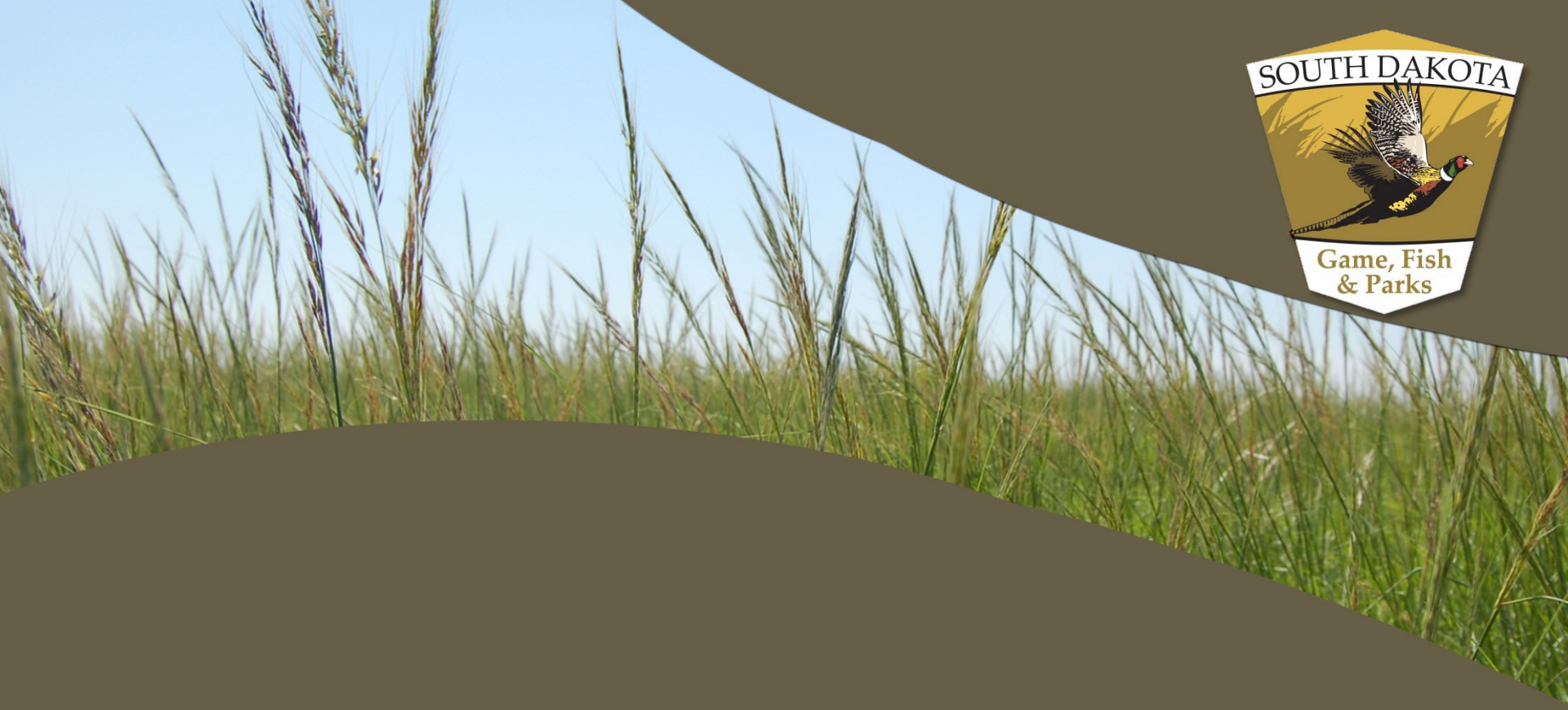
South Dakota

GAME, FISH and PARKS

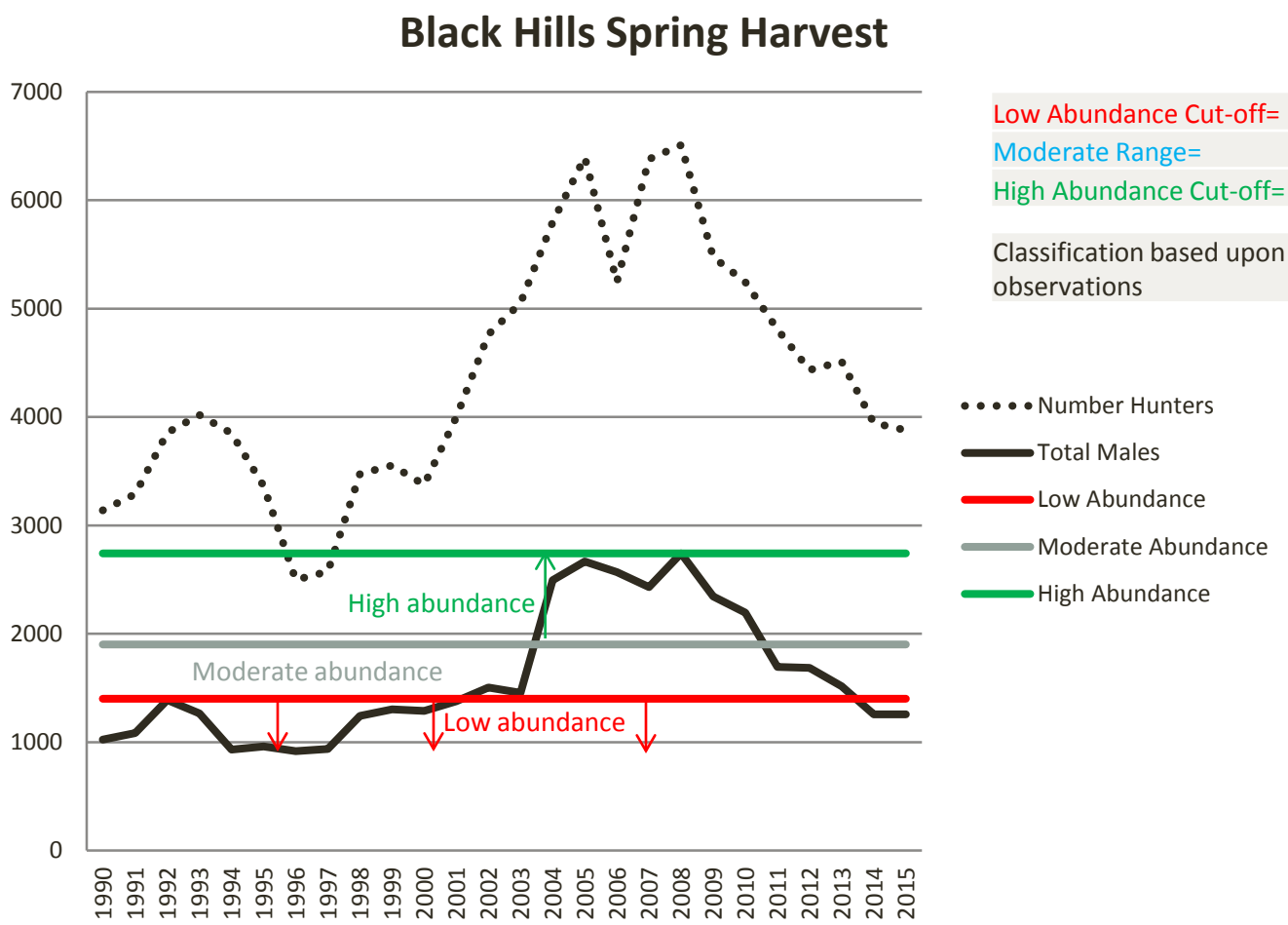


SOUTH DAKOTA
Game, Fish & Parks

Black Hills Wild Turkey Management Strategy

Black Hills Strategy

- Surrogate Abundance- Using data back to 1990- classified Low, Moderate, and High Abundance based on spring harvest and other metrics.



Low Abundance Cut-off=	≤1400
Moderate Range=	1401-1899
High Abundance Cut-off=	≥1900

Classification based upon success, surveys, and field observations

Strategy by Categories (Increase-A-C, Moderate-A-C, Decrease-A-C

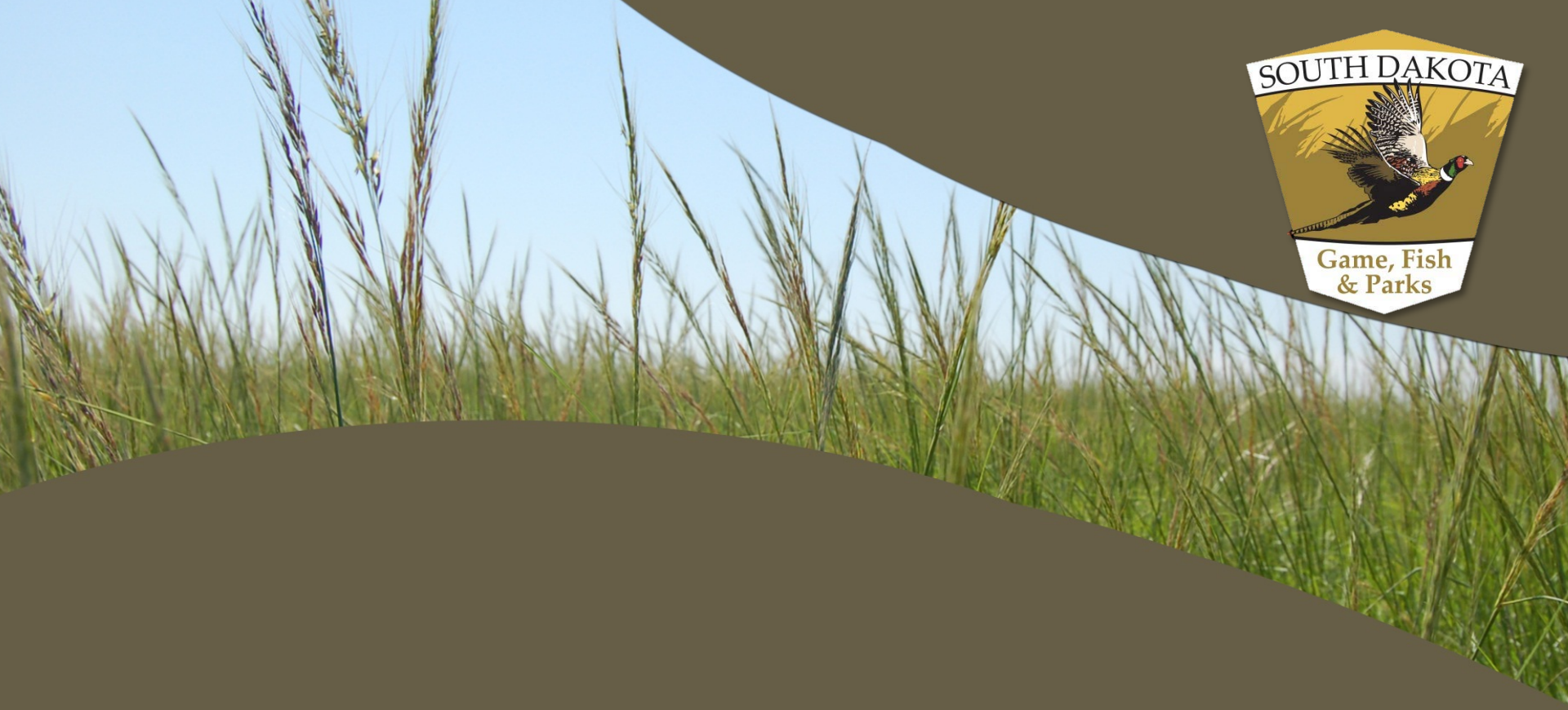
Low Abundance	Moderate Abundance	High Abundance
≤1400 (mean previous 2 springs)	1401-1899 (mean previous 2 springs)	≥1900 (mean previous 2 springs)

Harvest Strategies

Increasing	Limited Growth to Maintaining	Maintaining to Decreasing
Increase-A	**Moderate-A**	**Decrease-A**
Low Abundance and overlapping CI at 30% for 2 years	Moderate Abundance and overlapping CI at 30% for 2 years	High Abundance and overlapping CI at 30% for 2 years
Spring: Type 32 allowed and one tag per person	Spring: Type 32 and 35 allowed	Spring: Type 32 and 35 allowed
Fall: Type 31 allowed but limit to 400 or less, one tag per person	Fall: Type 31 allowed but limit to 600 or less	Fall: Type 31, 37, and 38 allowed but limit to 2000 or less
Increase-B	**Moderate-B**	**Decrease-B**
Low Abundance and overlapping CI at 30% for 1 year and above for one year	Moderate Abundance and overlapping CI at 30% for 1 year and above for one year	High Abundance and overlapping CI at 30% for 1 year and above for one year
Spring: Type 32 allowed	Spring: Type 32 and 35 allowed	Spring: Type 32 and 35 allowed
Fall: Type 31 allowed but limit to 500 or less	Fall: Type 31 allowed but limit to 750 or less	Fall: Type 31, 37, and 38 allowed but limit to 2500 or less
Increase-C	**Moderate-C**	**Decrease-C**
Low Abundance and and CI above 30% for both years	Moderate Abundance and CI above 30% for both years	High Abundance and CI above 30% for both years
Spring: Type 32 allowed	Spring: Type 32 and 35 allowed	Spring: Type 32 and 35 allowed
Fall: Type 31 allowed but limit to 600 or less	Fall: Type 31 allowed but limit to 1000 or less	Fall: Type 31, 37, and 38 allowed but limit to 3000 or less
*Limit Fall Season length: Dec-Jan	*up to 2 fall licenses per hunter	*up to 5 fall licenses per hunter
*up to 1 fall license per hunter		

Black Hills Strategy

Year	Spring Harvest	Abundance	Hen Abundance	Class	Hen Harvest	Proportion	Lambda
1990	1023	7809.160305	6091.145038	Moderate	539	8.848910946	NA
1991	1085	8282.442748	6460.305344	Moderate		0	NA
1992	1388	10595.41985	8264.427481	Moderate		0	NA
1993	**1266**	9664.122137	7538.015267	Low	215	2.852209665	NA
1994	**932**	7114.503817	5549.312977	Low	164	2.955320788	NA
1995	**960**	7328.244275	5716.030534	Low	0	0	NA
1996	**918**	7007.633588	5465.954198	Low	0	0	NA
1997	**937**	7152.671756	5579.083969	Low	0	0	NA
1998	1243	9488.549618	7401.068702	Moderate	0	0	NA
1999	1304	9954.198473	7764.274809	Moderate	222	2.859249646	NA
2000	1288	9832.061069	7669.007634	Moderate	210	2.738294314	NA
2001	1379	10526.71756	8210.839695	Moderate	0	0	NA
2002	**1503**	11473.28244	8949.160305	Low	0	0	1.138509
2003	**1456**	11114.50382	8669.312977	Low	165	1.903265004	1.078615
2004	2494	19038.16794	14849.77099	High	270	1.818209858	1.130876
2005	2666	20351.14504	15873.89313	High	399	2.513561083	1.074877
2006	2570	19618.32061	15302.29008	High	962	6.286640726	1.100973
2007	2430	18549.61832	14468.70229	High	1039	7.1810172	1.053484
2008	2743	20938.9313	16332.36641	High	1179	7.218794694	0.99419
2009	2346	17908.39695	13968.54962	High	711	5.090005902	1.051038
2010	2195	16755.72519	13069.46565	High	646	4.942818761	0.992382
2011	1693	12923.66412	10080.45802	High	513	5.089054478	1.03155
2012	1685	12862.59542	10032.82443	High	470	4.684622993	1.037128
2013	1517	11580.15267	9032.519084	Moderate	188	2.081368423	1.042829
2014	**1258**	9603.053435	7490.381679	Low	114	1.521951816	1.01597
2015	**1258**	9603.053435	7490.381679	Low		0	0.92215



Prairie Units - Turkey Management Strategy

Prairie Harvest Strategy

- Unit Objectives
  - Increase
  - Maintain
  - Decrease
- Objective based on biological, social, or anecdotal factors
- Unique harvest strategy for each objective

Contingent on aligning spring and fall units!

Prairie Harvest Strategy

- Minimum threshold to meet objective (maintain or decrease)
- Spring hunter success 95% CI ≥ 40% for 2 consecutive years at a specified minimum number of licenses.
- Unit objective is ***increase*** if threshold not met
- Hard trigger to close fall season

Population Objective – Increase

- *Justification* – Population **BELOW** objective based on biological data, hunter surveys, public comments, and field staff observations
- Hard triggers to close fall season: **Spring success** 95% CI overlaps 40% in two consecutive seasons or **spring success** 95% CI below 40% in one of two consecutive seasons

Fall Season:
Limited number of **ANY** turkey tags or close fall season

Decrease unit size

Spring Season:
Bearded turkey tags **ONLY** or close spring season if necessary

Population Objective – Maintain

- *Justification* – Population within objective range based on biological data, hunter surveys, public comments, and field staff observations
- Minimum Threshold: **Spring success** 95% CI ≥ 40% for 2 consecutive seasons

Fall Season:
ANY turkey tags to keep population within objective or **CLOSE** fall season

Restrict unit boundary where necessary

Spring Season:
Bearded turkey tags **ONLY**

Split spring seasons for prairie units as needed

Population Objective – Decrease

- *Justification* – Population **ABOVE** objective based on biological data, hunter surveys, public comments, and field staff observations
- Minimum Threshold: **Spring success** 95% CI ≥ 40% for 2 consecutive seasons

Fall Season:
Allow for liberal number of **ANY** turkey tags to increase harvest and decrease population

Spring Season:
ANY turkey tags

Split spring seasons for prairie units as needed

Example - Brookings

- *Objective* – Increase
- Minimum spring hunter success threshold not met
  - 2014 – 33%(95% CI 30 – 40%)
  - 2015 – 24%(95% CI 20 – 32%)
- Hard trigger, close fall season

Example – Custer/Penn-Mid

- *Objective* – Increase
- Minimum spring hunter success threshold met
  - 2014 – 46%(95% CI 40 – 52%)
  - 2015 – 47%(95% CI 42 – 51%)
- Fall season closed, but not due to hard trigger

Example – Gregory

- *Objective* – Increase

- Minimum spring hunter success threshold not met
  - 2014 – 41%(95% CI 36 – 46%)
  - 2015 – 47%(95% CI 42 – 51%)

- Fall season open (WR1 unit)
  - Would recommend a limited number of licenses if spring and fall units are aligned

Example – Fall River

- *Objective* – Maintain

- Minimum spring hunter success threshold met
  - 2014 – 48%(95% CI 44 – 53%)
  - 2015 – 52%(95% CI 47 – 57%)

- Fall season closed (WR1 unit)
- Would have option of fall licenses if spring and fall units were aligned