

## 2018 Conservation Wrangler Application Example



The Texan by Nature Conservation Wrangler Program highlights the very best Texan-led conservation projects occurring in the state. Texan by Nature supports select innovative and transformative projects in the field of conservation with tailored aid, resources, and visibility. Conservation Wrangler Projects demonstrate tangible returns for people, prosperity, and natural resources.

### Conservation Wrangler Project Criteria:

- Texan-led conservation
- Benefits community by providing tangible returns for people, prosperity, and natural resources
- Reaches new and diverse audiences
- Science-based
- Measurable conservation outcomes
- Partnership between community, business, individuals, and conservation organizations

### Conservation Wranglers Receive:

- 12-18 months of tailored support
- Recognition and/or seal
- Op-Ed
- Letter of support
- Promotion via social media, newsletter, website, etc.
- Connections to technical, expert, and industry support
- Recognition and participation in annual Conservation Wrangler Summit and Celebration

## Application

**Applicant Name:** Don Kahl

**Applicant Email:**

**Applicant Phone Number:**

**Project Name:** Texas Playa Conservation Initiative

**Project Website:** Currently in development for release in Spring 2018 (PlayasWorkForTexans.com)

### Project Social Media Platforms

- **Facebook:** Information is shared through a Playa Country page hosted by PLJV (@playacountry/) and TPWD's page (@texasparksandwildlife)
- **Twitter:** N/A
- **Instagram:** N/A
- **Other:** N/A

**Location and size of project area—If applicable, provide an address for the project OR provide the cities and/or counties in the state that the project spans.**

The project area encompasses the entirety of the High Plains Ecoregion of Texas (Texas' portion of Bird Conservation Region 18), including all or parts of 46 counties in NW Texas: Andrews, Armstrong, Bailey, Borden, Briscoe, Carson, Castro, Cochran, Crosby, Dallam, Dawson, Deaf Smith, Dickens, Donley, Ector, Floyd, Gaines, Garza, Glasscock, Gray, Hale, Hansford, Hartley, Hemphill, Hockley, Howard, Hutchinson, Lamb, Lipscomb, Lubbock, Lynn, Martin, Midland, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Roberts, Randall, Sherman, Swisher, Terry, Wheeler, and Yoakum.

This applicant gave a detailed description of the project area, including relevant maps. This gives us a good picture of the project area.

[Map of Texas Playa Conservation Initiative Coverage Area](#)

**How did you hear about the Conservation Wrangler Program?**

Matt Wagner, Project Development, Texan by Nature

**Provide a (1) background and description of the project. Additionally, please include the (2) project start date and project phase(s), (3) how the project has been/is funded and how much money has been spent on the project to date. (4) If this is a multi-year project, please specify your funding strategy for subsequent years.**

Of the more than 80,000 playa wetlands found in the North American Great Plains, approximately 23,000 are found in the High Plains and Rolling Plains of NW Texas. Playa wetlands are ephemeral, clay lined depressions, ranging from a few acres to a couple hundred acres in size and their inundation is solely dependent upon runoff from heavy rain events. Healthy playas are important for [recharging the Ogallala Aquifer](#) with clean water and they also provide vital habitat to an array of resident and migrating wildlife. Land use practices have greatly altered most of the playas in Texas, leading to permanent loss of functionality for many of these important wetlands. Realization of the mounting threats to playas, and correspondingly, the Ogallala Aquifer, led to the development of a partnership focused on restoring and conserving this valuable resource. The Texas Playa Conservation Initiative (TxPCI) was founded in January 2015 to address playa resource concerns for the benefit of the Ogallala Aquifer, wildlife, and residents and producers in Texas' playa region.

This is an excellent example of project background information. This is an opportunity to give TxN a feel for the scope and history of the project. This applicant included specifics that help us during the application review process.

Leading partners in the development and administration of TxPCI include Texas Parks and Wildlife (TPWD), Playa Lakes Joint Venture (PLJV), Ducks Unlimited (DU), US Fish and Wildlife Service (USFWS), and USDA Natural Resources Conservation Service (NRCS). Initially, TxPCI has focused on playa restoration on grassed playas by backfilling abandoned pits, remnants of outdated cropland irrigation practices or sites for livestock watering. This is one of the quickest and easiest ways to restore a playa. By filling pits, which were designed to collect and drain water from the playa, water during flood events is redistributed across the entirety of the playa basin, helping to recharge the aquifer with clean water that is properly filtered through the clay soils of the basin, while also providing shallow water habitat for migrating and wintering waterfowl and shorebirds. To date, 6 pit filling projects have been completed, restoring 235 playa acres at a cost of \$110,049. An additional 5 pit filling projects are under contract, and following their restoration, 444 playa wetland acres will have been restored

through the program. We will continue to reach out to landowners and we expect many more pit filling projects to come.

As the program continues to grow and evolve, we will look to incorporate other restoration practices to benefit playas that have been altered more severely. Examples of other restoration practices include establishment of grass buffers around farmed playas to reduce sedimentation of playa basins and to better filter runoff that collects in the basins, and silt removal from playa basins to restore the natural hydrology of previously farmed basins. Also, the lowering of the national acreage cap for the Conservation Reserve Program (CRP) looms large; as CRP contracts expire and landowners begin to consider returning those acres back to crop production, we risk losing many grass buffers around playas that were established through the program. Finding ways to mitigate the loss of these important buffers is quickly rising in importance for TxPCI. In the next 5 years, CRP contracts covering over 1.6 million acres in Texas are set to expire; 1.5 million of those acres are found in NW Texas.

TxPCI is being developed as a continuous program aimed at restoring, conserving, and preserving playas in Texas. To date, we've acquired an array of state, federal, and grant funds to fund restoration projects through TxPCI, including \$207,000 from TPWD's Migratory Game Bird Stamp Fund, \$40,000 from USFWS Regional High Plains Emphasis Area Funds, and \$80,000 from a National Fish and Wildlife Foundation (NFWF) grant awarded to DU. We've also submitted a proposal for a North American Wetlands Conservation Act (NAWCA) grant, which if awarded, will add an additional \$100,000 to our current restoration efforts. As TxPCI grows, we look to continue funding our efforts through the above funding sources, as well as adding funds through other grants and partner funding sources.

[Map of Unfarmed Playas with Pits](#)

[Map of Playas at Risk of Sedimentation by 2040](#)

[Map of Playa Associated CRP Expirations Through 2031](#)

**Provide an overview of project goals and objectives. Additionally, please specify how support and visibility from Texan by Nature could help you reach your goals.**

Our goal is to create an abundance of healthy playa wetlands across the Texas Panhandle, to benefit current and future residents and producers reliant on the Ogallala Aquifer, and to support healthy populations of resident and migrating wildlife that depend on playa wetland habitat and the surrounding upland grasslands that encompass fully functioning playas. We wish to do this by 1) educating locals about playas and their link to a healthy ecosystem and to the sustainability and integrity of the Ogallala Aquifer, and 2) restoring, conserving, and protecting as many fully functioning playas as possible to help sustain residents and wildlife in the High Plains of Texas.

This section is important for us to understand your project goals. This allows TxN to see how we can support your mission and help you reach your goals. Please provide a clear idea of the project's purpose and what you hope to accomplish in the future through your project.

Our current target has been playa landowners, to restore playas on private lands. As we look to expand, we'd like to build working relationships with local municipalities and partner with local water conservation districts and producer-focused organizations, to make an impact at the landscape level to protect water and wildlife for

the use and enjoyment of the residents who depend on and enjoy both resources. Our partnership is highly optimistic that our program is primed to erupt and will make significant contributions to natural resource conservation in the Texas Panhandle. We want and need Texan by Nature to help us get there. We feel Texan by Nature can help us to advance the program at the landscape level, helping us in educating locals about playas and the wetlands' role in sustaining the economy and communities in the High Plains of Texas, while also helping to open doors to new partnerships.

### [Educational Handout for Restoring Playas](#)

**Specify any potential risks or concerns associated with the project. Additionally, please list and explain any unmet needs that the project has (i.e. funding, volunteers, etc.).**

There are no known risks or concerns associated with the project. Unmet needs would include field staff. As TxPCI grows, the ability of TPWD to cover field operations and landowner outreach will be stretched. Additional staffing (through hiring of additional staff, contract staff, or a greater role from partner staff) will be needed to adequately sell restoration and the Initiative's overarching message. Also, as the Initiative grows, funds must also grow and expand to accommodate demand.

This section is meant to help TxN see the areas where we can assist your project and help it to reach its goals. If we understand where the concerns and needs are we can provide additional support.

**List project personnel and their respective duties as they relate to the project. Please designate one person as the primary project lead and point of contact.**

- Don Kahl, Region 1 Migratory Game Bird Specialist, TPWD – Primary lead and point of contact. Coordinates Steering Committee, writes grant proposals, leads field operations and landowner outreach efforts, and coordinates restoration projects including contractors.
- Billy Tarrant, Region 1 Director, TPWD – Holds a leading role in Steering Committee and oversees TPWD staff's involvement in TxPCI.
- Mike Carter, Joint Venture Coordinator, PLJV – Holds leading role in Steering Committee and oversees PLJV Staff's involvement in TxPCI.

This applicant gave an organized list of involved project leads.

**Project Lead Name:** Don Kahl

**Project Lead Email:** don.kahl@tpwd.texas.gov

**Project Lead Phone Number:** 806-475-1308

## People

**How many people contribute directly to the project (i.e. staff, volunteers, students, partners, etc.)? If possible, please include how the people contribute (e.g. time, supplies, money, etc.)**

From all partners involved, 21 staff have made contributions to TxPCI. From TPWD, 8 staff have contributed to the Initiative, including holding roles on the Steering Committee, funding acquisition, communications, landowner outreach, conducting and coordinating field operations, project contract writing, and

This is a great example of what we are looking for in this section: specifics on the people involved and how they contribute.

coordinating restoration through contractors. From PLJV, 5 staff have assisted through the Steering Committee, communications, grant application writing, accounting, and landscape level planning. From USFWS, 3 staff have assisted through the Steering Committee and funding acquisition. From DU, 2 staff have assisted through the Steering Committee and funding acquisition. From NRCS, 3 staff have assisted through the Steering Committee and landowner outreach.

We are proud of our partnership. All parties involved have at one time or another delved into the world of playa conservation, without any one entity making a large impact on their own. Collectively, we feel we have the resources and expertise to make a large impact in the High Plains landscape.

**How many people are impacted by your project and how are they impacted? (e.g. X number of people in the surrounding city are impacted because they have access to clean water)**

Playas play an important role in replenishing and improving the quality of the region's water supply. Research has shown that these shallow, temporary wetlands are a primary source of recharge for the Ogallala Aquifer, contributing up to 95 percent of inflow of water to the aquifer and improving the quality of that water. Recharge rates in playa basins are 10 to 100 times higher than under other areas, and groundwater recharge may exceed three inches per year in unaltered playas. At our current scale of restoring a playa at a time, our efforts mostly impact a family at a time, helping to ensure that the landowner is doing all they can to positively influence the health of the aquifer, and water therein, below their land. As we expand to a landscape scale and include restoration and conservation of playas that feed portions of the aquifer that are used for municipalities in the region, the number of people positively impacted will grow exponentially. Those waters utilized by local towns and cities lie beneath private lands, so to benefit the many, we must still build strong relationships with the few who own the playas above.

Residents have long benefited from abundant, clean water from the Ogallala Aquifer, with the aquifer being the key to sustaining life and an agricultural economy in the semi-arid climate of the Texas High Plains. Unchecked, overuse of this resource is quickly diminishing the aquifer at alarming rates. There are many unknowns for the future of Texans in this landscape, but as the aquifer diminishes, the outlook is bleak. The time to act is now.

Show us how your project will impact the community and the scope of this impact.

**Please share the demographics of the people involved and impacted by this project. (i.e. age, race, gender, income, etc.)**

The playa-dense region (46,000 sq. mi.) from which we'll draw our participants is diverse. Of the 1.2 million people that call the region home, 77.9 percent identify as White, 37.8 percent as Hispanic, 5.5 percent as Black, 2.3 percent as Asian or American Indian, and 2.4 percent as multiracial. The population grew nearly 10 percent from 2000 to 2010, and 30 percent of the population is under age 20. Though the region is experiencing growth, incomes are modest (average median in these counties is \$50,000, 15% below Texas overall) and over 20 percent of children still live in poverty. Access to clean, reliable water, which playas can help provide, will be important to keep families in the region (families currently comprise 69 percent of the population), and keep growth strong.

Being clear and specific helps TxN to quickly identify applicants who align with our mission.

**Who are the target audiences for this project and how are they being reached currently (i.e. social media, word of mouth, etc.)?**

Our target audience is currently playa landowners, specifically those who own playas in grass that are pitted. We currently use a county by county approach, where we identify the playas that fit our criteria, find ownership information, and directly contact the landowner to pursue restoration on their playas. We also utilize local newspapers, radio, social media, and field days/workshops to provide information about the importance of playas and to help spread the word about TxPCI. A website with much more information about the benefits of playas and restoration options will soon be available and included in all promotional and outreach activity.

This applicant did a great job in outlining the target audiences and what outreach they were doing.

**Are there audiences that haven't been reached and you wish to reach? Is there a strategy in place to reach those audiences? If so, what is the strategy?**

As we move forward, we will be collecting human dimensions (HD) information to help us better evaluate the direction of the program and its development, helping us to better meet the needs of landowners whom we wish to work with. This data will be collected utilizing exit interviews following the completion of projects and will also be collected by utilizing focus groups. All partners involved agree that the more information we can gain through HD efforts will only strengthen our message and our program. As we move forward, finding funding or capacity to further expand this effort will be vital to our program's success. We've admittedly struggled with this aspect of our program, and are looking for resources and/or partners that can help us further advance our social science effort.

This will show TxN what you are trying to do and how we will be able to support your project when it comes to reaching audiences and amplifying your message.

## Prosperity

**Please list any partner groups, organizations and/or businesses. Please also include their role(s) as a partner.**

- Texas Parks and Wildlife Department: Direct funding, grant writing, program delivery, field operations, and outreach.
- Playa Lakes Joint Venture: Communications, accounting, outreach, landscape planning/GIS, and grant writing.
- Ducks Unlimited: Direct funding and grant fund acquisition.
- US Fish and Wildlife Service: Direct funding.
- Natural Resources Conservation Service: Outreach.

Please be thorough here. We may be able to broaden your network and identify mutual partners.

**Are there any connections or partnerships to groups, organizations, and/or businesses you wish to develop? How do you envision the partnership helping your project succeed?**

As we move forward, we wish to gain support from local municipalities whose residents are dependent on the Ogallala Aquifer. Playa and water conservation education efforts will be important in our ability to sell our message to these residents and we see a need for new partners with the resources and expertise to lead that educational effort.

This is an opportunity to tell TxN in more detail what you hope to achieve through networks and what support you need to reach more partners.

Another missing piece to our partnership are non-government organizations that represent the landowners and producers that are vital to and directly affected by the restoration work that we're conducting. As we move forward, we wish to partner with local water conservation districts and producer or landowner support organizations, which will help provide legitimacy for our program in the eyes of the producers and landowners in the project area.

We have the support of several other agencies and organizations, but as we move forward, we wish to draw them into the fold in hopes that they can provide additional resources (funding, staff, outreach expertise, landowner contacts, etc.) to the effort.

**How does your project impact the local and/or broader surrounding community economically? (This could be detailed in money made, jobs created, business growth, tourism established, etc.)**

This is difficult for us to estimate. As communities struggle to deal with drought and declining aquifers, playas are playing a role in replenishing and improving the quality of the region's water supply. The economic benefits of healthy playas include cleaner water for future generations, which in turn helps to keep communities and businesses present on a semi-arid landscape. More healthy playas with corresponding healthy upland grasslands that encompass playas will also provide recreational and educational opportunities.

- **More Water:** Groundwater recharge is a continuous process; the water recharging through playas today will be available for use by the next generation. A healthy, functioning system of playas can provide high-quality water to help support the domestic needs of a farmer/rancher or the residents of a small town. Playas across the region recharge at an average rate of about three inches per year (Gurdak and Roe, 2009)—that's three inches of water the size of the playa moving toward the aquifer each year. For instance, a four-acre playa, which is a very small one, sends an acre-foot of water toward the aquifer each year. That's 325,851 gallons of water, more than enough to supply a couple of families for a year.
- **Cleaner Water:** The benefit goes beyond simple recharge; playas clean the water as it travels toward the aquifer. Studies show that water reaching the aquifer through playas is of higher quality than that going through other pathways. This happens in two ways: first, as rainfall and runoff travel toward the playa, the surrounding grasses trap sediments, which can carry contaminants into the playa; as water moves through the clay floor of the playa, a second cleaning process occurs as the soils beneath the playa remove nitrates and other dissolved contaminants.
- **Recreational and Educational Opportunities:** Healthy playas provide habitat for wildlife and recreational activities for the local community. Wet playas attract thousands of ducks, geese and a variety of shorebirds during migrations, providing local hunting and birdwatching opportunities. People attracted to the area for recreational purposes could benefit communities as they utilize local hotels, restaurants, and various small businesses while visiting the region. Also, playas are a living laboratory where students can learn about wetlands, geology and the history of the region.

Plain and simple, it is difficult for us to document how our program will aid in the growth of the local economy, but we do feel that our efforts will help to sustain a viable economy in the region by keeping people in the communities across this landscape. To look at this another way, the city of Lubbock, the 11<sup>th</sup> largest city in Texas, has a population of 252,000 and has steadily grown at an annual rate of nearly 2% since

**This section is very important. It's important that the return on conservation is clear and measurable in today's economy. This section shows TxN that the economic impact of your project is measurable and has been considered.**

2000. As the population has grown, new business development and a healthy housing market have come with it. The city's economy is growing.

Now consider that in 2012, 98% of the city's water came directly from wells pumping water from the Ogallala Aquifer. Lakes Meredith and Alan Henry supply some water, but the propensity of severe drought within the region means that these lakes cannot consistently provide adequate water, year-in and year-out. Lubbock continues to depend heavily on groundwater to sustain, and most communities in the area are similarly reliant on groundwater. Municipal use of groundwater isn't the greatest threat to the future of the aquifer either. Irrigation for crop production is responsible for approximately 95% of the water pumped from the Ogallala in Texas, with withdrawal rates far exceeding recharge rates. As this source is depleted, major changes will come to the agricultural economy of the region and in turn, water availability for residential use will suffer. Within the next 50-100 years, this loss, unchecked and with recharge of the aquifer ignored, will lead to serious damage to the local economy and communities of the region, if something is not done now.

**How much money is/has been saved by the creation of this project? (e.g. this project improves water quality and saves X dollars each year in water treatment)**

Currently, we do not have a good estimate to answer this question. The aquifer has provided abundant, clean water for residents for well over a century. As water sources become depleted and water quality and quantity suffers, only then will we have an idea of the added expenses for water treatment and development of new water sources. We do know that it will be expensive as compared to the current luxury of drinking water, untreated, straight from a tapped well from the aquifer.

If you do not have an estimate, what would you need to get this information?

## Natural Resources

**How large is the project area and/or the habitat created (e.g. miles, acres, hectares, square feet, etc.)?**

Texas Playa Conservation Initiative has the potential to make a drastic impact for playas within the boundaries of our project area, which covers parts of 46 counties in the High Plains Ecoregion of Texas. Within the project area, there are an estimated 3,445 playas that fit our current criteria for restoration (surrounded by grass and have a pit). If restoration is expanded to buffer establishment, an additional 5,000 playas would be available for restoration under our program. As CRP acres expire over the next 5 years, 300,000 acres of grass that currently protects playas from siltation will be in jeopardy of being returned to crop production, leaving numerous playas vulnerable to further degradation from siltation.

If the project joins conservation sites or is a small part of a larger space such as a park, please outline those areas as well.

**What ecosystems are positively impacted by this project?**

Efforts are focused in the High Plains, Shortgrass Prairie Ecoregion of Texas, with restoration, conservation, and preservation of playa wetland ecosystems being the target.

Why might it be important for the ecosystem?

**How many/what wildlife species are positively impacted by this project? —Please specify any species of concern.**

There are a multitude of migrating and wintering waterfowl and shorebirds, as well as many species of resident and migratory wildlife that depend on playa basins and the surrounding grassland habitat, that will benefit from our efforts to restore playas. Some avian species of concern include Northern pintail, Sandhill crane, long-billed curlew, burrowing owl, lark bunting, grasshopper sparrow, McCown's longspur, American avocet, black-necked Baird's and least sandpiper, black tern, Franklin's gull, Northern bobwhite quail, Peregrine falcon, bald eagle, white-faced ibis, short-eared owl, Northern harrier, and dickcissel

Including detailed species and endangered species is very helpful to understand the importance and scope of your project.

**How many/what plant species are positively impacted by this project? —Please specify any species of concern.**

Restoration of grass playas through pit filling helps to restore the natural hydrology of the wetland. In doing so, conditions promote important moist soil vegetation that provides energy and protein-rich food sources for migrating and wintering waterfowl and shorebirds. Some of the major plants that benefit from playa restoration include smartweeds, arrowleaf, barnyard grass, spikerush, and docks. An abundance of hydrophilic vegetation in flooded playas are needed to ensure that waterfowl and shorebirds can replenish essential energy reserves lost during their southward fall migration and accumulate energy reserves prior to their northward spring migrations to the breeding grounds.

If this is a restoration project, please explain plant selection or invasive removal species and effort to control.

**What bodies of water (rivers, streams, lakes, aquifers, watersheds, etc.) are positively impacted by this project?**

The Ogallala Aquifer is positively impacted by the restoration and conservation of playas. Research has shown that playas are a primary source of recharge for the Ogallala Aquifer, contributing up to 95 percent of inflow of water to the aquifer and improving the quality of that water. Recharge rates in playa basins are 10 to 100 times higher than under other areas, and groundwater recharge may exceed three inches per year in unaltered playas. Properly functioning playas have intact clay basins, are encompassed by grassy buffer strips or prairie, and collect runoff from the surrounding area after large rain events. Aquifer recharge occurs through playa basins and along the perimeter of playas. When a dry playa receives a surge of water from rainfall, water flows into the playa basin and moves through the clay layer via large cracks. These cracks eventually swell shut as the clay absorbs water making the basin impermeable. Recharge continues to occur along the playa's perimeters as long as it is submerged in water, much like water running over a bowl's lip, as well as along the root systems tied to the vegetation within the playa basin.

If your project is not related to water, please explain water use and any water use maintenance planned. What is the project water district?

**If you currently collect metrics related to natural resources impacted by this project, please provide a list of metrics collected to date (e.g. native plants planted, wildlife diversity, water quality, acres established, etc.)**

If you have metrics in another form, you can include it separately with your application in the form of an attachment.

To date, 6 grassed playas have been restored through pit backfilling, positively influencing 235 playa wetland acres. Based on current signed contracts, the number of acres influenced will nearly double, following completion of dirt work during spring 2018.

**If you plan to collect metrics related to natural resources impacted by this project, please provide a list of metrics you plan to collect and specify how you plan to collect them.**

To monitor the efficacy of playa restoration efforts, key metrics on bird use and wetland function are collected across the project area. To measure bird use of playas, a statistically rigorous sampling protocol called Integrated Monitoring in Bird Conservation Regions (IMBCR) is conducted annually across the project area. Using this protocol, field biologists collect data on all birds seen and heard at over 70 sampling locations across the project area. This information feeds back into a regional monitoring program and allows the partnership to draw inference on how birds use the landscape thus informing adaptive habitat management. To measure wetland function, the extent, duration, and frequency of playa wetness are monitored using remote sensing data and the Google Earth Engine platform. These data are collected on playas across the project region including playas undergoing restoration both before and after the restoration has been completed.

**This applicant was very thorough. They gave us a good idea of what they need for metrics. Measurable impact is important and helps us identify project potential.**

EXAMINER