



## Kaibab Plateau Bison Herd Reduction Summary Report 2022

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### *Historical and Management Context*

The present-day Kaibab Plateau Bison herd first migrated to Grand Canyon National Park in the late 1990’s and have not left the plateau since 2009. Due to exponential growth of the herd and impacts to other park resources, a short-term environmental assessment was signed in late 2017 with the goal of reducing the herd to below 200 bison over a period of 5 years. This year was the 4<sup>th</sup> year that the park has conducted live capture and removal operations.

### *2022 Bison Reduction Operation Staffing*



The park ran a live capture and removal operation in 2022, using an Incident Command Team (IMT). In total, 45 individuals participated in the operation in assigned roles and many others played critical roles in assisting the operation. The IMT was activated the first week in July with 11 individuals on the Command and General Staff. Operations were made up from workgroups across the park and from managing partners.

Operation	#Staff	Ops Hours	Managing Partner Assistance
IMT Command & General	11	176	(note this doesn't include planning time)
Baiting & Capture	12	143	
Processing	21	553	2 AZGFD, 2 USFS, 1 USGS, 2 other park units
Veterinary	3	58	1 BRD, 1 USFS
Loading	14	29	4 ITBC, 1 USGS, 1 other park unit
<b>TOTAL</b>	<b>45</b>	<b>1,028</b>	Reported time only

### *Incident Management Planning and Preparation*

Command and General Staff Meetings began in the beginning of July by means of weekly conference calls for planning and preparation of events. This group used the 4year operational framework and previous operational After-Action Review’s to plan the event. They also prepared a Go-no-Go decision document for the operation.

## Budget

Payroll	\$22,810	35 individuals
Overtime	\$21,172	
Travel	\$8,488	14 individuals
chases	\$20,656	Mostly re-occurring expenses (\$18,589 for hay/alfalfa)
Bison Corral Repair	\$74,670	Onetime expense. Phase 1 of 3. Paid for by GC Conservancy
<b>Total Cost</b>	<b>\$147,796</b>	
Cost per bison	\$1,739	85 bison captured

## Corral Improvements

Specific safety walkway issues were identified on the corral structure during previous years capture efforts. Staff identified 3 tiers of urgency on the safety walkways that needed to be addressed. The park contracted out tier one safety fixes to BlueWorld Construction for 2022. Due to some funding and contracting issues these fixes were delayed well into August, which delayed the original planned dates of the 2022 capture operation. BlueWorld installed new, safer catwalks on the processing alleyway (below) and the walkways that lead to the bull pen. Additionally, two new crossovers were added to aid the efficient flow of staff using the walkways. Without these fixes, funded by Grand Canyon Conservancy, the park would not have moved forward with captures in 2022.



## Operations

Dates	Operation
July 5	Start weekly IMT meetings
July 1 – Sept. 8	Baiting (Approx. 6 weeks prior to capture dates)
Aug. 22-Aug. 30	Corral Contracting work
Sept. 3 – Sept. 9	Capture (32 bison on 9/3 at 21:30; 36 on 9/4 at 21:30, 2 on 9/8 in the morning, 16 on 9/9 between 6-10am)
Sept. 6	Mobilize Additional Staff (note: Sept. 5 was a federal holiday)
Sept. 7- Sept. 9	Processing
Sept. 10	Loading & Transfer
Sept. 11	Clean-up & Demobilize

Baiting the trap with reclaimed water, salt blocks, and a hay/alfalfa mixture began approximately 6 weeks prior to the anticipated capture dates. An unusually heavy monsoon kept bison away for most of this period. Hay and salt baiting was increased with water no longer a limiting resource on the landscape. The weather was hot and dry a week prior to capture which helped lure in the bison. Thirty-two bison were captured on the first planned

date of Sept. 3<sup>rd</sup> at 21:30. Animals were pushed into the facility so that the trap could be re-opened. An additional 36 bison were captured at 21:30 on Sept. 4<sup>th</sup>. The trap was then closed until all of the bison could be processed and sorted into the corral. The trap was re-opened on Sept. 7<sup>th</sup> and staffed that night until 06:00 Sept. 9<sup>th</sup>. On the morning of the 8<sup>th</sup>, 2 more bison were caught. Then sometime between 06:00 and 10:00 on the 9<sup>th</sup> an additional 16 bison entered the trap and they were captured when staff arrived to begin corral demobilization. Staff regrouped and processed the remaining bison and demobilized shortly after. Of the 85 bison caught in the trap, a calf and a mature bull were caught twice, resulting in a net of 83 individuals.

Once initial bison were captured, processing and loading staff were mobilized to the North Rim where the majority camped at CC Hill. Prior to processing, staff participated in a North Rim orientation, a briefing, a review of Job Hazard Analyses specific to the bison operation, a review of low stress handling and bison behavior, and training on their specific role at the corral at Lindbergh Hill and then participated in additional review at the corral.



Staff used low stress handling methods including large flags and hand signals to move bison in small groups through the corral and into the squeeze chute. In the squeeze chute animals were aged and marked with ear tags and a variety of biological samples were taken for disease and herd monitoring. Bison were sorted in holding pens based on size; this helps reduce the chance of them injuring each other. Sixteen bison were released post processing per protocol (i.e. matriarchs, patriarchs, nursing cows, and dependent calves). This year we had more large bison than previous years, two calves were killed in capture by a bull and 3 cows had to be

ethanized due to mortal injuries received from another cow. These animals were moved to Lindbergh Hill and necropsied. Hides, hooves, and tails were removed from the cows to be donated to tribes. Meat is not salvaged from animals that may have infections but is left on the landscape for scavengers.

Transfer documents and mandatory Certificates of Veterinary Inspection were prepared the night before loading. ITBC brought 4 smaller livestock trailers with sliding gates to load animals at the corral. The smaller trailers then transferred their animals to a semi with a portable chute at Lindbergh Hill. The calves were transported separately in a small trailer. This new method worked quite well and helped meet biosecurity guidelines. Loading took less than four hours.

No injuries to personnel were reported.

### Outcome

Disposition	Number	Destination
Died	5	Hides, hooves, & tails donated to Tribes
Released/Did not fit criteria	16	Back to Park
Released/Collared	3	Back to Park (outfitted with tracking collars)
Transferred	39	Iowa Tribe of Oklahoma (OK)
Transferred	19	Cheyenne River Sioux (SD)
<b>Total Captured</b>	<b>85</b>	2 bison were captured and counted twice

### Key Lessons Learned

- ✓ New catwalks really increased efficiency and safety
- ✓ Having internet capabilities at Lindbergh Hill was a game changer and increased efficiencies

- ✓ Documents provided pre-operation on low stress handling helped set the tone
- ✓ Re-opening the trap and having additional staff to help with that increased our capture numbers
- ✓ Water on the landscape can affect the attractiveness of the bait. Staff should use weather predictions to help time captures.
- ✓ Need a “kick-the-tires” onsite visit and dry run a few months prior to operation
- ✓ Check lists should be created for items that need to be onsite
- ✓ Kick out big, angry bison early
- ✓ Shorten the time bison are held – start training earlier once staff have arrived
- ✓ VIPs and media need a better safety/ expectation briefing prior to visiting the corral and no interviews should be conducted during ops.

**Reduction Status – Progress towards EA Goals:**

The park is on target to reduce the herd to below 200 bison, the objective identified in the EA.

Year	From Flights			Captured Collar		Removal					Add Calves
	Jan/Feb Popn Est.	Pop'n Range	C.I.			Ship	Other*	AZGFD Hunt	NPS Lethal Removed	Total Removed	
2019		175-509	90%	51	12	31	5	55	-	91	53
2020		285-365	95%	76	11	57	1	64	-	122	28
2021	375	296-483	95%	66	17	36	3	36	5	80	49
2022	216	187-313	95%	85	3	58	10	TBD	0	68	60
<b>TOTALS</b>				<b>278</b>	<b>43</b>	<b>182</b>	<b>19</b>	<b>155</b>	<b>5</b>	<b>361</b>	<b>190</b>

\*Known mortalities from other causes including motor vehicle collisions

