VIRTUAL FENCE
RESOURCE GUIDE



Virtual fence is an emerging technology with the potential to transform livestock operations while also supporting conservation. It is rapidly gaining traction across the Greater Yellowstone Ecosystem.

By enabling precise grazing, real-time livestock location tracking, and virtual herd movement, virtual fence can help livestock producers save time and reduce costs. At the same time, it offers conservation benefits by allowing wildlife to move across the land with fewer physical barriers, keeping livestock out of sensitive habitat areas, supporting rotational grazing that maintains rangeland health, and improving separation between livestock and wildlife such as elk and grizzly bears.

This guide provides an overview of currently available resources to help ranchers and landowners navigate virtual fence products, funding opportunities, and implementation steps that support adoption of this technology.

Please note that no guarantees are made regarding funding availability, and vendor or agency pricing and policies may change at any time. For the most up-to-date information, you are encouraged to contact the relevant organizations directly.

WHAT IS VIRTUAL FENCE?

Virtual fencing is a technology that controls livestock movement using GPS-enabled collars that emit auditory and/or electrical cues as the animals approach the boundary set by producers, eliminating the need for physical barriers like barbed wire. The collars are managed remotely via a computer or mobile app, allowing flexible and adaptable grazing management. Animals learn to avoid areas with virtual fences through classical conditioning.

KEY BENEFITS

- **Flexible management:** Boundaries can be changed remotely and quickly to adapt to changing needs.
- **Labor savings:** Can reduce the time spent moving, building, and repairing traditional fences.
- **Return on Investment:** Can be a cheaper alternative to traditional fencing, especially on large properties. Can reduce gathering time, provide quicker location and identification of predation, potentially prevent cow/calf losses during calving, and possibly provide more effective disease transmission management with easier herd movement.
- **Improved grazing:** Can allow for management that optimizes forage utilization and rotational grazing without physical barriers.
- **Conservation:** Can protect sensitive areas, improve soil health and vegetation productivity, bunch cattle for predator conflict mitigation, allow for mimicking wildlife grazing patterns, and remove physical barriers that harm wildlife.

POTENTIAL LIMITATIONS

- **Signal and coverage issues:** Virtual fences rely on GPS, cellular, and LoRa radio communication signals, which can be unreliable in areas with dense tree cover, steep slopes, or poor cellular service.
- **High initial cost:** There can be a significant upfront cost for the collars and necessary base stations or towers.
- **Learning curve:** There is a learning curve for producers to implement and manage the technology effectively.
- **Not a "Set-It-and-Forget-It" System:** Virtual fencing is a dynamic management tool that requires ongoing attention for tracking battery status, updating boundaries, and monitoring animal behavior and training.
- **Does not eliminate the need for some existing fence:** Boundary fences and fences in high-risk areas, such as along highways, are still needed.

While virtual fences have proven benefits for livestock producers and conservation, it should not be considered a magic bullet. Rather, it is another tool in the toolbox for livestock management. Technology is constantly evolving and improving, and if it isn't right for your operation now, it could be in the future. Each product is slightly different and doing your homework can save you a lot of headaches in the future.

VENDOR AND PRODUCT INFORMATION

This is not an endorsement of any vendor. Prices are subject to change.

HALTER

- https://www.halterhq.com/en-us
- **Contact:** Wyoming Sales Rep – Emery Fine, emery.fine@halter.co.nz, (307) 206-2350
- **Company Statement:** Halter collars use sound and vibrations to contain and move your herds across the range. A low-energy electric pulse, significantly weaker than an electric fence, is used only when cows repeatedly ignore the primary cues, keeping animal welfare our top priority.
- **Collars:** Collars are fully owned by the customer but are on a subscription basis, meaning they do not purchase the collars; they are included with subscription. The annual subscription for Halter is $72/year per collar, with a lifetime warranty.
- **Batteries:** Halter collars are solar charged, eliminating the need to change batteries.
- **Base Stations/Towers:** Towers are $4,500 each. A Halter specialist will work with you to determine the number of towers appropriate for your operation.

ESHEPHERD BY GALLAGHER

- https://am.gallagher.com/solutions/eshepherd/home
- **Contact:** Customer Engagement – Jacey Ellsworth, jacey.ellsworth@gallagher.com, 605-787-3123
- **Company Statement:** eShepherd™ is a solar powered, GPS enabled, livestock neckband that enables you to track, fence and move your livestock around your farm using virtual boundaries. Simply draw your virtual fence anywhere on your property, and your cattle are trained to remain within the virtual barrier. eShepherd offers web and mobile apps. The system creates a 6ft wide virtual line on the ground for precise grazing.
- **Collars:** Collars are fully owned by the customer. Cost varies by volume, but the average cost is $250/collar. All hardware, including neckbands, solar panels, and base stations, comes with a three-year warranty. If needed, devices are refurbished or replaced. Outside the warranty period, maintenance is minimal, typically limited to replacing straps or clips.
- **Batteries:** eShepherd collars are solar charged, meaning no need to change batteries on a regular basis. Batteries have a 7+ year lifespan.
- **Base Stations/Towers:** eShepherd has both cellular and base station systems. If base station/s are necessary, they are $6,000/station.

VENCE

- https://www.merck-animal-health-usa.com/species/cattle/vence
- **Contact:** Allison Burenheide, allison.burenheide@merck.com
- **Company Statement:** Vence is built for hard to fence, extensive areas. Our base stations cover 7,500+ acres depending on topography, and we have had huge success/great efficacy in places with little to no cellular service because our collars run on Lora WAN to check in with the base station, not needing cellular service to talk to the base station. We have a fantastic Rancher Success Team who are there for onboarding ranchers, training cattle, and any needs for their Vence use.
- **Collars:** Collars are leased at $50/cow for an annual subscription, which includes the battery.
- **Batteries:** Extra batteries are $10/battery.
- **Base Stations/Towers:** Base stations are $10k for self-install, $12k for the Vence team to install it.

NOFENCE

- https://www.nofence.no/en-us/
- **Contact:** sales.us@nofence.no
- **Company Statement:** The Nofence system works best with good-to-excellent cell coverage. While Nofence collars function exclusively on AT&T and T-Mobile networks, the app can be used on any mobile device with any cell service. If you have AT&T or T-Mobile, simply check your signal strength in the pasture—three or more bars is ideal. If you use a different carrier, confirm your pasture has network coverage using these AT&T and T-Mobile coverage maps.
- **Collars:** Collars are fully owned by the customer. Cattle collars are $345/each for 5-49 collars or $331/each for orders of 50 or more, with the first year's subscription included. Sheep and goat collars are $255/each for 5-49 collars or $241/each for orders of 50 or more, with the first year's subscription included. After the first year, all collars are automatically enrolled in a subscription with ongoing monthly or yearly costs based on the number of collars in use and whether they are used all year or for a select number of months. All collars have a 5-year warranty.
- **Batteries:** Nofence collars use built-in solar panels to extend the life of their rechargeable batteries, which typically last 6-9 months. Battery life may vary depending on grazing intensity, pasture size, sunlight, and cell coverage. You can easily check battery levels in our app and swap them out — no tools needed. For best performance, we recommend pastures of at least half an acre with good sun exposure.
- **Base Stations/Towers:** N/A; GPS & cell service only

FUNDING OPPORTUNITIES

Funding for virtual fence is often available from a variety of sources. Each opportunity has its own requirements and application process. This is not a guarantee of funding. Opportunities may end at any time at the sole discretion of the funding organization.

NON-GOVERNMENTAL ORGANIZATIONS

Property and Environment Research Center (PERC) – Virtual Fence Conservation Fund

- https://www.perc.org/virtual-fence-conservation-fund/
- **Contact:** Travis Brammer, Director of Conservation, tbrammer@perc.org
- **Funding Opportunity:** PERC offered a virtual fence fund in 2025 and 2026. They anticipate being able to offer another round of funding in the future. Applications are competitive, but do not have a geographic restriction.

Ricketts Conservation Foundation (RCF) – Virtual Fence Conservation Partnership Program

- https://rickettsconservation.org/tag/press-release/
- **Contact:** Shari Meeks, Project Manager, smeeks@rickettsconservation.org
- **Funding Opportunity:** RCF introduced a funding opportunity for virtual fence 2025. Successful applicants can receive 100% cost share for base stations (up to $50,000) and 50% cost share for collars and neckbands (up to $100,000) over a four-year period. Ranchers enter into a four-year agreement with RCF, where both parties collaboratively develop anticipated outcomes, conservation goals, and a monitoring plan.

Plank Stewardship Initiative

- https://www.plankstewardship.org/
- **Contact:** Milward Simpson, Executive Director, milward.simpson@plankstewardship.org
- **Funding Opportunity:** The Plank Stewardship Initiative provides financial resources to nonprofit and government entities that can assist us in fulfilling our mission to help farmers and ranchers in the Northern Great Plains enhance their business skills and economic sustainability, enter into successful succession planning for their operations, and further their efforts to conduct conservation-friendly, sustainable rangeland management.

Foundation for America's Public Lands – Official Charitable Partner for the Bureau of Land Management

- https://americaslands.org/
- **Contact:** Tomer Hasson, Senior Program Officer, tomer.hasson@americaslands.org
- **Funding Opportunity:** The Foundation is working to support virtual fence education as well as implementation for permittees utilizing BLM land. Project proposals and requests should be submitted through your local BLM field office.

World Wildlife Fund – Sustainable Ranching Initiative

- https://www.worldwildlife.org/places/great-plains/sustainable-ranching-initiative/
- https://www.worldwildlife.org/places/great-plains/sustainable-ranching-initiative/ranch-systems-and-viability-planning-rsvp/
- **Contact:** Alexis Bonogofsky, Director Sustainable Ranching Program, alexis.bonogofsky@wwfus.org
- **Funding Opportunity:** World Wildlife Fund's (WWF) Sustainable Ranching Initiative (SRI) is partnering with ranchers across the Northern Great Plains (NGP) to increase sustainable grassland management on one million acres in five years. Through the Ranch Systems and Viability Planning network (RSVP), WWF has established a comprehensive support system for ranchers to develop sustainable grazing management plans with assistance from on-the-ground technical specialists and to access continuing education to improve ecological outcomes at scale in the NGP.
- Landowners in the RSVP program can apply for funding in the form of cost-share for ranch improvements. This is intended to encourage increased adoption of sustainable grazing practices in the NGP. Project costs are expected to be shared with the rancher and/or additional contributing partners, if applicable. Currently, the standard for cost-share projects is that WWF will pay up to 50% of the balance of the total project cost not covered by the rancher and or contributing partner, with a maximum of $60,000 per ranch.



GOVERNMENT AGENCIES

Natural Resources Conservation Service (NRCS) – Environmental Quality Incentives Program

- https://www.nrcs.usda.gov/programs-initiatives/environmental-quality-incentives-program
- **Contact:** NRCS district office for your area. https://offices.sc.egov.usda.gov/locator/app
- Funding Opportunity: In Wyoming, NRCS offers cost share for virtual fence through its Environmental Quality Incentives Program (EQIP). Applications are competitive and must be submitted through an NRCS office.

Conservation Districts

- **Contact:** Find your conservation district below.
  - Wyoming Conservation Districts
  - Montana Conservation Districts
  - Idaho Conservation Distrcits
- **Funding Opportunity:** Your local conservation district may have programs or grants to assist with virtual fence implementation. Opportunities vary by location.

US Fish and Wildlife Service – Partners for Fish and Wildlife Program

- https://www.fws.gov/program/partners-fish-and-wildlife
- **Contact:** Tim Kramer, Wyoming Lead, timothy_kramer@fws.gov, 307-286-7888
- **Funding Opportunities:** The Partners for Fish and Wildlife Program provides free technical and financial assistance to landowners, managers, tribes, corporations, schools and nonprofits interested in improving wildlife habitat on their land. Our staff provide free technical and financial assistance to plan, design, supervise and monitor customized habitat restoration projects. These projects range in size from a wetland of a few acres to a grassland restoration covering several hundred thousand acres.

Please scan the QR code or visit
lovegyc.org/virtual-fence
for additional information and resources.

Compiled by Erin Welty, Greater Yellowstone Coalition, ewelty@greateryellowstone.org.

Photos GYC/Erin Welty.

OTHER FUNDING SOURCES

Cultivo – Carbon Credit Program for Ranchers and Farmers

- https://cultivo.land/
- **Contact:** Ford Smith, Sales Manager, 406-223-7814, ford.smith@cultivo.land
- **Funding Opportunity:** Cultivo unlocks your land's potential. We partner with ranchers to provide soil sampling and ranch advisory, and we pay for upfront costs including virtual fencing and other tech or infrastructure. We empower ranchers to establish a new income stream through carbon credits and other nature-based programs, while at the same time improving land health and productivity.

Carbon Credit Program for Ranchers and Farmers

- https://grassrootscarbon.com/
- **Contact:** Hunter Jones, Rancher Sales, hunter.jones@buildgrassroots.com
- **Funding Opportunity:** Regenerative grazing rebuilds soil health and improves ranch productivity while strengthening the land for future generations. Grassroots Carbon partners with ranchers to generate income from carbon stored in healthy soils, rewarding their stewardship and supporting long term resilience.

Other Carbon Credit Programs

- https://native.eco/climate-project/regenerative-ag/
- https://agorocarbonalliance.com/

