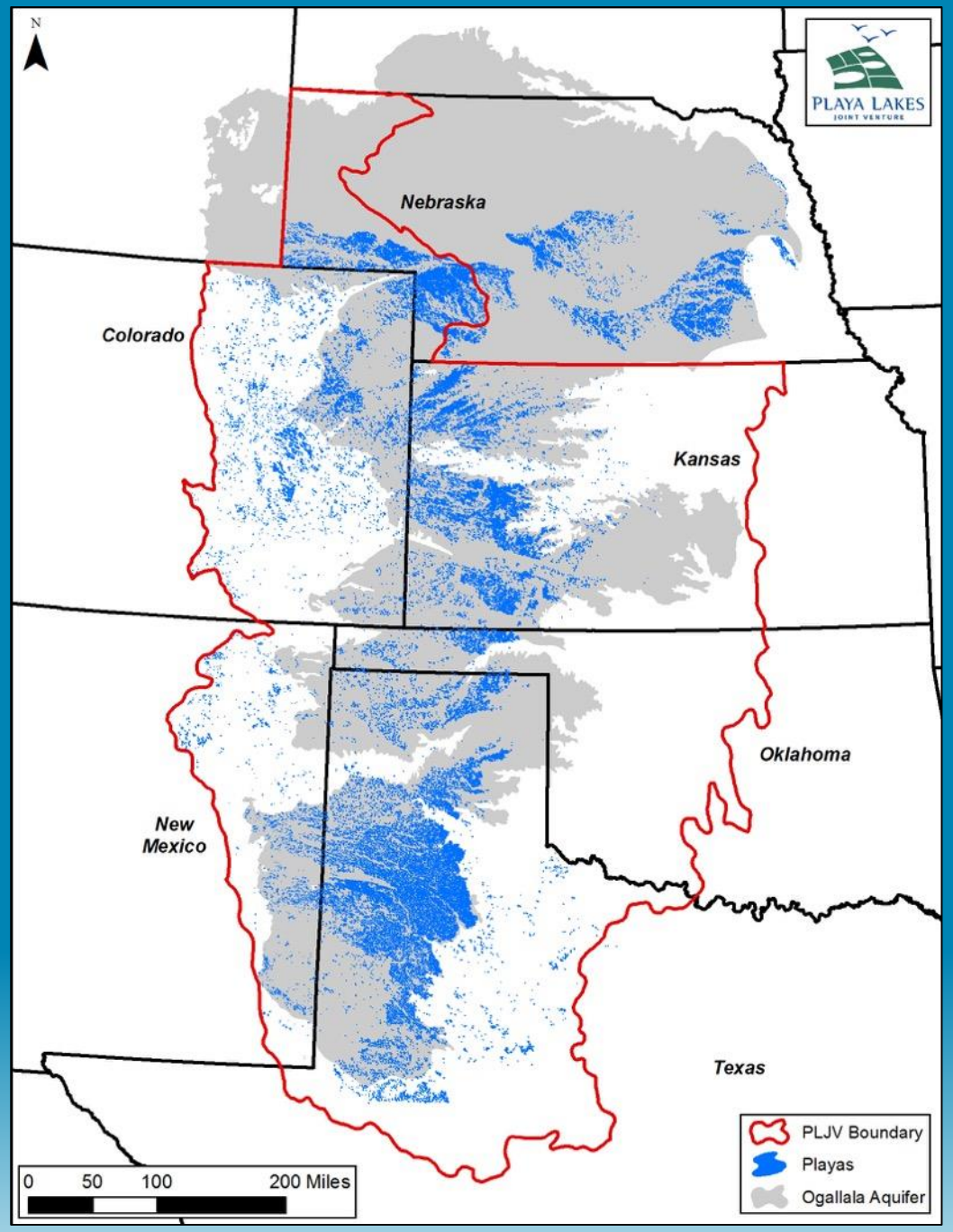
# Playas Recharging Kansas Communities

PLAYA LAKES
JOINT VENTURE

# OUR WORK

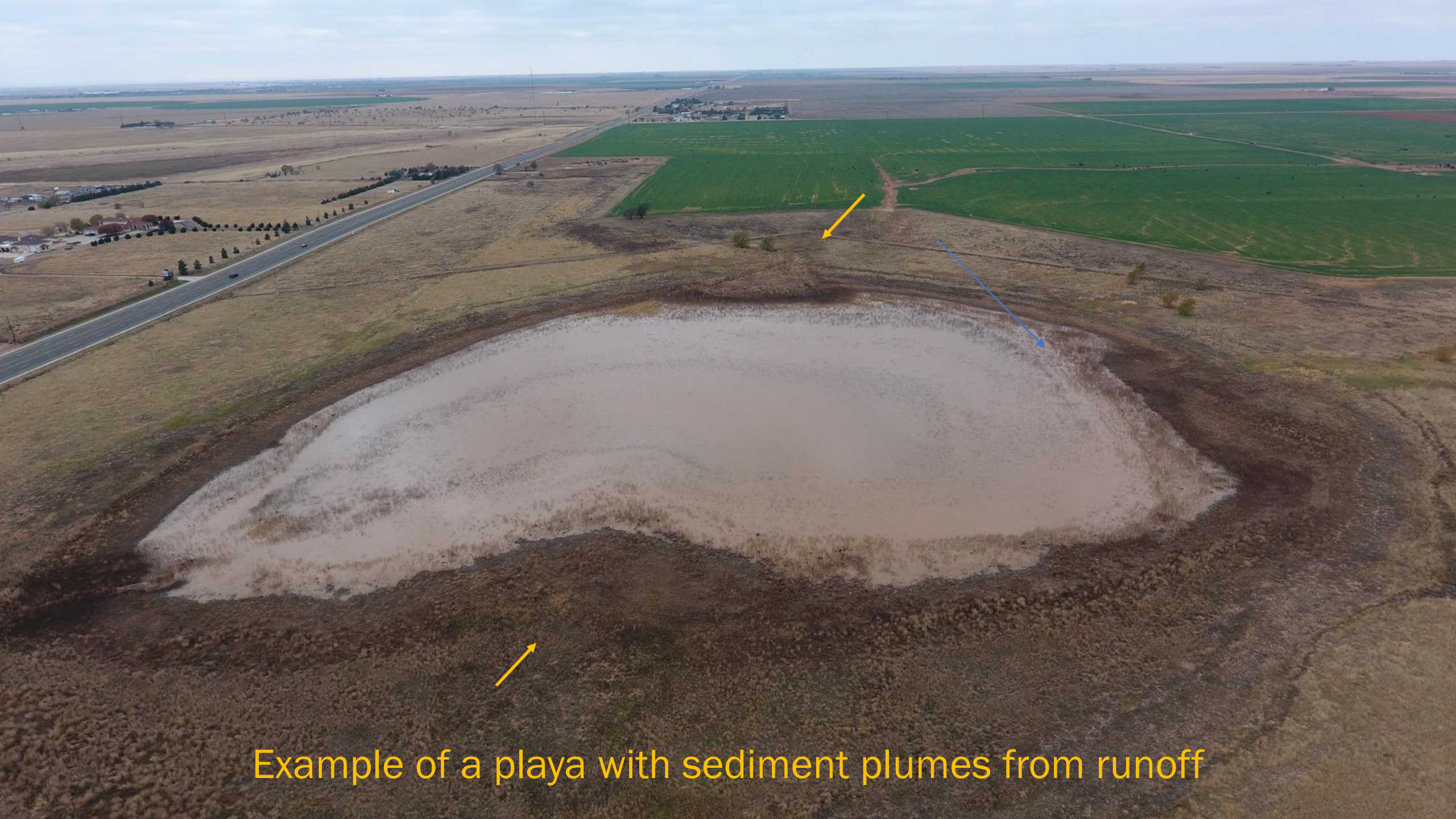
*"Conserve playas, prairies and landscapes of the western Great Plains for the benefit of birds, other wildlife, and PEOPLE."*




PLAYA LAKES
JOINT VENTURE

# PLAYAS

- Small, temporary wetlands
- Almost entirely on private land
- Lowest point in a closed watershed (e.g. no inflow or outflow), collecting rainfall and runoff
- Landcover in the watershed greatly determines playa health
- #1 continuing threat is sediment accumulation
- #1 existing impact is pits



Example of a playa with sediment plumes from runoff

# Checklist for a Playa Landscape that Works

- ✓ Native grass buffers
- ✓ Sediment kept out and/or removed
- ✓ No hydrological modifications (i.e. pits)
- ✓ Allowed to go through natural wet-dry cycles
- ✓ Appreciated for the green infrastructure benefit
- ✓ Actively managed
- ✓ Stewardship

PLAYA LAKES JOINT VENTURE

# LISTENING OVER THE YEARS

## 2006

- Survey to 1,800 farmers and ranchers
- Ogallala Aquifer #1 conservation concern
- 50% didn't know if playas recharge

## 2007

- Started promoting role of playas in groundwater recharge
- Literature review, film, website, radio, fact sheet

## 2013

- 13 landowner focus groups
- Majority would conserve playas to help aquifer, if convinced
- Fewer conserve playas for wildlife
- Need more info from credible source

## 2015

- Asked the experts at Playa Summit what we could say about playas and recharge
- Recharge averages 3"/yr & is cleaner
- You can't save irrigators, but can get enough for towns

## 2016

- Early meetings with Clovis leadership
- City of Clovis asked us to participate in their Water Conservation Summit and talk about playas

BELIEFS

# 2013 Landowner Focus Groups

- Amount of recharge is not significant
- Majority would conserve playas to help the aquifer – IF they were convinced of benefit
- Need more information – How much recharge, and how long does it take?
- Info must be from a credible source

# Playa Recharge Summit

- November 2015
- Consensus group to agree on messaging about playas and recharge
- 14 hydrologists, social scientists, Science Advisory Team, and communicators
- A day and a half of discussions
- Experts agreed on current research and vetted communication messages

# Messages About Recharge

- #1
  - Playas are a major source of recharge to aquifer
- #2
  - Recharge cannot make up for losses from irrigation
- #3
  - It is enough to support rain-fed systems, grazing operations and municipalities
- #4
  - If you conserve a playa, that water is yours
- #5
  - Healthy playas with buffers improve the water quality

# National Geographic Magazine

"Two-year-old Annalea Garcia is bathed nightly by her mother, Crystal, in a bucket filled with water hauled from town. Their well and the wells of some 30 other families on the outskirts of Clovis, New Mexico, have run dry."

*August 2016*

*I'm restoring playas as part of my operation. But, if our community is going to be sustainable, the key is shutting off irrigation wells.*

**—Vincent de Maio, local rancher**

*If we manage surface water better, we can increase recharge through playas by 50%.*

**—Blake Prather, local rancher**

# Water Potential from Playas

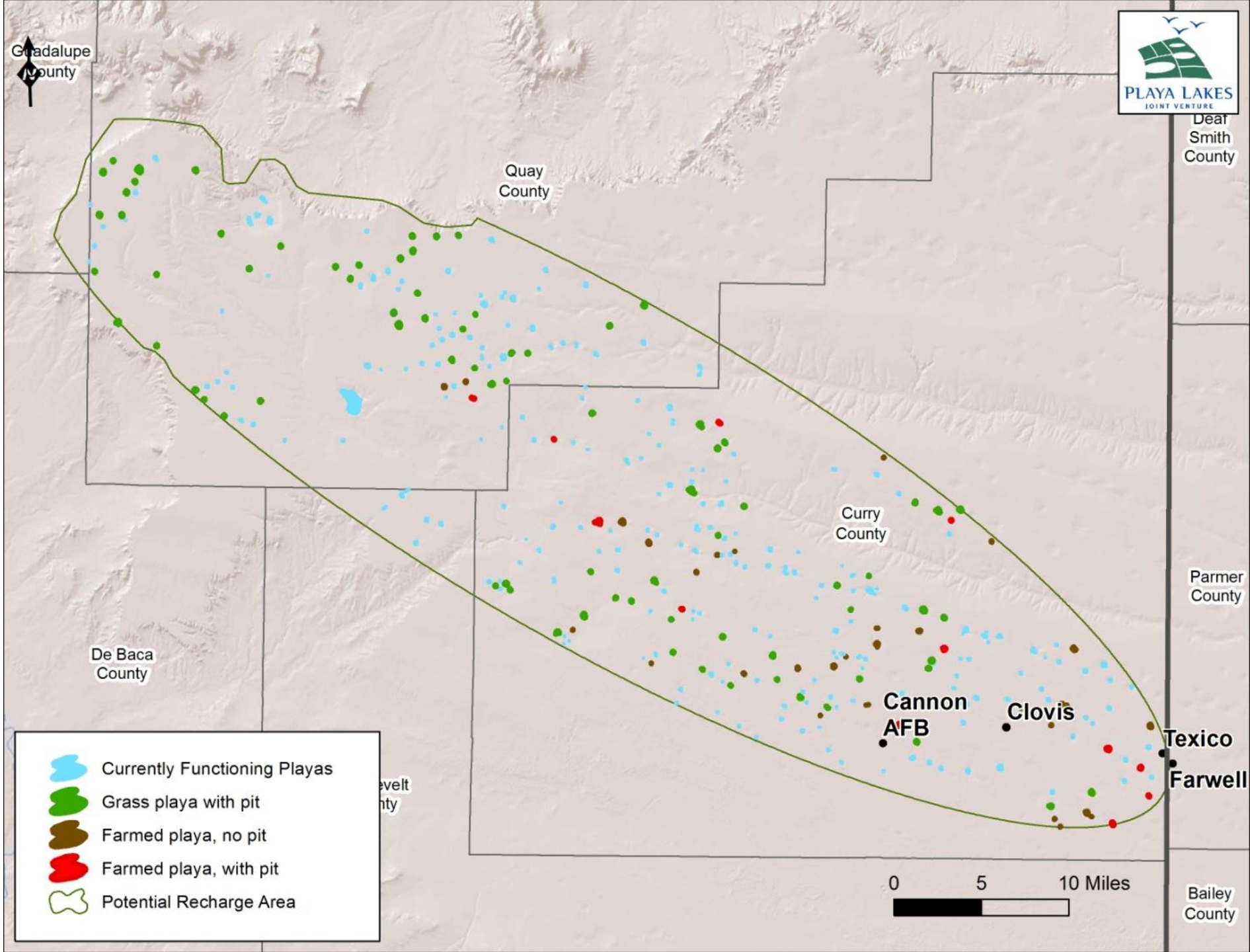
## TODAY

2,752 functional playa-acres recharge about 225 million gallons (15% of municipal use)

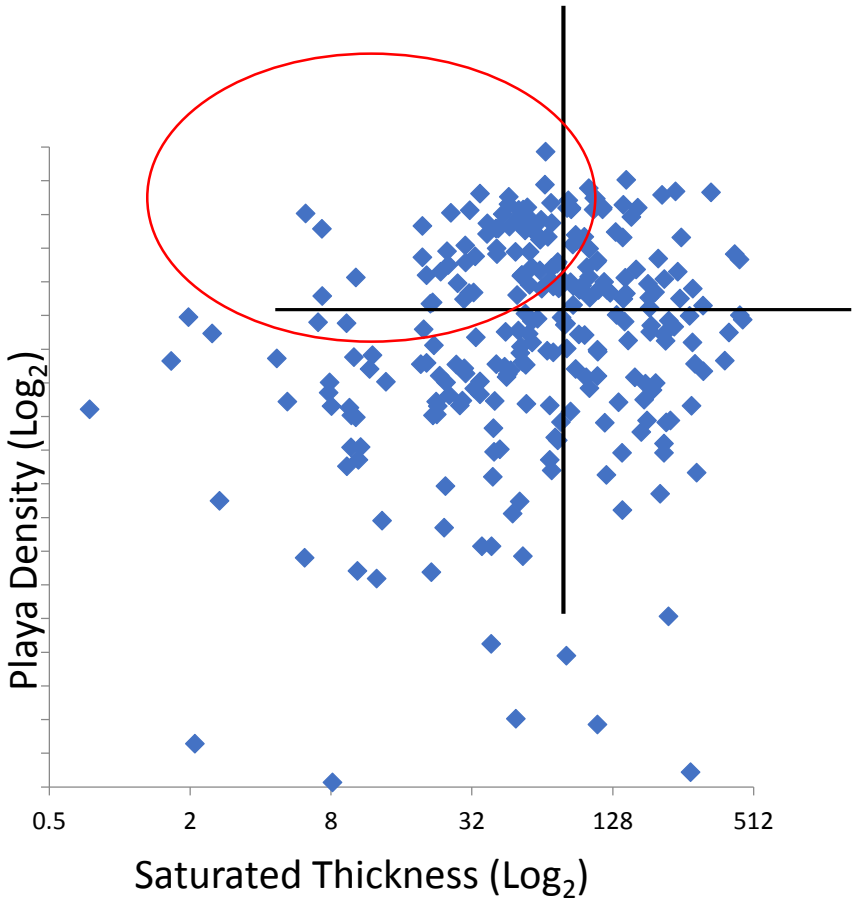
## FUTURE

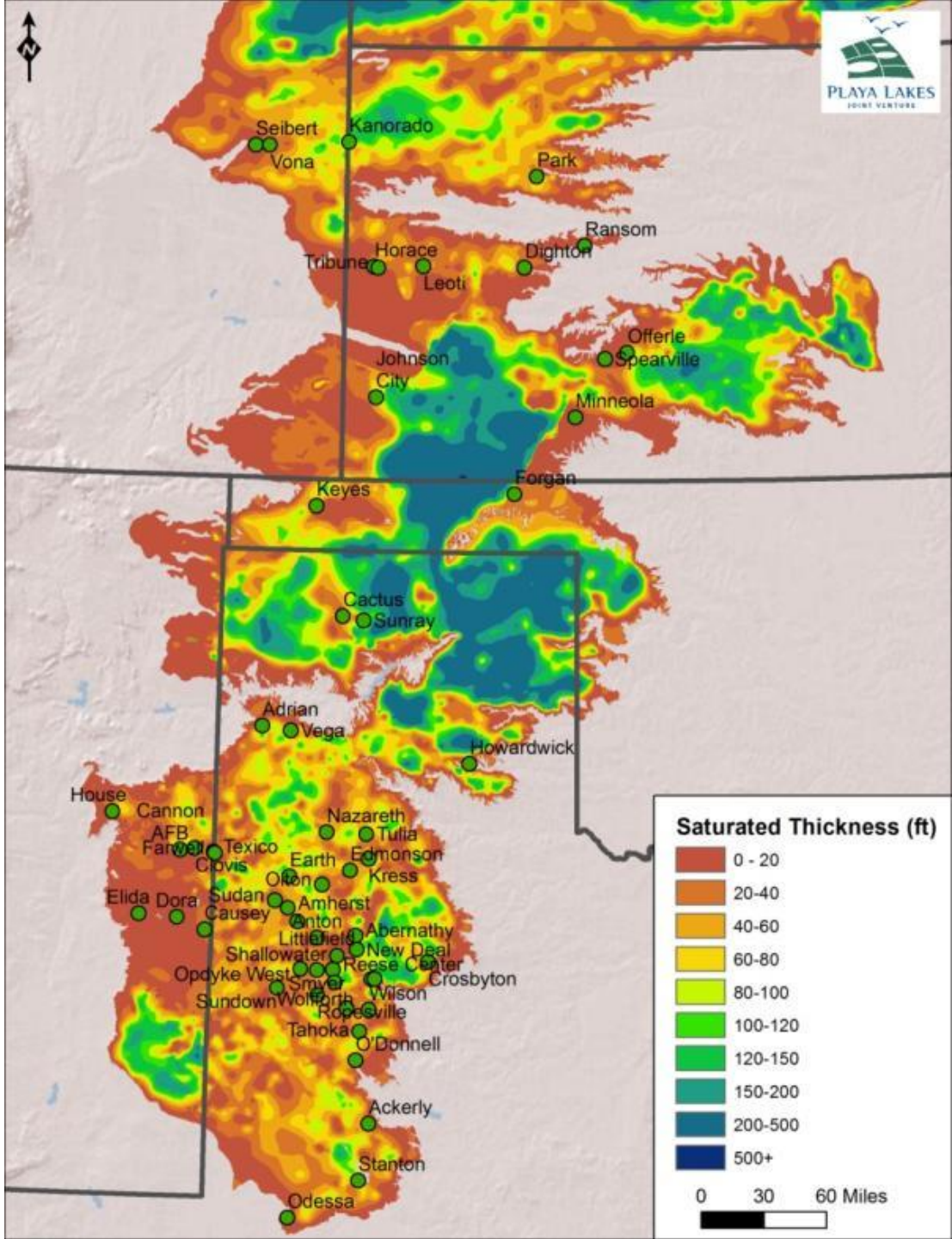
4,137 functional playa-acres recharge about 337 million gallons (23% of municipal use)

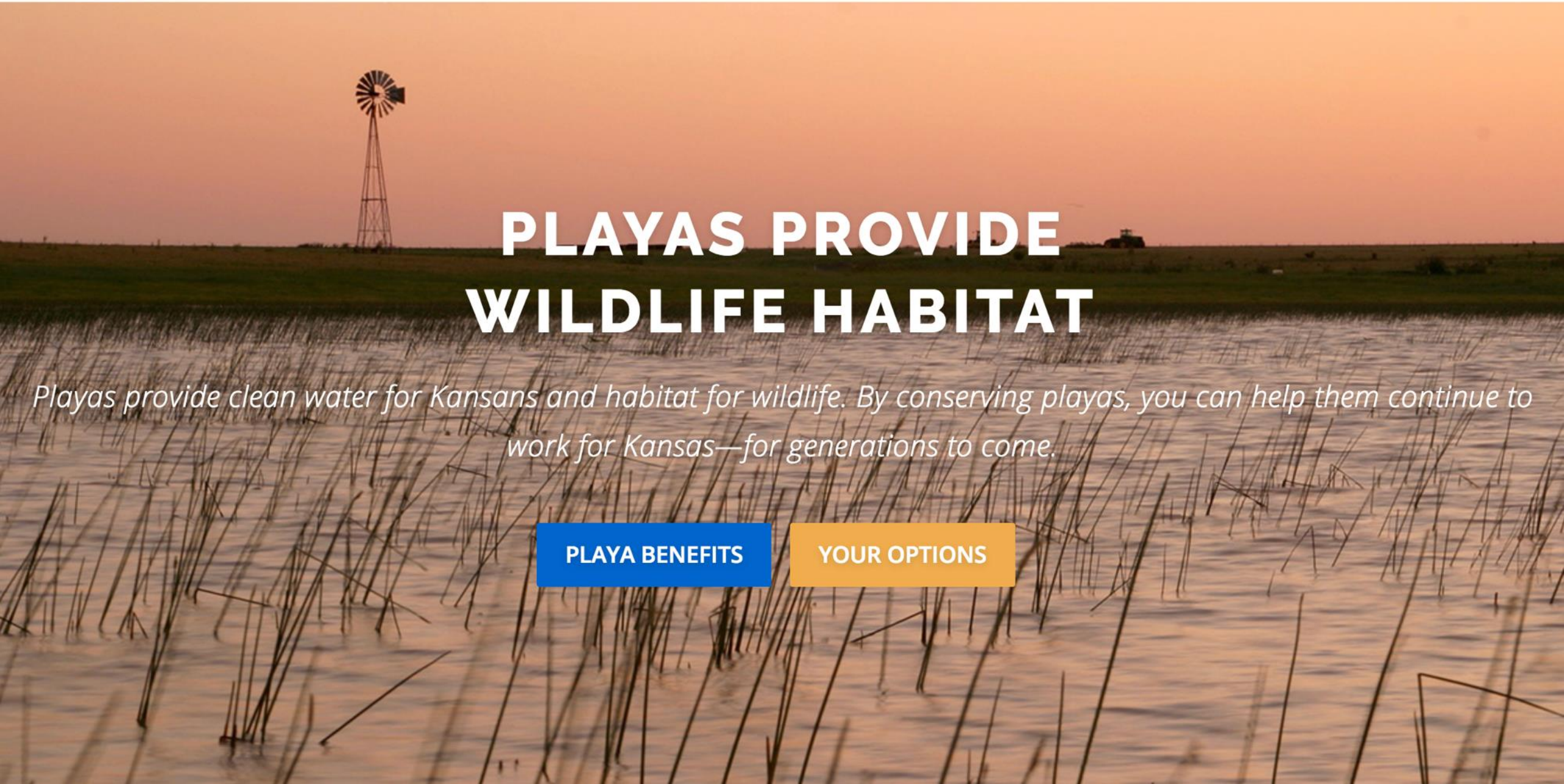
## = 8% INCREASE



# 56 Towns Like Clovis



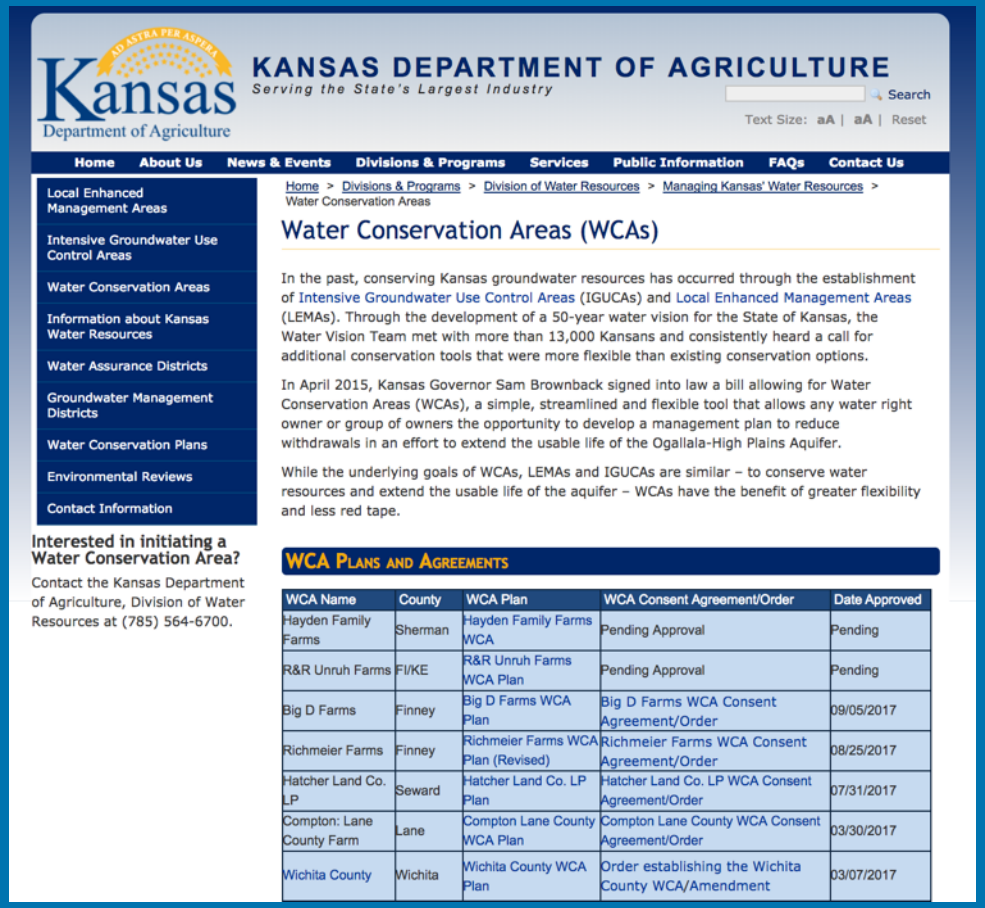


# PLAYAS PROVIDE WILDLIFE HABITAT

*Playas provide clean water for Kansans and habitat for wildlife. By conserving playas, you can help them continue to work for Kansas—for generations to come.*

PLAYA BENEFITS YOUR OPTIONS

# KANSAS
# Moving Ahead



Kansas Department of Agriculture

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**Interested in initiating a Water Conservation Area?**

Contact the Kansas Department of Agriculture, Division of Water Resources at (785) 564-6700.

Home > Divisions & Programs > Division of Water Resources > Managing Kansas' Water Resources > Water Conservation Areas

## Water Conservation Areas (WCAs)

In the past, conserving Kansas groundwater resources has occurred through the establishment of Intensive Groundwater Use Control Areas (IGUCAs) and Local Enhanced Management Areas (LEMAs). Through the development of a 50-year water vision for the State of Kansas, the Water Vision Team met with more than 13,000 Kansans and consistently heard a call for additional conservation tools that were more flexible than existing conservation options.

In April 2015, Kansas Governor Sam Brownback signed into law a bill allowing for Water Conservation Areas (WCAs), a simple, streamlined and flexible tool that allows any water right owner or group of owners the opportunity to develop a management plan to reduce withdrawals in an effort to extend the usable life of the Ogallala-High Plains Aquifer.

While the underlying goals of WCAs, LEMAs and IGUCAs are similar – to conserve water resources and extend the usable life of the aquifer – WCAs have the benefit of greater flexibility and less red tape.

### WCA Plans and Agreements

| WCA Name | County | WCA Plan | WCA Consent Agreement/Order | Date Approved |
|---|---|---|---|---|
| Hayden Family Farms | Sherman | Hayden Family Farms WCA | Pending Approval | Pending |
| R&R Unruh Farms | Fl/KE | R&R Unruh Farms WCA Plan | Pending Approval | Pending |
| Big D Farms | Finney | Big D Farms WCA Plan | Big D Farms WCA Consent Agreement/Order | 09/05/2017 |
| Richmeier Farms | Finney | Richmeier Farms WCA Plan (Revised) | Richmeier Farms WCA Consent Agreement/Order | 08/25/2017 |
| Hatcher Land Co. LP | Seward | Hatcher Land Co. LP Plan | Hatcher Land Co. LP WCA Consent Agreement/Order | 07/31/2017 |
| Compton: Lane County Farm | Lane | Compton Lane County WCA Plan | Compton Lane County WCA Consent Agreement/Order | 03/30/2017 |
| Wichita County | Wichita | Wichita County WCA Plan | Order establishing the Wichita County WCA/Amendment | 03/07/2017 |

## Water Conservation Areas: Wichita County

The social and economic vitality of the Wichita County community is dependent upon our water supply. In order to reduce the rate of decline of water levels in our aquifer and extend the life of our water supply, we propose to establish a Water Conservation Area within the boundaries of Wichita County. The management plan for this Water Conservation Area is presented herein and shall form the basis of a Consent Agreement and Order Designating a Water Conservation Area as required by K.S.A. 82a-745. The participating water right owners have reached a consensus and agree to the terms and conditions contained in this proposed management plan.

# USDA Migratory Bird, Butterfly & Pollinator SAFE

Playa focused program for Kansas and Nebraska

Announced January 2017

Total of 12,872 acres enrolled to date

*Everything about this program is right. It's a very well designed program!*

*We've some playas that weren't accepted, but we can adjust our bid for future signups. Ultimately, we hope to get the rest of those playas into the program.*

**—Vance Ehmke, Kansas farmer**

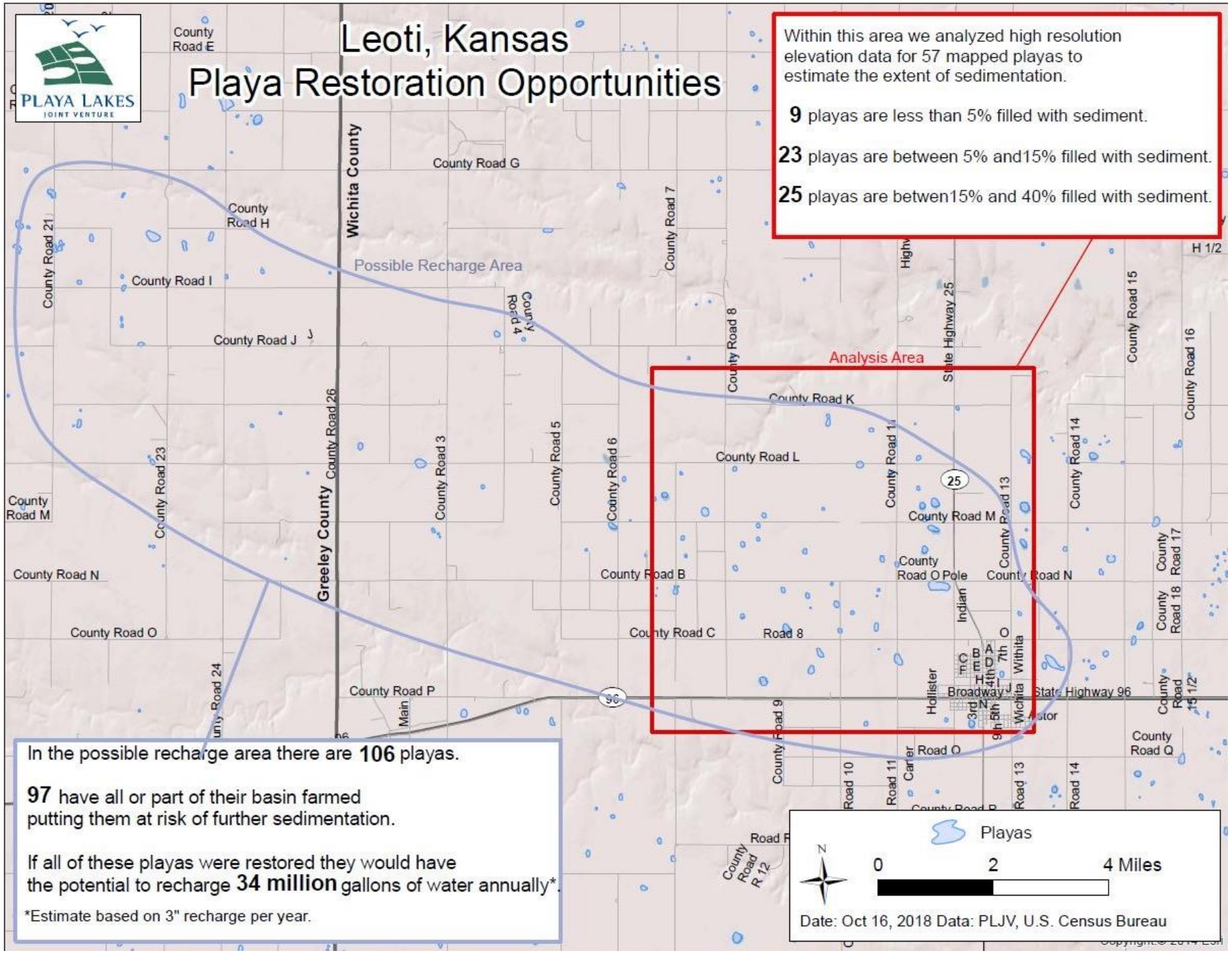
LEOTI

# Landowner Meeting – November 16, 2018

# WICHITA COUNTY

## Much Like Clovis, But…

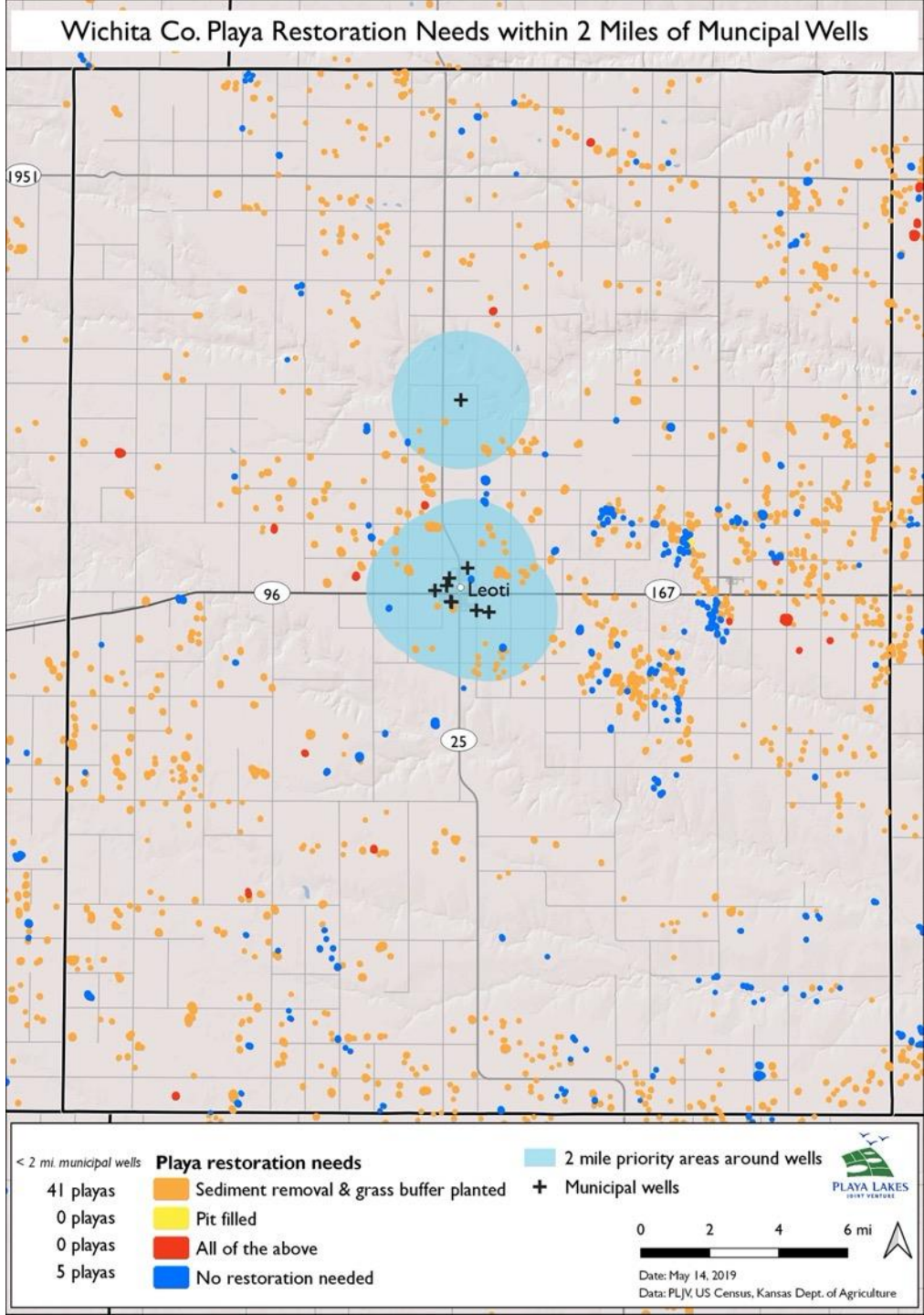
- Over 100 playas
- Mostly unknown status
- Majority have the potential to be restored
- Over 30 million gallons of water can potentially be recharged
- # of wells?



# PLAYAS NEAR MUNICIPAL WELLS

## Playas Within 2 Miles of Municipal Wells

- 137 acres of playas needing work
  - 41 playas need sediment removed & buffer planted
  - No playas need pits filled
  - 5 playas do not need any restoration
- 14 playas > 2 acres

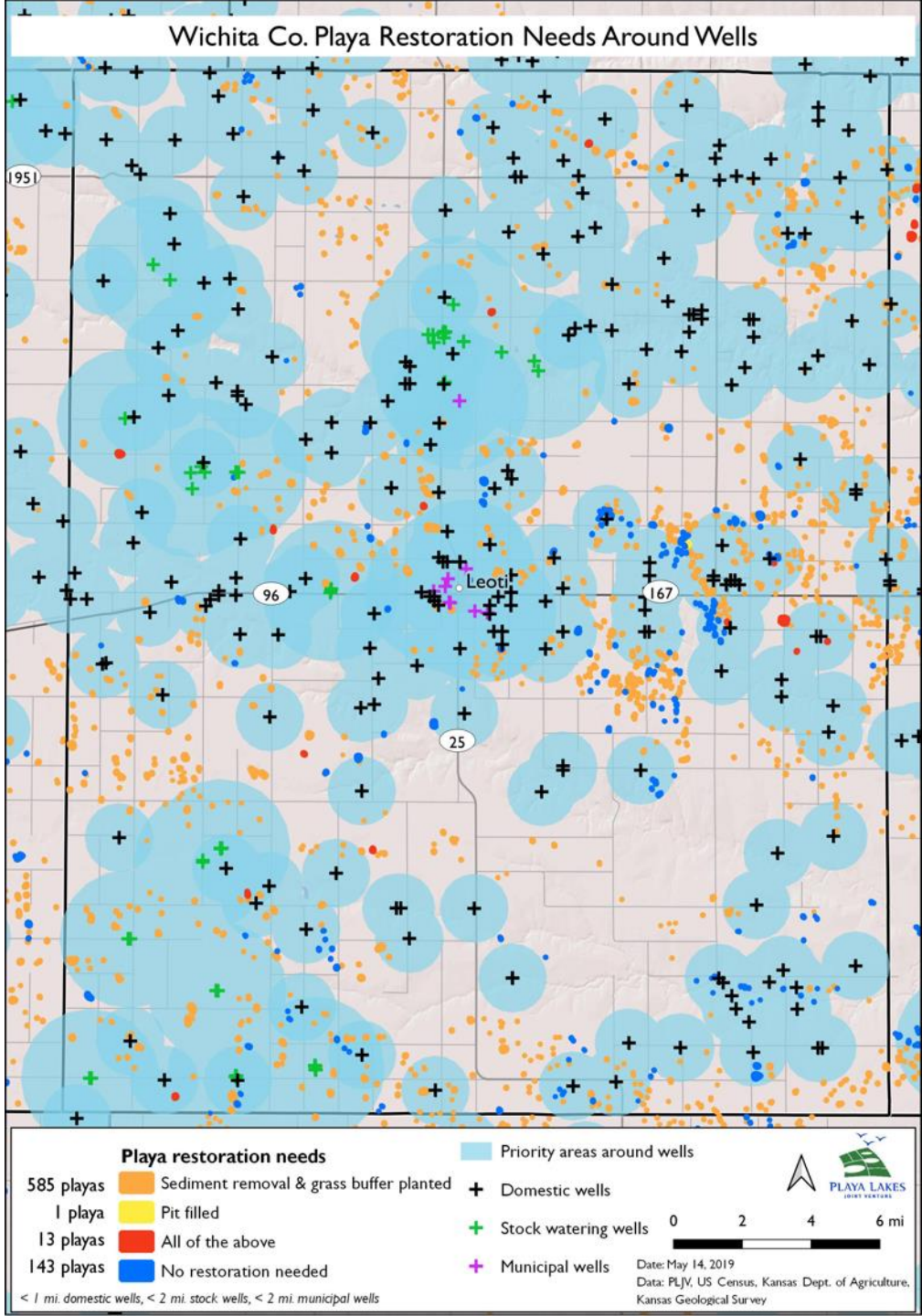


Leoti
Playa

# PLAYAS NEAR MUNICIPAL, STOCK, & DOMESTIC WELLS

## Playas Within 2 Miles of Municipal & Stock Wells and 1 Mile of Domestic Wells

- 1,387 acres of playas needing work
  - 585 playas need sediment removed & buffer planted
  - 1 playa needs pit filled
  - 13 playas need all of the above
  - 143 playas do not need any restoration
- 207 playas > 2 acres



# Relevance Brings Diverse Partnerships

- Towns of Leoti and Tribune
- Greeley County Conservation District
- Groundwater Management District #1
- Kansas Association of Conservation Districts
- Kansas Water Office
- Kansas Department of Agriculture
- Kansas Department of Health & Environment
- Wichita County Commission
- Wichita County Conservation District
- Greeley County Economic Development
- DU, KDWPT, PF, NRCS, FSA and PLJV

# NEXT STEPS

- Regional Conservation Partnership Program (RCPP)

  Providing Match
  - Water Transition Assistance Program (WTAP)
  - Public and Private Grants
  - Valuing Water

- Exporting to Other Kansas Communities

# THANK YOU

Mike Carter, Coordinator
Playa Lakes Joint Venture
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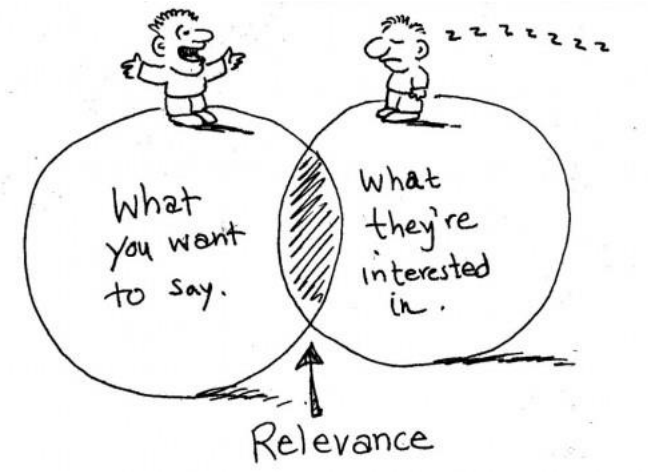
# Next Foray into Relevance

## Playa Calculators

- Estimated cost/profit to farm or conserve a playa
- Estimated value of water resources provided by playas through aquifer recharge




BOTTOM LINE CONFERENCE

**2020 Conference Dates**

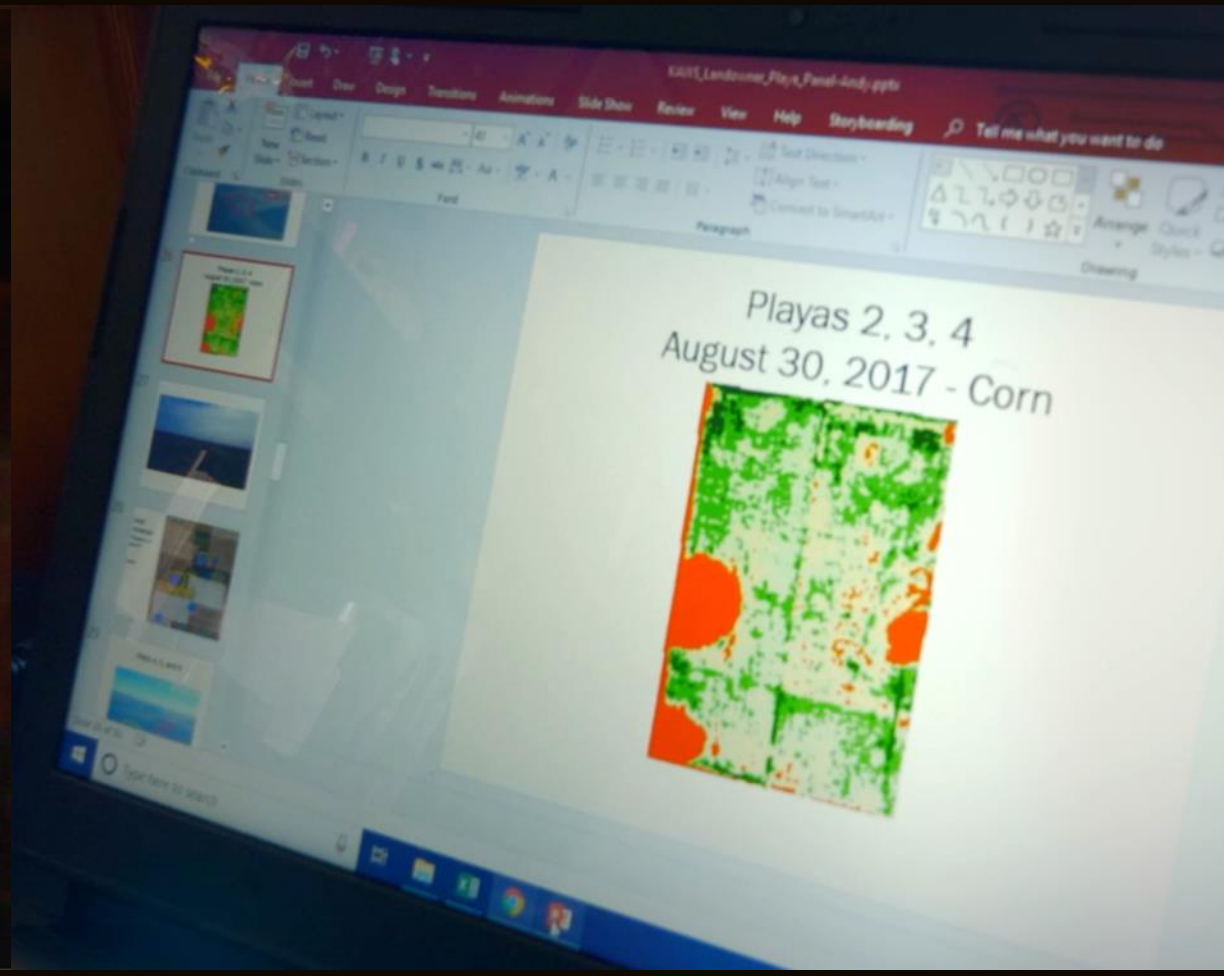
**Announcement Soon!**

**2019 Bottom Line Conference Update**

**Over 200 Farmers and Ranchers Attend 2019 Bottom Line Conference!**

PLAYAS WORK FOR KANSAS

# “Putting Money in My Pocket”



# CP23A-Playa Cost/Revenue Analysis Worksheet

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **CRP Rental Rate** | $ 45.00 | | | | | | | |
| | #1 - Farming Playa | | #2 - Enrolling Playa | | #3 - Field GPS | | #4 - Squared playa | |
| | **Acres** | **Total $** | **Acres** | **Total $** | **Acres** | **Total $** | **Acres** | **Total $** |
| Farmed Acres | 160 | | 152.5 | | 135.6 | | 129.7 | |
| CP23A-CRP Acres | 0 | | 7.5 | | 24.4 | | 30.3 | |
| **Total Field Acres** | **160** | | **160** | | **160** | | **160** | |
| **FARMING OPERATION INPUTS** | | | | | | | | |
| | per acre | | | | | | | |
| Fertilizer Application | $ 8.00 | | | | | | | |
| Fertilizer | $ 60.00 | | | | | | | |
| Seed | $ 14.00 | | | | | | | |
| Planting | $ 10.00 | | | | | | | |
| Spray | $ 16.00 | | | | | | | |
| Spray | $ 16.00 | | | | | | | |
| Harvesting | $ - | | | | | | | |
| **Total Inputs** | **$ 124.00** | **$ 19,840.00** | | **$ 18,910.00** | | **$ 16,814.40** | | **$ 16,082.80** |
| **YIELD/REVENUE** | | | | | | | | |
| Bushels/Acre | 50 | | | | | | | |
| $/bushel | $ 5.40 | | | | | | | |
| **Total Yield Revenue** | **$ 270.00** | **$ 41,175.00** | | **$ 41,175.00** | | **$ 36,612.00** | | **$ 35,019.00** |
| | | | | | | | | |
| **Total CRP Payments** | | **$0.00** | | **$ 337.50** | | **$1,098.00** | | **$1,363.50** |
| | | | | | | | | |
| **Total Net $ all acres** | | **$ 21,335.00** | | **$ 22,602.50** | | **$ 20,895.60** | | **$ 20,299.70** |
| | | | | | | | | |
| **Net $/farmed acre** | | $ 133.34 | | $148.21 | | $ 154.10 | | **$ 156.51** |
| **Net $/field acre** | | $ 133.34 | | $141.27 | | $ 130.60 | | **$ 126.87** |
| **SIP Payment** | | | | | | | | |

*We have mixed emotions about playas. But, on most days, we're thankful for them.*

*These playas offer a lot of private benefits—aesthetic and recreational value, **improved water quality**, as well as **aquifer recharge**.*

—Vance & Louise Ehmke, Farmers, Lane County KS