

Cheyenne Bottoms Management

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Importance to Wildlife

- 356 of 482 species of birds in Kansas use Cheyenne Bottoms
 - Whooping cranes, least tern, black rail, piping plover
- Over 600,000 shorebirds stopped at Cheyenne Bottoms in 2022
 - Estimated up to 45% of North America's shorebirds stop at Cheyenne Bottoms
- Over 1.5 million waterfowl stopped at Cheyenne Bottoms in 2021-2022
- Wetland of International Importance, Globally Important Bird Area, Hemispheric Reserve

S S F W

VIREOS

White-eyed Vireo	r			
Yellow-throated Vireo		accidental		
Bell's Vireo*	r	r	r	
Blue-headed Vireo	u		o	
Philadelphia Vireo	r			
Warbling Vireo*	u	u	u	
Red-eyed Vireo	u	u	u	

JAYS, MAGPIES, CROWS

Blue Jay*	u	u	u	u
Clark's Nutcracker		accidental		
Black-billed Magpie*		accidental		
American Crow*	u	u	u	u

LARKS

Horned Lark*	a	u	a	a
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SWALLOWS

Bank Swallow	c	o	c	
Tree Swallow*	c	u	c	
Violet-green Swallow		accidental		
N. Rough-winged Swallow*	c	c	c	
Purple Martin*	u	u	u	u
Barn Swallow*	a	c	a	
Cliff Swallow*	a	a	a	
Cave Swallow*	r	r	r	

CHICKADEES, TITMICE

Black-capped Chickadee*	o	o	o	o
Tufted Titmouse	r	r	r	

NUTHATCHES

Red-breasted Nuthatch	u		u	u
White-breasted Nuthatch*	u	o	u	u

CREEPERS

Brown Creeper	r		r	r
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WRENS

Rock Wren		accidental		
House Wren*	u	u	u	
Winter Wren		r	r	
Sedge Wren*	o	r	o	
Marsh Wren*	u	o	u	u
Carolina Wren	o	o	o	o
Bewick's Wren	r		r	

GNATCATCHERS

Blue-gray Gnatcatcher*	u	r	u	
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KINGLETS

Golden-crowned Kinglet	u	u	r	
Ruby-crowned Kinglet	u	u	r	

THRUSHES

Eastern Bluebird*	u	o	u	o
Mountain Bluebird	r	r	r	
Townsend's Solitaire		accidental		
Veery		accidental		
Gray-cheeked Thrush	r	r		
Swainson's Thrush	u		o	
Hermit Thrush	r		r	
American Robin*	c	o	c	u

THRASHERS

Gray Catbird*	u	u	u	
Curve-billed Thrasher		accidental		
Brown Thrasher*	u	u	u	
Northern Mockingbird*	u	u	u	o

STARLINGS

European Starling*	a	c	a	a
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WAXWINGS

Bohemian Waxwing		accidental		
Cedar Waxwing	u	r	u	u

OLD WORLD SPARROWS

House Sparrow*	u	u	u	u
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PIPITS

American Pipit	u		u	
Sprague's Pipit	r		r	

FINCHES

Evening Grosbeak		accidental		
House Finch*	u	u	u	u
Purple Finch			r	r
Common Redpoll		accidental		
Red Crossbill			r	
White-winged Crossbill		accidental		
Pine Siskin	o	o	o	
American Goldfinch*	c	u	c	c

LONGSPURS

McCown's Longspur		accidental		
Lapland Longspur	u		u	c
Chestnut-collared Longspur	r		r	r
Snow Bunting			r	r

SPARROWS

Cassin's Sparrow	r	r	r	
Grasshopper Sparrow*	c	c	u	o
Lark Sparrow*	u		c	u
Lark Bunting*	r	r	r	
Chipping Sparrow	c		c	
Clay-colored Sparrow	c		c	
Field Sparrow	u		u	o
Fox Sparrow	o		u	o
American Tree Sparrow	c		c	a
Darkeyed Junco	c		c	c
White-crowned Sparrow	c		c	u
Harris's Sparrow	c		c	c
White-throated Sparrow	u		u	r
Vesper Sparrow	u		u	u
Le Conte's Sparrow	o		r	
Nelson's Sparrow		accidental		
Baird's Sparrow		accidental		
Henslow's Sparrow		accidental		
Savannah Sparrow	u		u	o
Song Sparrow	c		c	c
Lincoln's Sparrow	u		u	u
Swamp Sparrow	u		u	u
Spotted Towhee	u		u	u
Eastern Towhee	r		r	r

CHATS

Yellow-breasted Chat	o	o	o	
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BLACKBIRDS, ORIOLES

Yellow-headed Blackbird*	c	c	c	o
Bobolink*	r		r	
Eastern Meadowlark*	c	c	c	u
Western Meadowlark*	c	c	c	c
Orchard Oriole*	u	u	u	u
Baltimore Oriole*	u	u	u	u
Red-winged Blackbird*	a	a	a	a
Brown-headed Cowbird*	c	c	a	c
Rusty Blackbird	r		r	r
Brewer's Blackbird	u		u	u
Common Grackle*	c	c	c	u
Great-tailed Grackle*	c	u	c	o

WARBLERS

Ovenbird		accidental		
Worm-eating Warbler		accidental		
Louisiana Waterthrush		accidental		

S S F W

Northern Waterthrush	r			
Golden-winged Warbler		accidental		
Black-and-White Warbler	o		o	
Prothonotary Warbler		accidental		
Tennessee Warbler	o		r	
Orange-crowned Warbler	u		u	
Nashville Warbler	u		u	
MacGillivray's Warbler		accidental		
Mourning Warbler	r		r	
Kentucky Warbler		accidental		
Common Yellowthroat*	c	c	c	
Hooded Warbler		accidental		
American Redstart	o		o	
Northern Parula		accidental		
Bay-breasted Warbler		accidental		
Blackburnian Warbler		accidental		
Yellow Warbler*	u	u	u	
Chestnut-sided Warbler	r		r	
Blackpoll Warbler	o		r	
Palm Warbler			r	r
Yellow-rumped Warbler	u	u	u	o
Yellow-throated Warbler		accidental		
Prairie Warbler		accidental		
Black-throated Gray Warbler		accidental		
Townsend's Warbler		accidental		
Black-throated Green Warbler	r		r	
Canada Warbler		accidental		
Wilson's Warbler	o		o	

GROSBEAKS, BUNTINGS

Summer Tanager		accidental		
Northern Cardinal*	u	u	u	u
Rose-breasted Grosbeak	o	o	o	
Black-headed Grosbeak	r	r	r	
Blue Grosbeak*	o	o	o	o
Lazuli Bunting		accidental		
Indigo Bunting*	o	u	r	
Dickcissel*	c	c	c	

Date: _____ Time: _____
 Weather: _____
 Observations: _____

SEASON CODES
 (S) Spring = MARCH - MAY
 (S) Summer = JUNE - AUGUST
 (F) Fall = SEPT - NOV
 (W) Winter = DEC - FEB

ABUNDANCE CODES
a-abundant : common, numerous birds can be seen daily
c-common : certain to be seen in suitable habitat
u-uncommon : present, but not always seen
o-occasional : seen a few times per season
r-rare : seen in 2-5 year intervals
accidental : very few records exist

(*) Documented breeding species, meeting the requirements for a Probable or Confirmed Breeder.

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Birds of Cheyenne Bottoms



The Cheyenne Bottoms ecosystem was historically a 41,000-acre wetland basin consisting of prairie freshwater marshes, wet meadows, grasslands, shelterbelts, riparian areas and agricultural lands. Currently, the State of Kansas and The Nature Conservancy owns and manages over 28,000-acres of this ecosystem. This management consists of the manipulation of the habitat for many birds and other wildlife species, vegetation control, agricultural and ranching practices and water level control.

Cheyenne Bottoms is one of the most important ecosystems in Kansas and the Central Flyway region. It is recognized as a Wetland of International Importance, a Western Hemispheric Shorebird Reserve Site and a Globally Important Bird Area. It is a popular destination for hunters and bird watchers, and serves as a host for many other wildlife-related opportunities.

At least 356 of the 482 species of birds currently known to occur in Kansas have been recorded at Cheyenne Bottoms. There are over 130 species that breed and nest on the area, 148 species that may winter here and nearly 70 species that may occur year-round.

Nearly 40 species of waterfowl and over 40 species of shorebirds have been reported at Cheyenne Bottoms. Tens of thousands of geese, ducks and shorebirds can be observed when habitat conditions are favorable during spring and fall migration. It also serves as an overwintering location for many waterfowl species.



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Economics

- 1987 Economic Impact Study
 - \$1.8 million to Barton County,
 - \$2.87 million to Kansas
- Around 60,000 visitors annually
 - Recent study of an economic impact report on the tourism in Kansas, each contributes \$200 per day
 - \$12 million annually



Hunter data

- Average 4,975 waterfowl hunter days annually
 - USFWS estimates each spends \$72.44 per day
 - \$360,389 annually
- 2021-2022 Season
 - 52.89% out of state waterfowl hunters
 - 32 states
 - 5,790 waterfowl hunter days
 - 1,746 unique waterfowl hunters



Inlet System

- Over 21 miles long
- Series of 3 dams, pipes, creeks, and canals
- Inlet pipe from Arkansas River
 - Started in 2013
 - 5 mile long pipeline
 - Estimated \$5,895,993

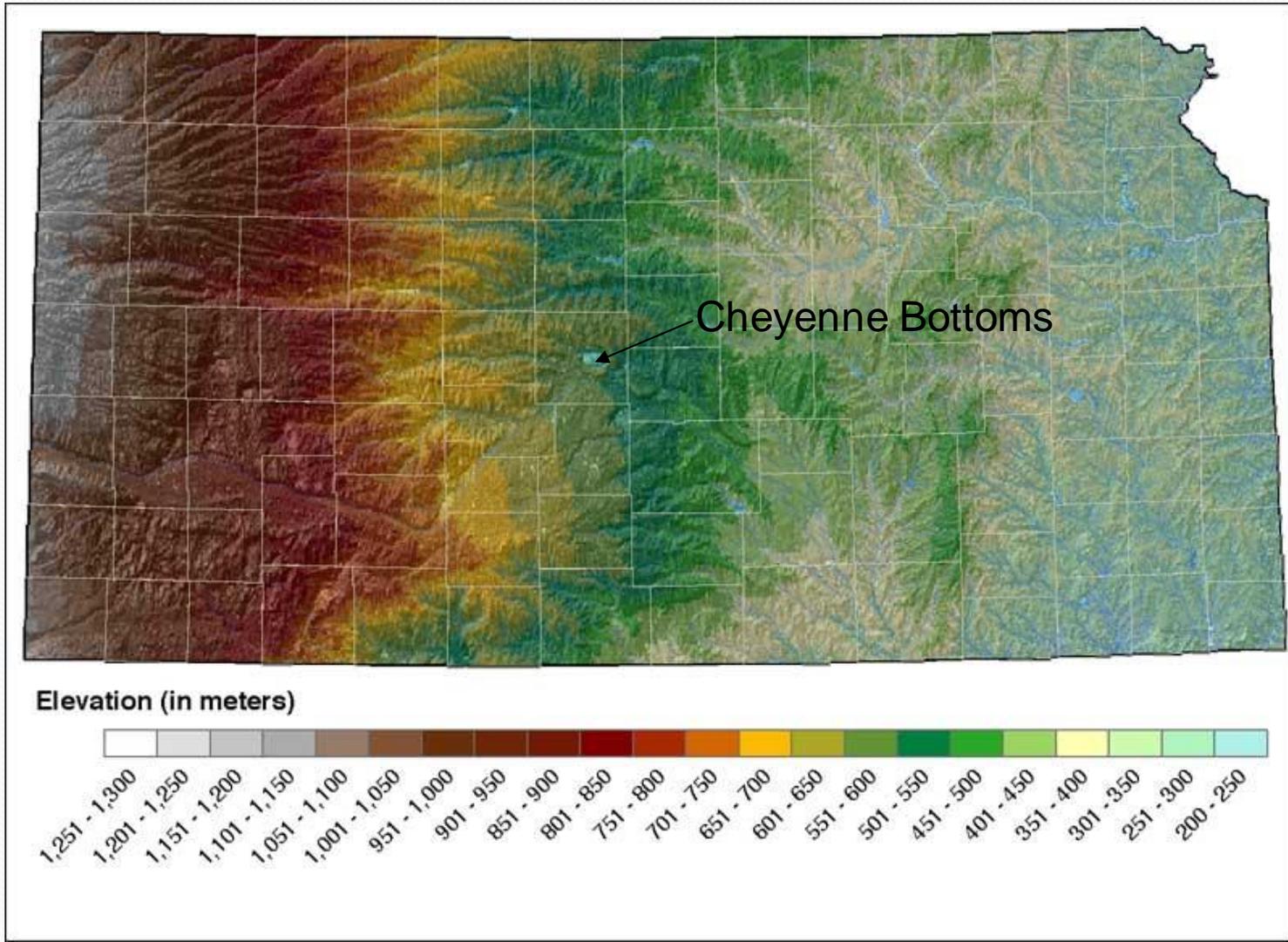


2018 Pittman-Robertson Grant

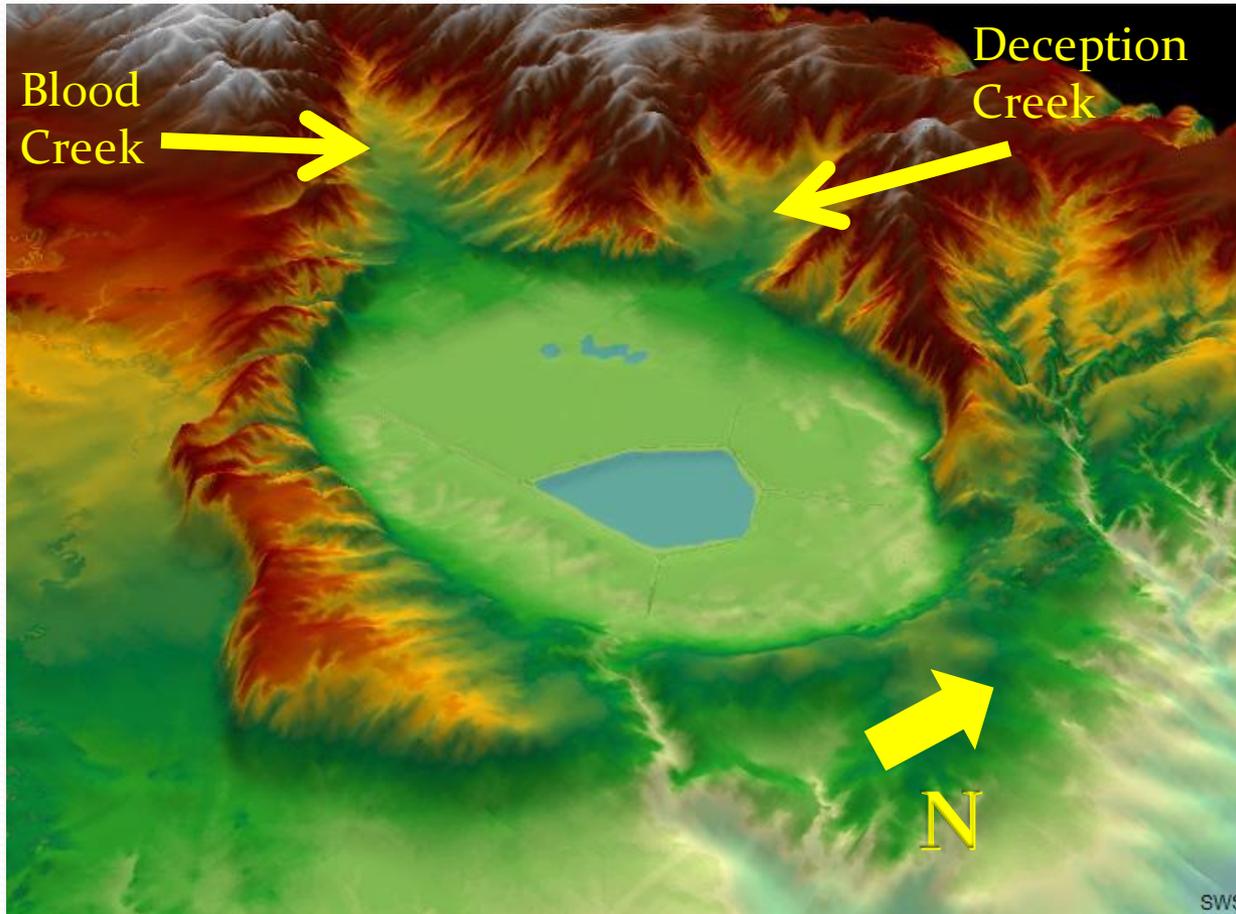
- \$6 million
 - \$4.5 million PR funds
 - \$1.125 million KDWP fee funds
 - \$375,000 state waterfowl stamp
 - Added DU donations, total \$6.9 million
- Silt removal
- Pump replacement
- New pump station
- New office and shop
- Repair or replace water control structures
- New kiosks, campground, hunter access



CHEYENNE BOTTOMS IS LOCATED IN CENTRAL KANSAS

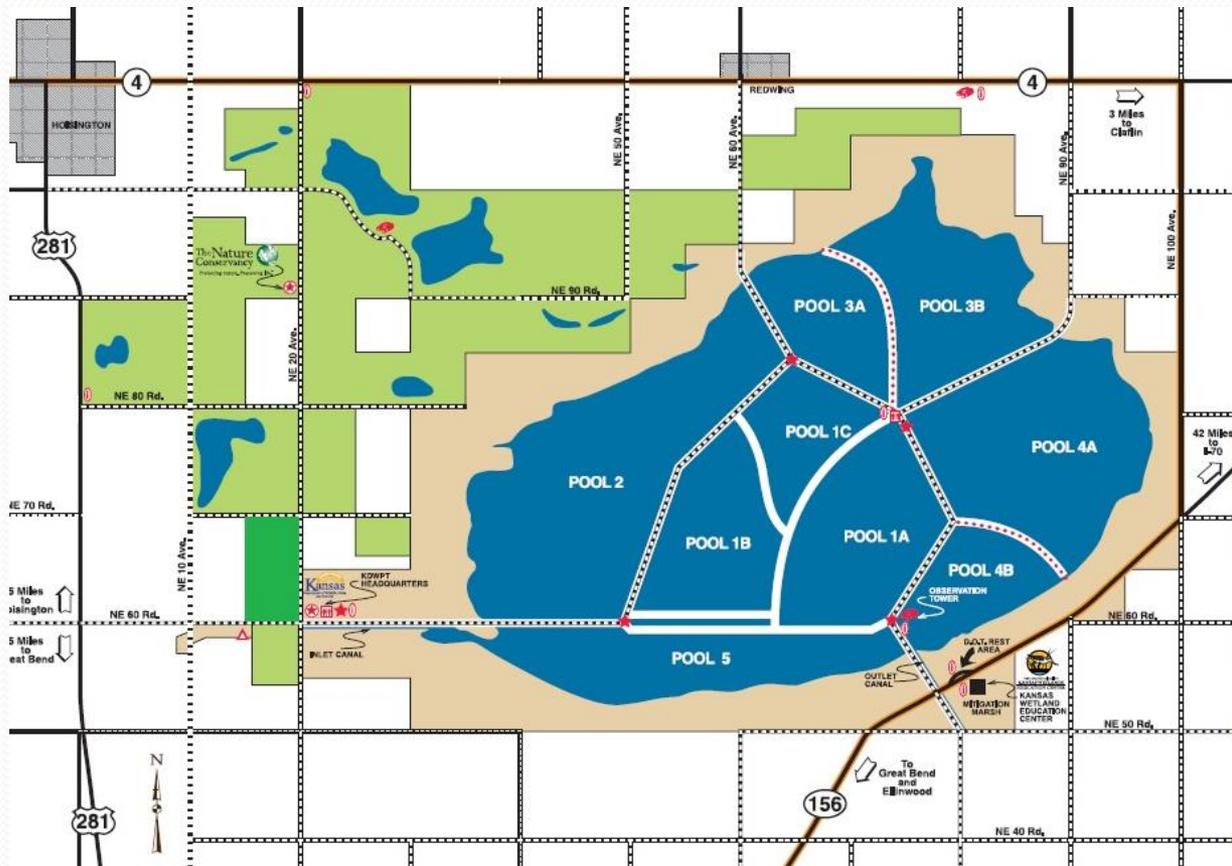


Cheyenne Bottoms 41,000 Acre Drainage Basin



Cheyenne Bottoms Wildlife Area

19,998 acres



Brief History

- Dissolution of subterranean salt beds
- Largest interior wetland in the United States
- Early development attempts
 - Attempts to drain for farming
 - Grand Lake Reservoir Company
 - American Coursing Club
 - Market hunting
 - National Wildlife Refuge
 - Bombing range in WWII



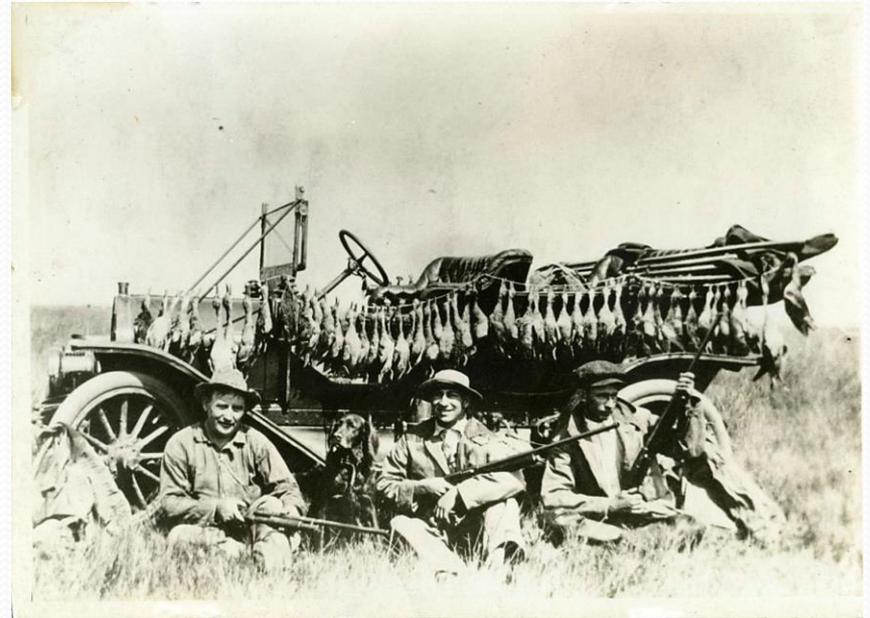
Brief History

- Pittman Robertson Act, 1937
 - Kansas began purchasing land for CHBW in 1942
 - Completed CHBW in 1957
 - Divided basin into 5 pools
 - All paid for by sportsmen
 - \$2.8 million



Brief History

- Mid 1990's
 - \$17 million renovation
- 2013 Arkansas River Pipeline
- 2018 Pittman-Robertson Grant



Water Management



Supplemental Water

- 25” average annual precipitation
- 60” average evaporative loss
- 1 year can not exceed 37,960 Acre Feet
 - Arkansas River (2427)
 - 18,185 Acre Feet
 - Wet Walnut Creek (439)
 - 19,175 Acre Feet
 - Dry Walnut Creek (39951)
 - 4,346 Acre Feet
- Staged Water Rights
 - Blood Creek (39789)
 - Deception Creek (40081)



Supplemental Water

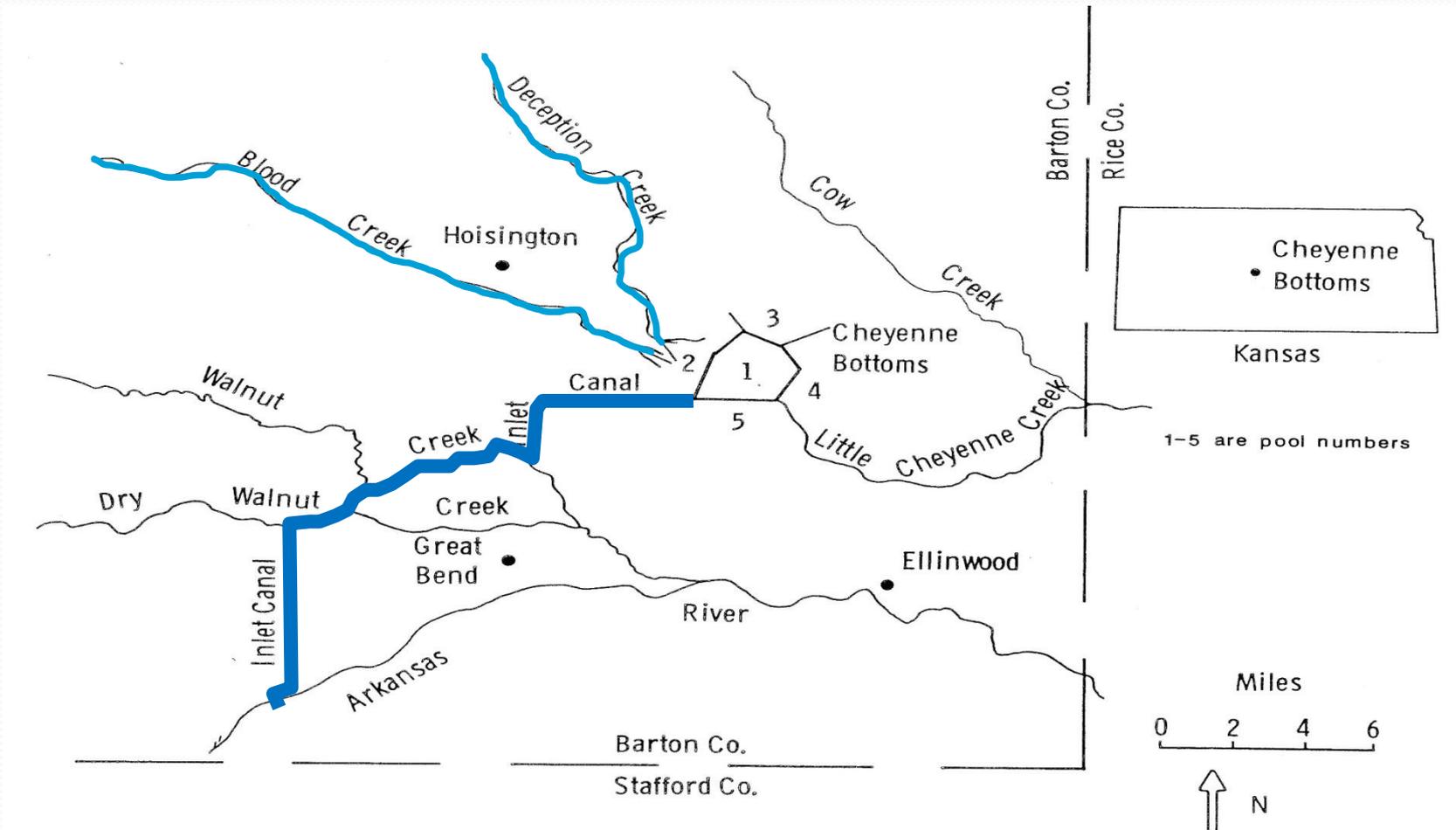
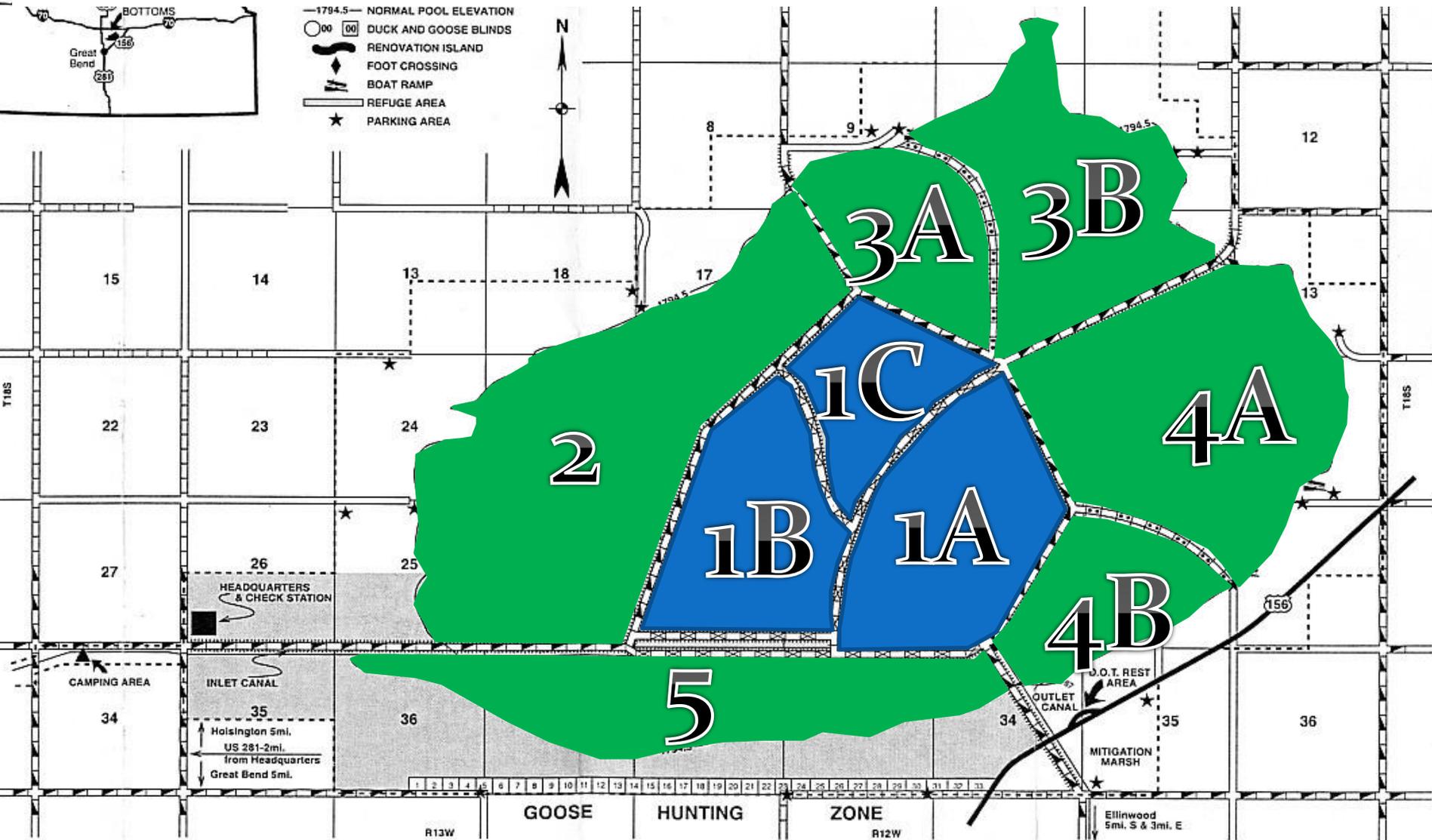


Figure 2.1 Location Map for Cheyenne Bottoms Wildlife Area

15,482 acre feet in storage pools

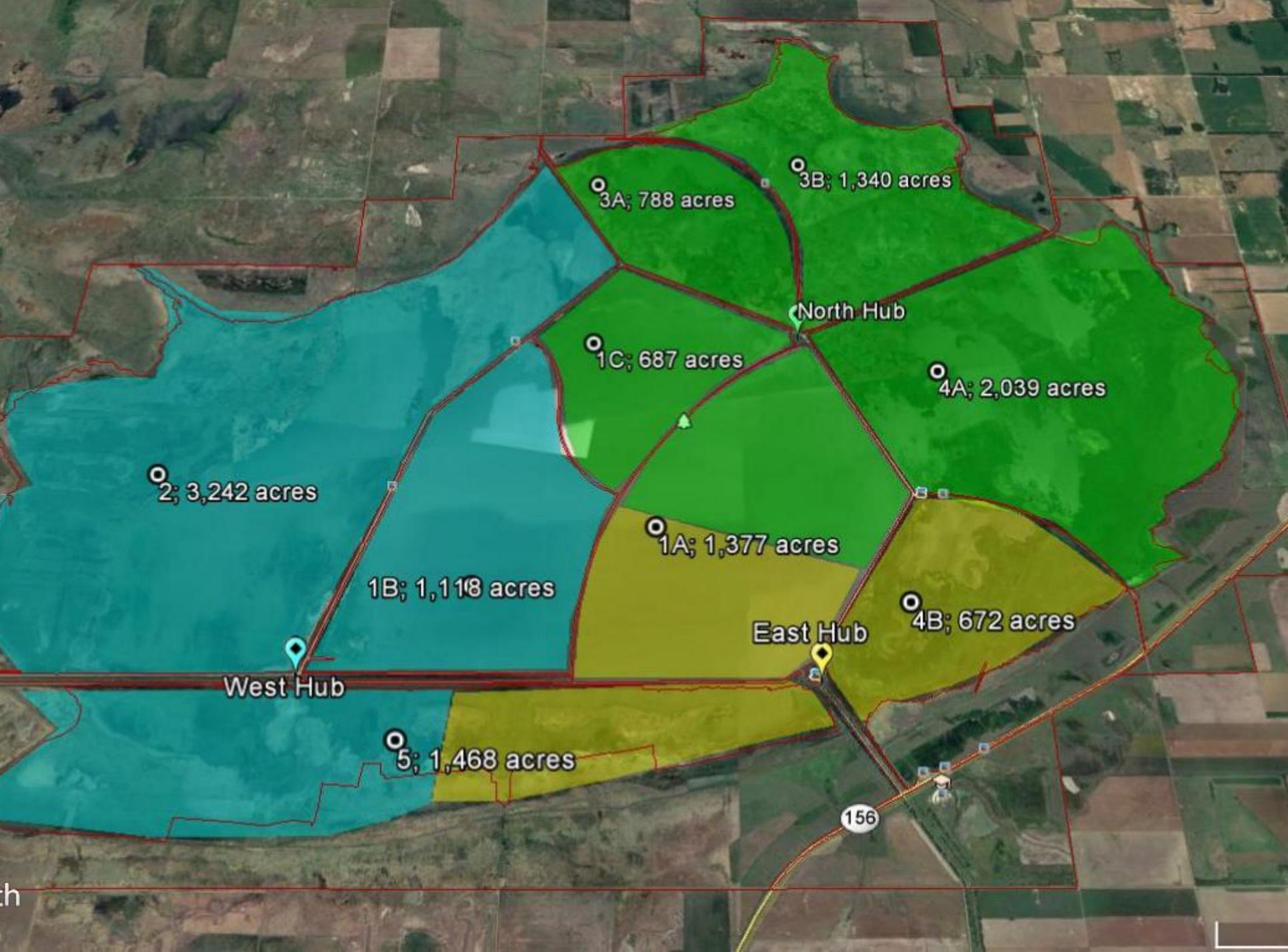
14,323 acre feet in perimeter pools



Infrastructure

- 14 submersible pumps
- 4 propane pumps
- 40 water control structures





Basic Water Management

- Spring
 - Draw down perimeter pools
 - Water in storage
 - Hope to have storage pools as full as possible by end of spring
- Summer
 - Storage
 - Divert water
 - Keep storage pools as full as possible
- Fall
 - Flood perimeter pools
 - Maintain levels
- Winter
 - Maintain levels
 - Begin draw downs late season



Outlet



Property Management



Silt Removal

- Slowly silted in over the years
- Reduces ability to manage water
- Increase in cattails
- Expensive
- Time consuming



Cattail Control

- 5,000 acres controlled in last 5 years
 - Increase habitat for waterfowl and shorebirds
- Herbicides
- Prescribed Burning
- Discing



Habitat Improvements and Maintenance

- Habitat
 - Prescribed burning
 - Food plots
 - Tree control
- Visitor Access
 - 19 parking lots
 - 13 boat ramps
 - 26 foot crossings
 - 3 vault toilets
 - Free campground
 - 17 miles of roads
 - 177 islands



“Never have I seen together such quantities of swans, cranes, pelicans, geese and ducks, as were here. The swamp was fairly covered with them, and they seemed to feel themselves so safe that I could have killed hundreds of them with the shot barrel of my double-barreled weapon.” Dr. Frederick A. Wislizenus, 1839

