



Water for Private Recreation

A Case Study in Collaborative Water
Conservation in Colorado

Water Literate Leaders Program

April 10th, 2024

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.

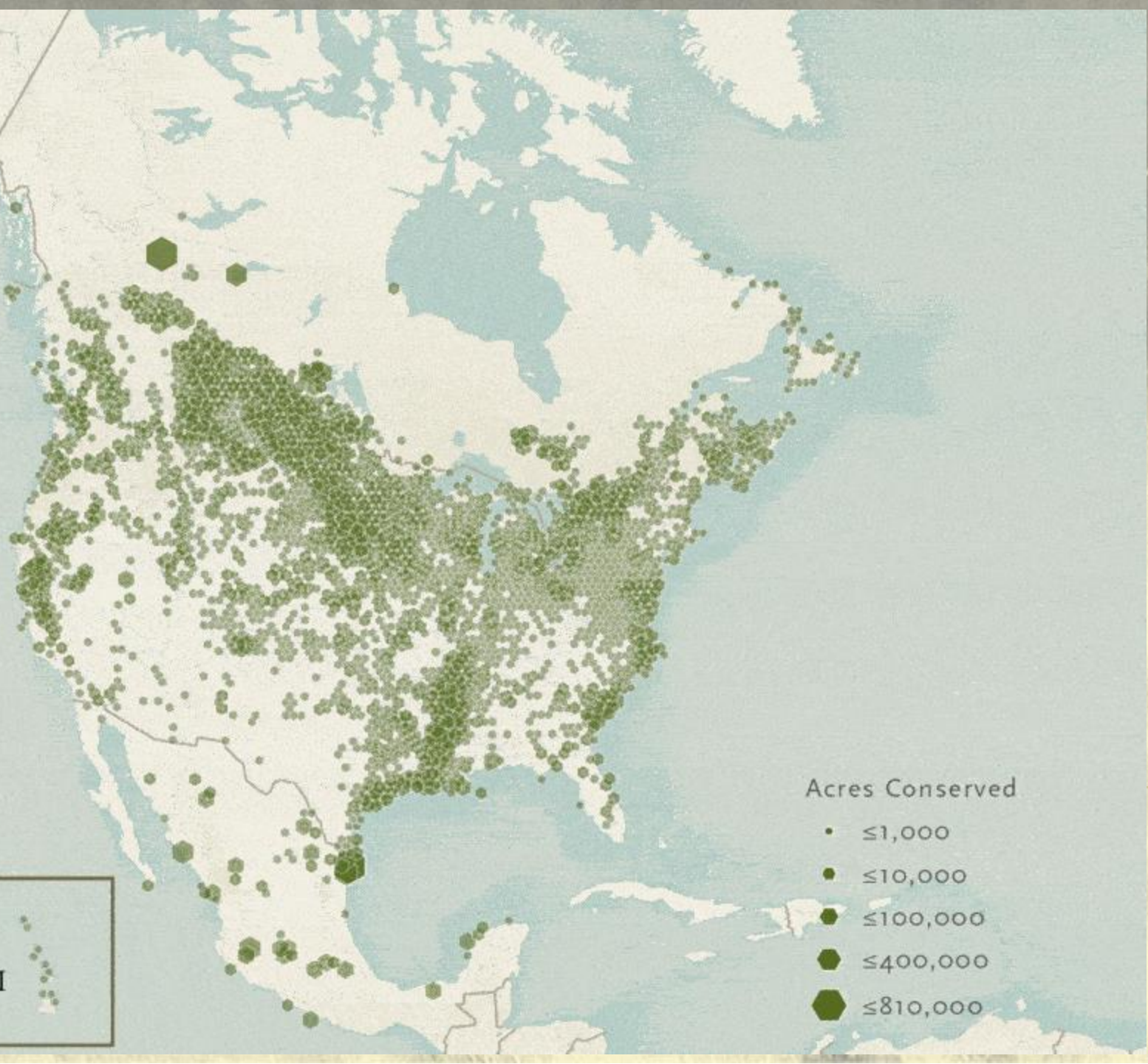
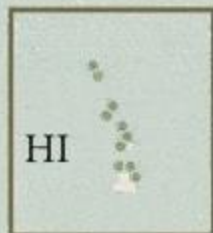






80 YEARS
OF
CONSERVATION

1938 - 2018

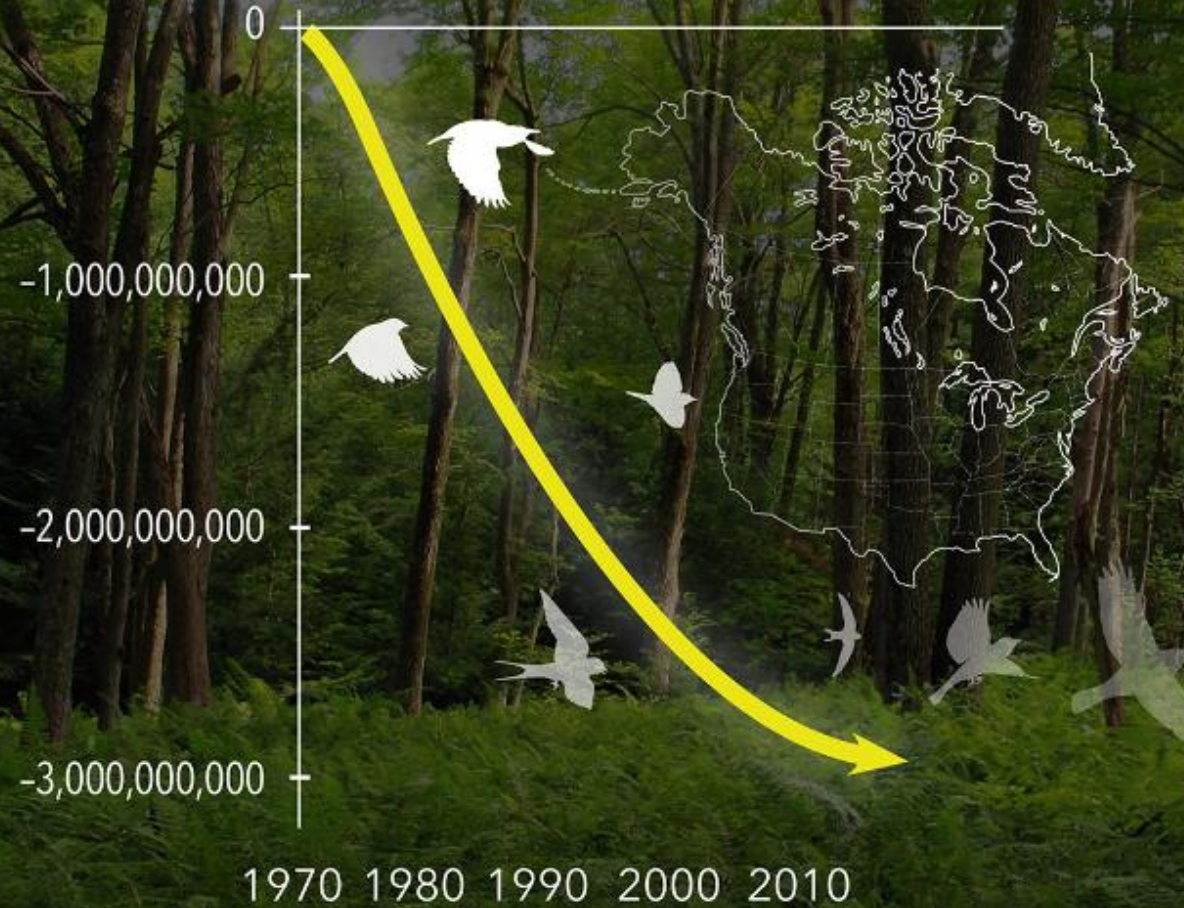




Bird Population Trends

2.9 billion

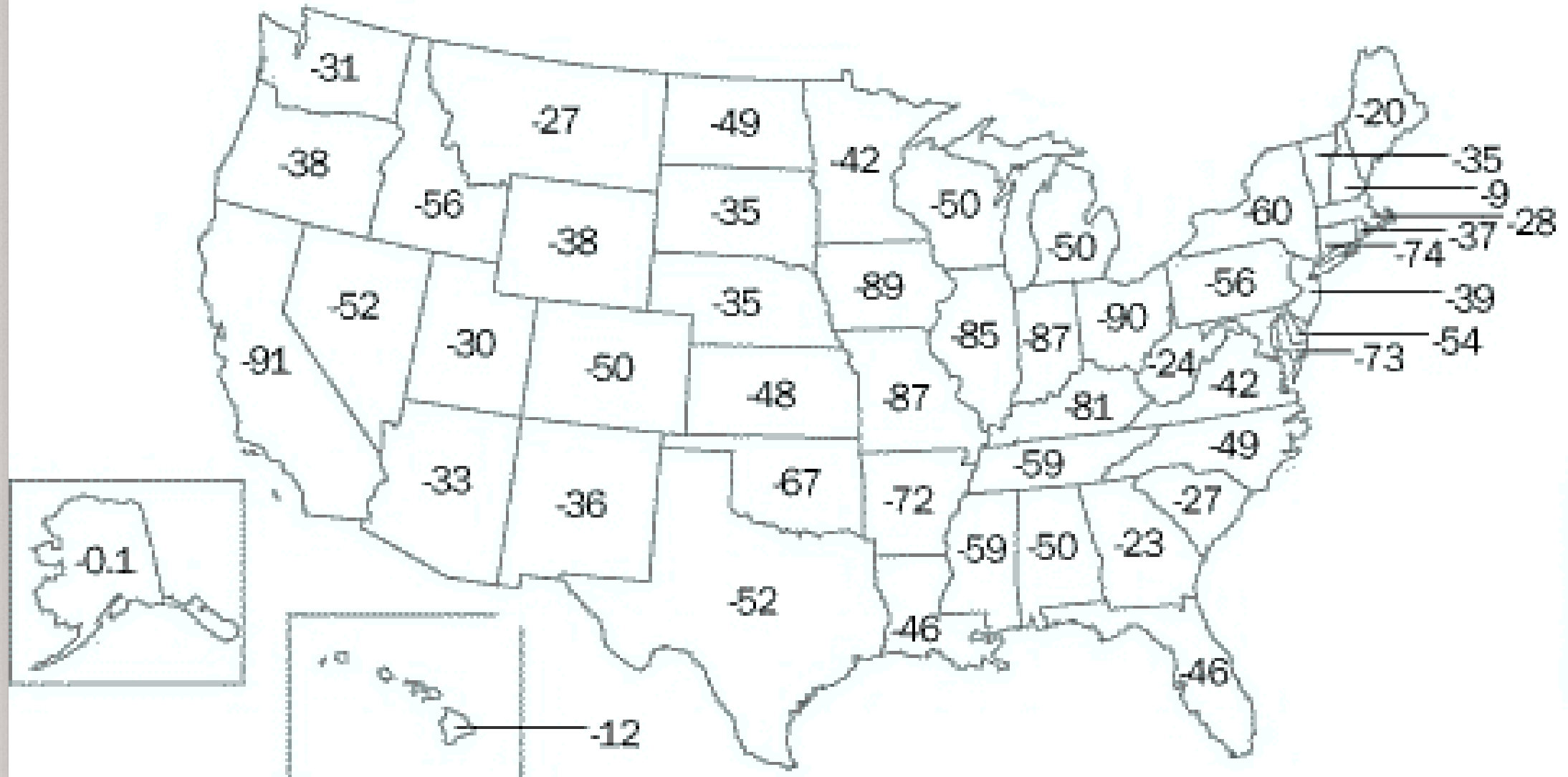
birds gone since 1970





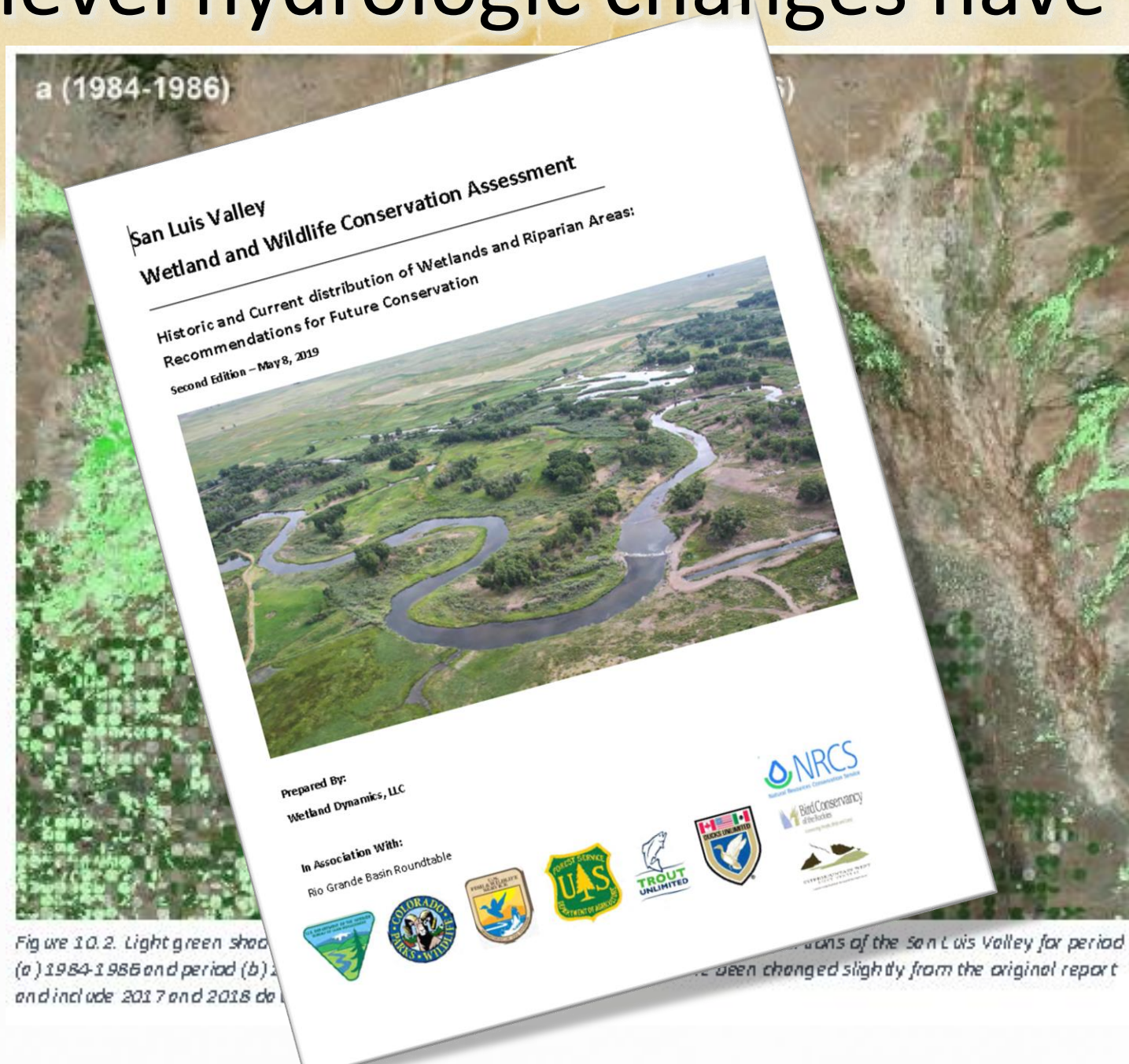
Wetlands Status & Trends

Percentage of Wetlands Acreage Lost, 1780's-1980's





Landscape level hydrologic changes have broad impacts



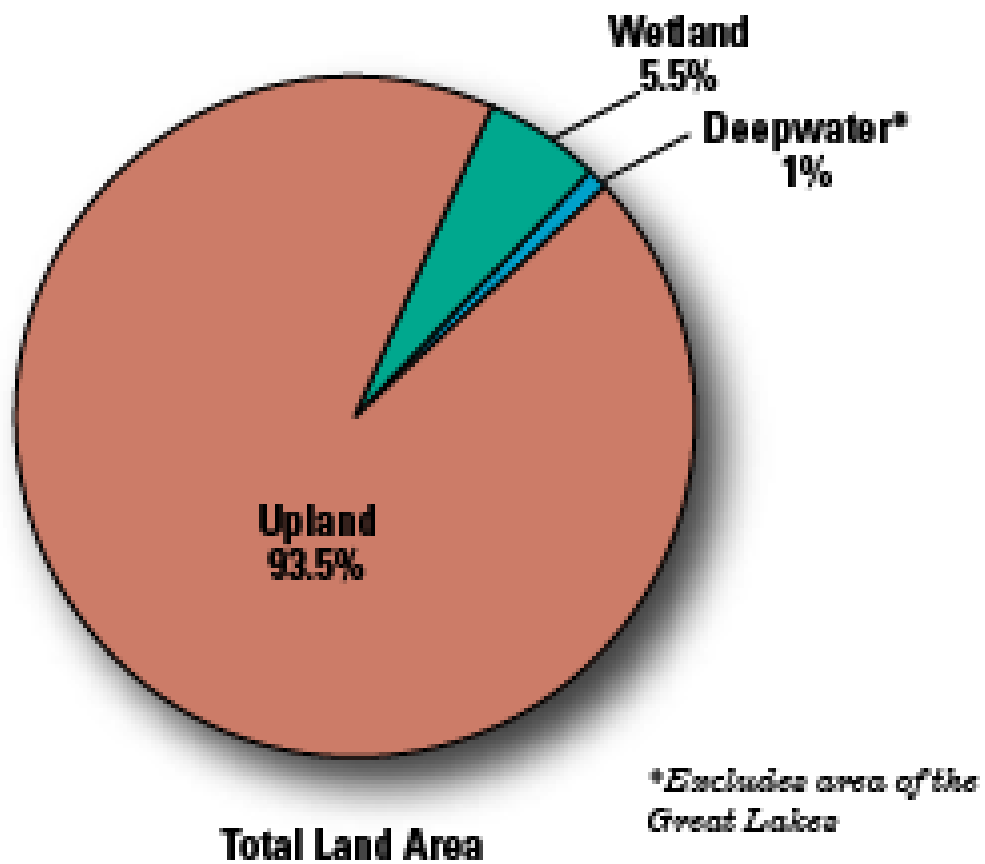
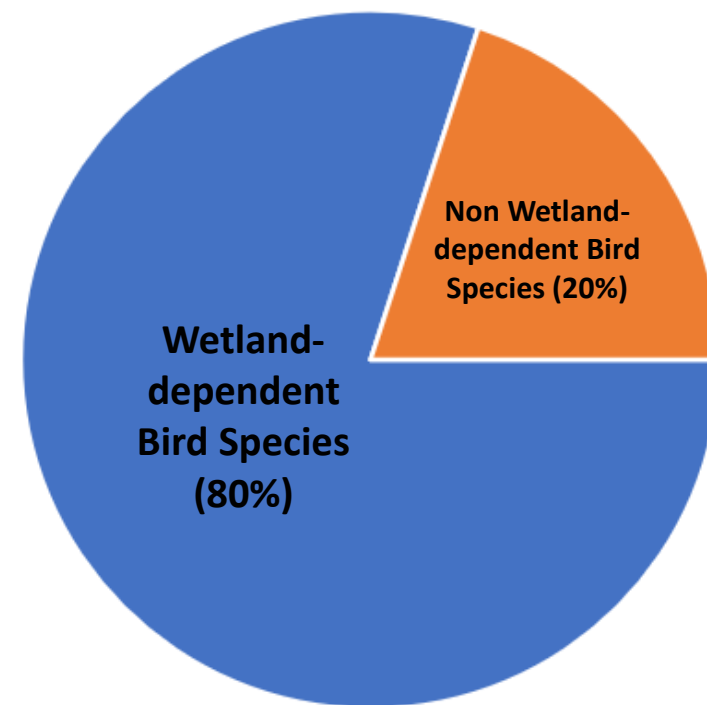
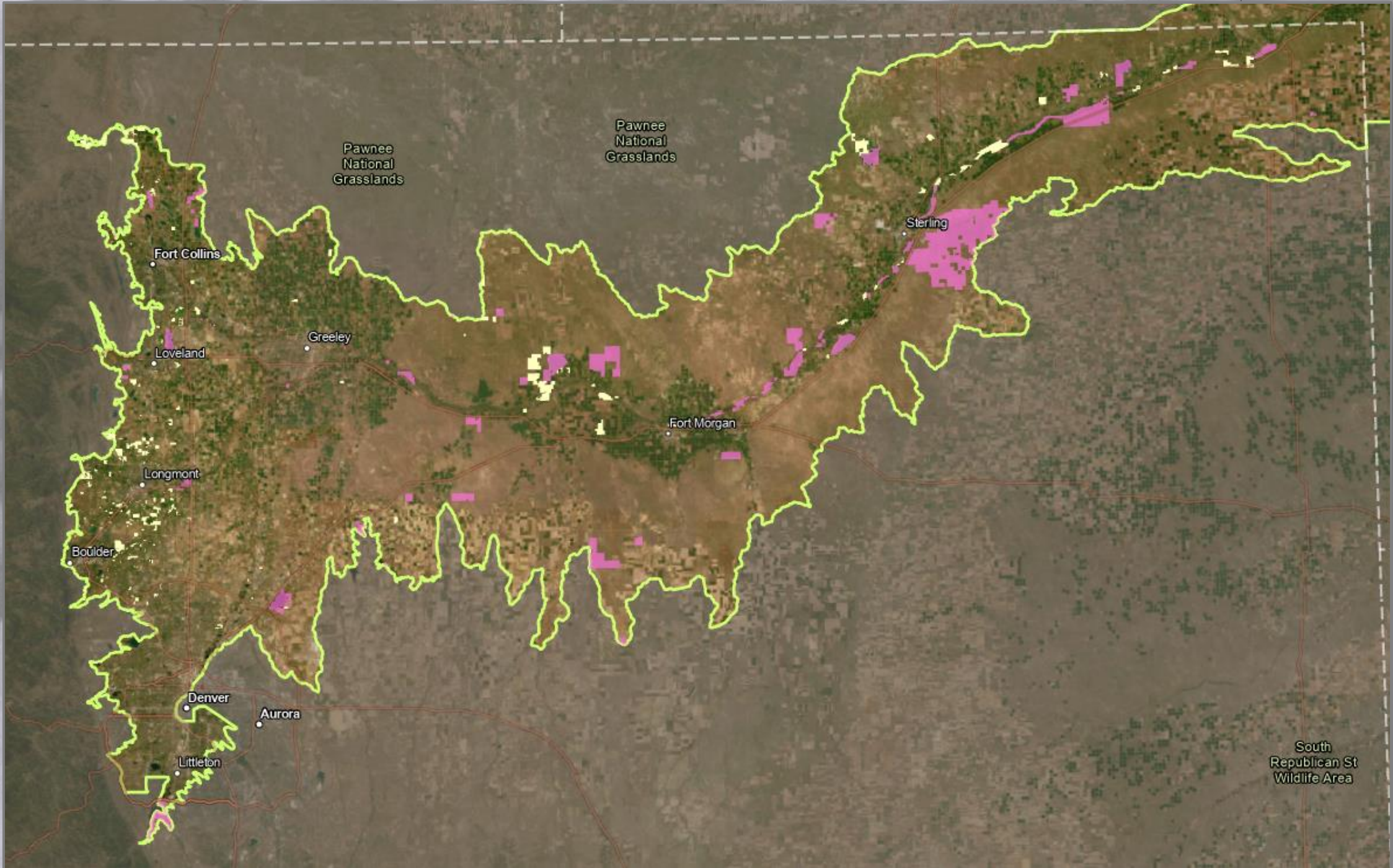


Figure 22. Wetland area compared to the total land area of the conterminous United States, 2004.









Wildlife Habitats Associated with Colorado Rivers (and their waters)

Riverine Habitats

Riparian Habitats

Agricultural/Municipal Habitats

Diversion, Storage & Conveyance

Irrigated Pasture, Hayland, & Croplands

Parklands





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



Riverine Flows



Techniques of Wetland Conservation in a Water-short Basin





Wetland Diversion & Irrigation





How Does This Work in a Water-short Basin?

Water Supply Gaps in the South Platte Basin

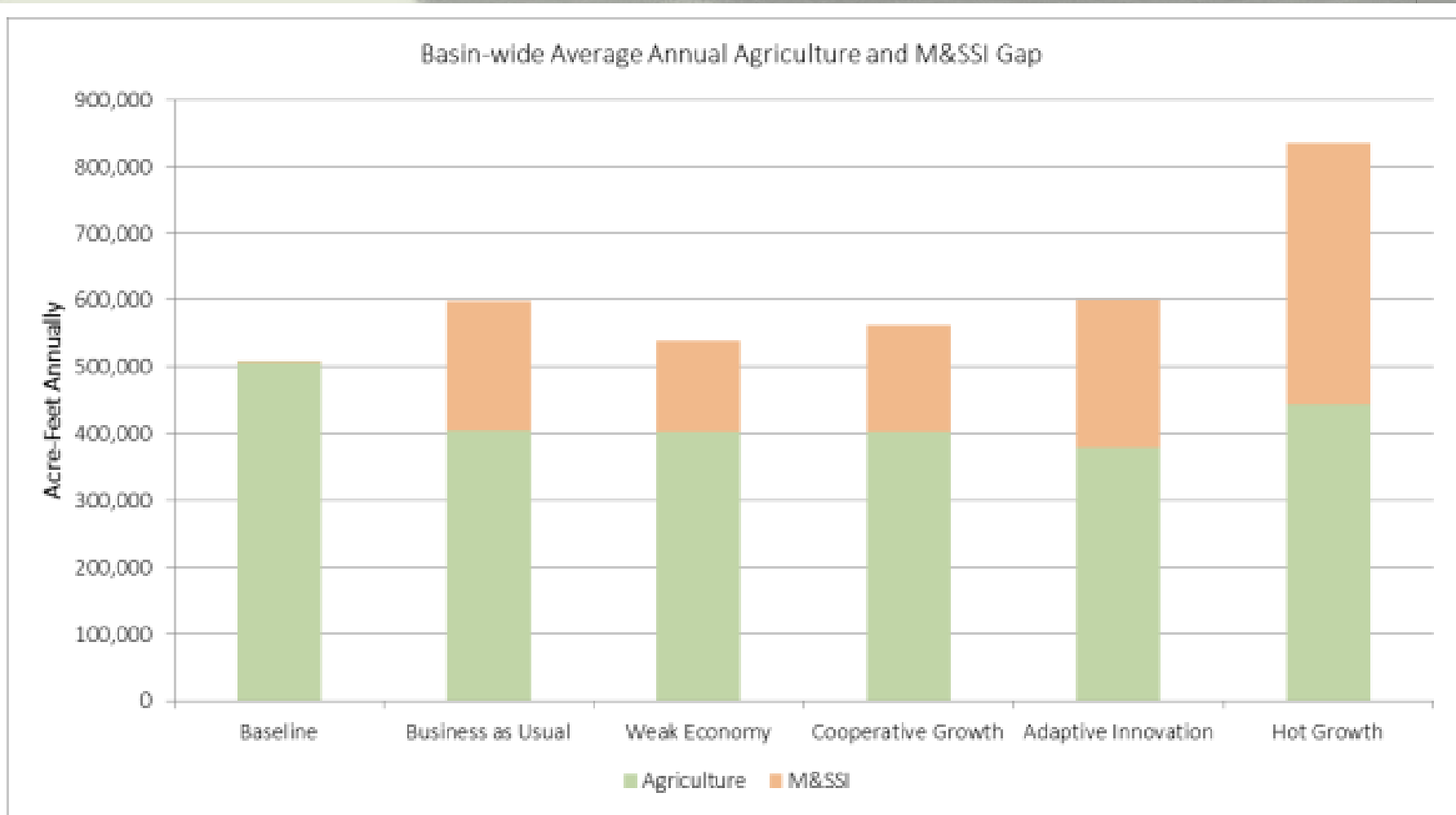
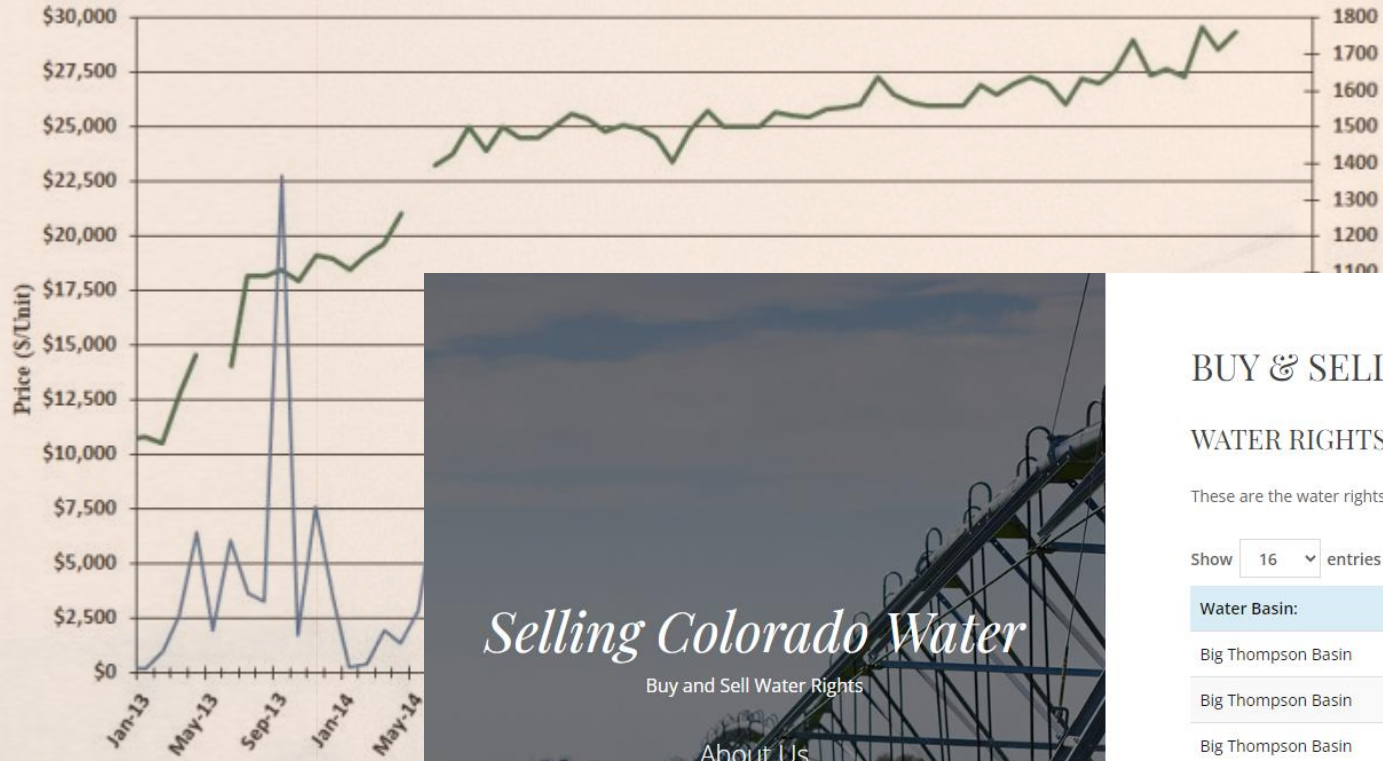


Figure 118: South Platte River Basin Comparison of Average Annual Gaps



Prices and Units Traded in Colorado-Big Thompson Project
(2013-2018)



Water is Expensive!

Selling Colorado Water

Buy and Sell Water Rights

- About Us
- History
- Value of Water
- Buy & Sell Water
- Contact

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 entries

Search:

Water Basin:	Description:	Quantity:	Price per share:	Availability
Big Thompson Basin	EBT	20	\$65,000.00	Sold
Big Thompson Basin	Home Supply	+	\$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	+	\$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	+	\$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



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



U.S. Fish & Wildlife Service

ENDANGERED SPECIES ACT OF 1973

As Amended through the
108th Congress

Department of the Interior
U.S. Fish and Wildlife Service
Washington, D.C. 20240

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM

Attachment 5
Section 9

October 24, 2006

Colorado will be responsible for mitigating the impacts of new water related activities in the associated habitats, in the manner described below.² As part of the proposed mitigation described below shall constitute the means for mitigating new water activities in Colorado, except for water related activities pursued by entities electing not to participate in the Program. Subject to the planned NEPA and ESA reviews, the Department of the Interior ("DOI") agrees that Colorado's Future Depletions Proposal is a sufficient mitigation by Colorado to offset the impacts of new water related activities in the South Platte Basin in Colorado. If Colorado implements the mitigation program described below, new water related activities in Colorado will not adversely affect the "Current Regime of the River;" the term is used in the document entitled "An Environmental Account for Storage Reservoirs in the Platte River System in Nebraska," (Program Attachment 5, Section 5). For purposes of this Implementation Program (Program Document), footnote 3. New water related activities shall not include augmentation for wells existing pre-June 30 1997, provided the wells do not increase irrigated acreage beyond that irrigated on June 30, 1997.³

II. Cooperative Agreement and the Program Draft EIS, the Colorado Plan for Future Depletions was referred to

² Colorado offers this agreement as part of its efforts to resolve endangered species conflicts through a negotiated and mutually agreed upon basin-wide cooperative agreement and recovery program. Nothing in this agreement constitutes an admission by Colorado that any depletion to the North or South Platte Rivers or their tributaries in Colorado that have occurred or may in the future occur adversely affect or reduce state line flows. Similarly, Colorado does not admit that any changes in the amount or timing of flows at the Colorado-Nebraska or Colorado-Kansas boundary that have occurred or may in the future occur reach or adversely affect endangered species in the United States. This agreement is not intended, and should not be construed, to amend or modify the South

OCT 20 1938

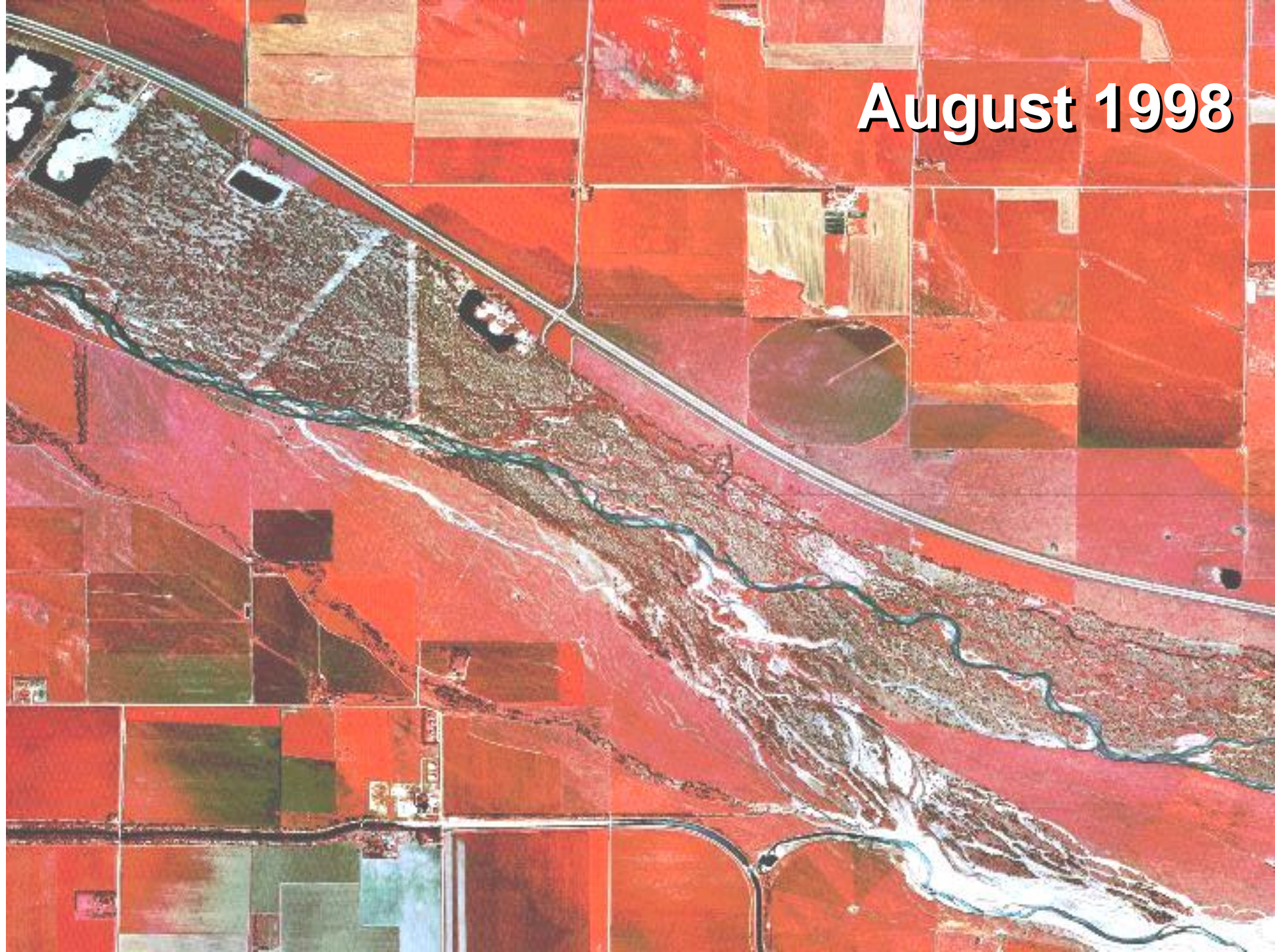
BMS
BMW

154 08

October 1938



August 1998





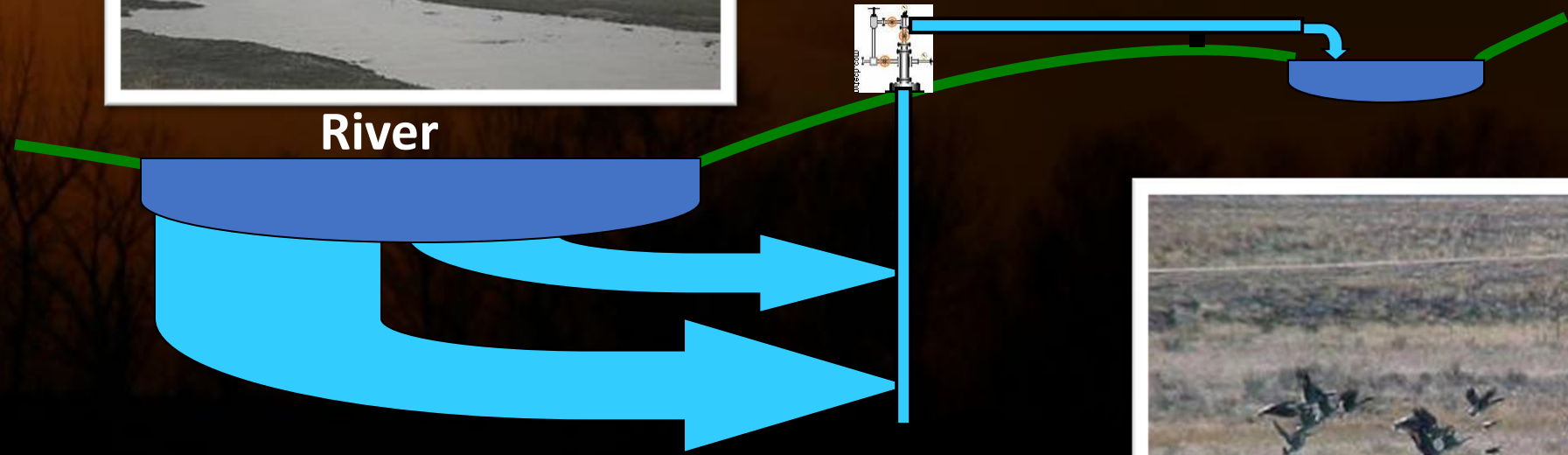
Managed Aquifer Recharge

At Higher River Stages in the Non-irrigation Season



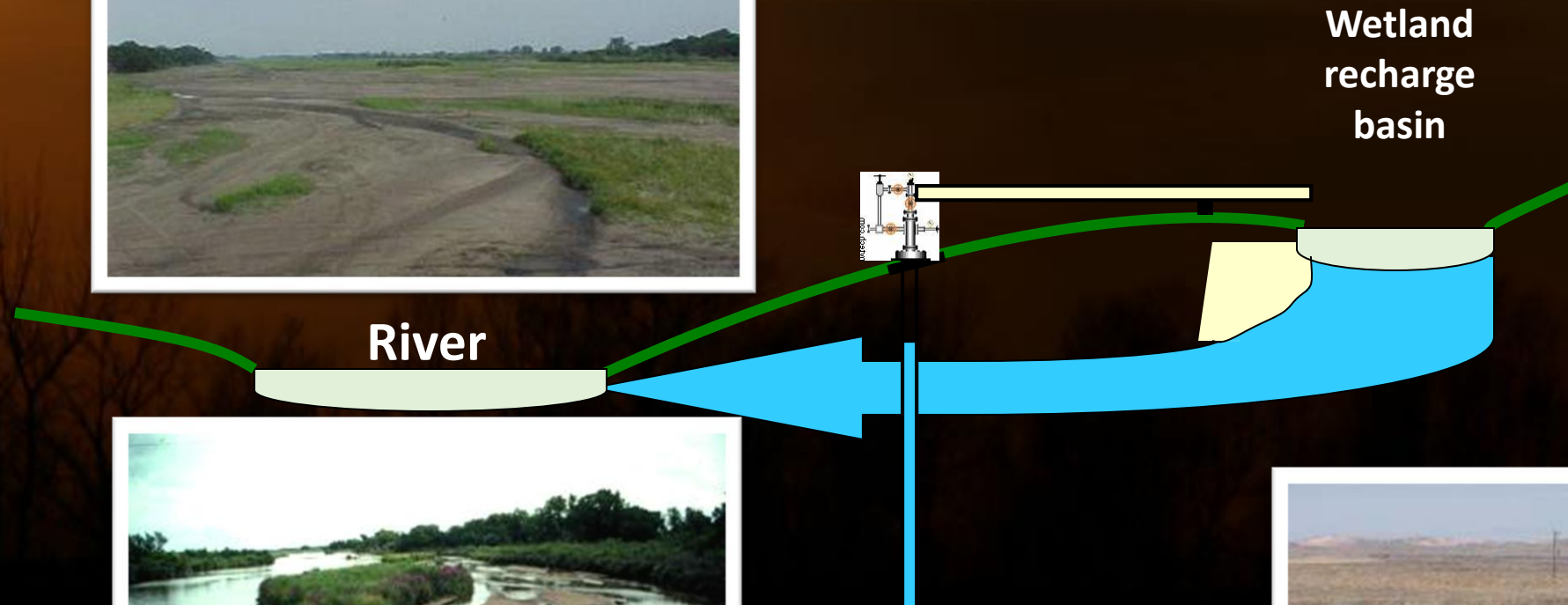
River

Wetland recharge basin



Managed Aquifer Recharge

At Low River Stages in Summer/Fall



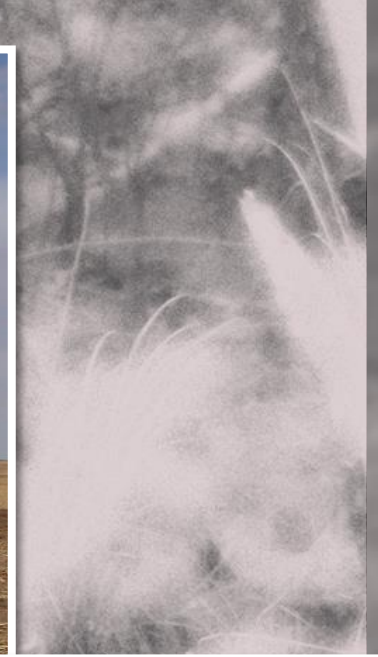
Managed Aquifer Recharge Pond Construction for Platte River Flow



**Managed Aquifer Recharge via
Wetland Habitat Development**



Managed Aquifer Recharge Pond Construction for Platte River Flow

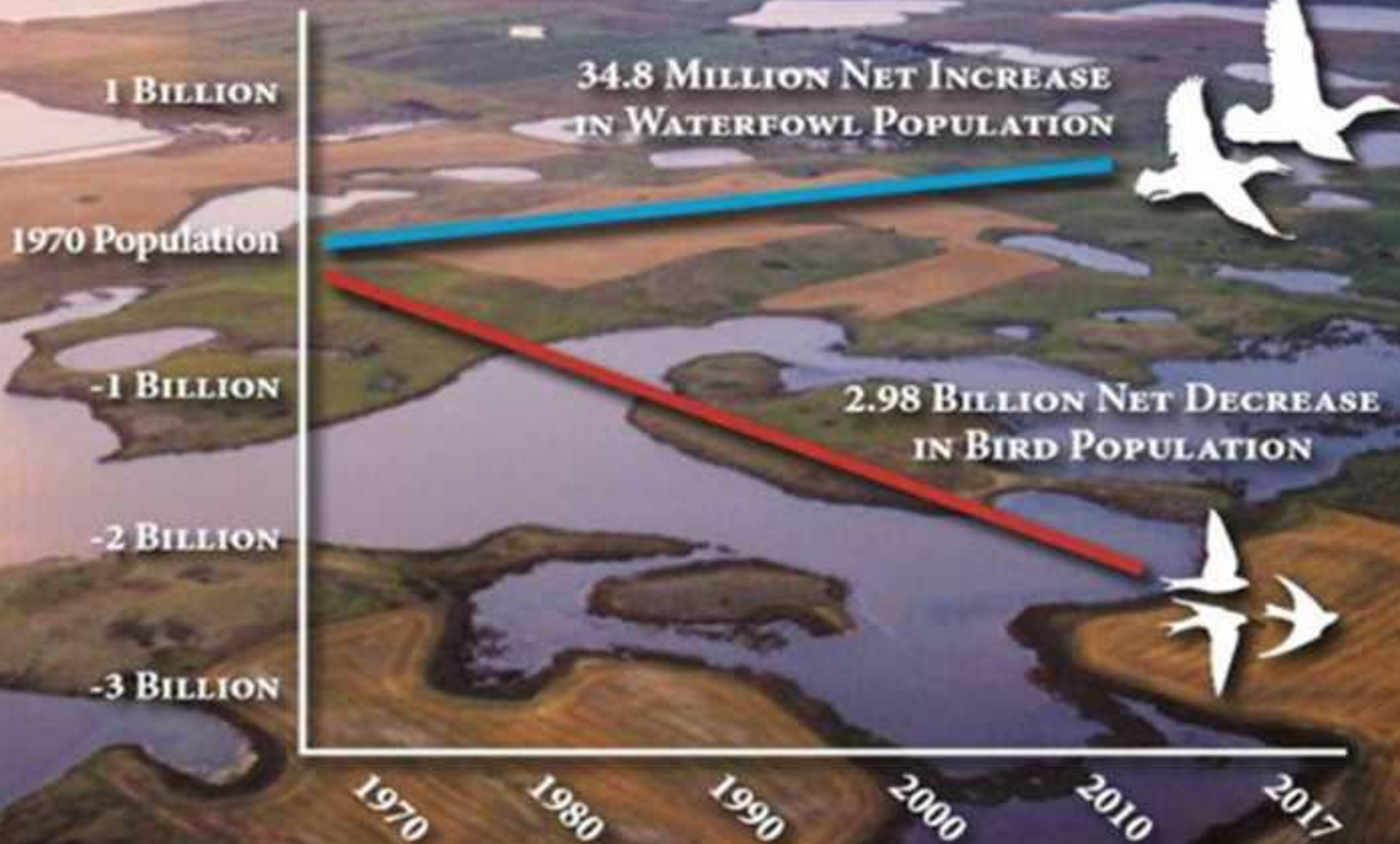


**Managed Aquifer Recharge via
Wetland Habitat Development**





LATEST RESEARCH FINDS NET INCREASES IN WATERFOWL POPULATIONS





The End