



Elk Management in South Dakota

**MAFWA Summer Meeting
June 2022**

***Andy Lindbloom
Senior Big Game Biologist***



Elk in South Dakota Overview



- History
- Elk surveys
 - Harvest
 - Herd composition
 - Survival monitoring
 - Aerial surveys
- Population objectives
- Disease considerations
- Research



South Dakota Elk History

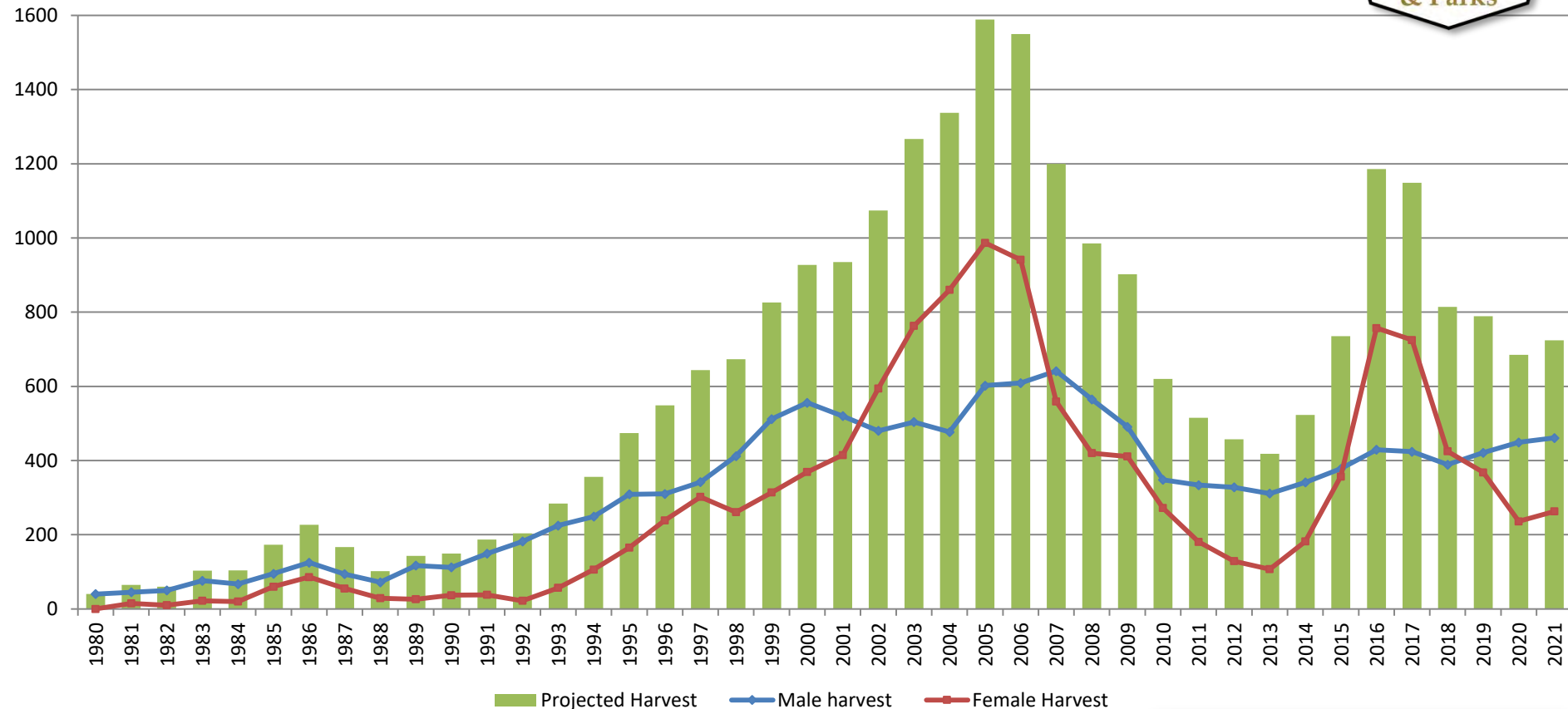


- Native and considered numerous in mid 1800's
- Last native Black Hills elk reported killed in 1888
- 1911-1920, 200 elk transplanted in the Black Hills
- 1952 – First limited license season
- 1950-1980 low elk numbers
- 1980-1990 – WCNP transplants to other areas in the Black Hills (145)
- Elk population started increasing in the 90s to all time highs in the mid 2000s



Black Hills Elk Harvest

(2021 preliminary)

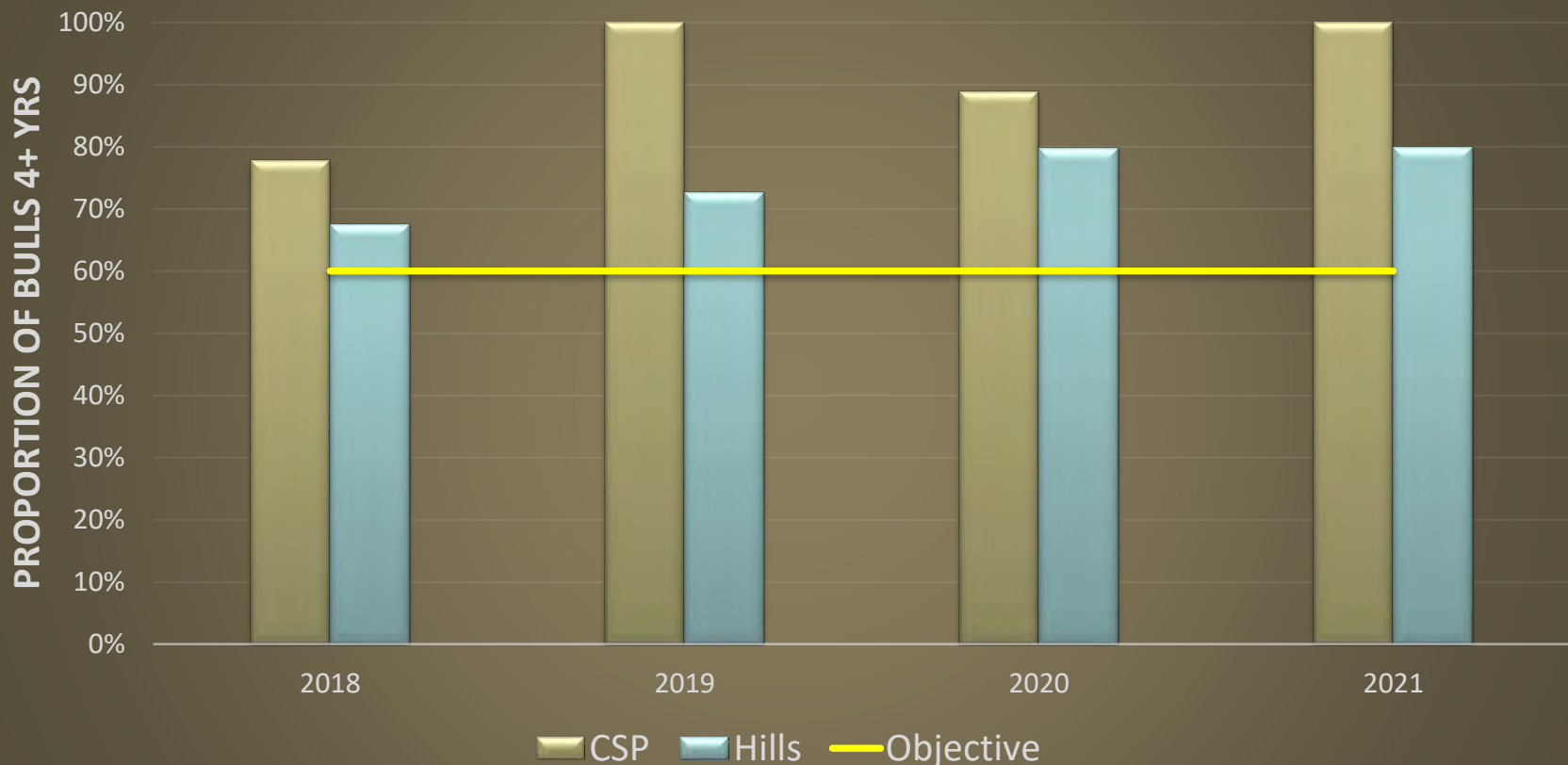


2021 Harvest: 735 total elk (471 males, 264 females)



Black Hills Bull Harvest Age

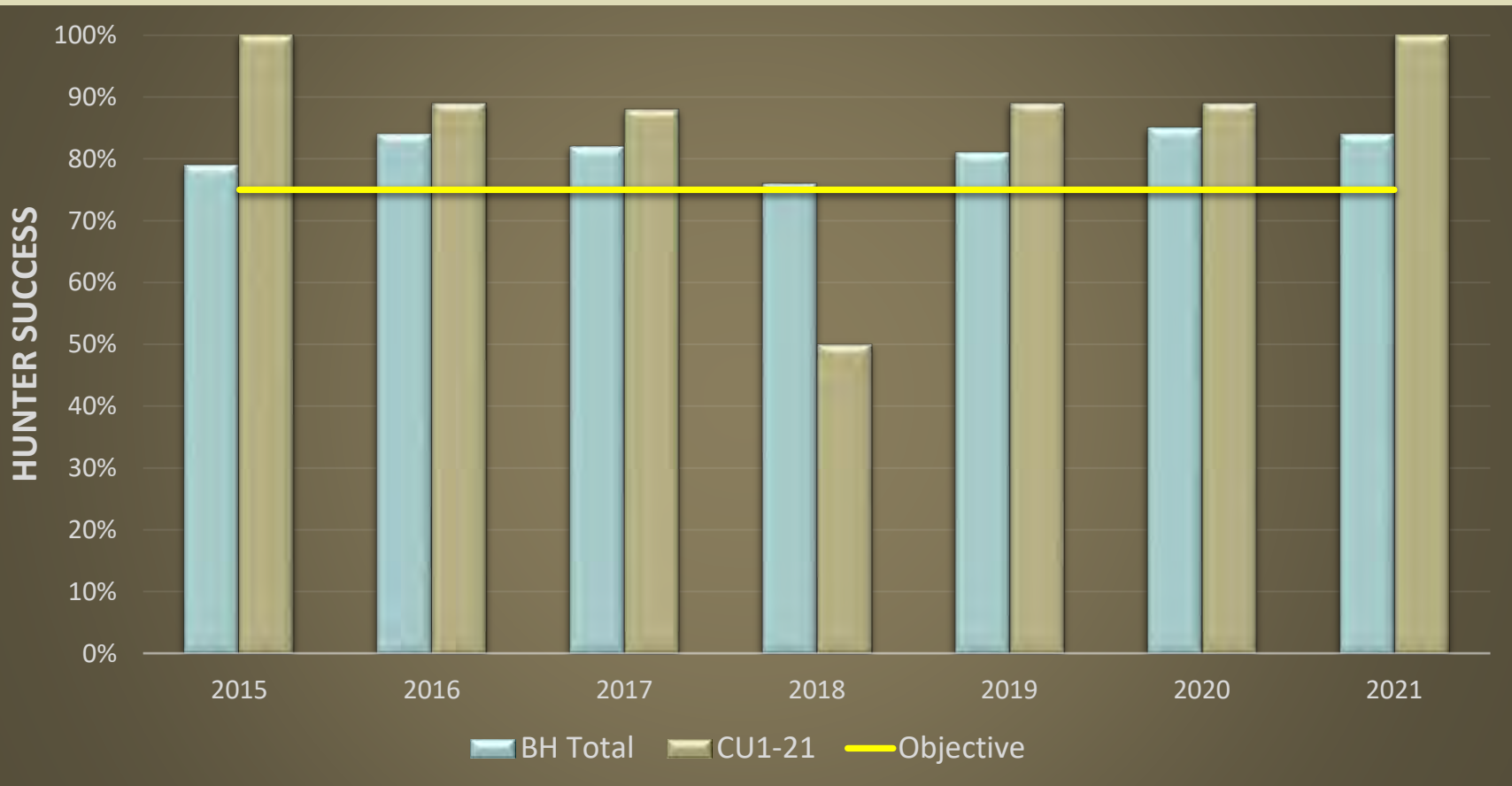
(2021 preliminary)



- *Manage Black Hills and CSP elk hunting seasons (firearm and archery combined) for an average bull harvest age structure of 60% bulls 4+ years of age.*

Firearm Hunter Success

Type 21 – “any elk”

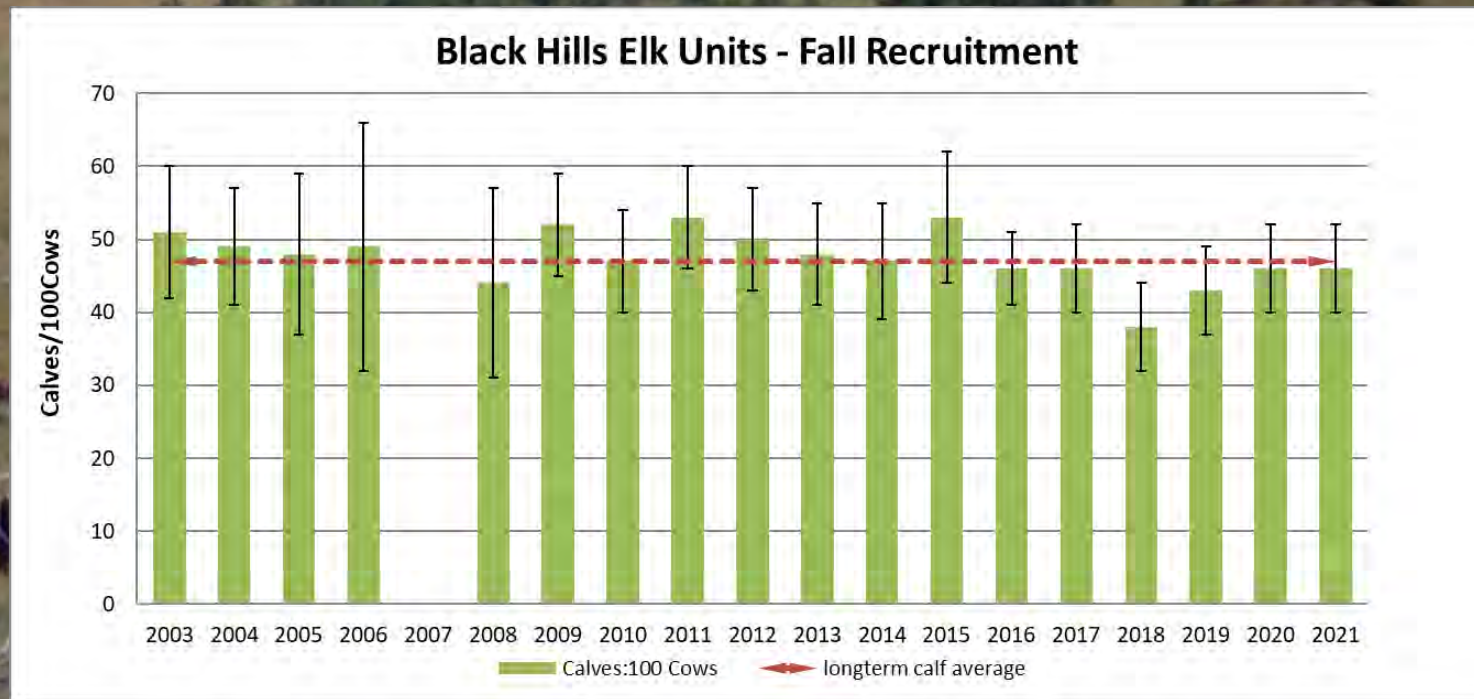


- Manage for a **minimum** of 75% hunter success for hunters with “any elk” Black Hills and CSP firearm license types.



Fall Herd Composition Surveys

- Random ground counts
- August
- Sex ratios
- Age ratios





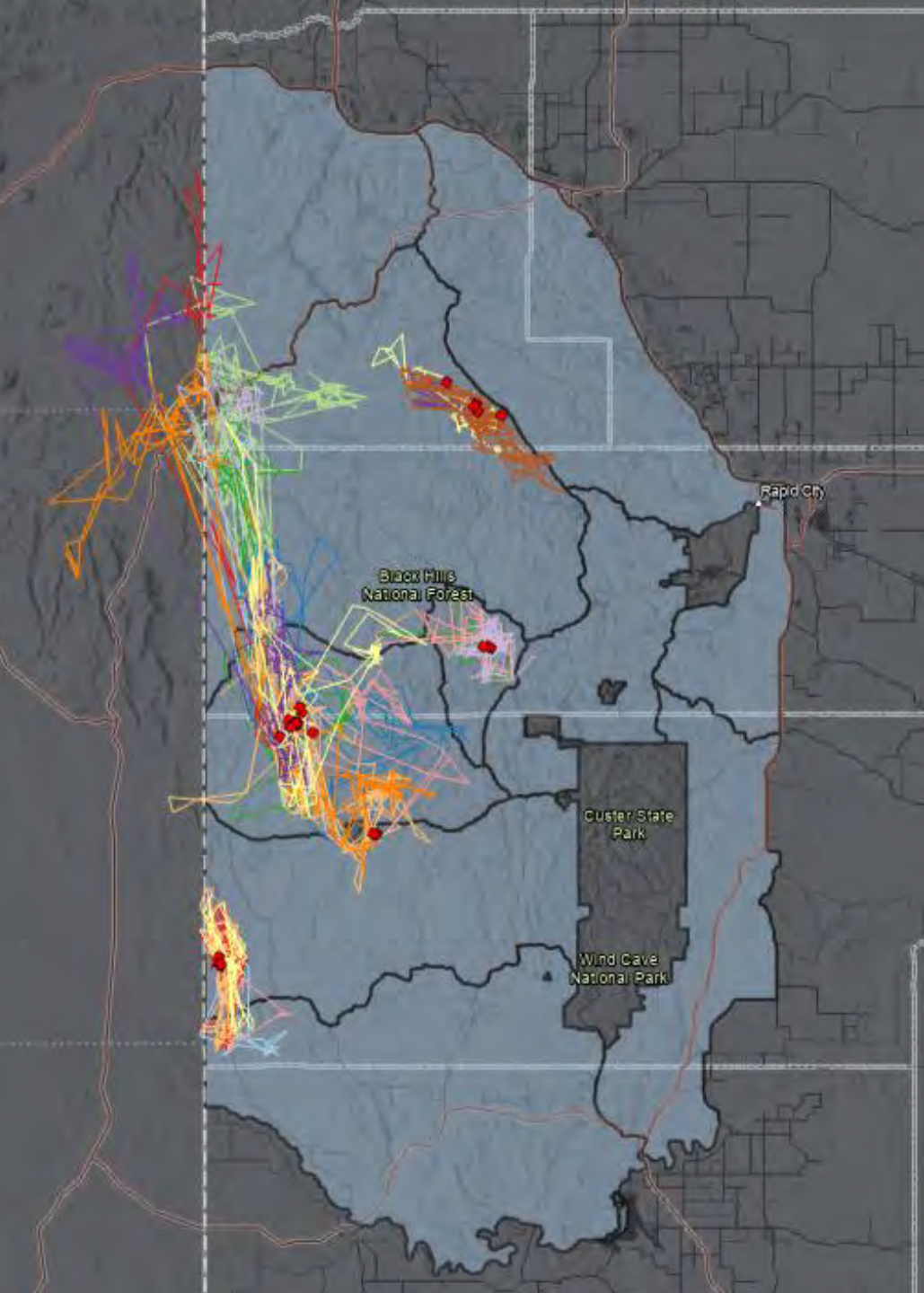
Survival Monitoring

- Helicopter-captured cow elk in winters of 2015 - 2020
- Monitor annual cow survival
 - Important metric of estimating population trends
 - Evaluate impacts of harvest
- 2021 annual cow survival = 93%
- *RMEF funded captures and collars*



**Rocky Mountain
ELK FOUNDATION**

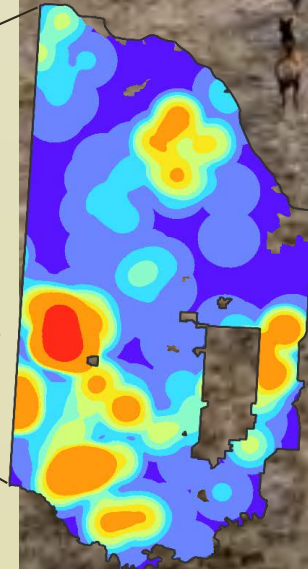
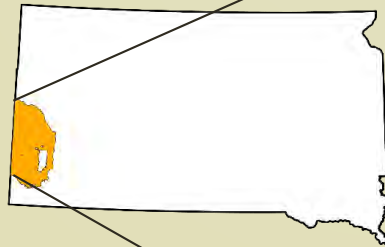




**Rocky Mountain
ELK FOUNDATION**

Aerial Surveys

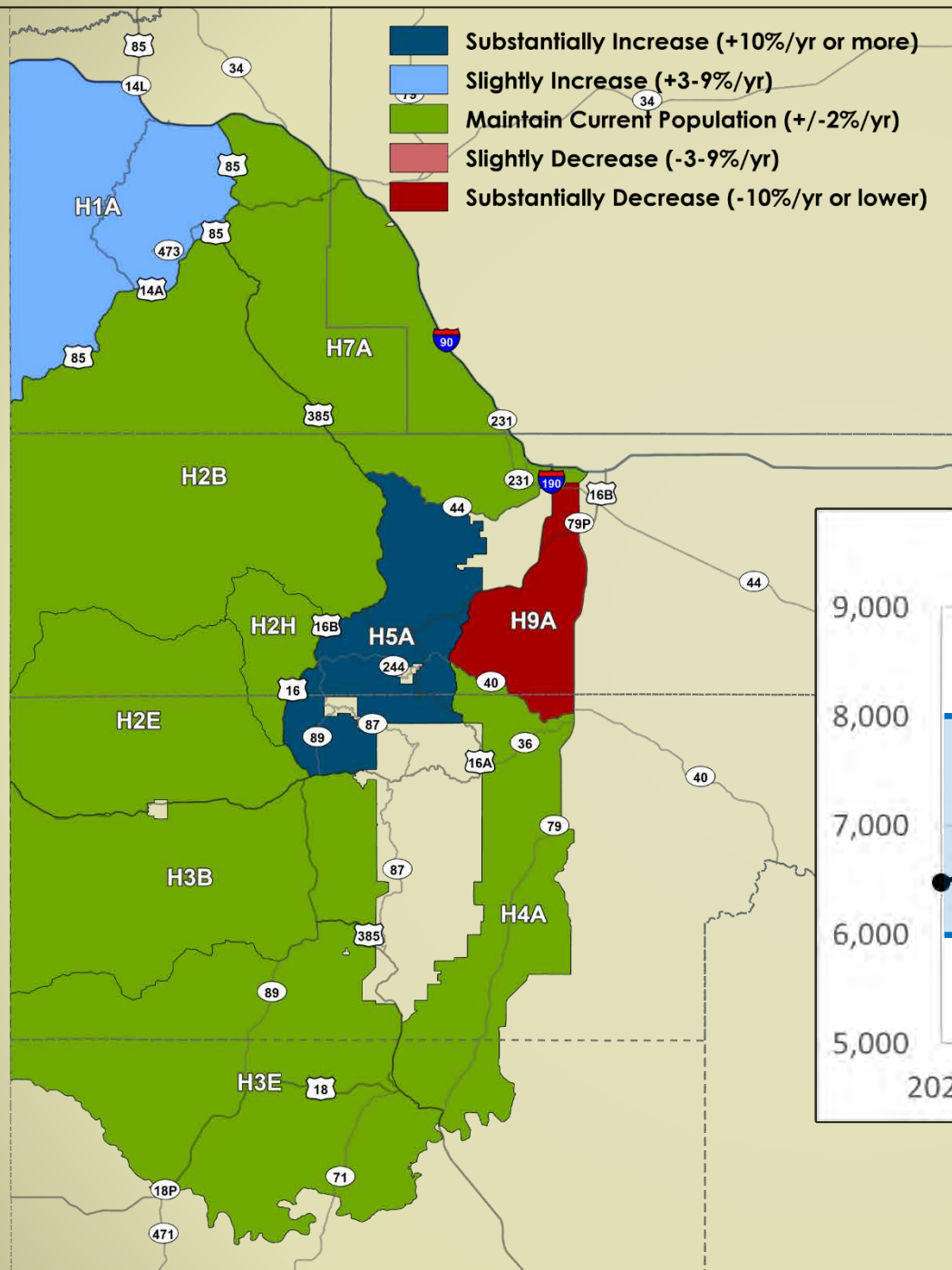
- Complete aerial survey flown in 2013, 2016, and 2020
- Next survey scheduled for 2024
- Aerial survey provides:
 1. Abundance estimate of wintering elk in the Black Hills
- 2020 estimates:
 - Black Hills \cong 6,500
 - CSP \cong 460



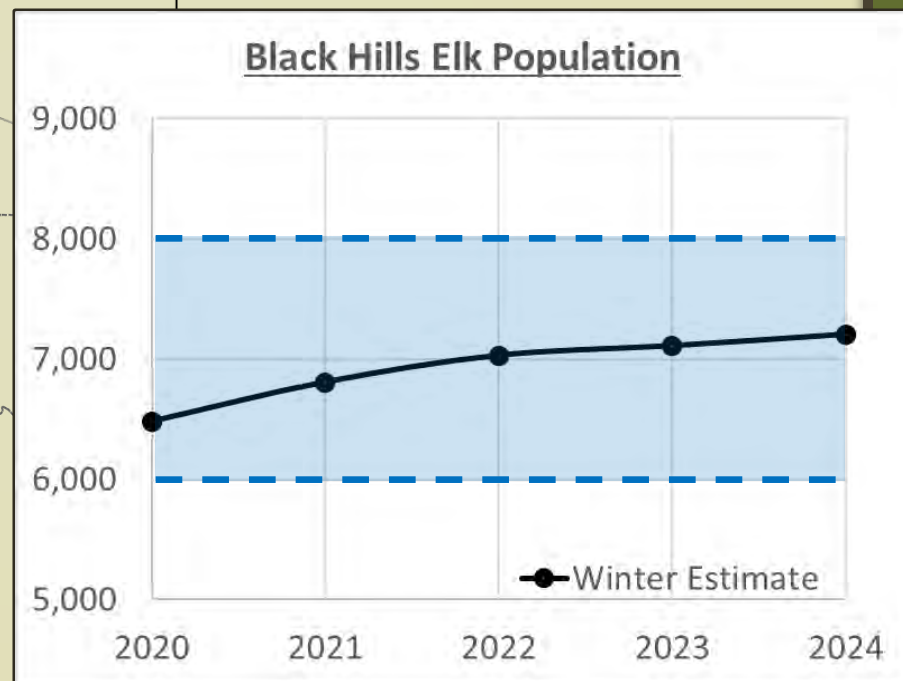
Putting it all together....

- Survey data
 - Harvest
 - Recruitment
 - Survival
 - Winter abundance estimates
- Black Hills elk research
- Population modeling
 - Projections of abundance and growth rates
 - License allocation
- Population objectives





6,000-8,000 Black Hills Population Objective





Disease Considerations

Chronic Wasting Disease

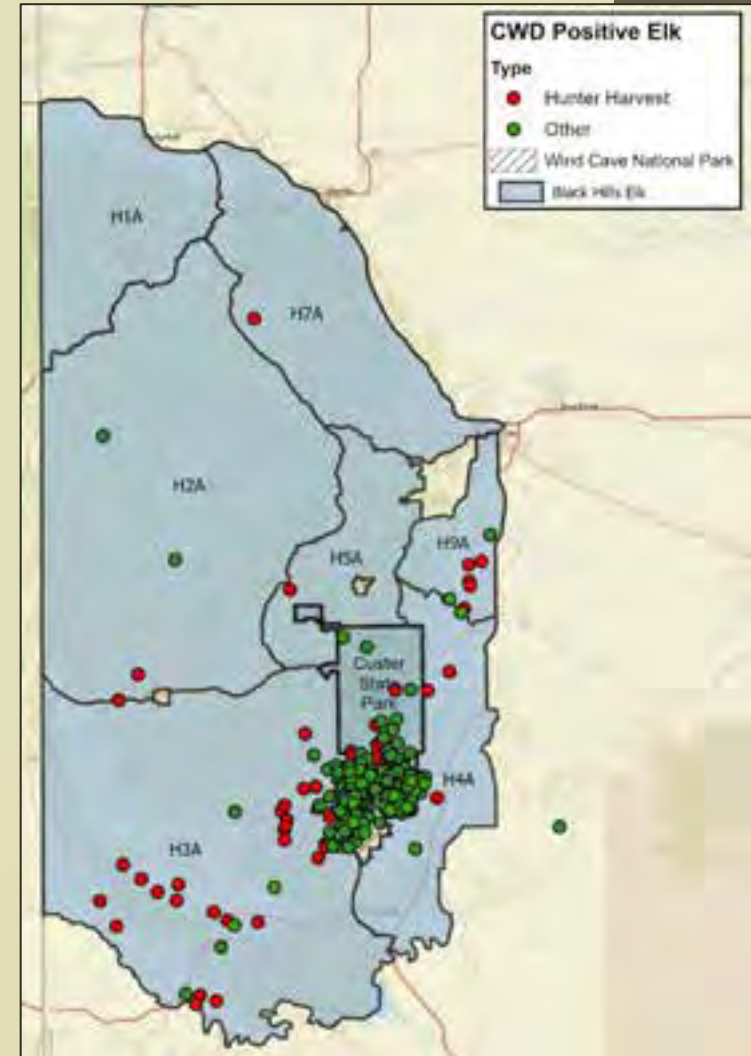
- *Elk Hunter Harvest*

Past ~ 7 Years

- Black Hills 1.4% (1,294)
- CSP 12.3% (81)
- WICA 15.4% (298; elk reduction)

Previous: 2000-2012/13

- Black Hills 0.5% (4,192)
- CSP 0.4% (785)
- WICA NA



Elk Research

Evaluating novel methods for testing Chronic Wasting Disease (CWD) status of elk and assessing impacts of CWD prevalence in the Black Hills of South Dakota.

Primary Objectives:

- *Evaluate and compare sensitivity and specificity for detecting CWD from ear pinna, skin, blood, or saliva samples.*
- *Estimate and monitor elk CWD prevalence rates by management unit.*
- *Estimate adult female survival in areas with different CWD prevalence rates.*



Research cont.



Estimating deer and elk abundance in complex topography.

Paul Lukacs, PI; University of Montana

Study areas:

- 100 cameras in the Grand River SA
- 260 cameras in the Black Hills SA



**Rocky Mountain
ELK FOUNDATION**



2020-07-22 06:01:16

M 2/3

57°F



DAU2-149

RECONIX



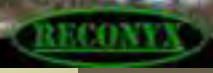
2020-11-20 10:09:19

M 1/3

0 31°F



DAU3-071



2021-03-06 06:39:43

M 2/3

35°F



DAU3 002





2019-06-11 11:26:21

M 2/3

57°F



BH069

RECONYX

2019-06-22 07:48:30 M 2/3 46°F

2019-06-22 08:03:53 M 1/3 46°F

2019-06-22 08:03:55 M 3/3 46°F

2019-06-22 08:18:57 M 1/3 48°F

2019-06-22 08:19:49 M 2/3 48°F



BH

BHO

BHO

BH053

BH053



