Water for Private Recreation

A Case Study in Collaborative Water Conservation in Colorado

Water Literate Leaders Program

April 10th, 2024

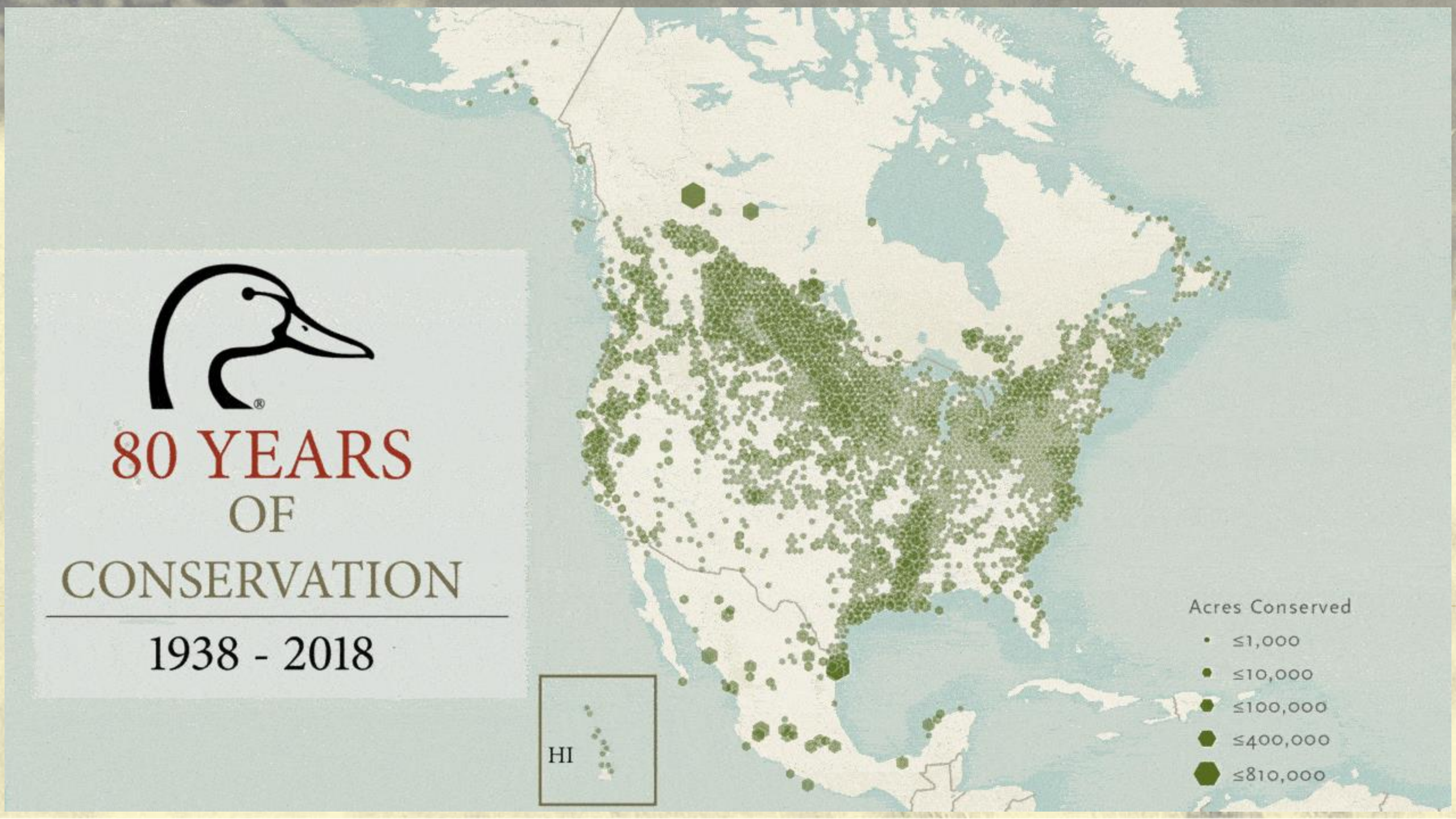
DUCKS UNLIMITED

Today's Presentation

1. **Brief introduction to me and Ducks Unlimited, the organization I work for**
2. **What's going on with the birds?**
3. **Wildlife Conservation, Habitats, & Water**
4. **Wildlife Habitat & Private Lands Recreation**
5. **Water supply for habitat conservation projects**
6. **Collaborative Water Conservation Case Study: South Platte Managed Aquifer Recharge**
7. **Questions & Broader Discussion of Water for Wildlife & Recreation**

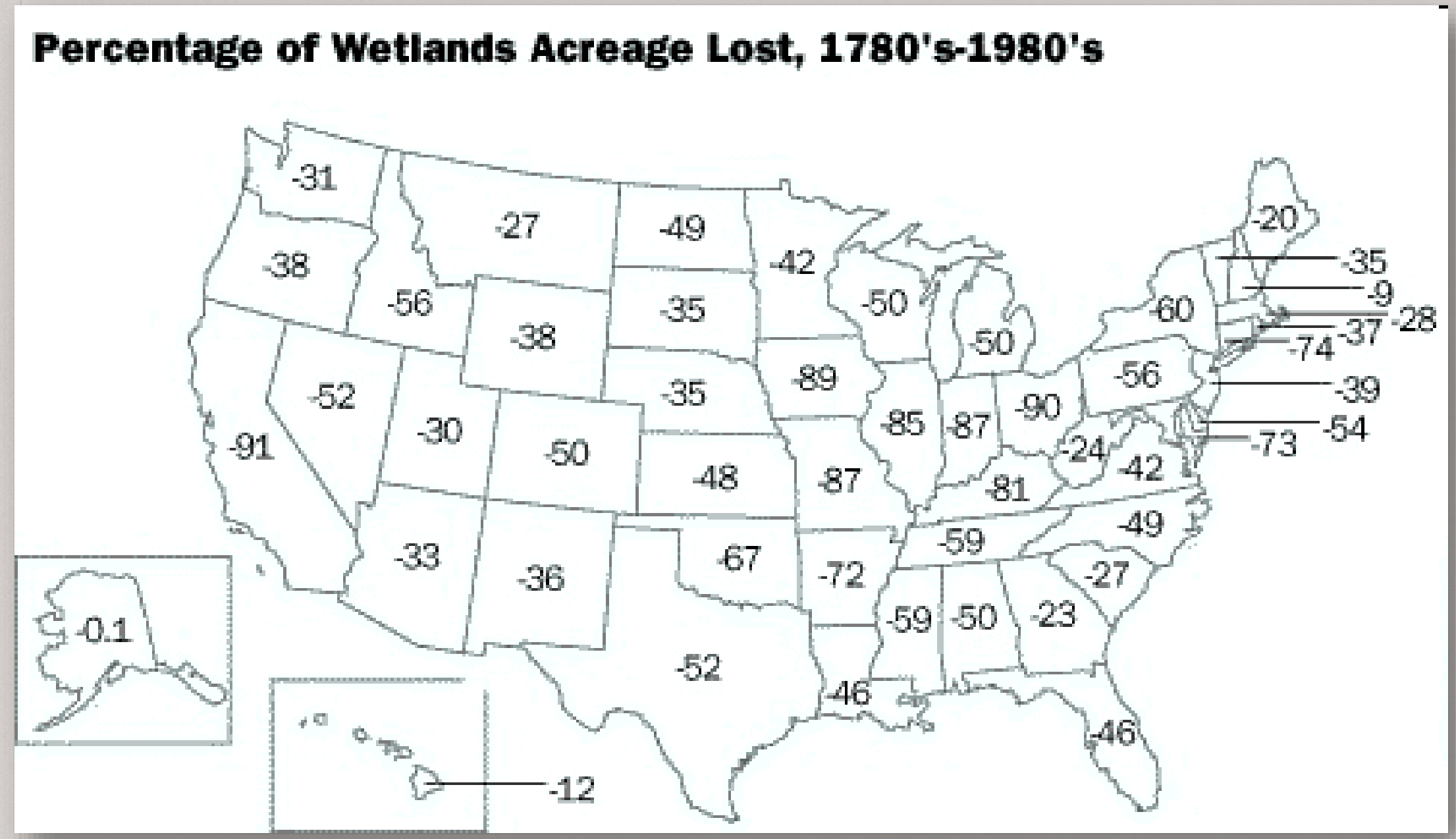
Matthew Reddy

Regional Biologist
Ducks Unlimited, Inc.


80 YEARS
OF
CONSERVATION
1938 - 2018
HI
Acres Conserved
≤1,000
≤10,000
≤100,000
≤400,000
≤810,000

Bird Population Trends

Wetlands Status & Trends

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Landscape level hydrologic changes have broad impacts

Figure 10.2. Light green shad ... ations of the San Luis Valley for period (a) 1984-1986 and period (b) 1 ... been changed slightly from the original report and include 2017 and 2018 da

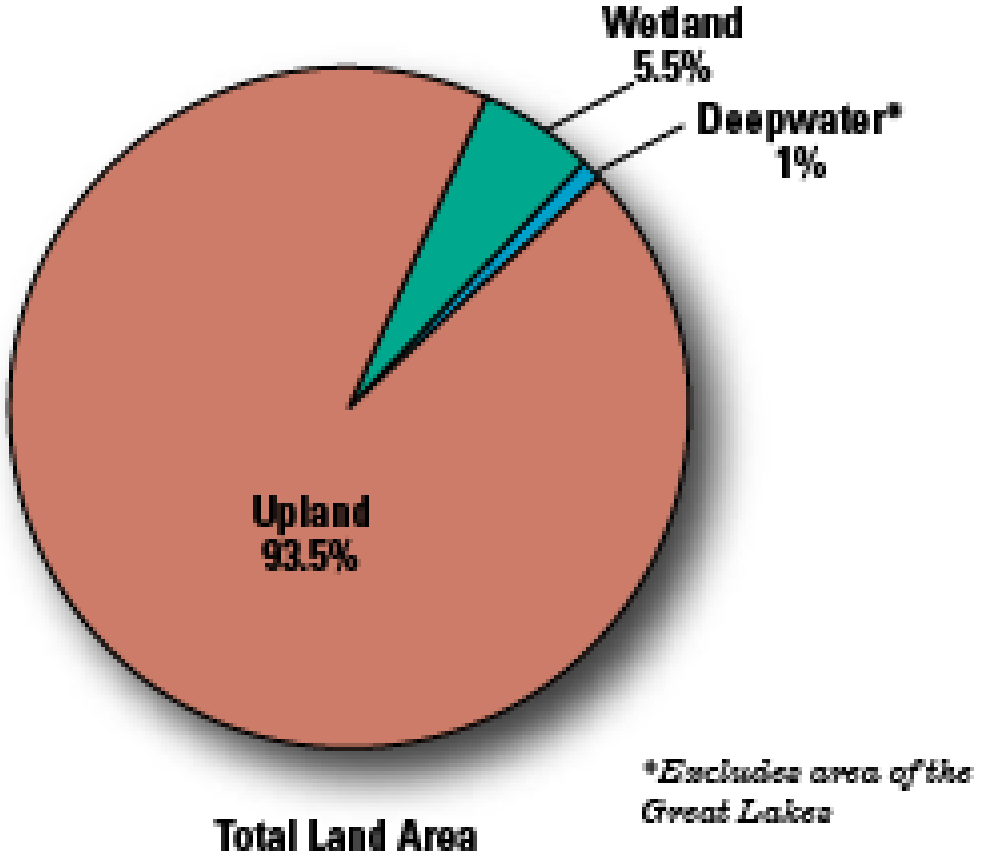
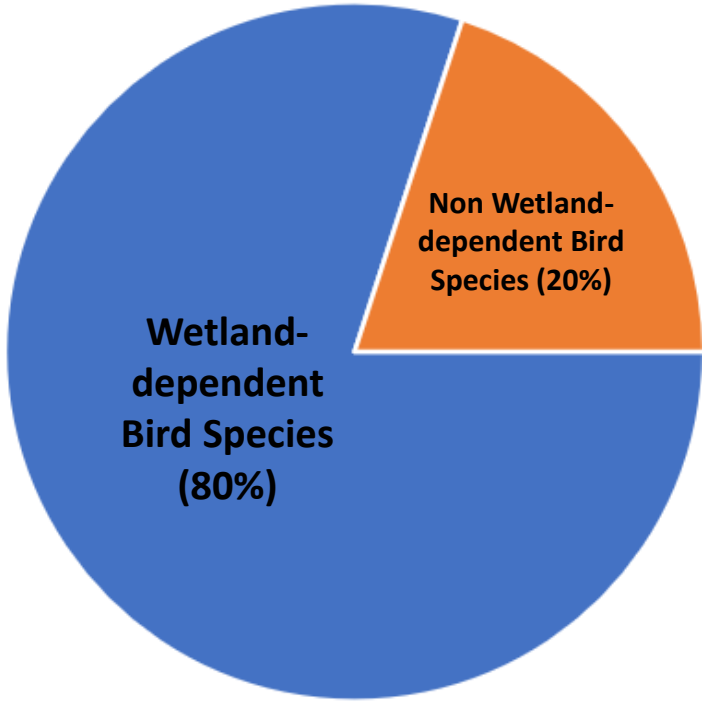


Figure 22. Wetland area compared to the total land area of the conterminous United States, 2005.

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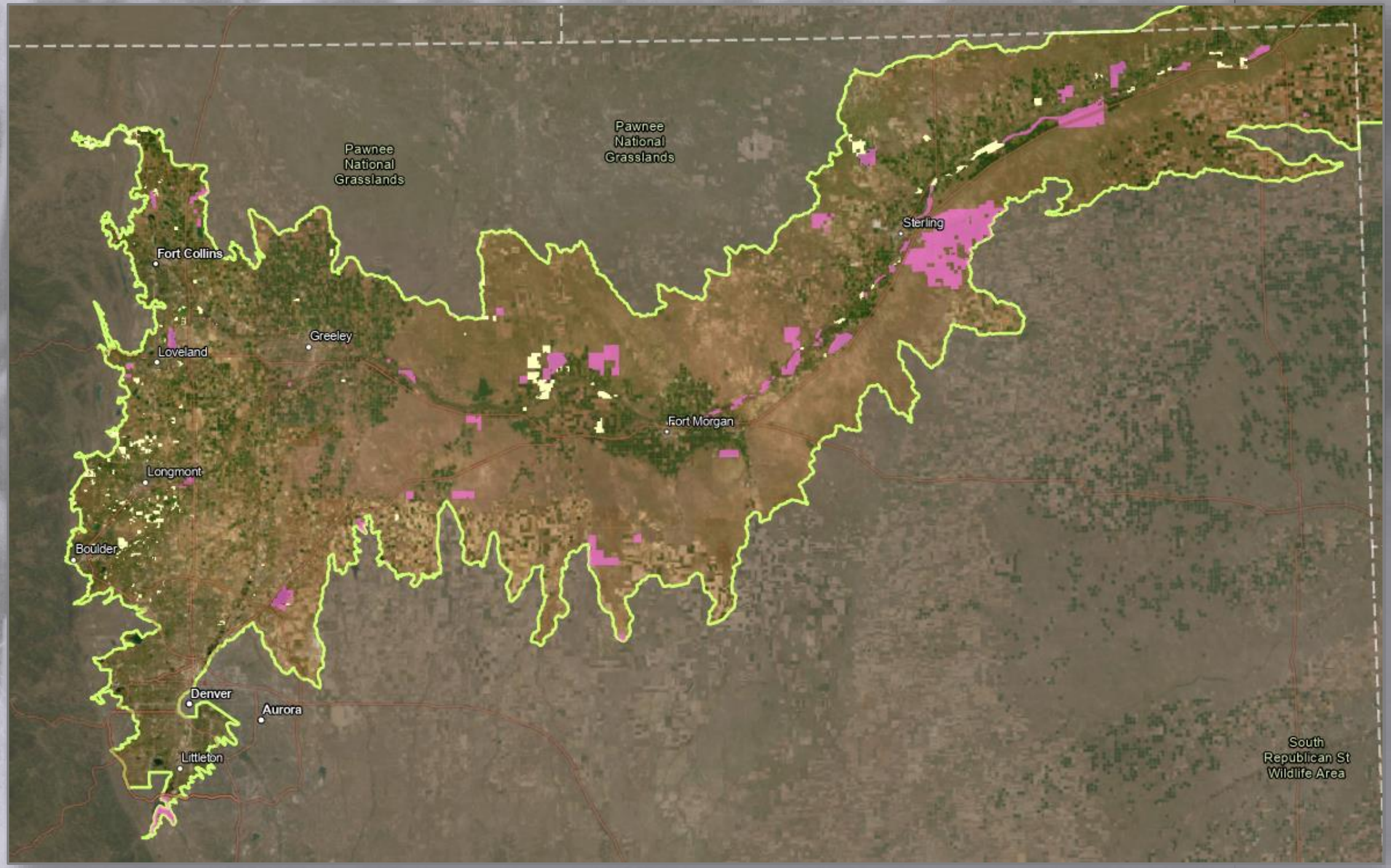
Pawnee
National
Grasslands
Pawnee
National
Grasslands
Sterling
Fort Collins
Greeley
Loveland
Fort Morgan
Longmont
Boulder
Denver
Aurora
Littleton
South
Republican St
Wildlife Area


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Wildlife Habitats Associated with Colorado Rivers (and their waters)

Riverine Habitats

Riparian Habitats

Agricultural/Municipal Habitats

- **Diversion, Storage & Conveyance**
- **Irrigated Pasture, Hayland, & Croplands**
- **Parklands**


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Water for Waterfowl Habitats on Private Lands (public too!)

Wildlife Habitat/Wetlands Are a Beneficial Use

We Use Natural Flow, Groundwater & Diverted Surface Waters to provide Habitat

New junior decreed rights for wildlife

Irrigation Rights

Transfer & Change of Senior Rights


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Riverine Flows

Techniques of Wetland Conservation in a Water-short Basin


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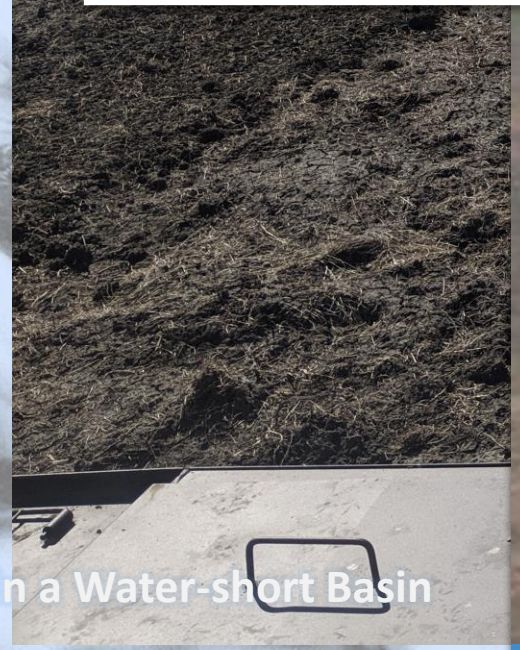
Wetland Diversion & Irrigation



Techniques of Wetland Conservation in a Water-short Basin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How Does This Work in a Water-short Basin?

Water Supply Gaps in the South Platte Basin

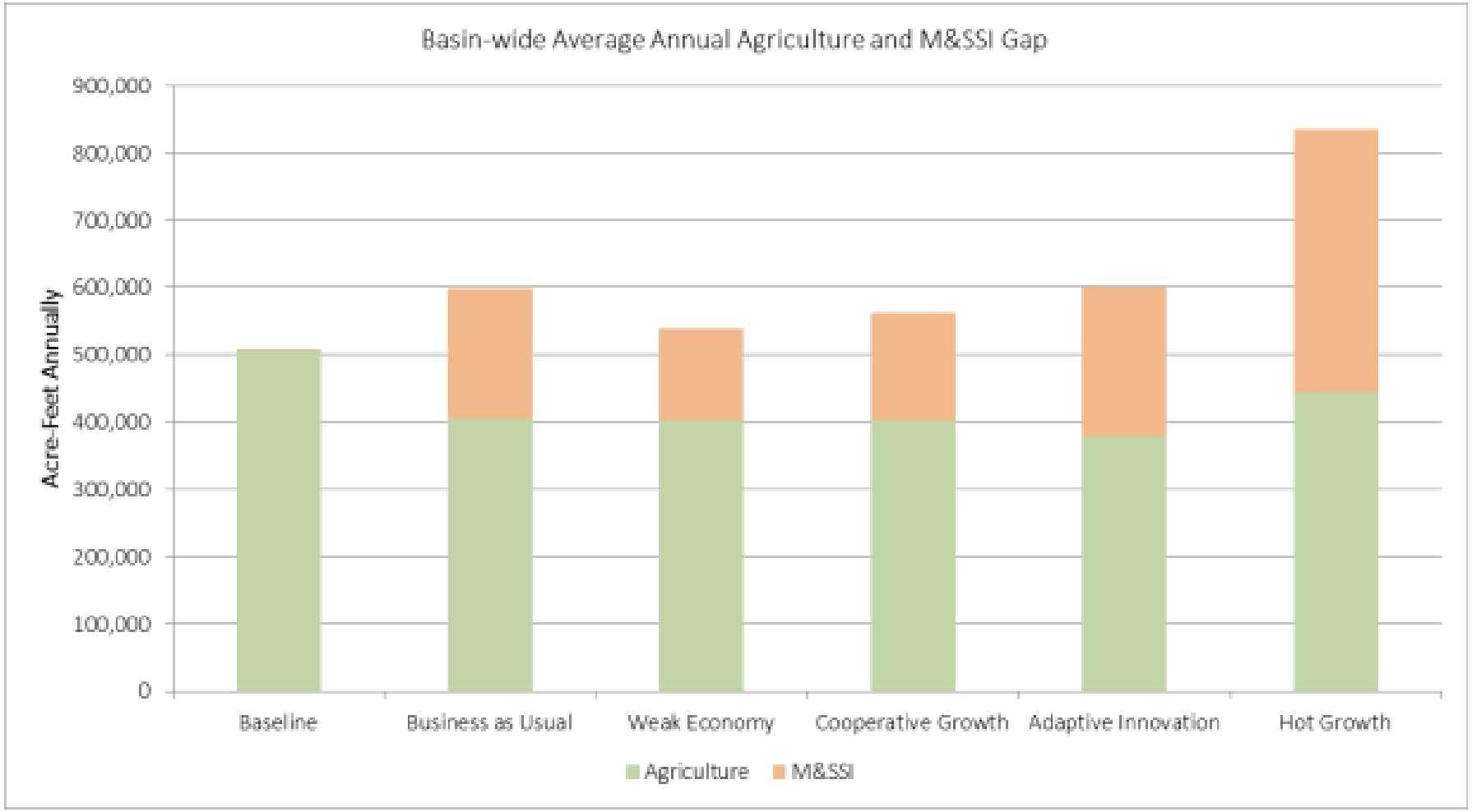

Figure 118: South Platte River Basin Comparison of Average Annual Gaps

https://cwcb.colorado.gov/colorado-water-plan/technical-update-to-the-plan


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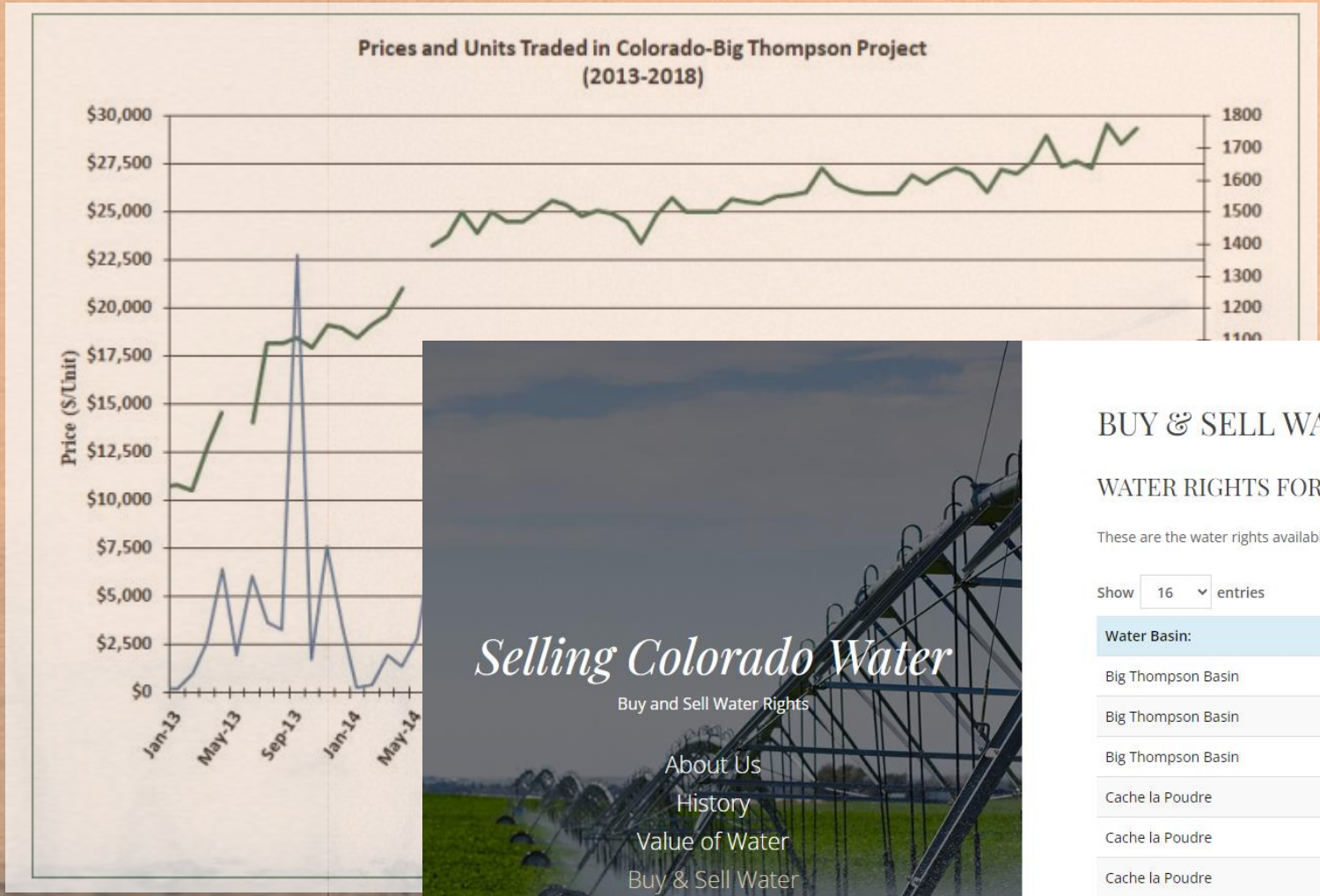
Water is Expensive!



BUY & SELL WATER

WATER RIGHTS FOR SALE:

These are the water rights available for sale. For more information, or to make an offer, contact us.

Show 16 entries Search:

Water Basin:	Description:	Quantity:	Price per share:	Availability
Big Thompson Basin	~~CBT~~	~~20~~	~~$65,000.00~~	Sold
Big Thompson Basin	~~Home Supply~~	~~1~~	~~$250,000.00~~	Sold
Big Thompson Basin	~~Loveland Waterbank~~	20	~~Negotiable~~	Sold
Cache la Poudre	~~Cache la Poudre River Direct~~	~~8~~	~~$43,000.00~~	Sold
Cache la Poudre	Larimer & Weld Irrigation System	4	$75,000.00	Available
Cache la Poudre	~~Whitney Ditch~~	~~1~~	~~$165,000.00~~	Sold
South Platte River Basin	Fort Morgan Ditch	20	Negotiable	Available
South Platte River Basin	~~Fulton; with 70 acres~~	30	~~$2,500,000 total~~	Sold
South Platte River Basin	Fulton	4.1	$50,000	Available
South Platte River Basin	~~Highland Ditch~~	~~5~~	~~$275,000~~	Sold
South Platte River Basin	Lake McIntosh	2	$9,500	Available
South Platte River Basin	~~Lower Latham~~	~~1~~	~~$700,000.00~~	Sold
South Platte River Basin	~~Mountain Mutual Reservoir Company~~	12	~~$50,000.00~~	Sold
South Platte River Basin	~~Slate Ditch~~	~~4~~	~~$25,000.00~~	Sold

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How Does this Work?

By Using Broad Societal Benefits as Basis for Collaborative Conservation

Table 8. Level of concern respondents reported regarding ecosystem services being reduced or lost if wetlands were to disappear or be degraded.
[In percent of survey respondents (n=962–980)]

Ecosystem service	Very concerned	Somewhat concerned	Slightly concerned	Not at all concerned
Clean water	79.5%	11.9%	5.6%	3.0%
Clean air	76.6%	14.4%	5.9%	3.0%
Providing a home for pollinators	68.7%	21.4%	5.6%	4.3%
Providing a home for wildlife	67.5%	21.9%	7.0%	3.6%
Flooding protection	56.9%	24.8%	11.9%	6.4%
Erosion protection	56.6%	26.1%	11.4%	5.9%
Scenic places for inspiration or spiritual renewal	43.4%	26.4%	18.3%	11.9%
Storage of greenhouse gases, such as carbon	42.2%	29.0%	17.1%	11.7%
Wildlife viewing and birdwatching	40.9%	33.1%	16.3%	9.7%
Hunting opportunities	19.6%	19.3%	19.2%	41.9%

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Water for Waterfowl Habitats on Private Lands (public too!)

Working with people who have water, but don't hunt ducks, to achieve Habitat & Conservation Goals

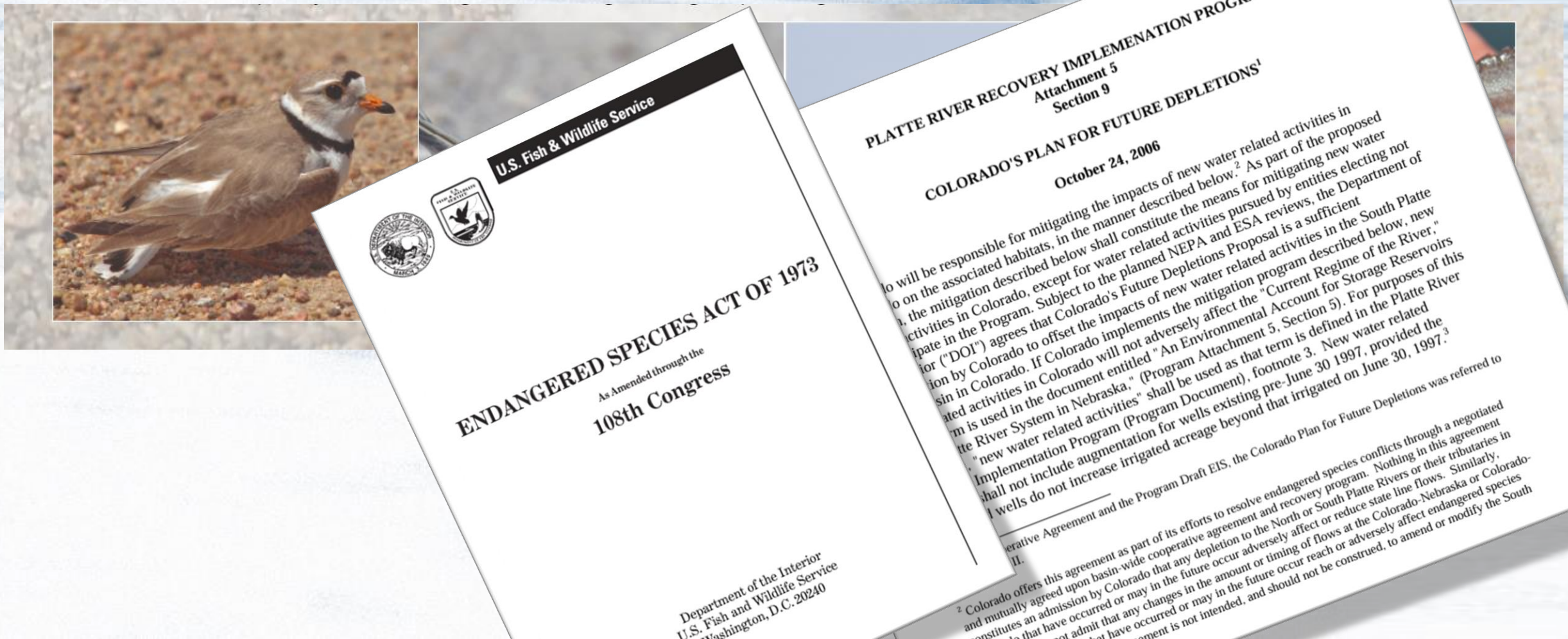
~OR~

Using ducks to make more water in a River to achieve Societal Goals

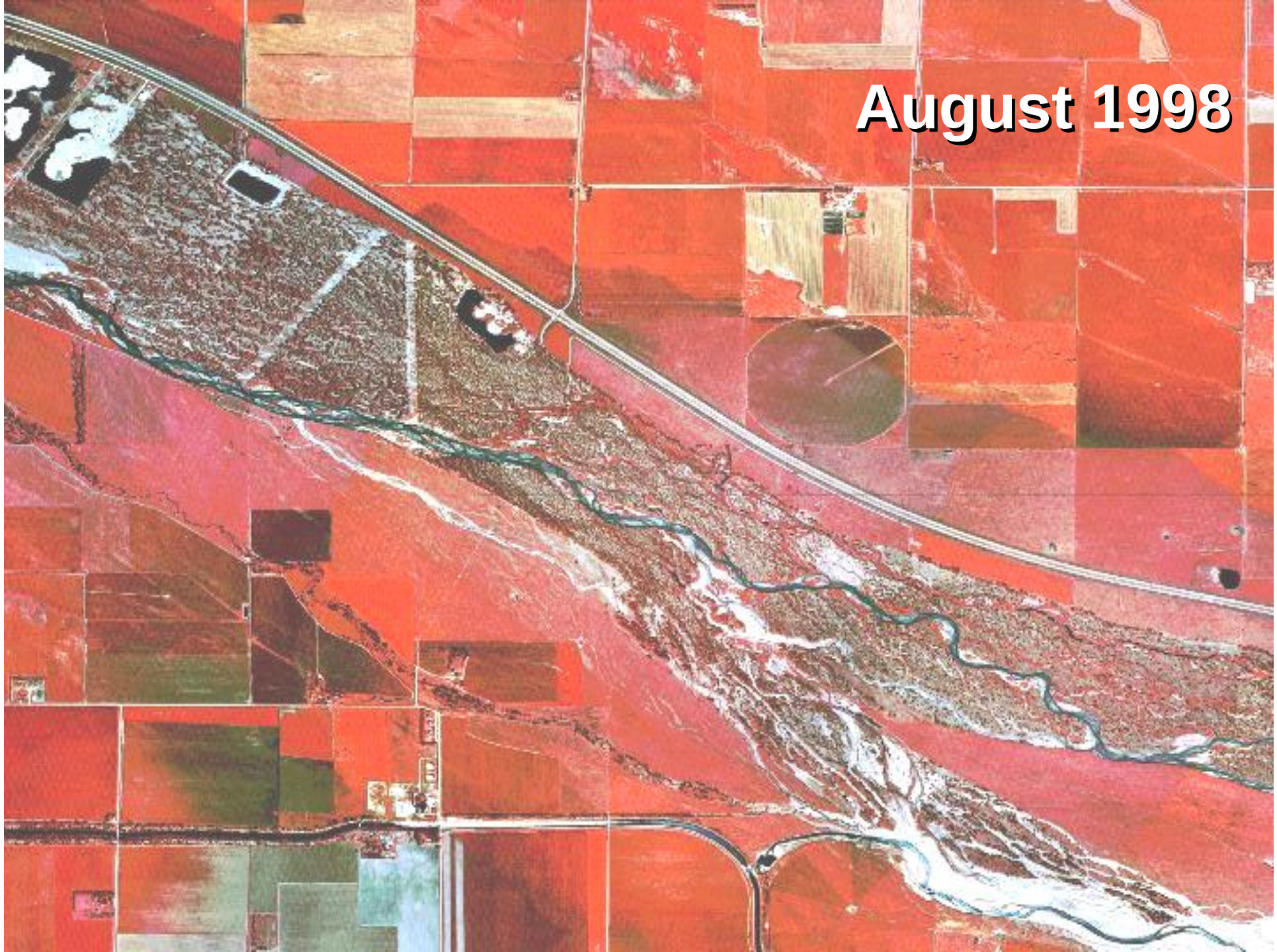
Managed Aquifer Recharge on The South Platte River

Managed Aquifer Recharge – A Case Study

Maintaining Platte River Flow through Augmentation




OCT 20 1938
BMS
BMW
October 1938


August 1998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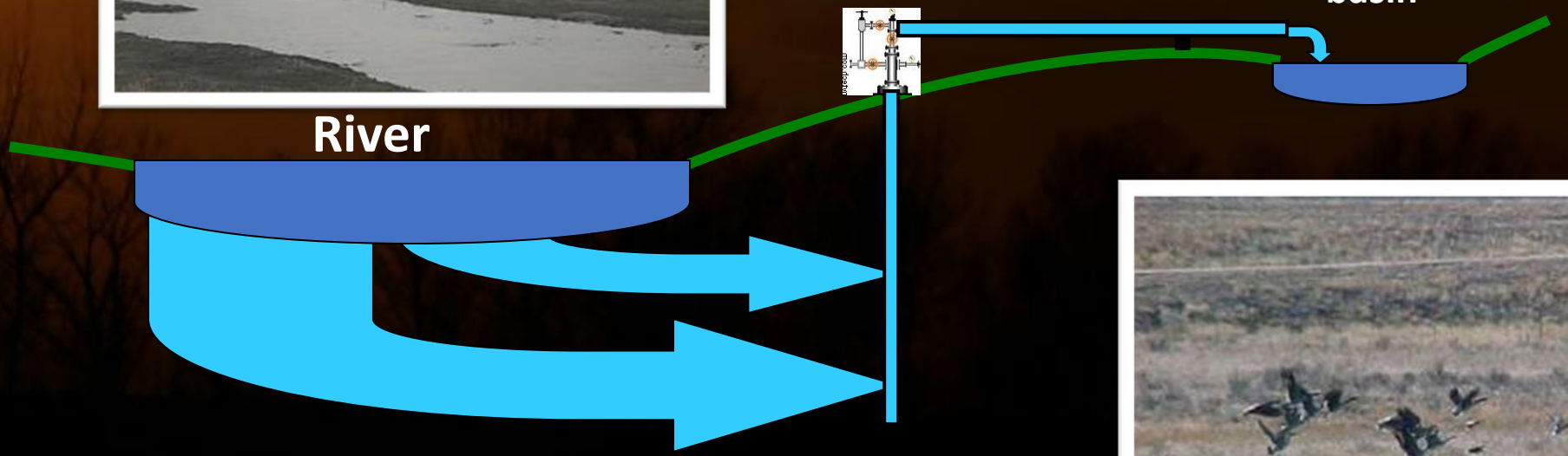
Managed Aquifer Recharge

At Higher River Stages in the Non-irrigation Season

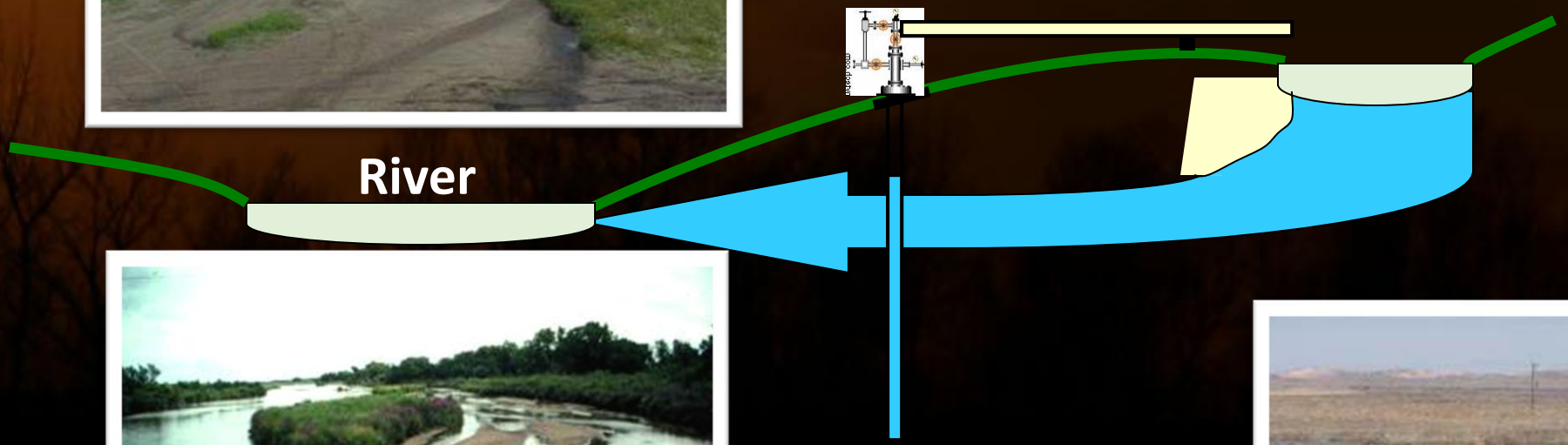
River

Wetland recharge basin

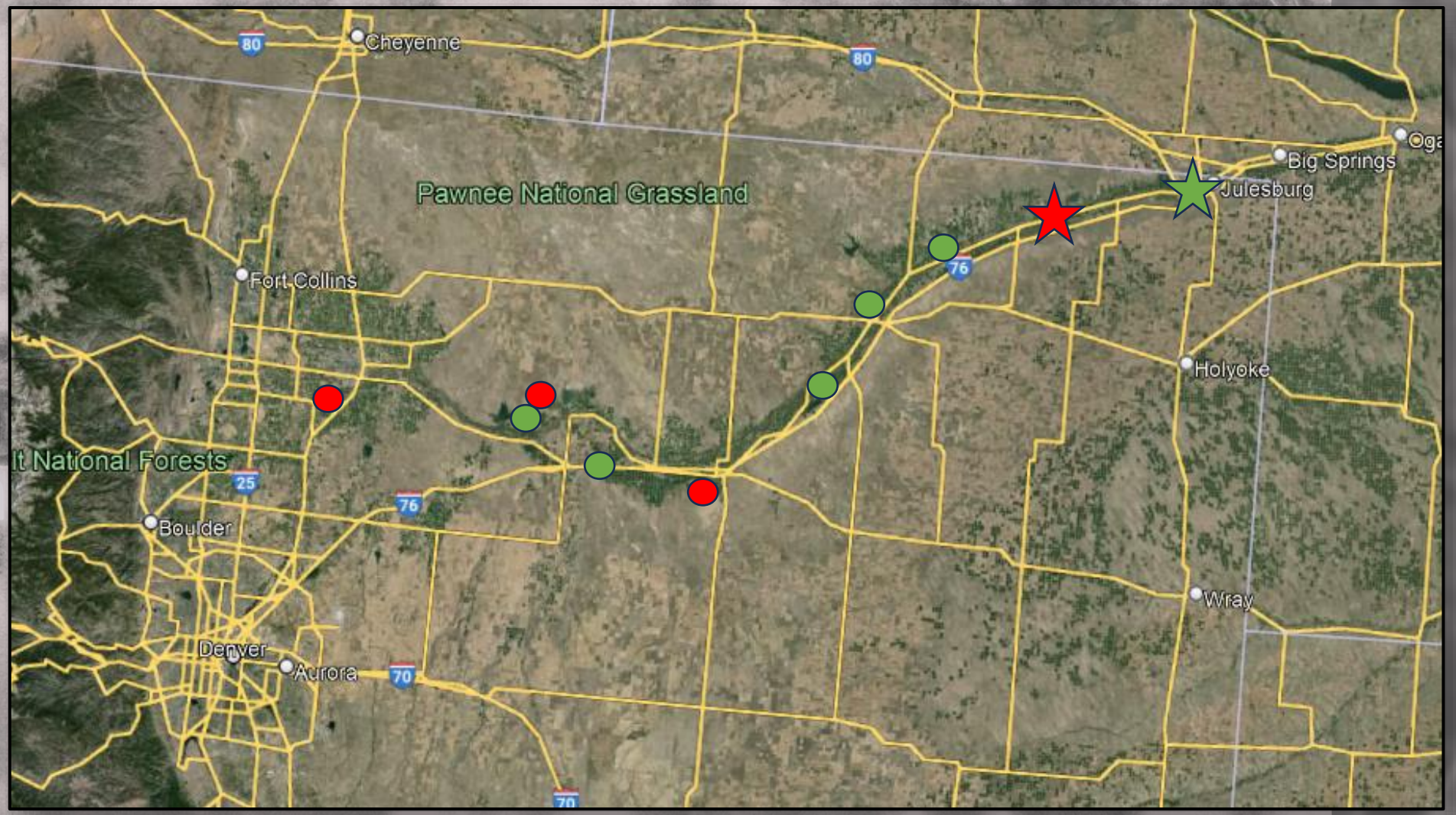


Managed Aquifer Recharge

At Low River Stages in Summer/Fall



Managed Aquifer Recharge Pond Construction for Platte River Flow

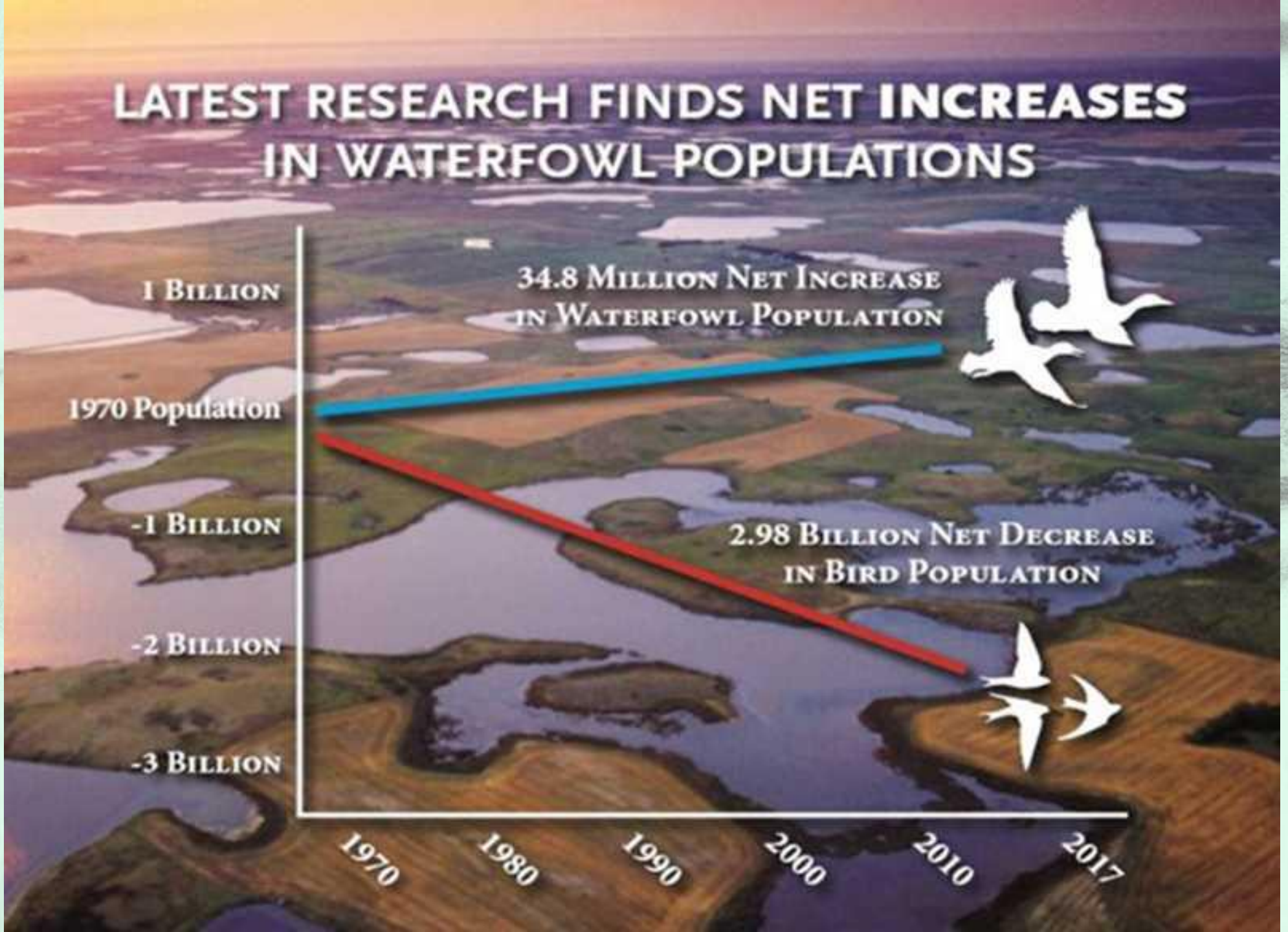


Managed Aquifer Recharge via Wetland Habitat Development

Managed Aquifer Recharge Pond Construction for Platte River Flow

Techniques of Wetland Conservation in a Water-short Basin

Managed Aquifer Recharge via Wetland Habitat Development


LATEST RESEARCH FINDS NET INCREASES IN WATERFOWL POPULATIONS
1 Billion
1970 Population
-1 Billion
-2 Billion
-3 Billion
34.8 Million Net Increase in Waterfowl Population
2.98 Billion Net Decrease in Bird Population
1970
1980
1990
2000
2010
2017


The End
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