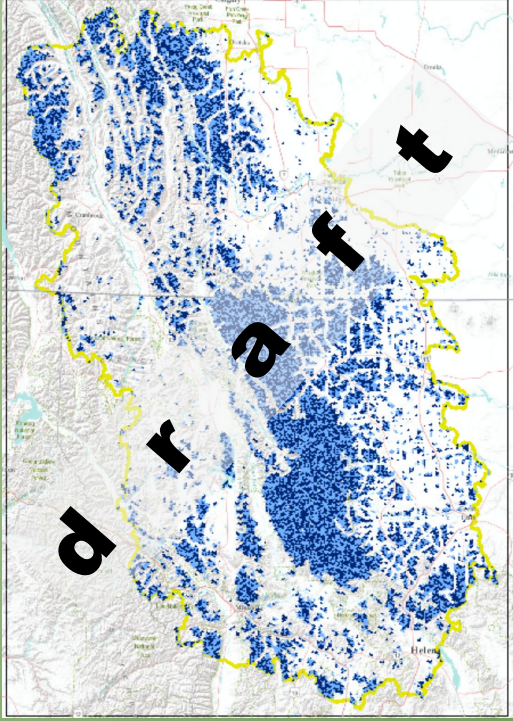
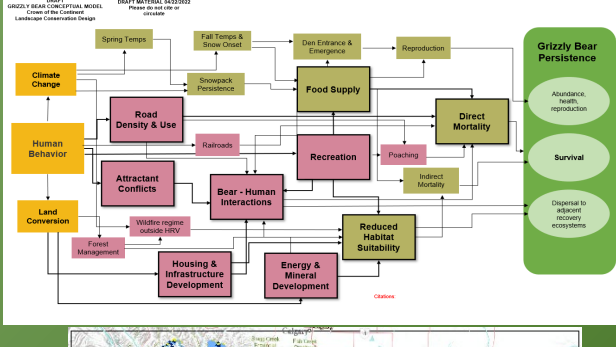
Elk





Forest



Grizzly Bear



 Retain 30% of current feature opportunity
 Retain 70% of current feature opportunity



Take a breath!
Discussion ... Q&A

So, What do we Do About it?

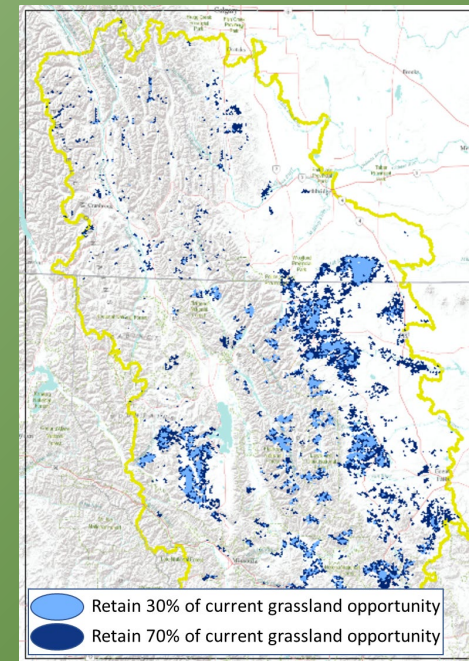
First:

- *We acknowledge that agencies, organizations and communities are already working hard to conserve and secure these resources*
- *A Landscape Conservation Design does not replace or supersede existing plans*
- *LCD is non-regulatory, voluntary and participatory*

The Landscape Conservation Design seeks to provide landscape context to jurisdictional efforts, support partner authorities and mandates and ultimately result in landscape-scale conservation outcomes

Crown LCD Strategy Design

Spatial Design addresses “Where?”



*Phase 2
Grassland
Spatial Design*



Strategy Design answers “Who?”, “What?”, “When?” and “How?” to support coordinated, cross-jurisdictional decision-making and action

- [Conservation Standards](#) (Formerly known as the Open Standards for the Practice of Conservation)



Crown LCD Strategy Design



“Who?”, “What?”, “When?” and “How?”

Theory of Change: description of a sequence of events that is expected to lead to a particular desired outcome. It shows a causal pathway from the current to the desired situation by specifying what is needed for goals to be achieved, articulating underlying assumptions which can be tested and measured.

Conservation Science and Practice Open Access
A journal of the Society for Conservation Biology

CONTRIBUTED PAPER | Open Access |

Using Theory of Change to improve post-2020 conservation: A proposed framework and recommendations for use

Wayne Stanley Rice , Merle R. Sowman, Maarten Bavinck

First published: 03 November 2020 | <https://doi.org/10.1111/csp2.301> | Citations: 10

Conservation Biology



Conservation Practice and Policy

Developing a theory of change for a community-based response to illegal wildlife trade

Duan Biggs,^{*†‡§¶} Rosie Cooney,^{§**} Dilys Roe,^{§††} Holly T. Dublin,^{§‡‡} James R. Allan,^{†§§} Dan W.S. Challender,^{§***} and Diane Skinner^{‡†††}

Crown LCD Strategy Design



Where do we start?

The 60+ conservation plans and assessments

US Forest Service	Lewis and Clark National Forest Plan	1986	https://www.fs.usda.gov/
Montana Fish, Wildlife and Parks	Montana State Wildlife Action Plan	2015	http://fwp.mt.gov/fishAnd
US Fish and Wildlife Service	National Bison Range Comprehensive Conservation Plan	2019	https://www.fws.gov/mou
US Fish and Wildlife Service	Lost Trail Comprehensive Conservation Plan	2005	https://www.fws.gov/mou
Crown Managers Partnership	Strategic Conservation Framework 2016-2020	2016	https://static1.squarespace.c
Roundtable on the Crown of the Continent	Adapting to Change in the Crown of the Continent	2015	http://largelandscapes.org
Ministry of Forests, Lands, Natural Resource Operations and Rural De	Action Plan	2019	https://www2.gov.bc.ca/g
Alberta Government	South Saskatchewan Regional Plan	2018	https://open.alberta.ca/pu
Glacier National Park	General Management Plan	1999	https://parkplanning.nps.g
Waterton Lakes National Park	Management Plan	2010	https://www.pc.gc.ca/en/
Waterton Lakes National Park	State of the Park Assessment	2019	https://www.pc.gc.ca/en/
Bureau of Land Management	Middle Rockies Rapid Ecoregional Assessment	2012	https://landscape.blm.gov
Confederated Salish and Kootenai Tribes	Climate Change Strategic Plan	2013	http://www.csktribes.org/
Canadian Parks and Wilderness Society – Southern Alberta Chapter	Southern Eastern Slopes Conservation Strategy project	2018	http://www.southerneaste
Glacier National Park	Foundation Document	2016	https://www.nps.gov/glac
Castle Provincial Park and Castle Wildland Provincial Park	Castle Management Plan	2018	https://www.albertaparks
Alberta Environment and Parks	Livingston-Porcupine Hills Recreation Management Plan	2017	https://open.alberta.ca/de

Crown LCD Strategy Design



Where do we start?

The 60+ conservation plans and assessments

BC Parks	MANAGEMENT DIRECTION STATEMENT for Akamina-Kishenina Prov
Ministry of Forests, Lands, Natural Resource Operations	Strategic Policy: Crown Land Allocation Principles
Southwest Alberta Sustainable Community Initiative	Community Values Assessment for the M.D. of Pincher Cree
Southern Foothills Community Stewardship Initiative	Values and Voices
Southern Alberta Land Trust Society	Southern Foothills Study
National Park Service	Rocky Mountain Network monitoring plan
US Fish and Wildlife Service	Plum Creek Habitat Conservation Plan
US Fish and Wildlife Service	Montana DNRC Habitat Conservation Plan
Headwaters Economics	Crown of the Continent and Climate Change report: Impacts of climate change on
Alberta SW Regional Alliance	Economic and Social Profile
BUREAU OF BUSINESS AND ECONOMIC RESEARCH	2019 Montana Economic Report
Waterton Biosphere Reserve Association	Species At Risk Action Plan for Waterton Biosphere Reserve
Crown Managers Partnership	Conservation Playbook 2.0 Sustainable management of nativ
Helena-Lewis and Clark National Forest	Draft 2020 Forest Plan
Glacier National Park	Interagency US2 Connectivity Workshop Report

Who? – *has the bandwidth to collaborate?*

What? – *what is the mandate (**focal features**)?
authorities? constraints?*

When? – *is the plan's timeframe? time-bound
objectives?*

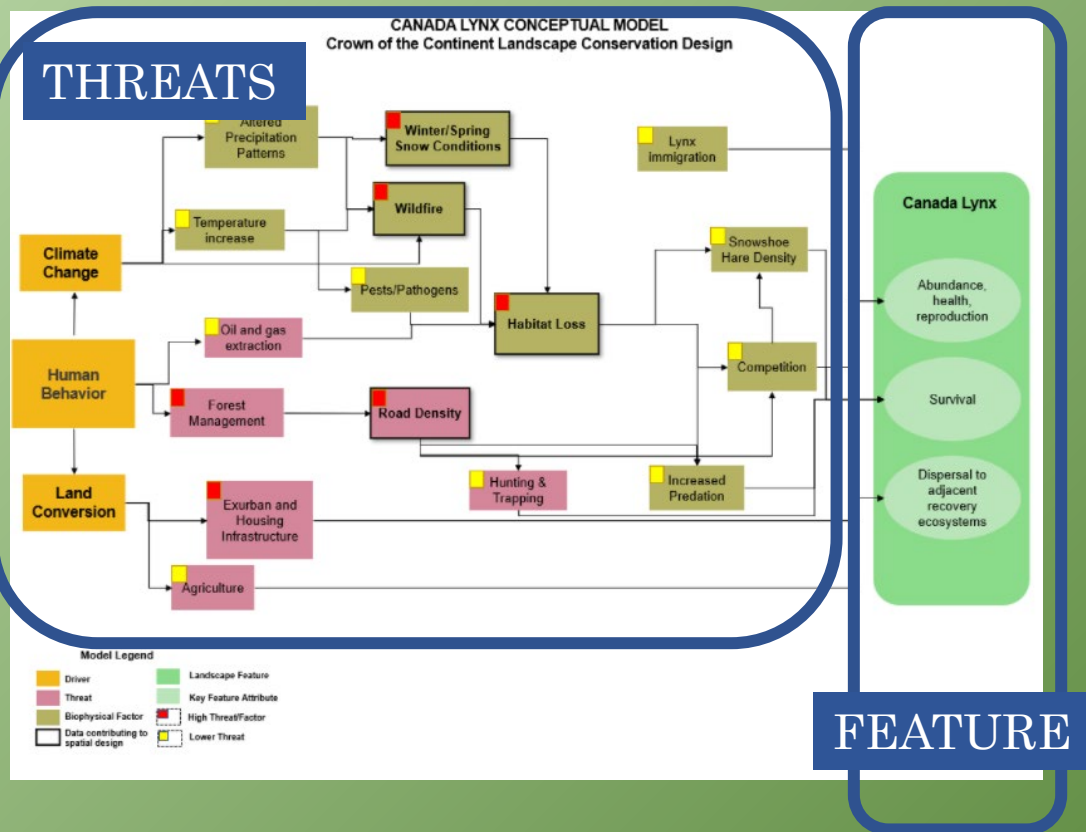
How? – *what **threats** will be addressed? how
will objectives be achieved
(**strategies**)? what resources are
brought to bear (**opportunities**)?*

Crown LCD Strategy Design



Where do we start?

The 60+ conservation plans and assessments

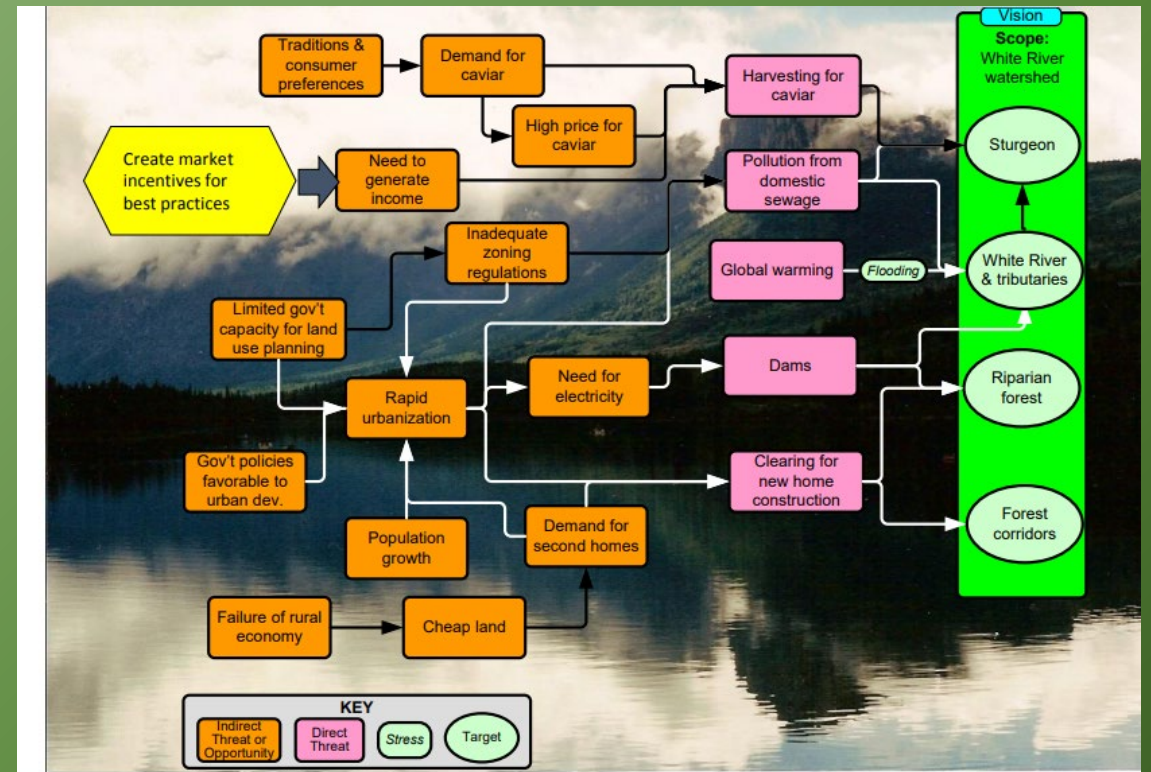
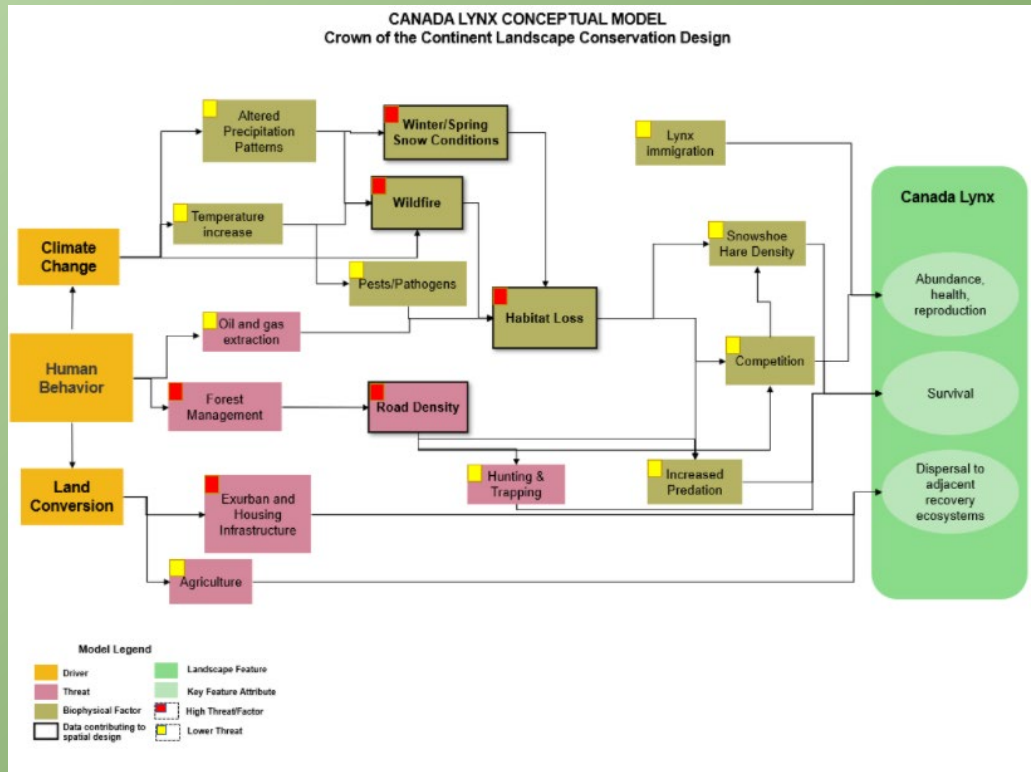


- Who?* – has the bandwidth to collaborate?
- What?* – what is the mandate (**focal features**)? authorities? constraints?
- When?* – is the plan’s timeframe? time-bound objectives?
- How?* – what **threats** will be addressed? how will objectives be achieved (**strategies**)? what resources are brought to bear (**opportunities**)?

Crown LCD Strategy Design



“Who?”, “What?”, “When?” and “How?”



Conceptual Model



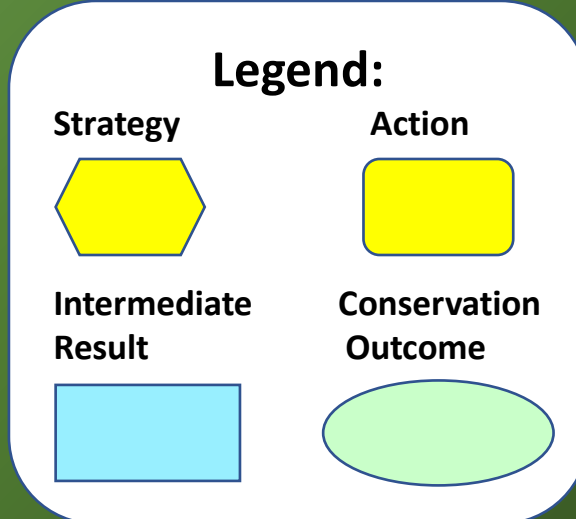
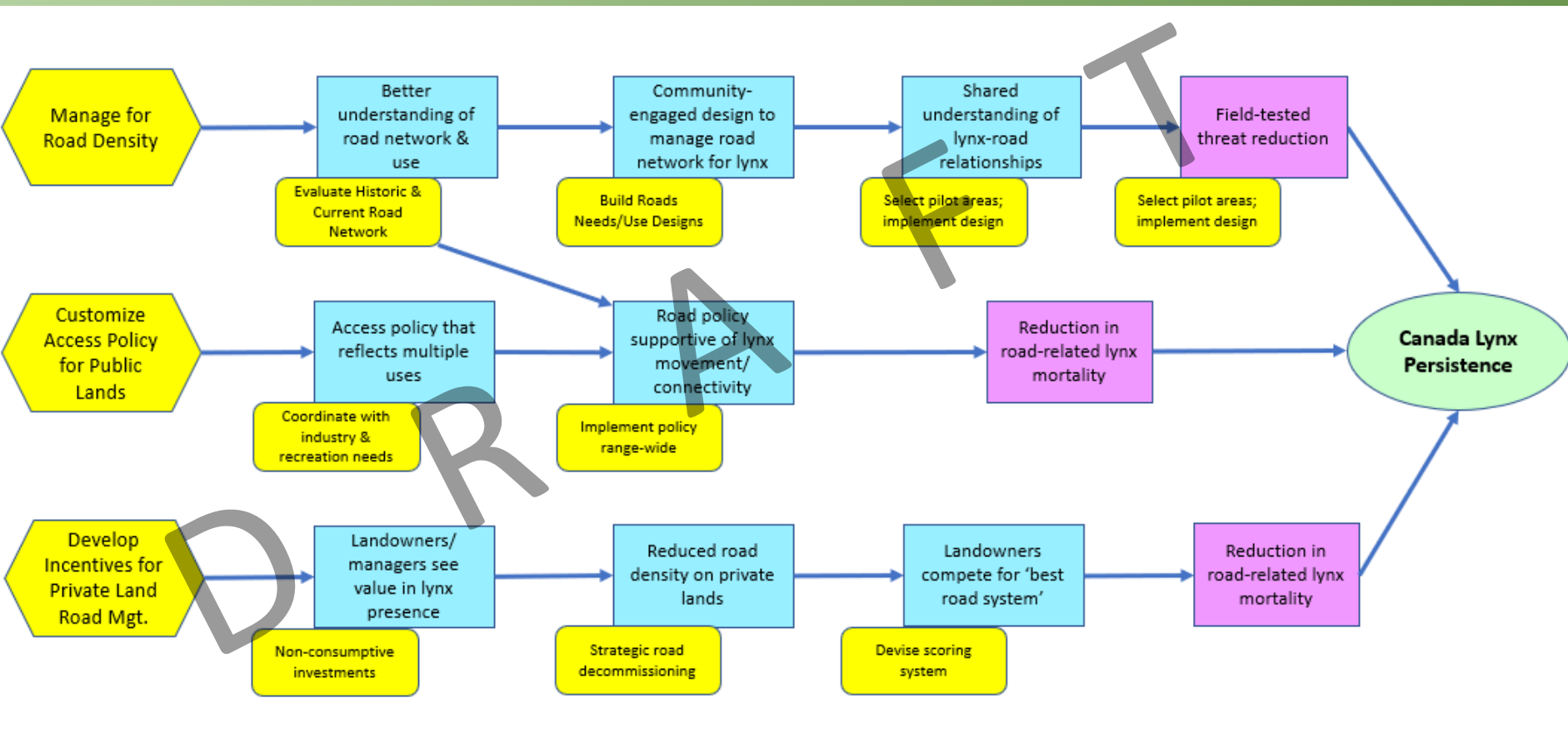
Theory of Change

Very Simple Draft Strategy for the Crown



FEATURE: CANADA LYNX | THREAT: ROAD DENSITY

Threats
Opportunities
Strategies
Features



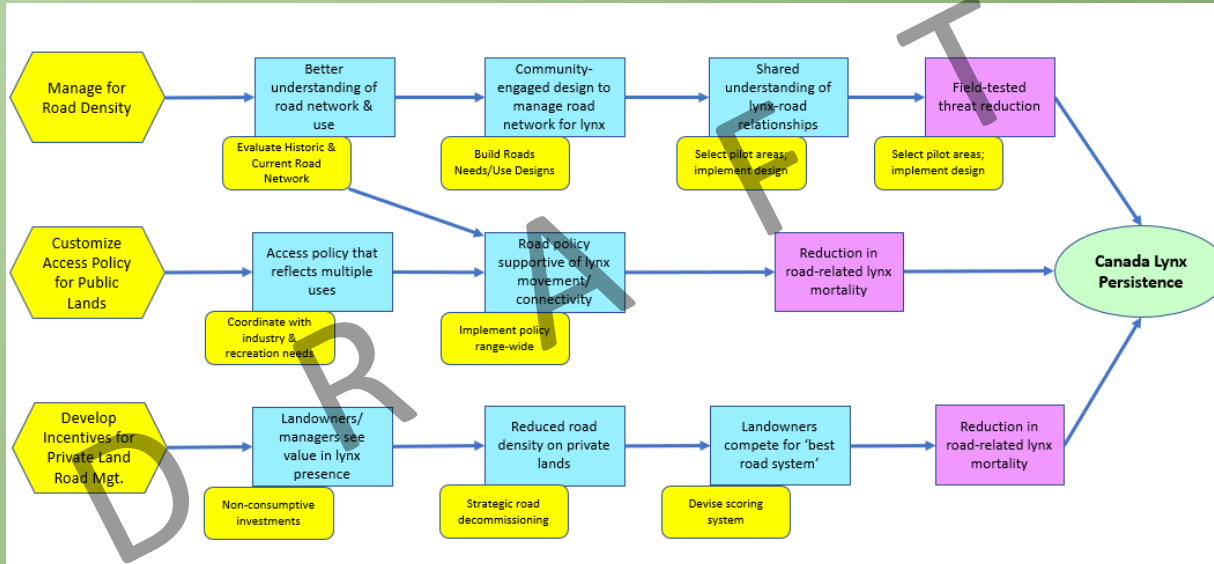
Very Simple Draft Example for the Crown

STRATEGY DESIGN
Arrive at a design for
decision making

5



FEATURE: CANADA LYNX | THREAT: ROAD DENSITY



Theory of Change models supported by co-developed narratives:

- *Flesh out jurisdictional actions*
- *Craft landscape-scale synergies*
- *Set (voluntary) goals for future conditions*
- *Collaboratively 'stress test' the designs (spatial and strategic)*
- *Develop Implementation Design*
- *Identify knowledge gaps*
- *Implement, Evaluate, Iterate*



Strategy Design: What does it Mean for Me?



Theory of Change models supported by co-developed narratives:

- *Flesh out jurisdictional actions*
- *Craft landscape-scale synergies*
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Helena-Lewis and Clark National Forest	Draft 2020 Forest Plan
Glacier National Park	Interagency US2 Connectivity Workshop Report

You and staff know your plans best

You possess knowledges and skills

You advocate for your organization's motivations, mandates, strategies and tactics

You recognize participation & contributions to Landscape Designs will enhance your goal achievement & may even reduce your burden

How do we move from here?



Feature-themed Workshops

LCD Partners and Crown Managers Partnership to host feature-themed workshops in 2024.

*Salmonids Workshop, April 18-19, 2002
Glacier NP*

- *Bull Trout & Westslope Cutthroat Trout*
 - *Threat scoring*
 - *Site reports & action/investment updates*
 - *Strategy evaluations*



America the Beautiful Challenge Proposal:

‘Bio-cultural Restoration within the Crown of the Continent’

- *Includes funds for LCD workshops, facilitators, subject matter expert support*
- *Web-based mapping application*
- *[86% of requested funds for biocultural restoration]*



Strategy Design Next Steps:



Leadership Team & staff:

Review your organization's Feature & Threat experts (nominate them)

Review your organizations plans in terms of LCD Features

Consider hosting Feature- (or Threat-) focused workshops

Be prepared to critically review draft Strategy Designs

Start thinking about how LCD products fit into future plan revisions

Analysis Team:

Review all resource plans in terms of LCD Features & synthesize information

Lead Communities of Practice

Coordinate & Facilitate Feature- (or Threat-) focused workshops

Draft Theory of Change models and narratives

Synthesize Spatial and Strategic Designs

 ***Social, Cultural, Economic Features***

Discussion, Questions, Critique



News from Around the Crown

