

## **Leopold Conservation Award Application**

### **Nominee:**

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Type of Operation: Cattle Ranch

### **1) Conservation Ethic**

William and Karen Payne purchased the ranch, which consists of 920 acres located three miles south of Saint Louis, Oklahoma, about 25 miles south of Shawnee, Oklahoma, in May 2006. The land has gentle rolling hills with soils of red clay, black loam and sand. There are several creeks and ravines with rugged rock outcroppings and several eroded ponds. The land had been severely overgrazed for over 20 years with continuous-type grazing, no cross-fencing, no brush control, and no tree removal or maintenance. With the assistance of the Noble Research Institute, Natural Resources Conservation Service office and Oklahoma Cooperative Extension, we determined there was not sufficient grasses on the 920 acres to identify what may even grow on this land.

With the consultation of the Noble Research Institute and NRCS, we let the land sit idle for the first year. During this year, we studied the soil profile maps from the NRCS for the land and the type of grasses that may be best suited for the areas. Our desire was to start and operate a stocker cattle operation, but our decisions were made more difficult because we had no idea of what may grow or the value of what did grow. However, we never lost track of the goal of having a sustainable cattle ranch.

During our first year, we started clearing lanes for electric fences on the better soils. However, we did not use dozers or heavy machines. Our intent was not to disturb or further destroy the land, so we elected to use a 100 hp skid steer with a Marshall tree saw. This allowed us to cut the tree off at ground level so that the roots could continue to keep the land from washing away during the rains. Erosion was a huge issue with this ranch, and we did not want to create other erosion issues by clearing and loosening the ground. This was one of the best things we did to stop the erosion. Tree roots held the ground and with minimal maintenance of herbicides on the bigger stumps we were able to reestablish grass in the areas. We had no intentions of plowing the ground, so the trees cut off at ground level or slightly below worked great in getting the lanes for fences cleared.

During this time, we discovered that grasses were growing back in every place we cleared. We planted no crops or grasses in these cleaned areas, however as the grasses grew we had to identify the type of grass and the value each provided.

Over the course of the first three years, we cleared approximately 300 acres with the skid steer, enrolled in the NRCS Equip program for cost share, installed over 20 miles of electric fences and began operating with nearly 300 head of stocker cattle. But it was not just clearing and adding cattle. We took the time to fence out the damaged ponds, fence out all the creeks and ravines, and we did not allow our cattle to enter the areas heavily covered in trees. The sensitive areas with broken terraces were fenced out and repaired, and cattle movements were restricted to keep any trails from going up and down the small hills. In addition, we added three ponds to assist with stopping erosion in critical areas of the ranch. We also reworked several of the broken terraces and built a dry dam structure to repair damaged areas.

Our entire goal was not to just have land with cattle but to have land that would support us, and we had chosen the cattle to do that. Cattle can be quite destructive to land, but there are things we do as an operation to prevent them from damaging the land. With cost share assistance from NRCS, we drilled water wells and added pasture watering systems with water hydrants every 300 yards. We haul fresh water to areas not piped with water. Cattle do not get into the ponds and only graze on cleared, maintained pastures of 3 to 5 acres.

We have grown from a stocker operation to a high intensity cattle operation with over 640 acres in grass production and over 60 miles of electric fences. We maintain a 169-head cow herd, 150 head of stockers plus our feeder cattle and are in all aspects of the cattle industry.

We manage for native grasses only. There are several areas of old world blue stems that were planted back in the 1940s to 1950s, and these are somewhat different to manage but overall we only manage for the native grasses of Oklahoma. We move our cattle frequently all by foot, no ATVs or horses. Cattle are grazed on small paddocks not for quantity of grass but for quality of grass. As we worked on the quality of grass, we discovered that the taller the grass left behind, the faster it would regrow. Plus the nutrient content of the grasses were getting better with each year of grazing.

Conservation of resources is a key part of our operation. We looked at the lay of the ground when deciding where to install electric fence for each lane. Our goals were to stop runoff and to prevent further erosion plus restore the trees in key areas so that we could provide shade for cattle and preserve the ground in the areas around the trees. In the beginning, the trees were so thick that they only grew 5 to 6 inches in diameter and were dying. By clearing the brush and smaller trees, we were able to get sun to the ground to grow grass, stop erosion and give the bigger trees the area they needed to grow healthy. This was extremely important in the creek and ravine areas to reestablish some grasses along these areas even though we do not graze these areas.

## **2) Ecological Community**

We have built the entire ranching operation around the environment in which we live. This ranch had no wild animals or wild flowers present in 2006. By fencing out the trees along the creeks and ravines, protecting the ponds and using intensive grazing practices, our operation has allowed the grasses to flourish not only for our cattle but for the wildlife on the ranch. Now we have several coveys of quail in addition to barred owls, doves, ducks, cranes, rabbits, squirrels, skunks, armadillos, deer, bobcats and coyotes. All of which are interesting to say the least, but we have also discovered the value of having the different species.

Each species takes care of itself and has no real effect on our cattle operation. The larger animals prey on the smaller species, and we have never had any incidences of predator animals chasing or causing problems with our cattle herd.

By using the smaller paddocks and maintaining a good forage base on the ground, we have stopped any soil erosion, our ponds have cleared up and are no longer muddy looking, and grasses stay green longer during the season. In addition to the grasses, we now have plant species beneficial for wildlife with wildflowers and specific weeds important to these various birds and wildlife. These different areas, which we have fenced out and do not allow cattle to enter, have a special purpose and flourish with other species of plants important to the wildlife.

### **3) Innovation and Adaptability**

In the early part of the ranch development, we focused on finding areas where we could grow grass and produce beef. However, it was more than just cattle and grass. We needed to make a living from our cattle and land, but in the early start we were spending more on feeds than the cattle would earn. We started experimenting with different types of grazing with smaller and bigger cattle, heifers versus steers, and this list goes on. What we did learn was different species of cattle performed better on the grasses we had established. Plus when the ground had higher intensity of grazing, the protein and nutrient levels were increasing more rapidly each year.

In 2011, we had a severe drought in the area. In 2010, we had started experimenting with mob grazing, or high intensity grazing, but with different classes of cattle. We don't put all our cattle in one big group and graze. We sort our cattle by size and type and put them into larger groups. For example, we put 40 cows in one group and have several groups of cows grazing different areas. Our stocker cattle are the same. We put up to 100 head of stockers in a group, and they graze various areas as a single group. Steers and heifers are separated. The breeding season is 45 days, which allows us to better control calving season to the forage plus we end up with larger groups of same-size calves.

In August of 2010, we fenced off seven 1-acre paddocks and grazed 60 head of 650-pound heifers in these paddocks 24 hours for each paddock. After the seven days, the area was not grazed again until 2011. The drought started in early 2011, and this test area was incredibly green and had grass over 2 feet tall. It was in the spring of 2011 after seeing the results of the seven 1-acre test that we decided to do 1-acre-tract grazing for the entire ranch, 640 acres. The experiment was difficult, but the end results were awesome to say the least. From that time on, we have never changed our grazing practices. By grazing 1-acre paddocks, we have been able to put sufficient nutrients back in the soils to grow an incredible amount of grass up to 5,000 pounds per acre and to stop feeding commercial feeds on a large scale. During the drought of 2011 and 2012, we added 100 head of cows to complement our stocker operation and to this day we still graze small paddocks.

We adapted to the drought from necessity of needing to grow more beef with less input feed costs. During this same time, the Noble Research Institute had 30 test plots on the ranch where we were doing fertilizer and herbicide testing to determine if it was economically feasible to fertilize native grass pastures. After five years of testing with various amounts of rain, it was determined that fertilizer would not increase grass production. During this time, we had not used fertilizers but had continued to do grass sampling and soil testing in various areas of the ranch and discovered that our high intensity grazing was adding nutrients to the land. This allowed us to grow more grass, which produced more beef per acre.

Another adaptation we had to overcome was the severe rains that come in south-central Oklahoma. Cattle and land with rain was not a good combination. The rain is needed to grow the grass, but the heavy and continuous rains were destroying huge areas of land each time. The ranch developed a rain plan in the early stages, and this plan has been one of our best strategies in protecting our land.

Now there are safe areas for our cattle during these heavy rain events. It takes some planning, but with the long-range weather forecast we can plan for these storms and can move our cattle to areas with gentle slopes and, in some places, sandy conditions, which we can access to get water or care for the cattle. The main concern is to not allow the cattle to mud up a field or to be trapped in an area that can cause more damage or harm to the environment and the cattle. We always maintain a retreat area for groups of cattle; we attempt to rotate cattle to and from these safe areas during the grazing season and keep a good forage base coming into the spring and fall knowing it will rain. It is all about having a plan and protecting what we have established.

#### **4) Resilience**

On Destiny Ranch, we have taken a small parcel of land, 920 acres, and built a viable business enterprise of cattle. We are full-time cattle producers. We don't work in town and raise a few cattle. Our entire cash flow comes from cattle. It started out as a full year-round stocker operation where we kept three groups of 80-100 head in each group, added 200 pounds of gain and sold them direct to the feedlots. We sold a group each month and purchased a group each month. As time and forage has become available, we needed some larger animals to assist with our land maintenance. The larger animals could better use the lower quality grasses during the summer and winter, so we added a cow herd. The calves from these cows were added to the stocker program in the first two years. In late 2015, we decided to add a fed-cattle program to the ranch and take our cow-calf operation all the way to retail beef sales in town.

We currently have 100 head of cows producing calves designated for our retail beef sales. We have our own labelled beef and sell beef by the pound in Norman, Shawnee, Ada and at the ranch. We also maintain a registered Polled Hereford herd of 69 head for replacement heifers and bulls. We use Angus bulls on our commercial Hereford cows for the retail business plus we sell black baldy breeding heifers from the commercial cow herd.

Having diversity allows us to have a little more flexibility than normal. If the markets fall, we can sell packaged beef retail. If we have heifers not selling due to the market, we have established an endpoint for everything we raise. There is still a need to sell larger groups off the ranch, but we are not totally dependent on just selling in the sale barn or to the feedlot sector. Having a small operation, we see the need to be diverse and flexible to meet the market conditions or seasons.

We not only promote our beef, but we promote how we raise our beef and what we do to protect the land and natural resources to raise our beef. Each class of cattle utilizes a different type of forage, and with this diversity built into our cow herd we have the ability to best use the forages to maintain our land and to prevent erosion and unwanted plant species from crowding out the grasses.

#### **5) Leadership and Communications**

Destiny Ranch is highly involved with teaching and demonstrating to others the importance and value of grazing management, and it holds seminars at the ranch each year. William and Karen are members of the Oklahoma Cattlemen's Association. William was the president of the Pottawatomie County Cattlemen's Association for three years and is currently the south-central district representative for the Oklahoma Cattlemen's Association. William and Karen are also members of the Noble Research Institute strategic planning for grazing lands, Noble Research Institute strategic planning for stocker cattle and the Oklahoma Grazing Lands Coalition.

Destiny Ranch has been featured in articles with Kubota's *Great Plains Living* magazine, Noble Research Institute's *Legacy* magazine, Oklahoma Cattlemen's *Oklahoma Cowman* magazine, *Livestock Weekly* (from San Angelo, Texas), and *The Journal Record* from Oklahoma City. In addition, we were recognized as the Agribusiness of the Year for Pottawatomie County and Shawnee, Oklahoma, in 2017.

Each year since 2011, we have held seminars on the ranch with assistance from the Noble Research Institute for grazing practices, growing native grasses and caring for the land. In 2017, we held a soil health seminar at the ranch with the NRCS and Konawa Conservation District with more than 70 in attendance. In addition, we hosted a seminar about the value of reserve forage in 2017 with the Pottawatomie County OSU Extension Center and OSU. There were 92 in attendance. We have hosted the Master Cattleman class of OSU Extension as well as Gordon Cooper Technology to assist our neighbors on how to better manage their land and resources.

## **6) Additional Information**

William has been guest speaker at the Texas Cattle Raisers Convention in Fort Worth, Texas, and at the National Grasslands Conference in Dallas.

At the request of the Noble Research Institute, Destiny Ranch had the honor of hosting Dr. Wayne Honeycutt, former deputy chief for science and technology with NRCS in Washington D.C., and 12 soil scientists from various regions around the United States. At the ranch, they saw demonstrations of the effects of rotational grazing on the soil health.

William served on a panel for the Noble Research Institute and the Foundation for Food and Agriculture (FFAR) as a producer for *Assessing and Managing for Soil Health on Rangelands and Pasture Lands*.

Destiny Ranch was featured in 2017 with an article by *Eniday* written by RP Siegel titled "A weapon against climate Change," which was about soils and grass and how cattle can play an important part in capturing carbon back into the soils.

One of our greatest challenges is being able to communicate to our fellow producers the need to respect the land and natural resources and finding time and methods to demonstrate why our grasses grow during drought and prevent serious erosions during the heavy rains.

- 1) I **William Payne** agree to be a nominee for the Leopold Conservation Award.
- 2) I Manage and/or own the property described in this application.
- 3) The agricultural operation described in this application is in compliance with all applicable regulations, and provides a positive example of environmental stewardship.
- 4) I understand I may be asked to be available for communications/media opportunities to promote the message of voluntary private lands and conservations.
- 5) I understand a video may be produced featuring my agricultural operation, which will require my participation.

Signature:

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