

Jim Matheson

From: Sparky the HerdDogg <notifications@herddogg.com>
Sent: Friday, January 29, 2021 6:56 AM
To: Jim Matheson
Subject: New CMP Application from Nachusa Grasslands



Cody Considine has just submitted a Conservation Management Plan application for Nachusa Grasslands

GENERAL

A. Premise Details

1. When was your premise established?: **10/01/1986**
2. What is your total herd size (an average annual count of all live bison): **125**
3. How many acres, owned & leased, is your premise: **4000**
4. What premise type do you operate? (Select all that apply): **Seedstock**
5. How many households are directly involved in your operation (count each household that has a significant interest in your business): **10**
6. Check here if you would be willing to share your completed application with others to help aid in their conservation efforts.

BISON

A. Genetic Stewardship

1. Select all of the following genetic stewardship practices that are in effect in your herd.
 - We never engage in interspecies crossbreeding
 - We completely adhere to the **NBA Code of Ethics**.
 - We have implemented a plan to remove from production, over time, any known negative interspecies genetic influence. (While the science is not yet

settled, a good herdsman, with or without the benefit of science, can devise a system to meet this criterion.)

✓ We have implemented a plan for genetic selection protocol for replacements that favors natural selection criteria. (Natural selection criteria would include pregnancy rate, conversion of grass to weight, etc., with little to no supplemental feed.)

2. Please elaborate on your plan and any progress made if you selected answers with a red asterisk.

Working exclusively with Jim Derr and Wind Cave National Park to grow the herd to minimum of 1500 breeding aged animals across seven ranches. Closed herd. We do not bring in any other animals outside of the Wind Cave lineage yet. We trade animals biannually, including bringing in more animals from the park itself. We maintain our Nachusa herd breeding age sex ratio approximately three cows per one bull. See attached report that indicates the progress (as of 2019) on TNC's genetic management of Wind Cave satellite herds and recommendations that we've been following as it pertains to Nachusa Grassland's bison herd. Analyses indicate the satellite herds have so far done a great job at preserving WCNP genetic diversity without creating genetic differentiation. Although we aren't completely following the recommended 1:1 sex ratio, we parentage test calves and introduce new bulls every other year from Wind Cave National Park. Based on the results of the most recent study indicates that our management strategies are meeting our goals of creating an environment that compliments the WCNP genetic diversity. We hope to add additional females from the park when available. When they are not available, we plan to trade within TNC Wind Cave Satellite herds that are more genetically distant from Nachusa's herd per recommendations within the report.

3. Please upload any additional files here, if applicable

[Expanding on The Nature Conservancy_Wind Cave National Park Partnership_Genetic Conservation Initiative 2020.pdf](#)

B. Handling & Facilities

1. Select all the following that best describe your animal handling practices and facilities.

✓ Adequate containment of bison. (Escapees are rare and quickly returned home)

✓ Low stress and safe handling facilities and practices are in place. (A very low level of injuries and stress to animals and humans.)

✓ Adequate containment of bison that includes consideration for other local wildlife. (Deer, elk, antelope, moose, etc. migrations. Free movement of prairie grouses, etc.)

2. Please elaborate if you selected any answers with a red asterisk.

We use a high tensile woven wire. 5 1/2' adjacent to public roads and 4 1/2' to non adjacent roads to allow deer to move freely across the landscape.

Bottom of fence starts at 12-18" off the ground. Our handling facility was designed in part to the principles of Temple Grandin and with her direct consultation. Most of our gates are hydraulic and we do not have any catwalks to minimize stress throughout our facility. We document all injuries, times we had to use a hot shot, or do something else that doesn't correspond to low stress philosophy. We make improvements each year to minimize those occurrences. I attached an aerial photo of our corral. Although this isn't the best design, we learn each year and have made many modifications since this photo was taken. We can safely move animals through in a low stress environment.

3. Please upload any additional files here, if applicable

No Files Uploaded

C. Health & Welfare

1. Please upload a copy of your bison health and welfare plan (i.e. deworming, vaccinations, quarantine protocol – if used - monitoring methods, goals, etc.), or comment in the text box below.

**[Nachusa Bison Roundup 2019 Bison Action Plan.docx](#)
[Nachusa_BisonConsPlanSection2020.pdf](#)**

Herd is visually inspected weekly. We will treat animals remotely via dart if necessary. The herd is rounded up once a year. There, each animal is inspected by a veterinarian and data collected. We take fecal samples for internal parasite loading three times a year. We only deworm if needed and so far have not had to. See our 2019 roundup action plan for more detailed information pertaining to vaccinations.

2. Please upload or comment in the text box below on your progress with and/or adherence to your health and welfare plan.

[Corral Gate Map.jpg](#)

Observations by staff, vet, grazing nutritionist, and fellow bison managers all agree our overall herd is healthy and thriving. Their weights, visual appearances, body condition, results from blood work, genetic data, and other research studying our herd indicate they are healthy.

3. Please upload any additional files here, if applicable

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LAND

A. Soil Health

1. Develop a plan to increase soil health and submit it in the comments section below or with an upload. (i.e. increase in carbon, biology, fertility, etc. Monitoring method.)

[NachusaSiteConservPlan_edited_2020_NBA.pdf](#)

2. Please provide evidence of a positive trend in increasing soil health in the comments section below or with an upload.

[2017_Baber_et_al_NachusaSoilMicrobes.pdf](#) [Klopf_et_al-2017-Ecological_Applications.pdf](#)

3. Please elaborate here, if applicable

Attached is the conservation plan for our full site. We have not called out soil health metric specifically in our goals. It should be noted several soil scientists conduct research on the site, including continuing a long-term study of changes soil microbial community and soil carbon and nitrogen pools across the site. In addition, staff scientist Dr. Elizabeth Bach's research expertise are in soil ecology and she works actively with researchers to monitor soil health. We also attach a peer-reviewed scientific publications of soil research conducted at Nachusa Grasslands.

4. Please upload any additional files here, if applicable

No Files Uploaded

B. Erosion Control

1. Identify erosion concerns and develop a plan to arrest the erosion in the comments section below or with an upload. (i.e. wind and/or water erosion. Timed grazing, water management systems, cover crops, monitoring methods, goals, etc.)

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2. Please provide evidence of progress on your soil erosion management plan in the comments section below or with an upload.

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3. Please elaborate here, if applicable

We have not traditionally specifically monitored soil erosion on the preserve, as it has not been a concern on the landscape. Researchers are investigating the presence and persistence of bison wallowing behavior and it's contribution to bare soil and erosion on the site. This is active research and results are not available yet. Erosion is not an issue we regularly see and therefore don't measure it. In the 30 years the preserve has been operating, erosion has not been an issue. As we purchase property, we convert row crop agriculture fields back to high diversity tallgrass prairie. The majority of biomass in a tallgrass prairie is in the roots. We do actively place 2" rock in our two tracks to prevent erosion on our lane system from vehicle use. If the conservation committee has recommendations or thoughts applicable to our region on what to look out for or how to measure erosion, we would be interested in learning. Not sure that is the answer you are looking for.

4. Please upload any additional files here, if applicable

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C. Plant & Animal Diversity

1. Please submit your plan to manage your land to benefit an increasing variety of plant and animal species in the comments section below or with an upload. (What are your target species? How do you monitor?)

Nachusa_ConsPlanPlantAnimal.pdf

2. Document your progress on your plan to manage your land to benefit an increasing variety of plant and animal species in the comments section below or with an upload.

2019_Barber_etal_PhylogGrassPlantAssembly.pdf

2019_Virgin&King_SnakeDiet.pdf

2020_Burke_etal_SmallMammalsBison.pdf

2020_Blackburn_etal_BisonDiet_preprint.pdf

2020_Herakovich&Jones_FireGrazingBirdNests.pdf

2020_Garfinkel_etal_BirdEcoService.pdf

2020_King&Vanek_SnakeRestoration.pdf

3. Please elaborate here, if applicable

Attached are a document pulling out the section of our overall site conservation plan that focuses on plants and animals. Also attached are several recently published peer-reviewed scientific papers evaluating plant and animal communities at Nachusa Grasslands, and specifically in context of bison grazing, which was added to the preserve in 2014.

4. Please upload any additional files here, if applicable

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PEOPLE

A. Community

1. Identify opportunities to positively benefit the health of individuals and your community in the comments box. (Smoking cessation programs for employees, participation in local health fairs, bison meat and/or health club memberships as an employee bonus, etc.)

Our preserve is open to the public except the bison unit. We have a visitor center. We host an annual celebration attracting 1,000+ people. We host bison tours every other weekend. Volunteers maintain an active website, <https://www.nachusagrasslands.org/>, and social media presence to share news and views from the prairie.

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2. Please provide evidence of how your efforts have positively impacted the health of individuals and your community in the comments box.

Numerous praise on a weekly basis on how visitors appreciate and value what we do. Attendance to the preserve is very steady. We have a strong volunteer community who are engaged with many aspects of managing the preserve.

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3. Please use this box if you have any other comments you would like to make.

Our volunteers formed a Friends of Nachusa Grasslands (501C3), where their main goal is to raise a three million dollar endowment along with actively helping steward the preserve. They also award \$50,000 for science at Nachusa each year where many of the projects have included bison. More information can be found on their website www.nachusagrasslands.org.

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4. Please upload any additional files here, if applicable

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B. Economic Opportunity

1. Identify ways that your operation can provide a positive economic impact in the comments box. (i.e. wages paid, increased local trade, more stable business model, etc.)

Wages for four full time staff, one part time, and six seasonal employees.

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2. Please describe how your efforts have created or sustained a positive economic impact in the comments box.

Visitors come from all around to see the bison, supporting our local economies. Bed and Breakfasts and restaurants have recently opened nearby to capitalize on the many people visiting the preserve.

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3. Please upload any additional files here, if applicable

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C. Leadership & Education

1. Please identify ways in which you can attain 8 credit hours of continuing education over the next year that pertains to your Conservation Management Plan. (We encourage local participation as well as NBA participation. Soil, grazing, water management workshops, etc.)

We attend and host numerous workshops and conferences annually regarding ecological management and restoration. We also host trainings and workshops on site.

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2. If you have attained or hosted 8 or more credit hours of continuing education that pertains to your Conservation Management Plan, please provide documentation.

Annual Ecological Society of America conference, IL prescribed fire conference, American Prairie Conference, Grassland Restoration Network annual workshop/meeting, NBA winter conference, Natural Areas annual conference, and the Global Soil Biodiversity Initiative.

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3. Please use this box if you have any other comments you would like to make.

We are pretty unique. Bison are small portion of what we do and we are not dependent on bison income to fund our operations.

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4. Please upload any additional files here, if applicable

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[Review CMP Application](#)

If you have any questions or follow up please email Cody Considine at cconsidine@tnc.org

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