



**KANSAS**  
DEPARTMENT OF  
AGRICULTURE

## **Division of Water Resources**

# Wetland Permitting and Flint Hills National Wildlife Refuge A Case Study

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# Presentation

- Permitting wetlands under the Kansas Water Appropriation Act (KWAA)
- Flint Hills National Wildlife Refuge case study including water rights
- Intensive Groundwater Use Control Area (IGUCA)



# Permitting Wetlands under the KWAA

- Collection and Storage  
of Natural Flow in  
Wetlands ( $\Rightarrow$  15 AF)

VS

- Direct Diversion into  
Wetlands (any q)

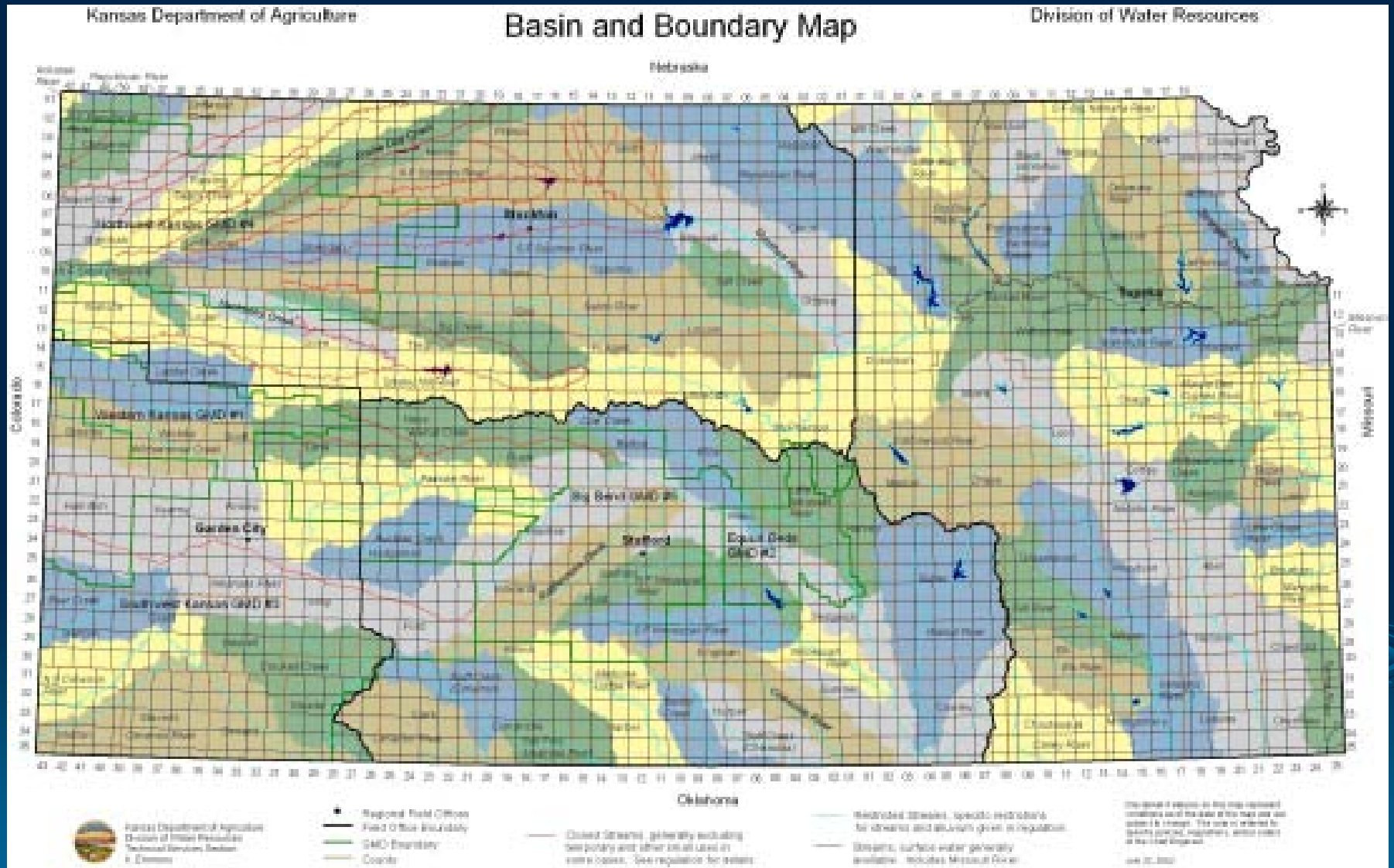
# Natural Flow Collection

- “Diversion” is defined as the act of bringing water under control
- A wetland cell with or without a berm, usually has stop logs, or other control structures in place, water naturally collects
- Collection and storage of water into these wetlands are a diversion and require permitting
- Consider acreage, maximum depth, no. of times filled per year, seepage, etc.

# Direct Diversion

- Same wetland setup with berms, stop logs or other control structures
- Pump water directly from a stream to fill the wetland cell or cells, or to supplement natural collection
- Permit the same way as all other appropriations- quantity, rate of diversion, point of diversion, place of use
- Consider acreage, maximum depth, no. of times filled per year, seepage, etc.

# Most Basins Restricted during Peak Season

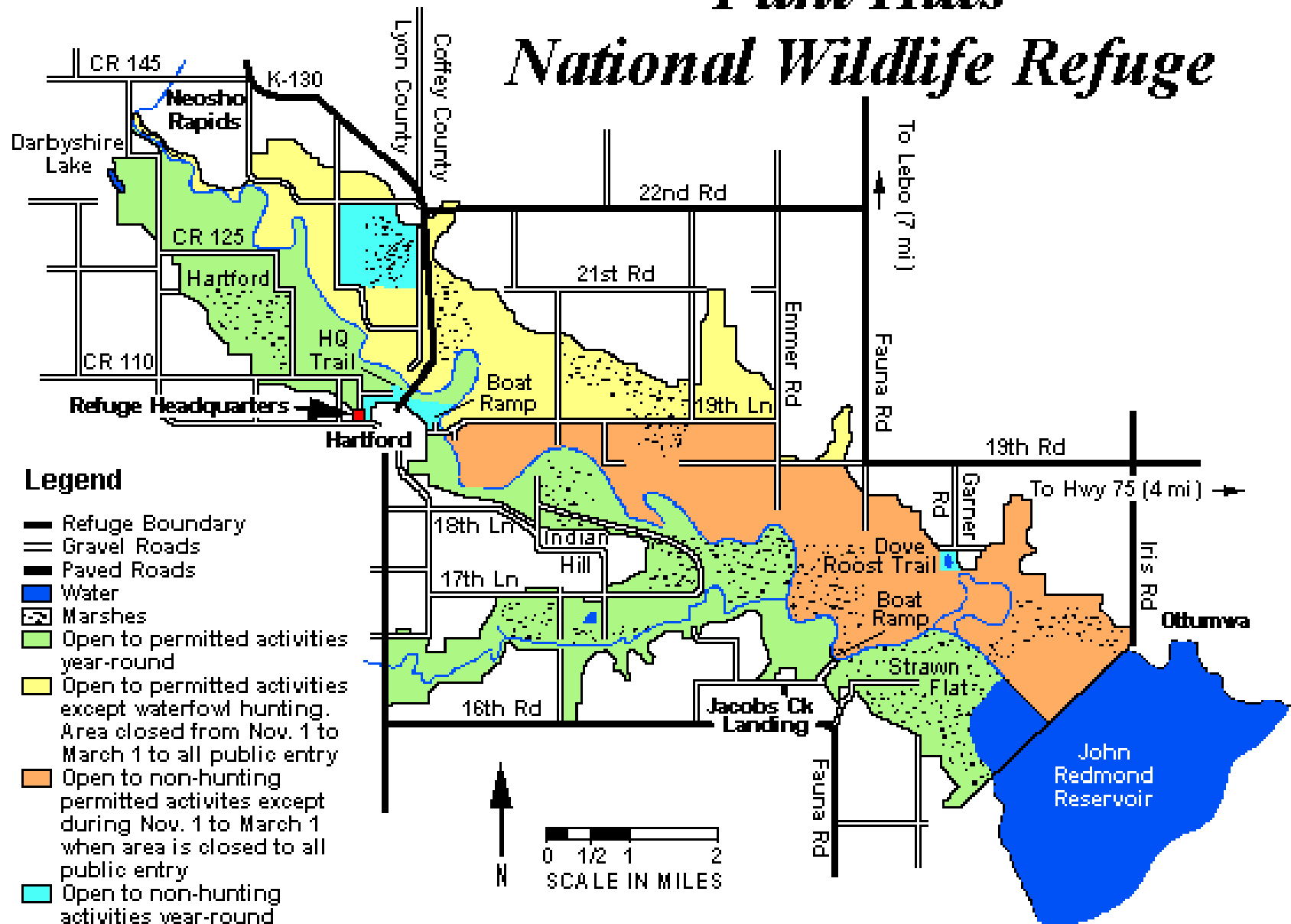


# A CASE STUDY

## Flint Hills National Wildlife Refuge



# Flint Hills National Wildlife Refuge



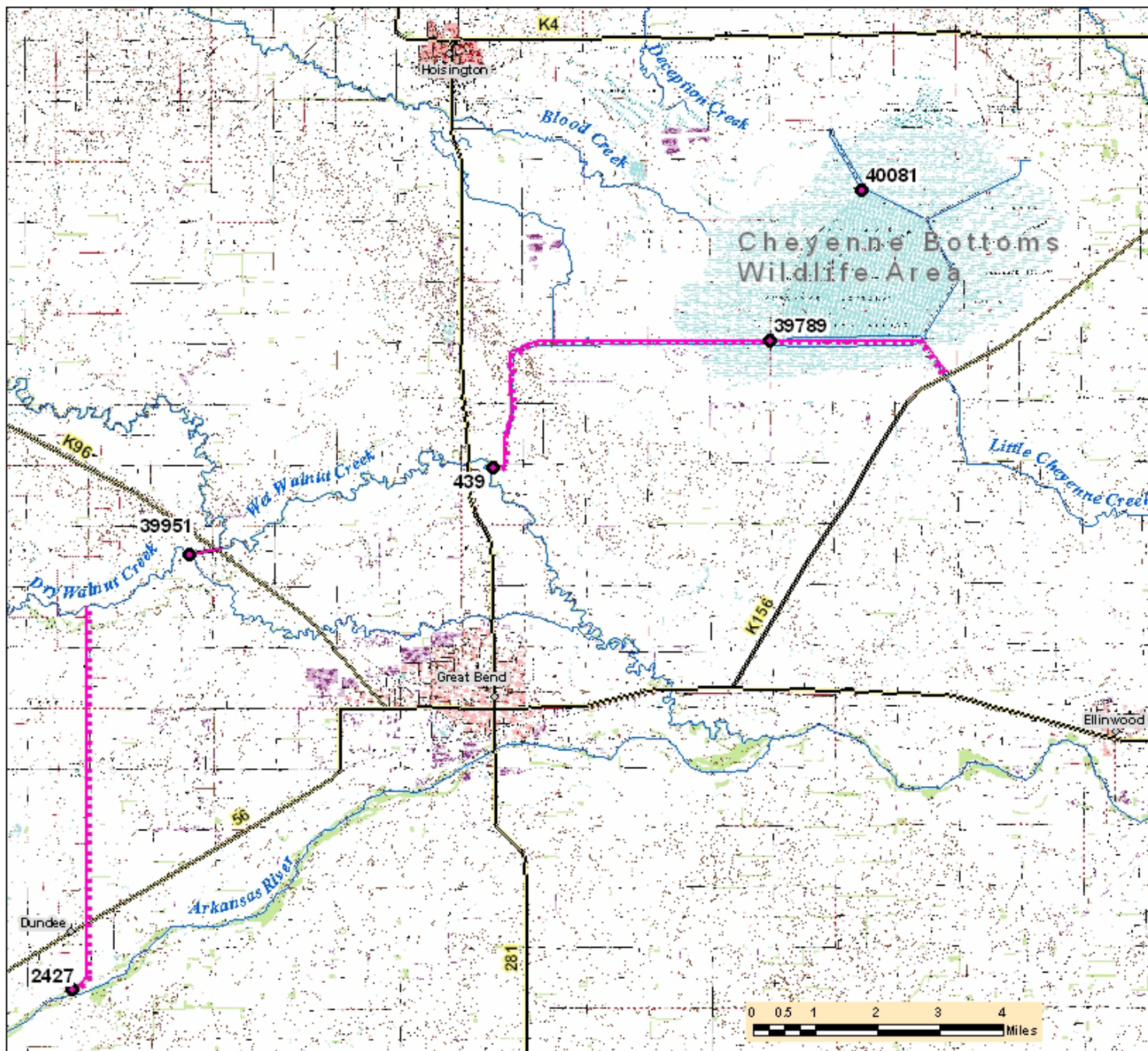


# Flint Hills National Wildlife Refuge Facts

- 18,500 acre system of shallow marshes
- Upstream portion of John Redmond reservoir on Neosho River
- Established in 1966
- Managed for migratory waterfowl, ducks & geese
- Farmland managed on share with local farmers

# Water Rights

Water Right-Direct	Source	Marsh Name	Quantity	Rate		Water Right-Natural Flow Collector	Commingle
17601 17606 17609 38273 38278 38280	Neosho River	Rummel	~400 AF	13,900 gpm		38277	38284
17601 17606 17609 38273 38278 38280	Eagle Creek	Hammerton	~500 AF	15,100 gpm		38285	38286
“” 38284, 38286, 39581	Neosho River	Troublesome (East)	~300 AF	12,350 gpm		5339	39582
16 additional rights Some Natural flow Direct	Tribs and Neosho Eagle Creek Troublesome	Mony Penny Lairds Strawn Flats Bench Lower Bench Pintail Boes West Bench	TOTAL ~2000 AF	varies		multiple	
Other Rights							



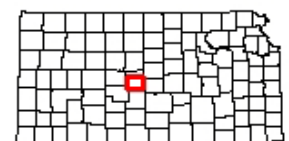
# Cheyenne Bottoms Wildlife Area Water Appropriations



## Legend

- Water Appropriations
- KDOT Highways
- Streams
- Aqueduct
- - - Canal

## Location Map



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Division of Water Resources  
BKF/rlh  
May 6, 2010

# Cheyenne Bottoms Water Rights

**Cheyenne Bottoms Wildlife Refuge**

**Priority**

<b>Source</b>	<b>Date</b>	<b>Quantity</b>	<b>Limitation</b>	<b>Comments</b>
<b>(439) Wet Walnut</b>	<b>10/8/1948</b>	<b>19,175 AF</b>	<b>none</b>	
<b>(2427) Arkansas River</b>	<b>4/9/1954</b>	<b>18,185 AF</b>	<b>none</b>	<b>Dundee Diversion</b>
<b>(39951) Dry Walnut</b>	<b>4/16/1990</b>	<b>6,000 AF</b>	<b>none</b>	<b>not yet perfected</b>
<b>(39789) Blood Creek (Cow Creek)</b>	<b>12/4/1989</b>	<b>9375 AF</b>	<b>storage</b>	
<b>(40,081) Deception Creek (Cow Creek)</b>	<b>10/3/1990</b>	<b>2905 AF</b>	<b>storage</b>	

# IGUCA - Intensive Groundwater Use Control Area



# KSA 82a-707 (Priorities)

- Statute governing administration between water rights.
  - In short it is the priority of the water right and not the type of use that drives administration in Kansas.





# Walnut Creek IGUCA

## Barton, Rush and Ness Counties

- Initiated: March 13, 1990, requested by Big Bend GMD 5 Pursuant to 82a-1036
- Reasons for Request:
  - DWR Report No. 89-1 (Water Availability)
  - October 10, 1989, KDWP requests proceedings in areas that affect the water right for Cheyenne Bottoms in the Walnut Creek drainage basin
  - January 11, 1990, Big Bend GMD No. 5 requested proceedings in Walnut Creek in Barton County.
  - Public Hearings: December 4-7, 1990, January 3-4, 1991, February 5-8, 1991, March 19-22 and 26-28, 1991, April 18, 1991
  - Order issued January 29, 1992

# Walnut Creek IGUCA

## Barton, Rush and Ness Counties

### ➤ Corrective Controls:

- Long-term sustainable yield of the aquifer is 22,700 AF/YR
- Defined reasonable quantities based on priority and maximum acres irrigated between 1985 to 1990
  - Vested current authorized quantities
  - Senior (**10-1-1965**): Barton 12 inches multiplied by max acres irrigated; Rush 13 inches multiplied by max acres irrigated; and Ness 14 inches multiplied by max acres irrigated
  - Junior (44 % of the allocations for senior rights): Barton 5.25 inches multiplied by max acres irrigated; Rush 5.75 inches multiplied by max acres irrigated; and Ness 6.25 inches multiplied by max acres irrigated
- Set Five-year allocations
- Municipal, non-vested allocated 1989 population and reasonable per capita use or the quantity authorized, whichever is less
- Non-vested for all other types of use are allocated 90% of maximum use reported from 1985 to 1990 or sum of the annual quantity of vested and senior and 44% of appropriation authorized



# Walnut Creek IGUCA

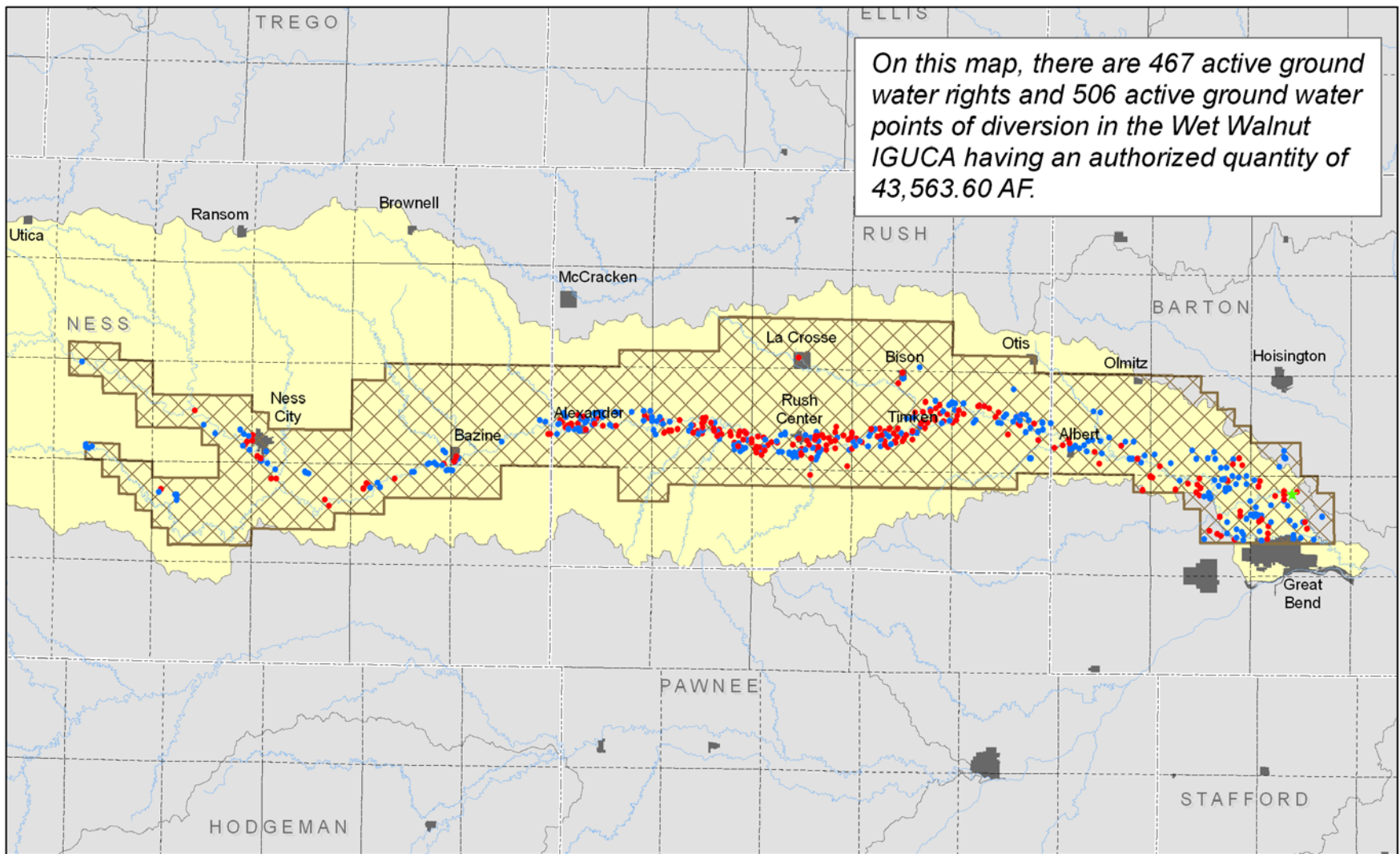
## Barton, Rush and Ness Counties

- Supplemental Order issued December 6, 1996
- Amended Order Dated June 24, 1998
- Supplemental Amended Order Dated June 29, 2001
  - Supplemental and Amended Orders allowed for a process to assign allocations of water rights that were in CRP. Allowed for Carry over of allocations. Allowed new applications for additional rate.



# Walnut Creek Basin

IGUCA IN PLACE



## Legend

- Ground Water Pds before 1966
- Ground Water Pds after 1966
- Streams
- Cities
- Walnut Creek
- Wet Walnut IGUCA

★ File Number 439

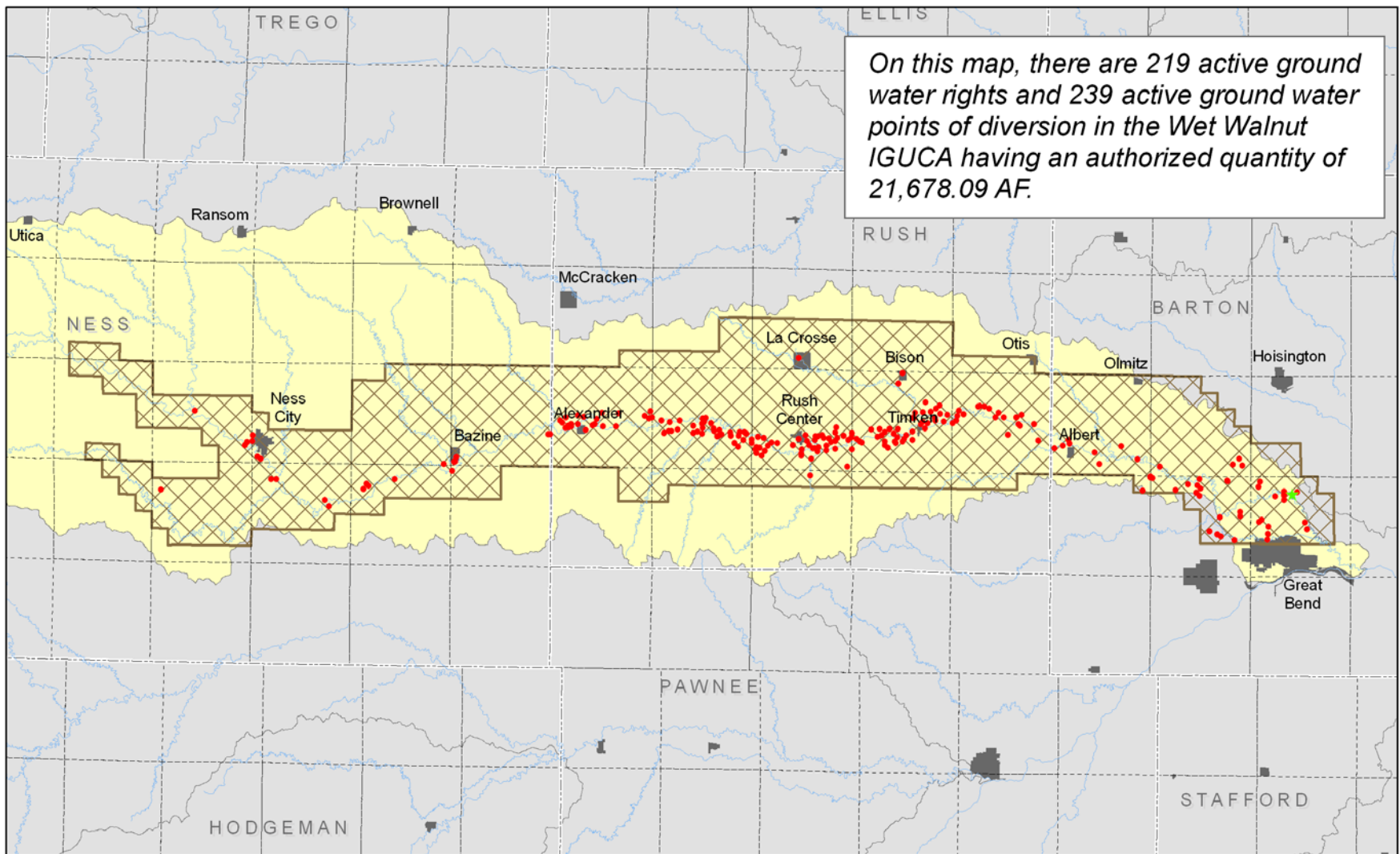
0 3.5 7 14 Miles



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Division of Water Resources  
December 27, 2006

# Walnut Creek Basin

IMPACT OF ADMINISTRATION  
Pds cutback to 1966 priority within IGUCA boundary



## Legend

- Ground Water Pds before 1966
- Streams
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★ File Number 439

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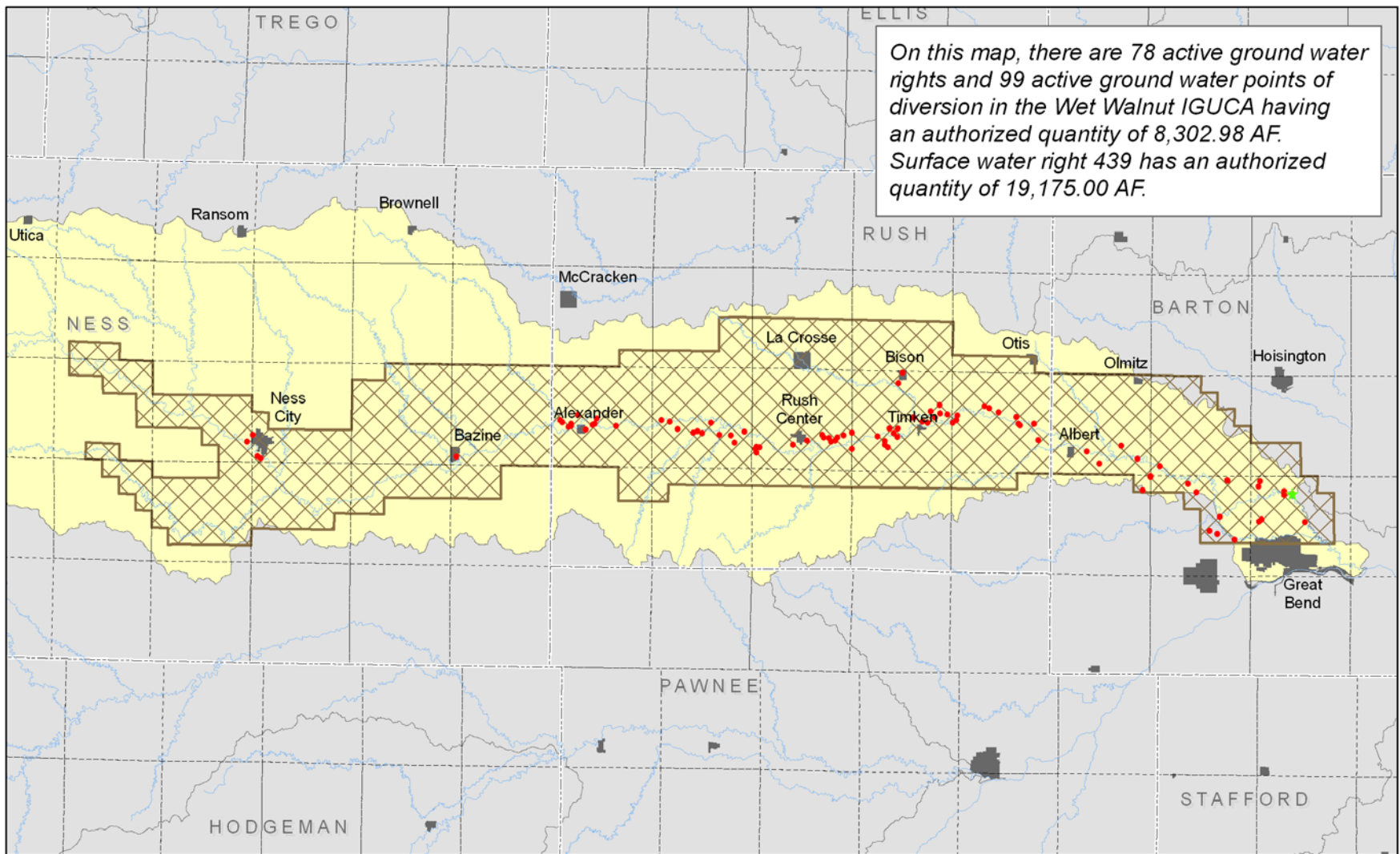


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Division of Water Resources  
December 27, 2006

# Walnut Creek Basin

Pds Senior to Water Right 439

On this map, there are 78 active ground water rights and 99 active ground water points of diversion in the Wet Walnut IGUCA having an authorized quantity of 8,302.98 AF. Surface water right 439 has an authorized quantity of 19,175.00 AF.



## Legend

- Pds Senior to Water Right 439
- Streams

- Cities
- Walnut Creek
- ▨ Wet Walnut IGUCA

★ File Number 439

0 3.5 7 14 Miles



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Division of Water Resources  
July 10, 2007



# Summary

- KWAA requires permitting of natural flow collection and direct diversion for wetlands
- Most wetlands/environmental areas can be permitted, but not direct diversion in peak season
- Flint Hills National Wildlife Refuge an example of wetland permitting in Kansas
- IGUCA

# Questions?

