

**Status of the Yellowstone Bison Population
and
Management Alternatives Winter 2015-2016**



Bison Management Objectives

- **End-of-winter target of 3,000 animals**
- **Maintain similar proportions of males and females (neither sex > 60%)**
- **Maintain age structure near 70% adults and 30% calves and yearlings**
- **Use hunting as a primary means of removal**
- **Reduce large culls**

We use an Integrated Population Model to

- **Assess the CURRENT CONDITIONS**
- **Assess our ability to meet alternatives OBJECTIVES under different management alternatives**
- Population Level Data:
 - Aerial survey in June to count calves
 - 3-4 aerial surveys June-August to count the population
 - Ground composition survey to count calves, yearling (juvenile) males and females, and adult males and females
 - Census of winter removals by age and sex categories
- Individual Level Data:
 - Capture-Recapture Study: 30-60 adult female bison fit with collars and monitored
 - Annual Survival
 - Reproductive Rate
 - Brucellosis Exposure, Transmission & Recovery
 - Herd Dispersal

Review of Management Operations Winter 2014-15:

	Actual Removal	Negotiated Recommended Removal
Total Removal	737	800-900
Total Female (A/Y)	297 (229/68)	480 (410/70)
Total Male (A/Y)	276 (193/83)	240 (180/60)
Calf	161	180

Review of Management Operations Winter 2014-15:

STATE AND TRIBAL HARVEST

	TOTAL	Adult Male	Adult Female	Calf	Unknown
2012	28	14	12	2	0
2013	229	116	85	28	0
2014	327	142	120	61	4
2015	219	160	35	21	3
TOTAL	803	432	252	112	7

Review of Management Operations Winter 2014-15:

CONSIGNMENTS TO RESEARCH AND MEAT PROCESSING FACILITIES

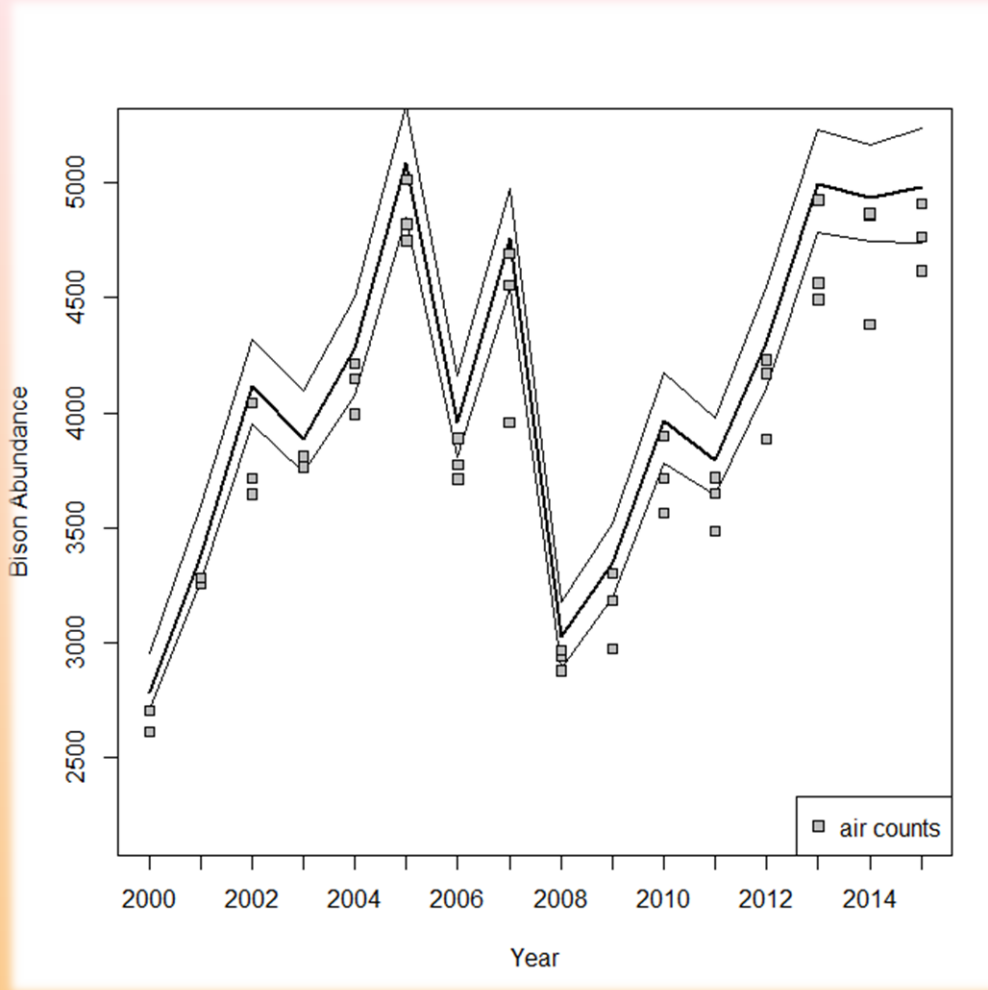
	TOTAL	Male (A/Y)	Female (A/Y)	Calf
2014	318	60 (19/41)	167(138/29)	91
2015	518	116(33/83)	262(194/68)	140
TOTAL	836	176(52/124)	429(332/97)	231

Review of Management Operations Winter 2014-15:

TAKE HOME MESSAGE:

- Since Winter 2012-2013: Harvests = 49% (775) Consignments = 51% (803) of Removal
- Harvest of 200-350 animals insufficient to offset growth under current conditions
- Combination of Harvest and Culls (total removal 650-750) has resulted in a stable bison population
- Harvests composition: biased towards males (63%) and near targeted age structure (14% calves)
- Consignment composition: heavily biased towards females (71%) and calves (28%)

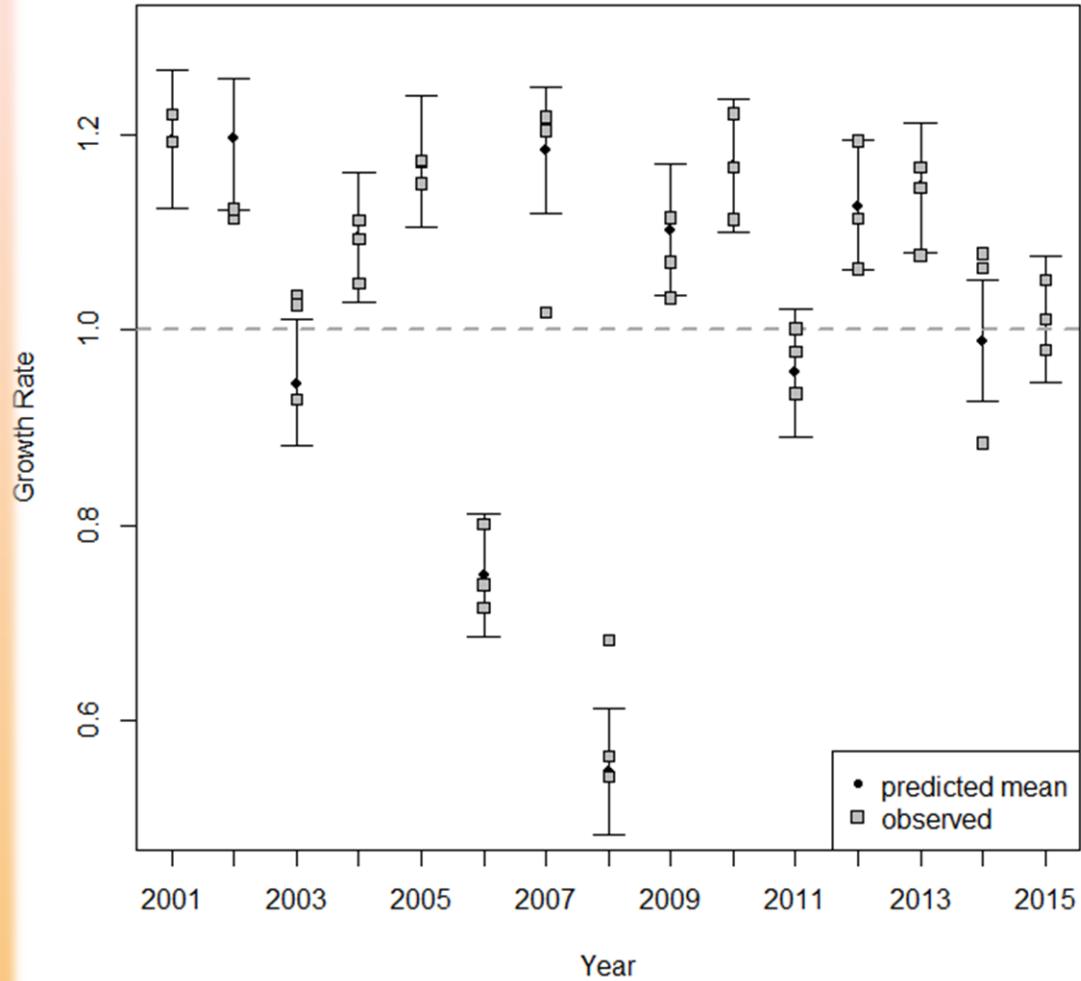
Current Conditions: Population Abundance



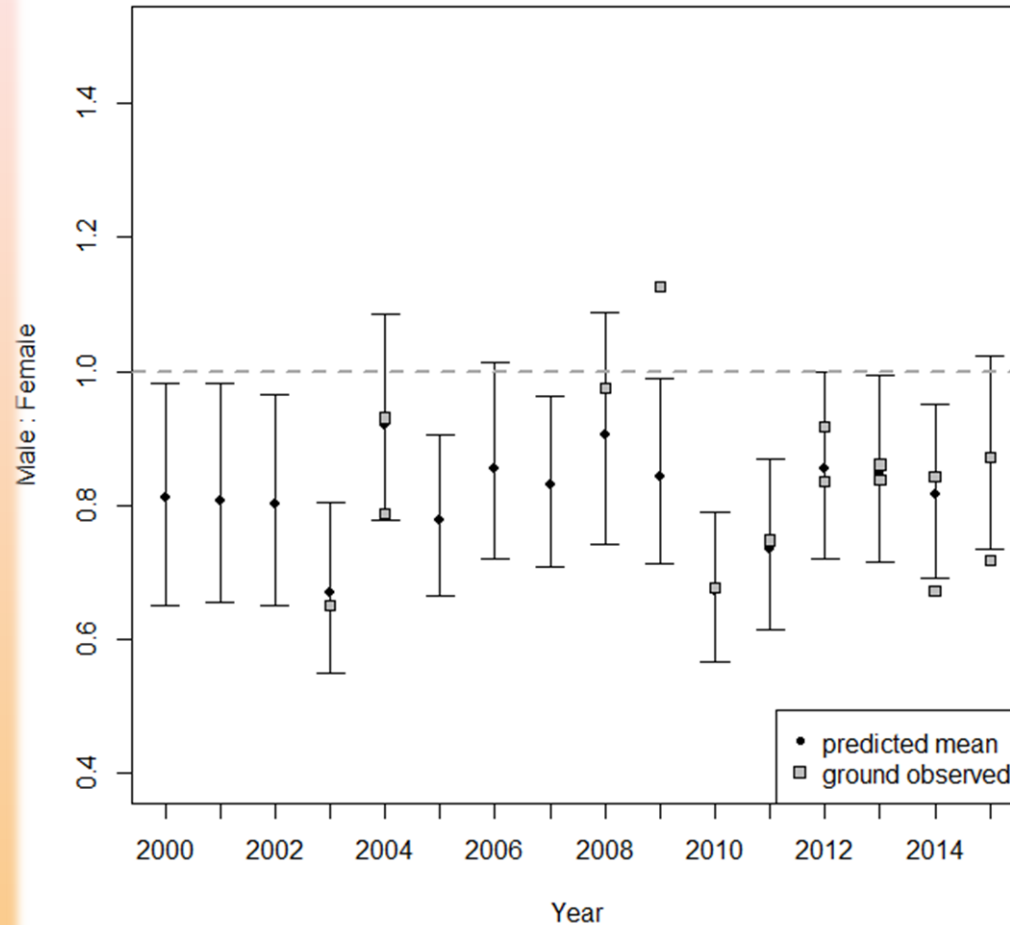
TAKE HOME MESSAGE:

- Stable Bison Population since summer 2013 around 4,900-5,000

Current Conditions: Population Abundance



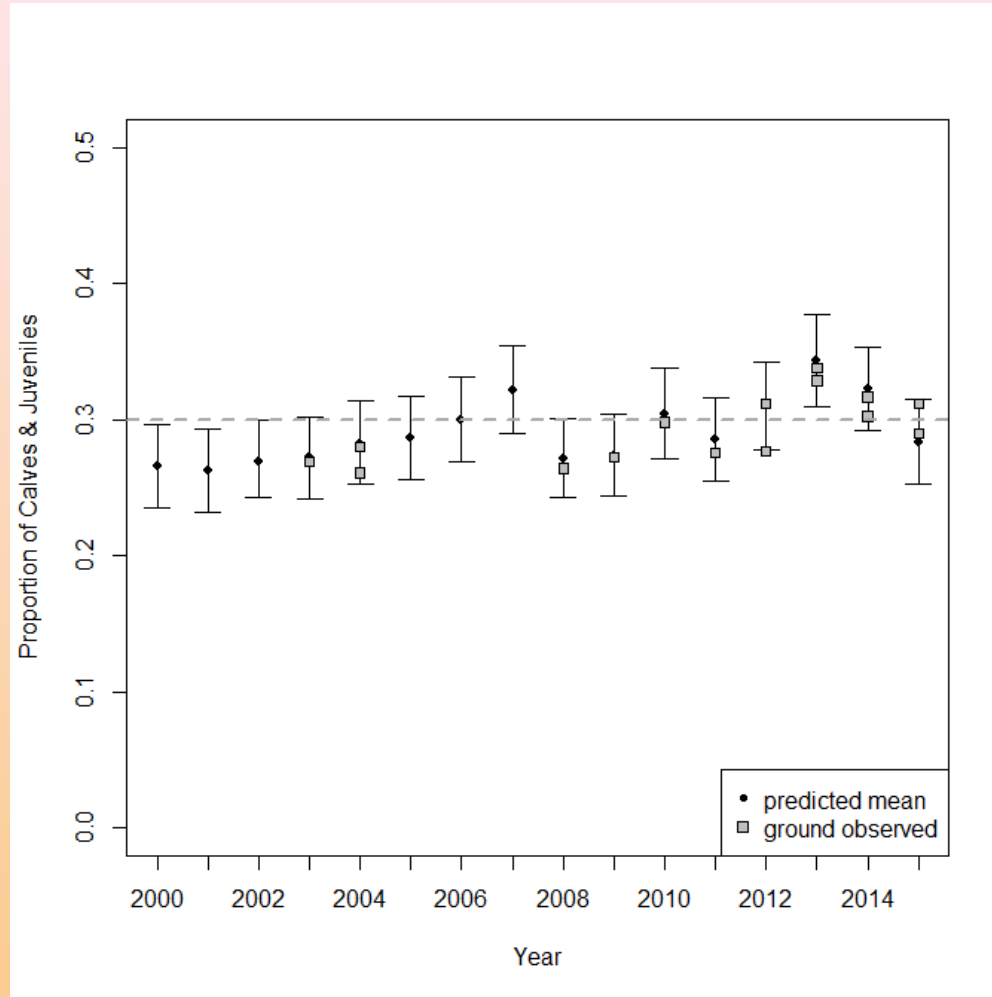
Current Conditions: Population Structure



TAKE HOME MESSAGE:

- 46% Male and 54% Female – maintaining near objective

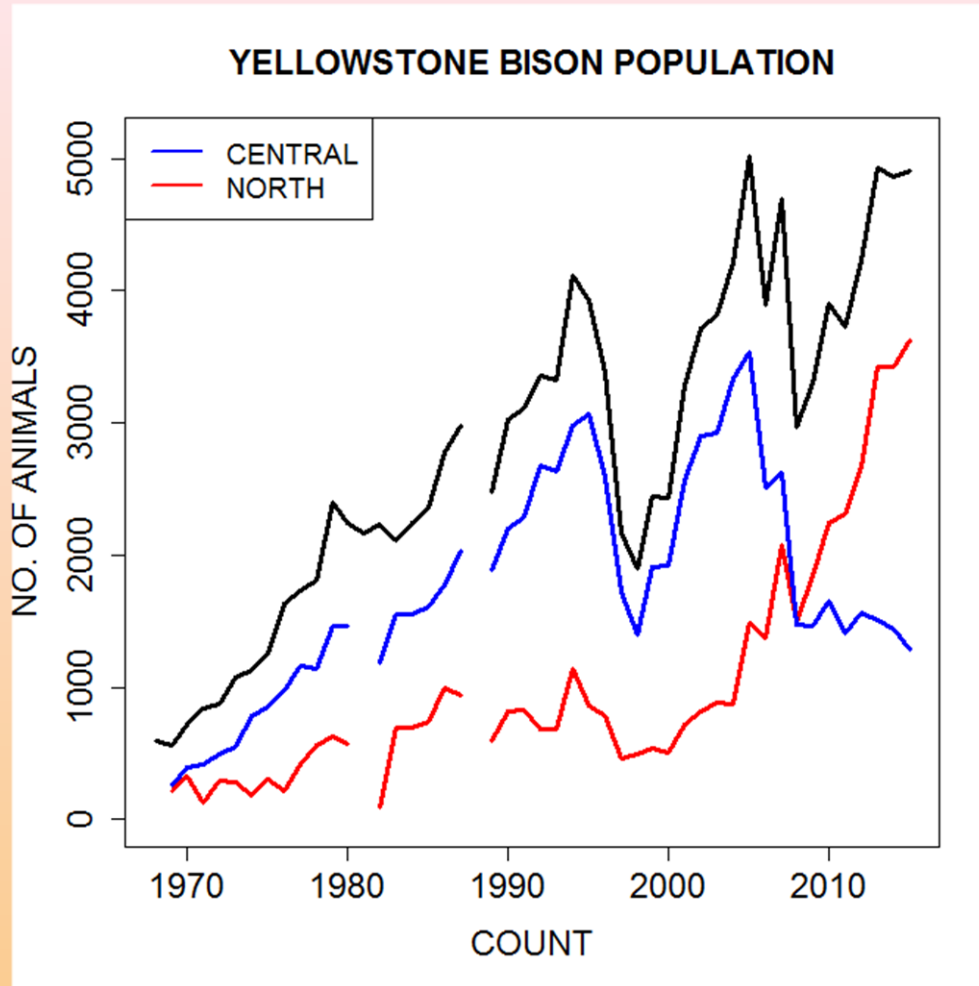
Current Conditions: Population Structure



TAKE HOME MESSAGE:

- Reducing the juvenile proportion which has longer term effects on growth rate

Current Conditions: Herd Structure



TAKE HOME MESSAGE:

- Central herd declining and Northern herd still increasing

PROPOSED MANAGEMENT ALTERNATIVES WINTER 2015-16

Remove: 70% Adult, 10% Yearling, 20% Calf
 60% Female & 40% Male

Alternative 1: Remove 900 (288M, 432F & 180C)

Alternative 2: Remove 1,000 (320M, 480F & 200C)

Alternative 3: Remove 1,100 (353M, 528F & 220C)

ASSESSMENT OF MANAGEMENT ALTERNATIVES WINTER 2015-16

REMOVAL	900	1,000	1,100
END OF WINTER SIZE	3,870	3,780	3,670
2016 CALF CROP	780	760	746
JUNE-JULY 2016	4,660	4,540	4,416

* All alternatives leave age and sex structure within objectives

NPS RECOMMENDED ALTERNATIVE WINTER 2015-16

- Recommend total removal of 1,000 bison
- Focus removals in the Northern Management Area
- Limit harvests in Western Management Area to <25 Adult Males
- Aim: Hunter harvest of 400 animals & 600 removed through consignments
- Harvest composition near annual average of 63% male
- NPS will likely meet calf removal objective before the female removal objective through consignments
- NPS working with 4-5 partners on logistics of consignments to processing plants