Parks Canada Parcs Canada

Canada

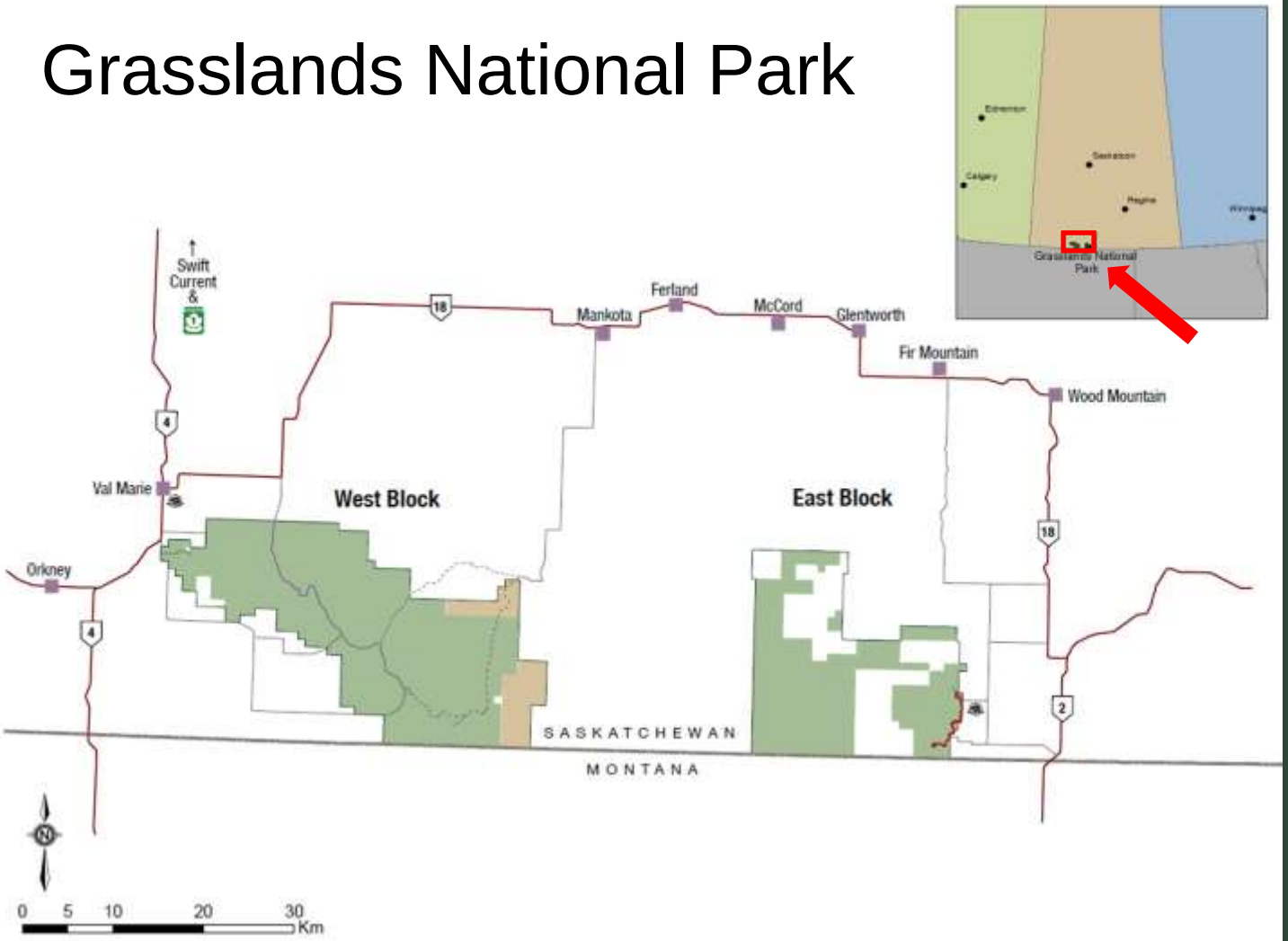
Grasslands National Park
Invasive Plant Management Plan

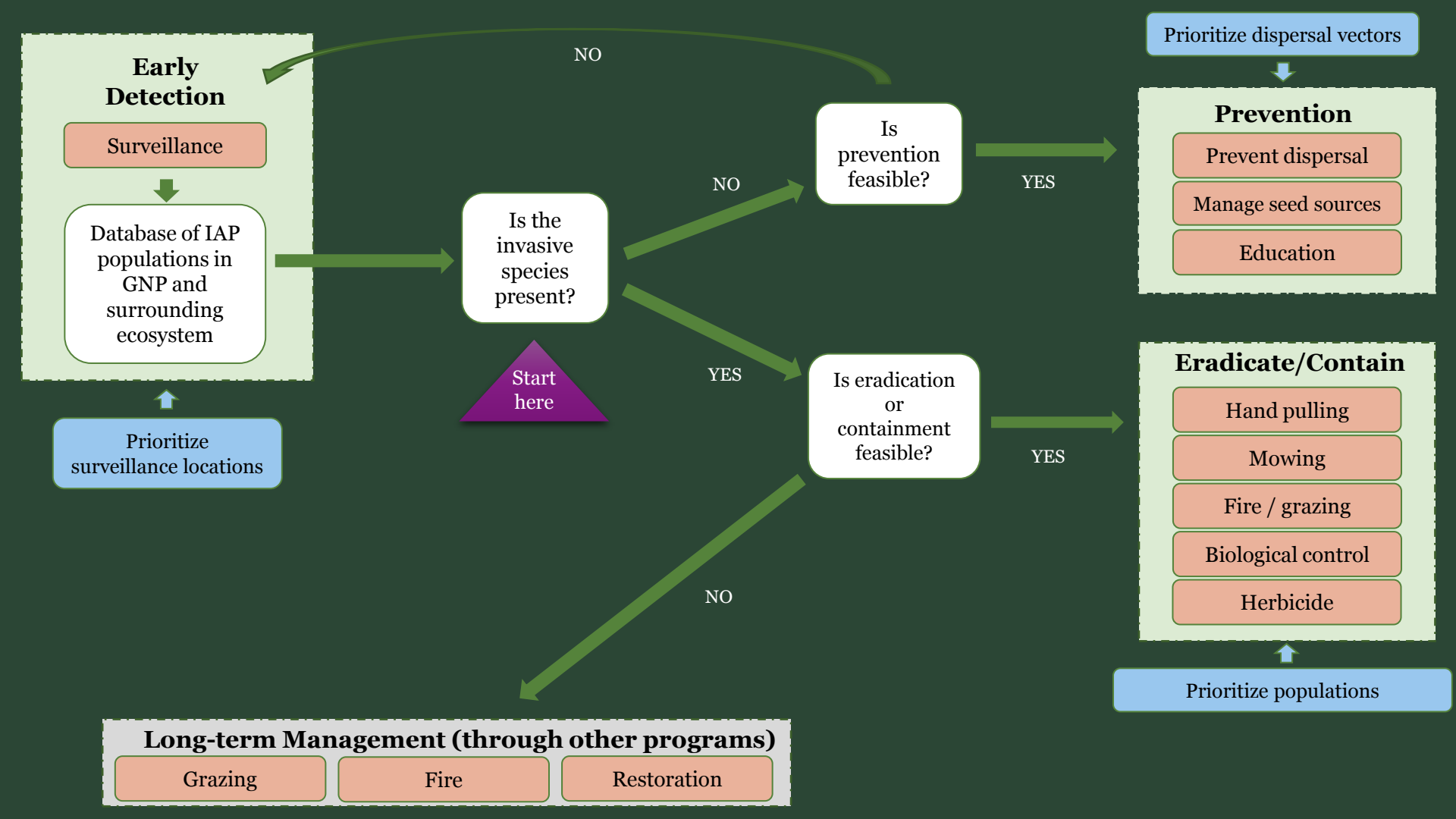
Nathan Young, Resource Management Officer

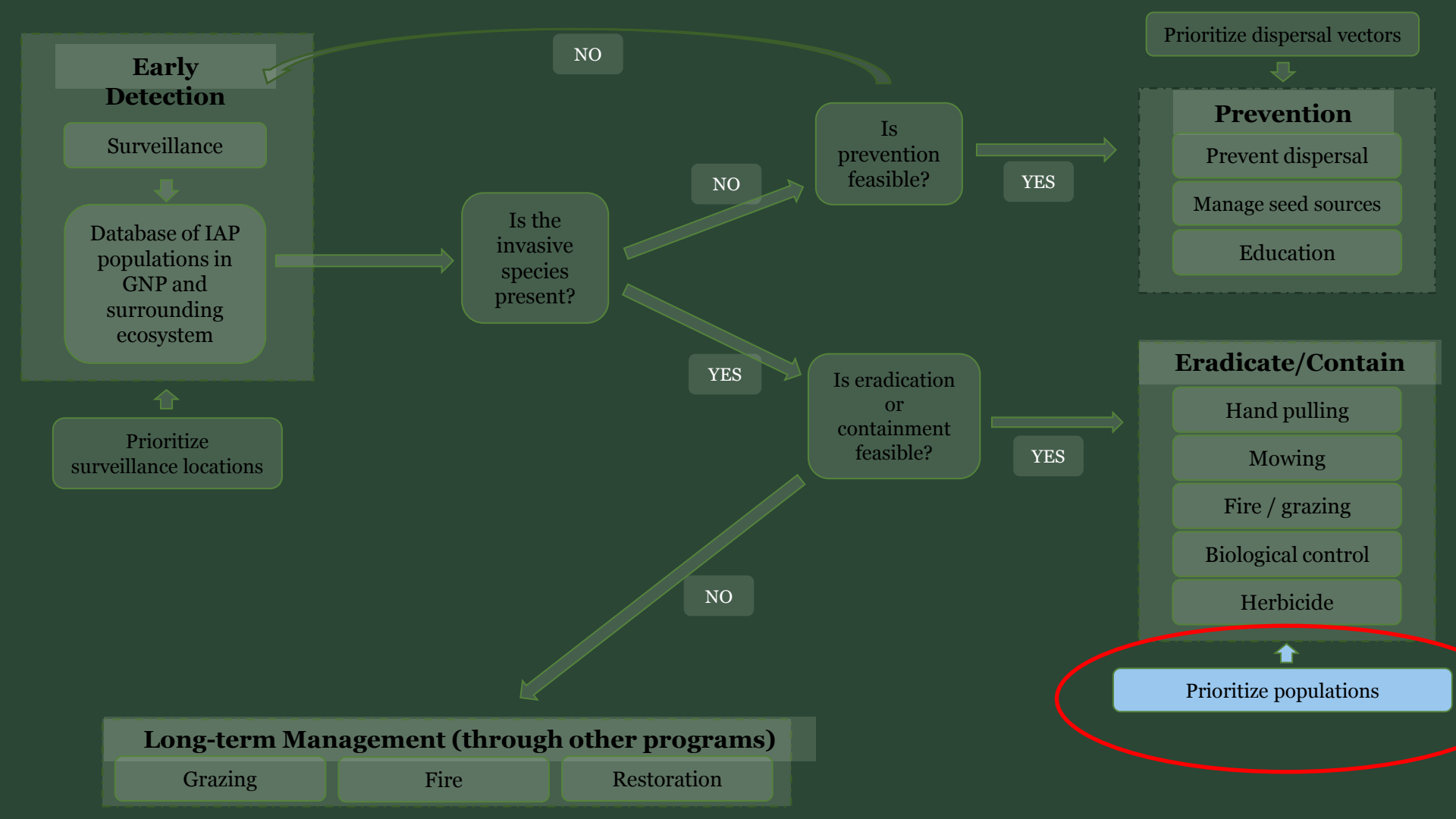
Overview

- Invasive Plant Management Plan for 2020-2024
- 3 program components
  - Control
  - Early detection
  - Prevention
- Focus on prioritization

Grasslands National Park




Early Detection
Surveillance
Database of IAP populations in GNP and surrounding ecosystem
Prioritize surveillance locations
Start here
Is the invasive species present?
NO
YES
Is prevention feasible?
NO
YES
Is eradication or containment feasible?
NO
YES
Prioritize dispersal vectors
Prevention
Prevent dispersal
Manage seed sources
Education
Eradicate/Contain
Hand pulling
Mowing
Fire / grazing
Biological control
Herbicide
Prioritize populations
Long-term Management (through other programs)
Grazing
Fire
Restoration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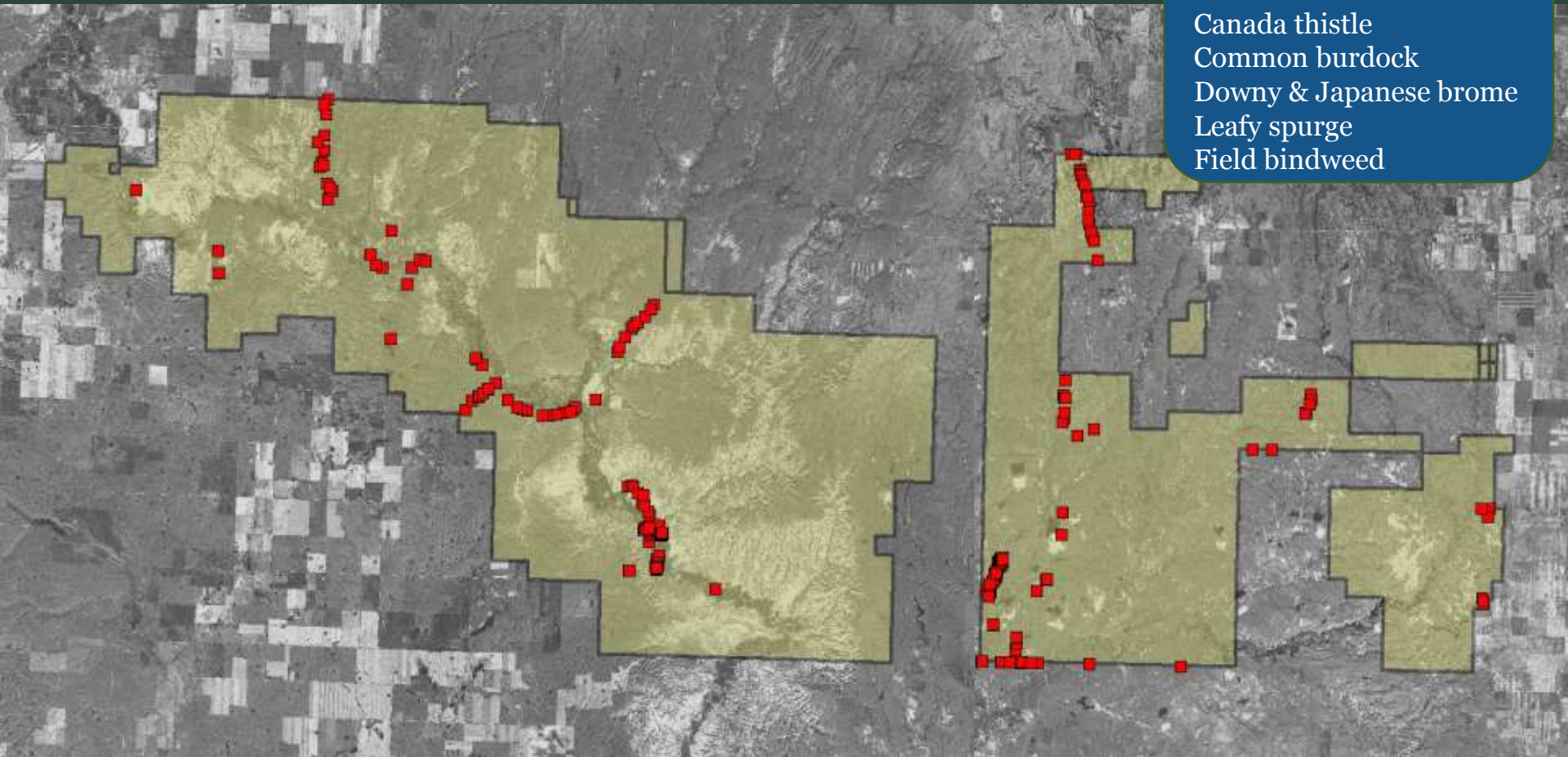
Invasive Plant Populations



Includes:

Absinthe wormwood
Canada thistle
Common burdock
Downy & Japanese brome
Leafy spurge
Field bindweed

Prioritize based on…

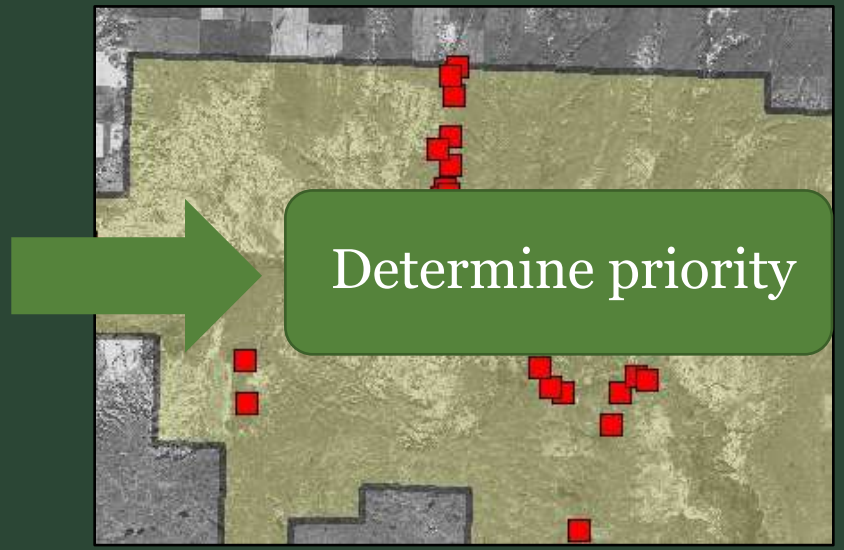
1) Species impact

2) Area at risk

3) Local population size

4) Park-wide distribution

5) Likelihood of spread



1) Species impact
2) Area at risk
3) Local population size
4) Park-wide distribution
5) Likelihood of spread

Very high

- ★ Leafy spurge
- Spotted knapweed
- Salt cedar
- ★ Crested wheatgrass
- ★ Smooth brome
- ★ Yellow sweet clover

High

- ★ White sweet clover
- Yellow star-thistle
- Diffuse knapweed
- ★ Absinthe wormwood
- Russian knapweed
- ★ Quack grass
- Yellow toadflax
- ★ Canada thistle
- Dalmation toadflax

Moderate

- ★ Scentless chamomile
- ★ Field bindweed
- Night-flowering catchfly
- ★ Black henbane
- Oxeye daisy
- ★ Downy brome
- African rue
- ★ Japanese brome
- Bull thistle
- ★ Common burdock
- Baby's breath
- Common crupina

Low

- ★ Perennial sow-thistle
- ★ Dame's rocket
- Hemp nettle
- ★ Green foxtail
- Purple loosestrife
- Hoary allysum
- Hoary cress
- ★ Narrow-leaved hawksbeard
- ★ Cow-cockle
- ★ Kochia
- Common tansy
- ★ Persian darnel

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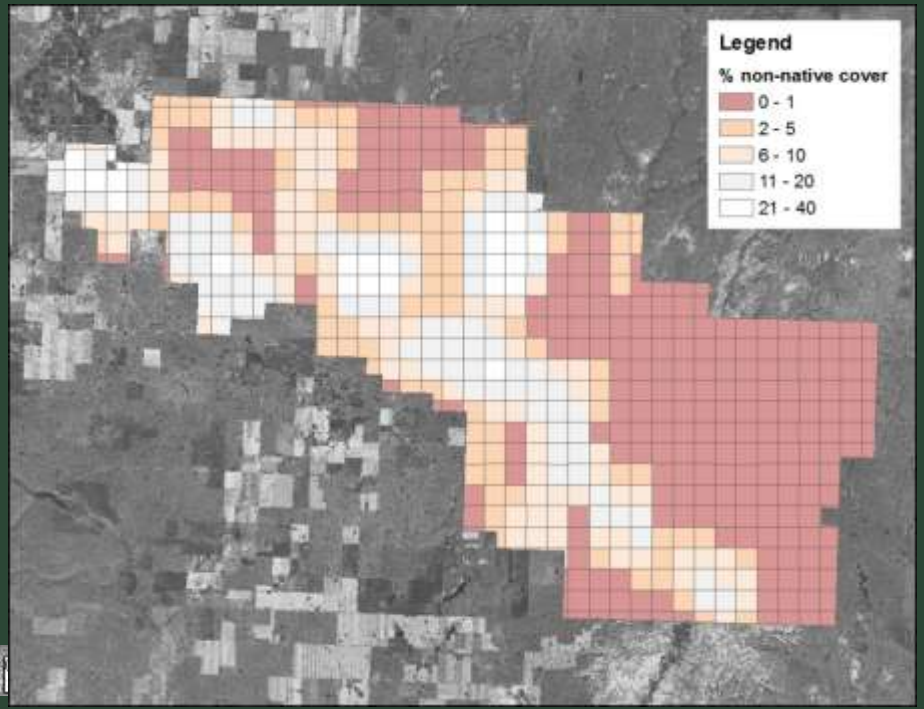

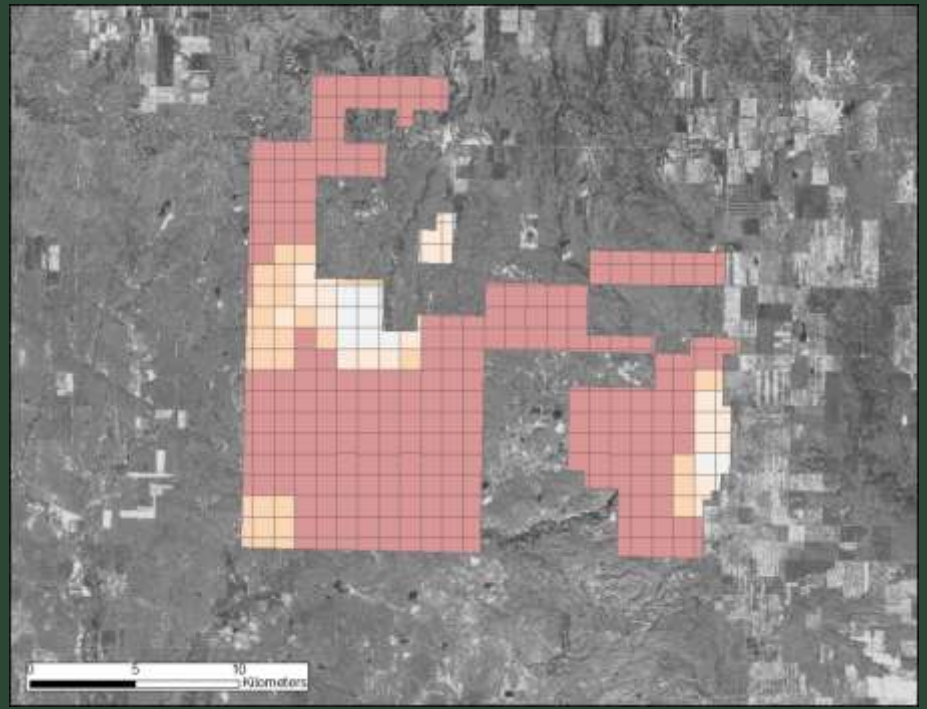

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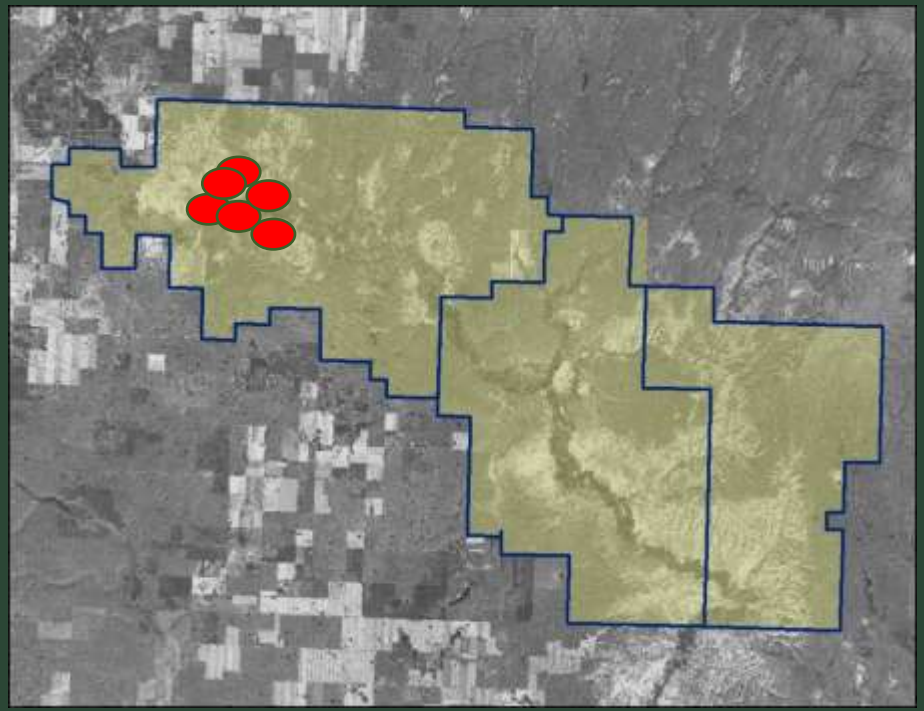

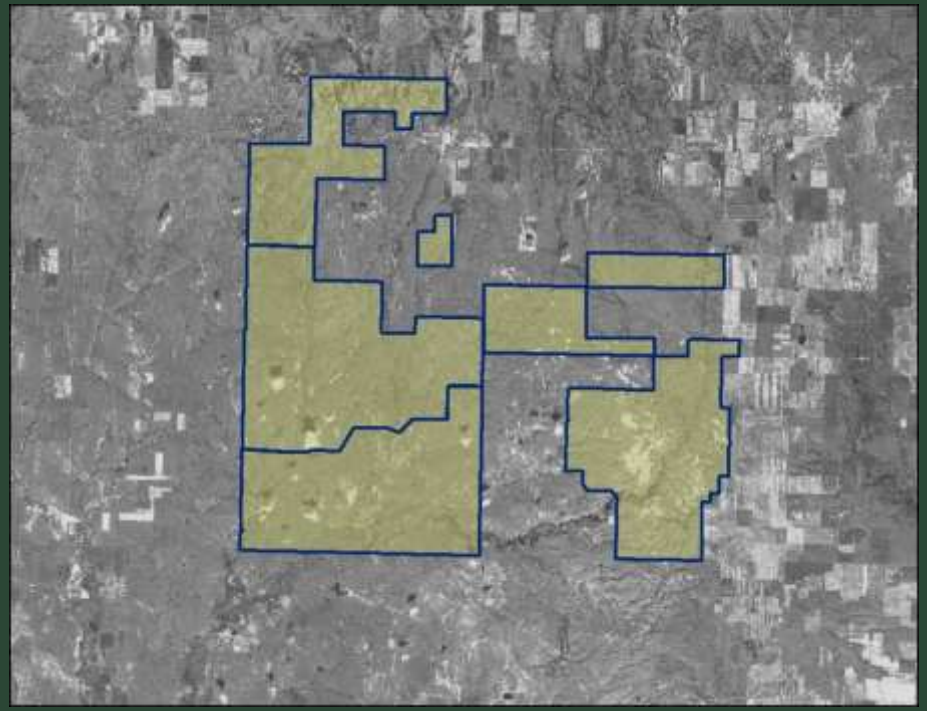

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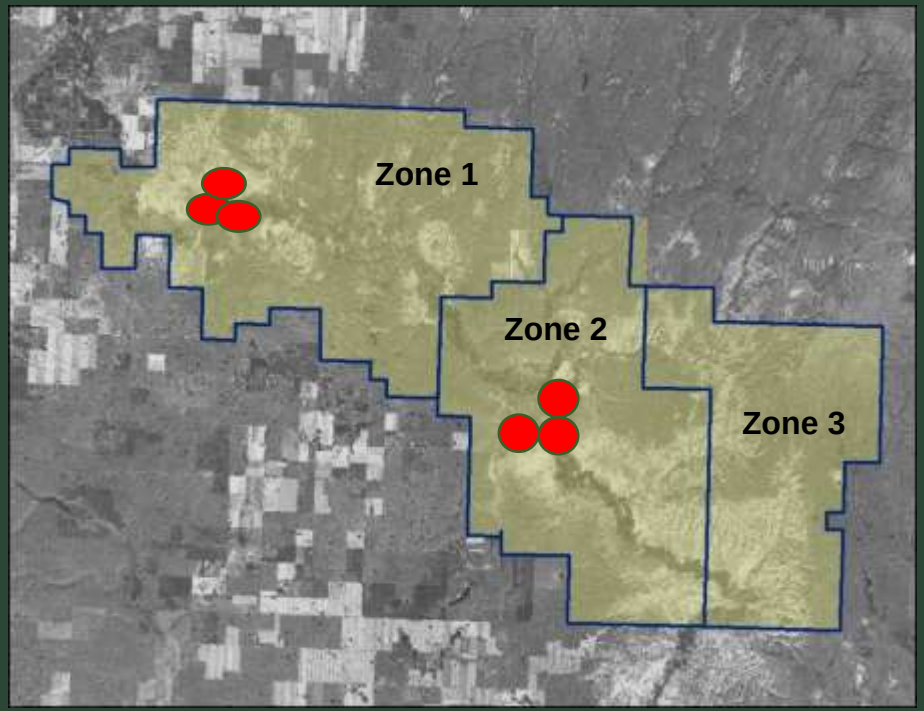
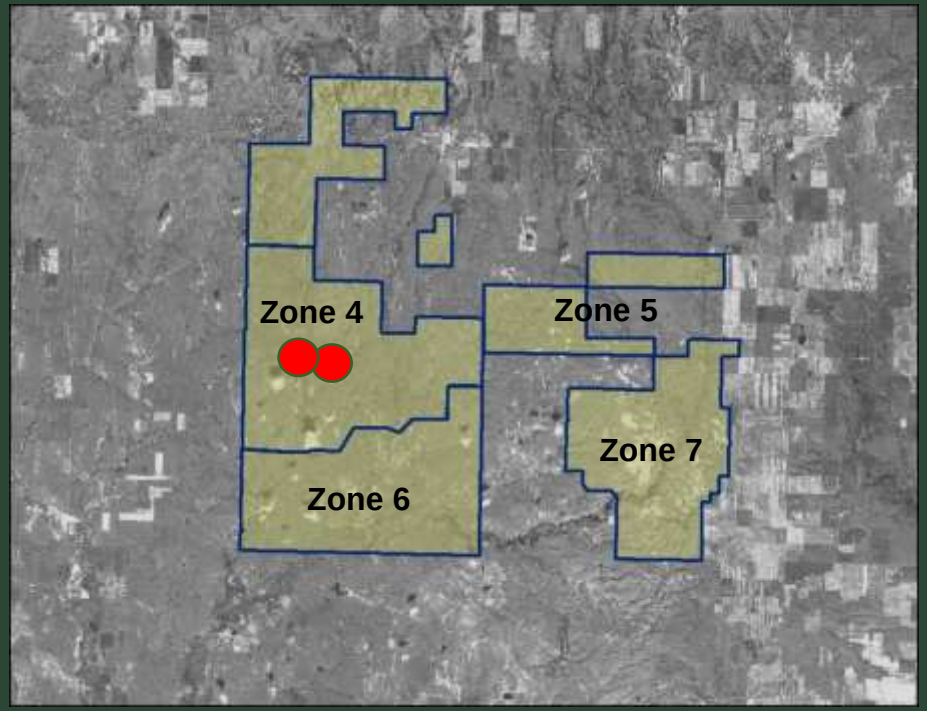
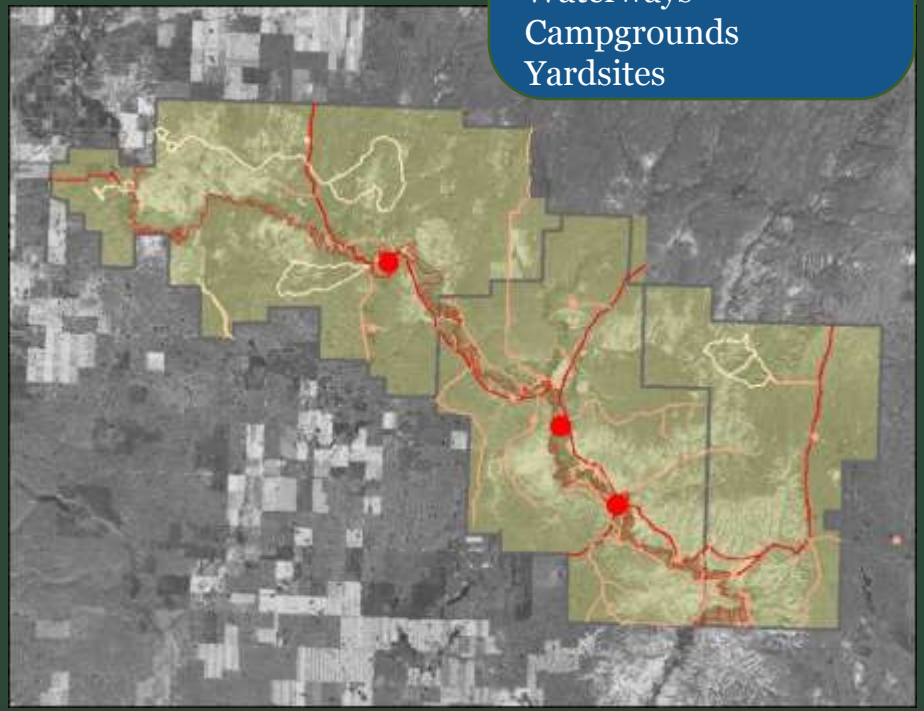


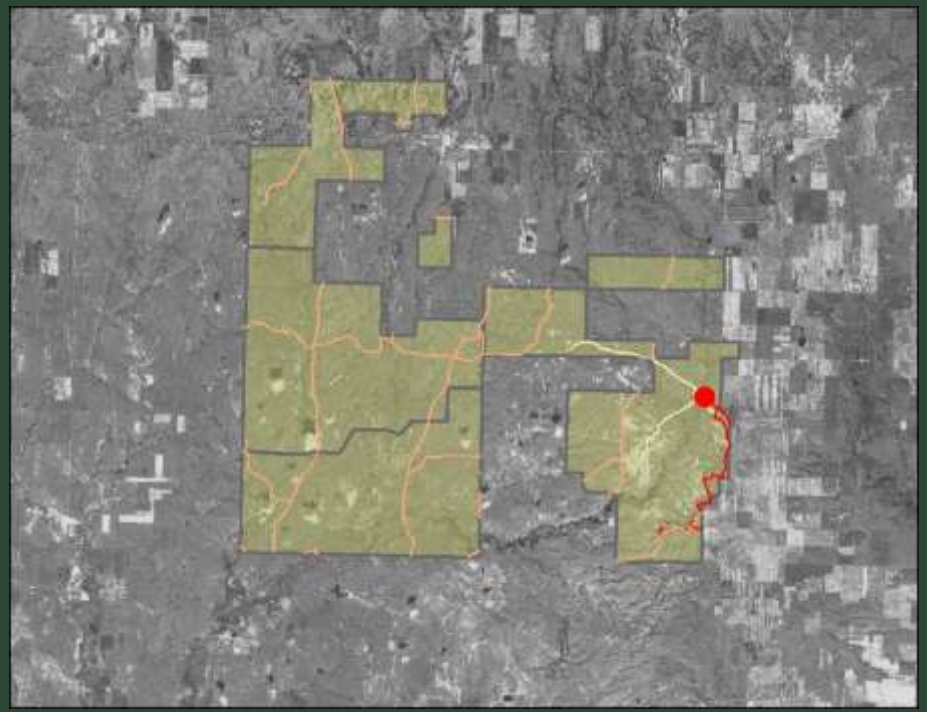


Corridors & hubs:

Public roads
Operational roads
Hiking trails
Waterways
Campgrounds
Yardsites

1) Species impact
2) Area at risk
3) Local population size
4) Park-wide distribution
5) Likelihood of spread





Prioritize based on…

1) Species impact → 30 points

2) Area at risk → 15 points

3) Local population size → 20 points

4) Park-wide distribution → 20 points

5) Likelihood of spread → 15 points

Species impact

Very high	-	30
High	-	22
Moderate	-	14
Low	-	7

High

- White sweet clover
- Yellow star-thistle
- Diffuse knapweed
- Absinthe wormwood
- Russian knapweed
- Quack grass
- Yellow toadflax
- Canada thistle
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Low

- Perennial sow-thistle
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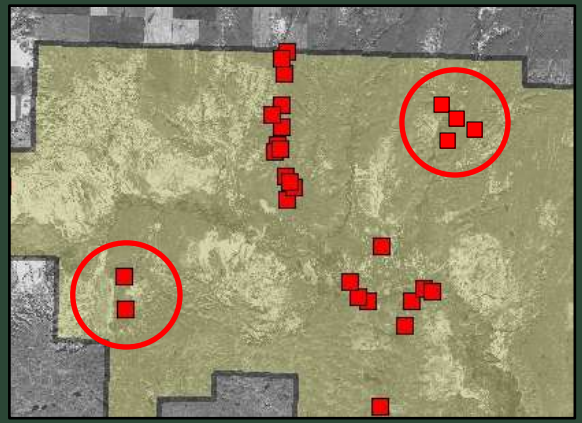
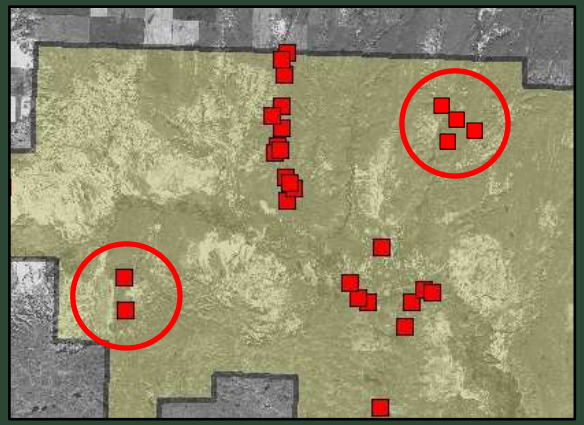
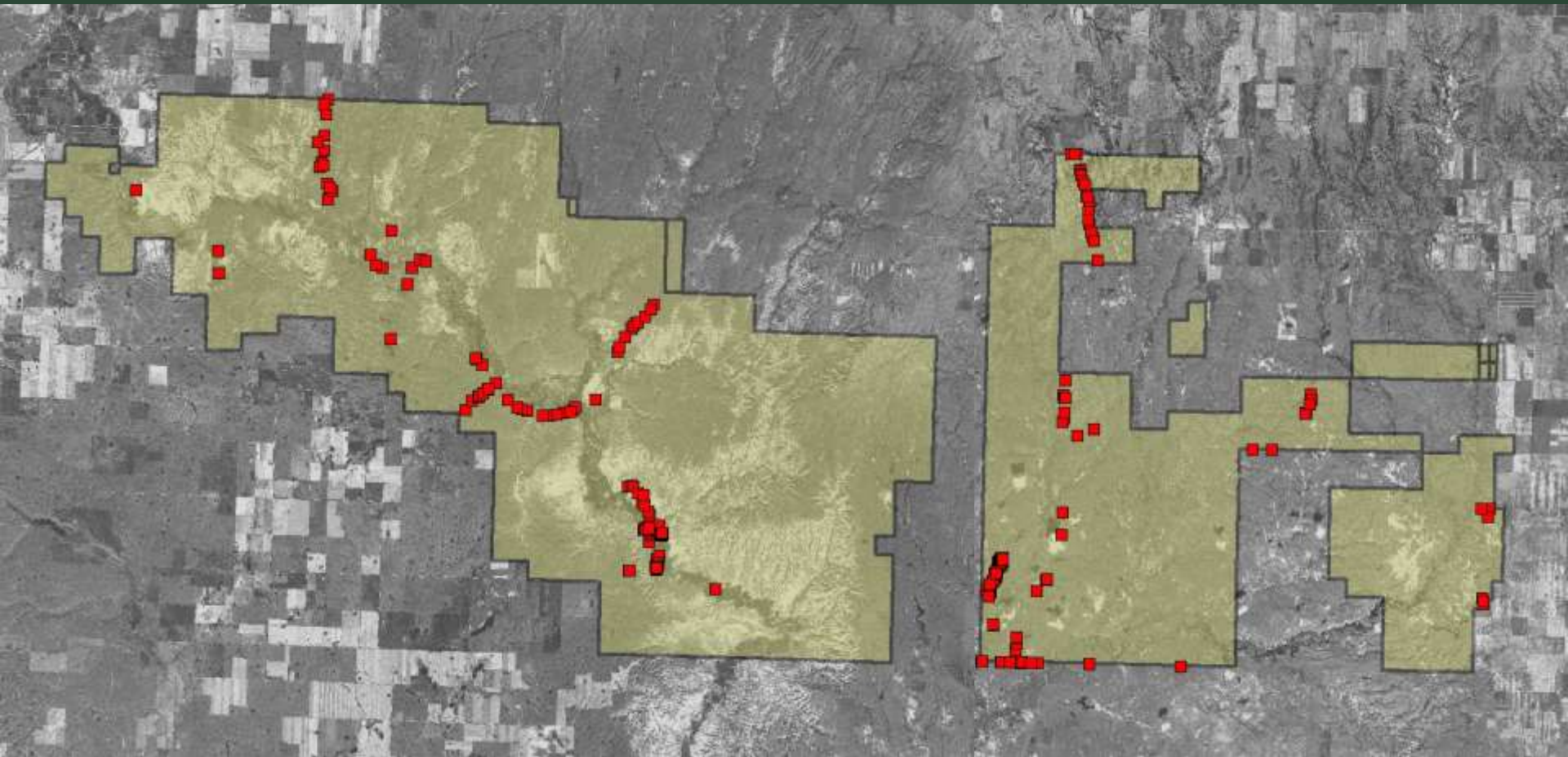


Area at risk

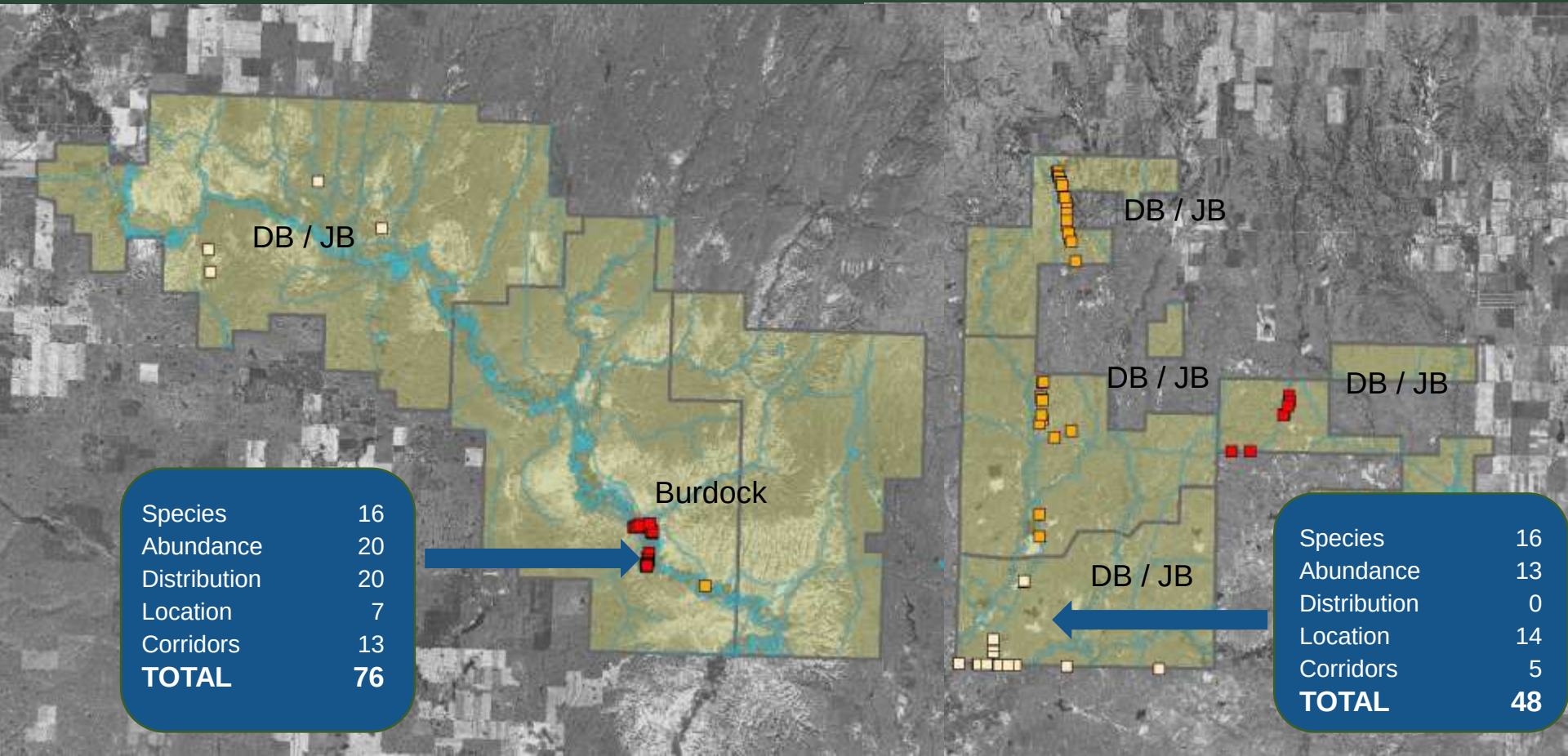
Level 5	-	15
Level 4	-	12
Level 3	-	9
Level 2	-	6
Level 1	-	3



Invasive Plant Populations



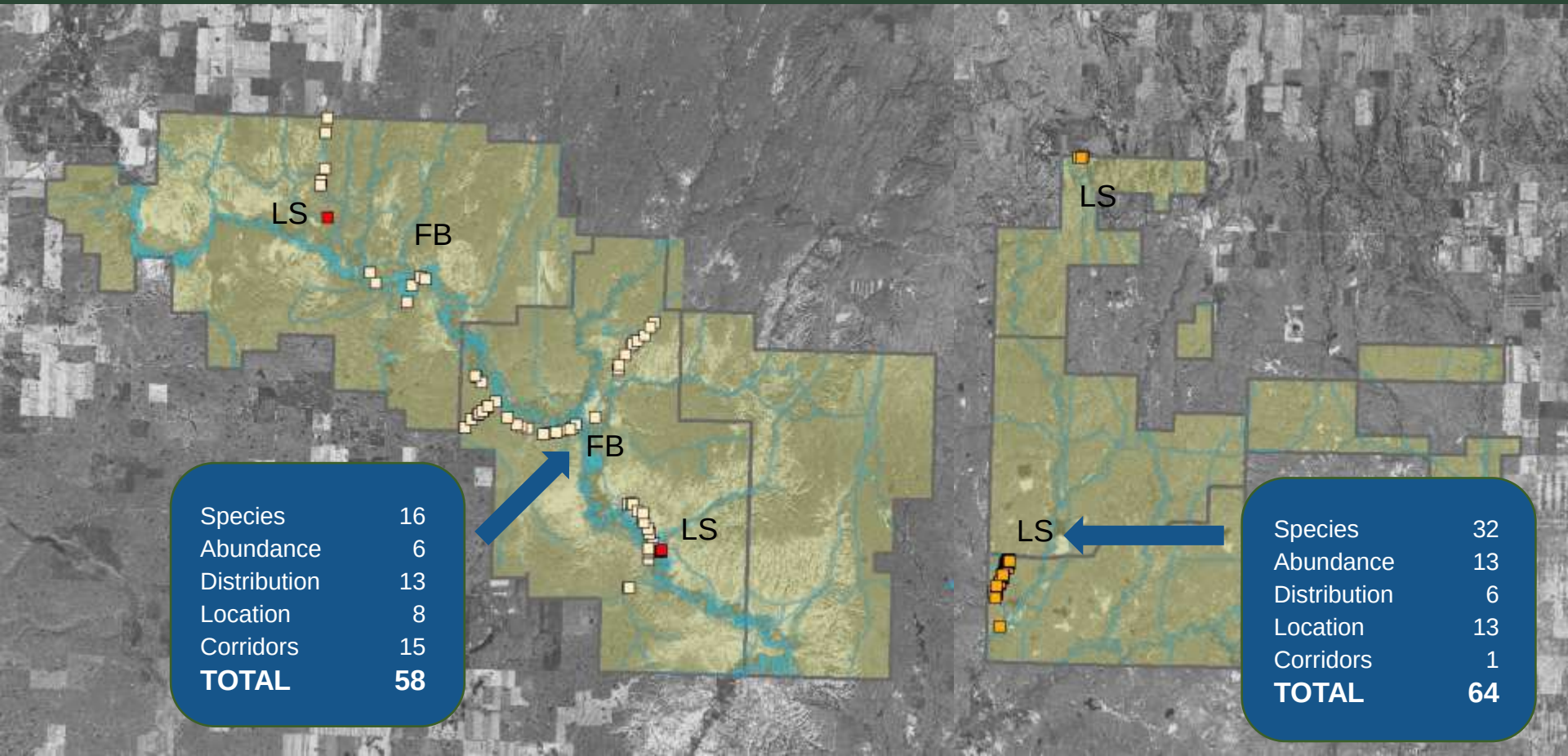
Spring



Species	16
Abundance	20
Distribution	20
Location	7
Corridors	13
TOTAL	**76**

Species	16
Abundance	13
Distribution	0
Location	14
Corridors	5
TOTAL	**48**

Summer


LS
FB
FB
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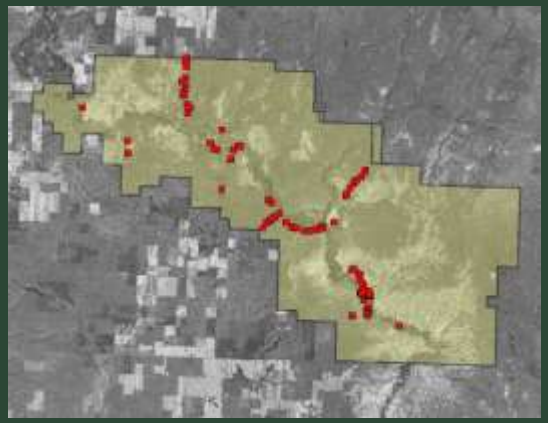
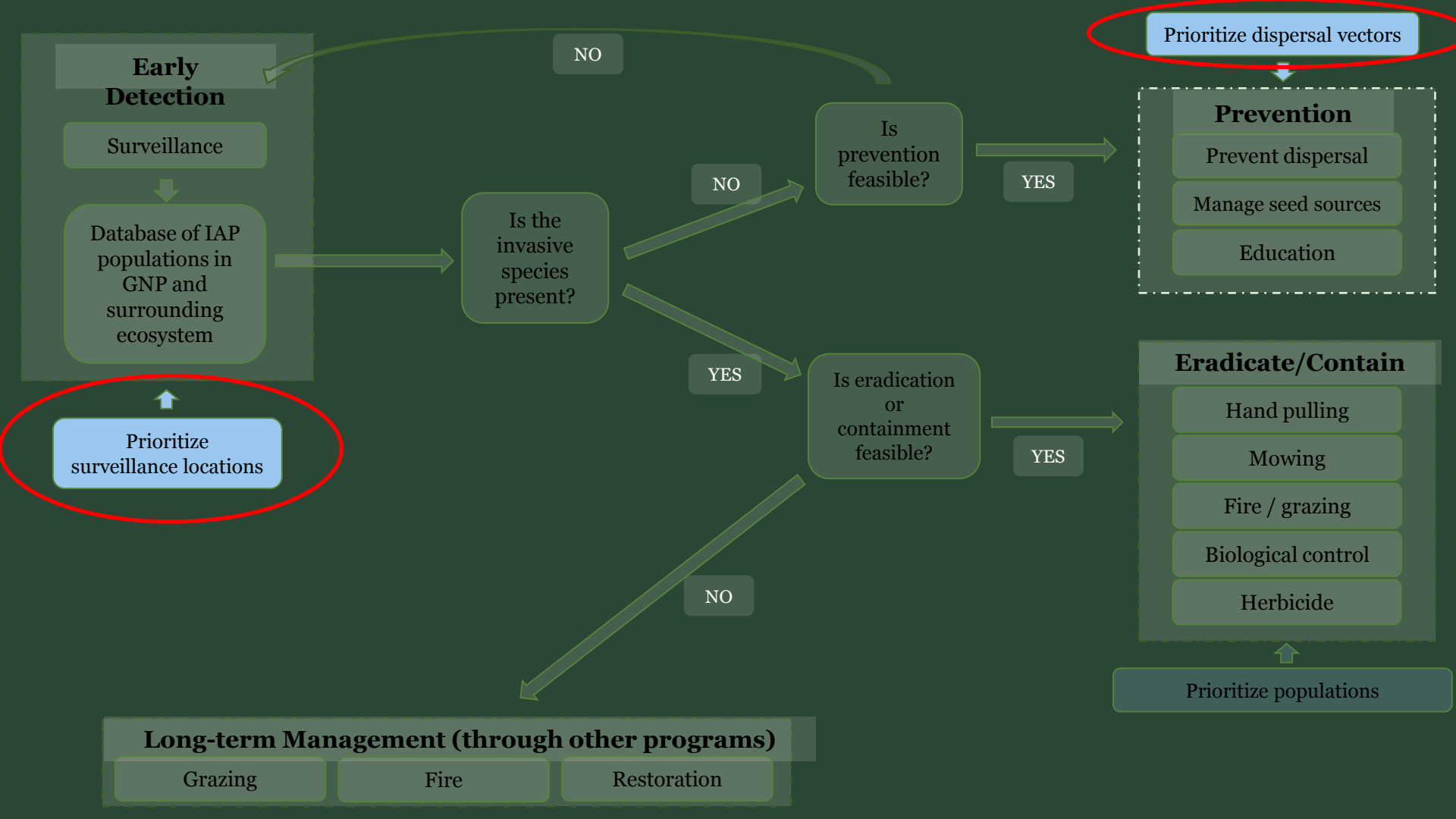
Species 16
Abundance 6
Distribution 13
Location 8
Corridors 15
TOTAL 58
Species 32
Abundance 13
Distribution 6
Location 13
Corridors 1
TOTAL 64

Limitations

- Widespread IAP
  - e.g. cultivated fields
- Data deficiencies

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NO
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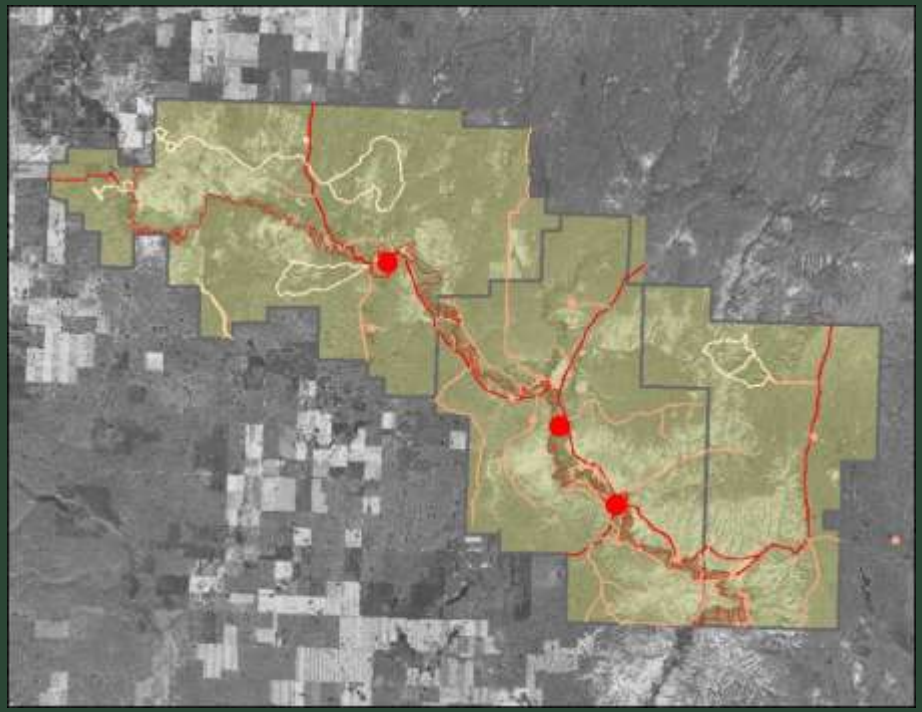
Prevention / Early Detection

- Corridors:
  - roads
  - trails
  - rivers
  - yards
- Vectors:
  - cars
  - people
  - wildlife
  - wind
  - water



Prioritize based on…

- Carrying capacity
- Which species are being transported
- Where are they ending up
- Where are they coming from

Determine priority

Priority vectors

High risk

- Visitor passenger vehicles
- Imported earth materials
- Imported seed mixes
- Staff / local passenger vehicles
- Graders
- Imported livestock feed
- Imported livestock
- Backcountry hikers
- Off-trail ATVs

Moderate risk

- Wildlife
- Horses
- Local livestock feed
- Mowers
- Imported horse feed
- Frenchman river
- Fire equipment
- Bison feed
- Wind

Priority vectors

High risk

- Visitor passenger vehicles
- Imported earth materials
- Imported seed mixes
- Staff / local passenger vehicles
- Graders
- Imported livestock feed
- Imported livestock
- Backcountry hikers
- Off-trail ATVs

→ Messaging in visitor guides

→ Improved washing infrastructure

→ Develop best practices / guidelines

→ Quarantine and inspection

Priority vectors

- Wildlife
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- Local livestock feed
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- Wind

Targeted surveys

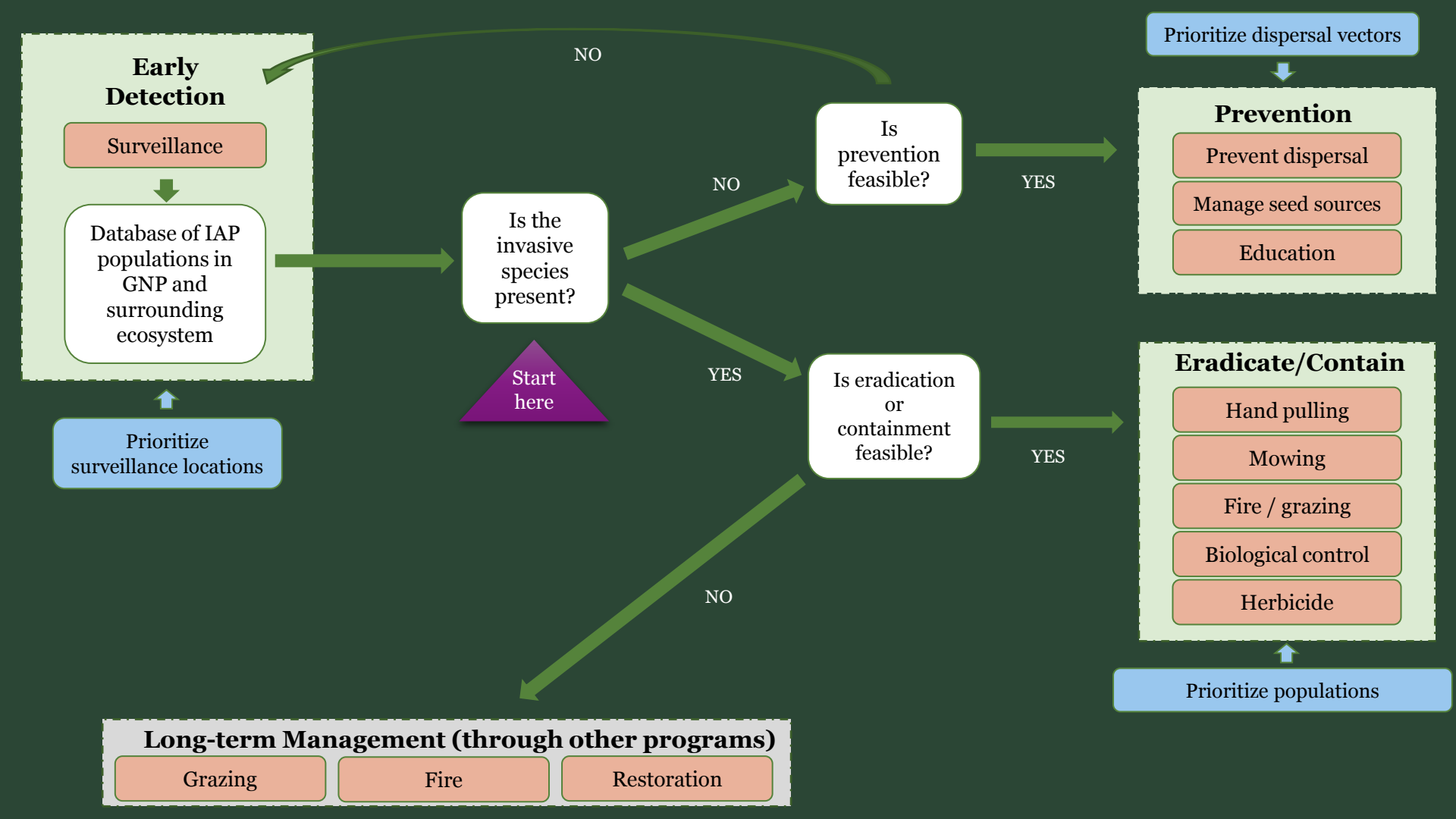
Priority vectors

- Wildlife
- Horses
- Local livestock feed
- Mowers
- Imported horse feed
- Frenchman river
- Fire equipment
- Bison feed
- Wind

Visitor engagement

Summary

- Integration of multiple strategies
  - Prevention
  - Early Detection
  - Eradicate / Contain
  - Manage / Restore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Summary

- Integration of multiple strategies
  - Prevention
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  - Eradicate / Contain
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- Base decisions on risk assessment
  - Cost-effective
  - Less biased
  - Documented

Questions