

# **THE DAM TRUTH**

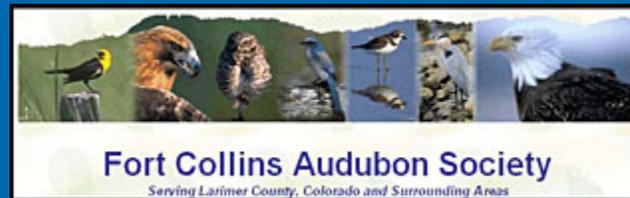
[www.SaveThePoudre.org](http://www.SaveThePoudre.org)

Gary Wockner, PhD, Ecologist

***“In god we trust, all others bring data.” -- W. Edwards Deming***

# Conservation Partners

This presentation and the research behind it were supported in numerous ways by the following organizations:



**The Save The Poudre Coalition is committed to positive, balanced solutions for the long-term health of the Poudre River and for the sustainability of our communities. This coalition believes that what's good for the land, air, water, and wildlife is good for people and good for our economy.**

**The Coalition is not anti-growth or anti-dam.**



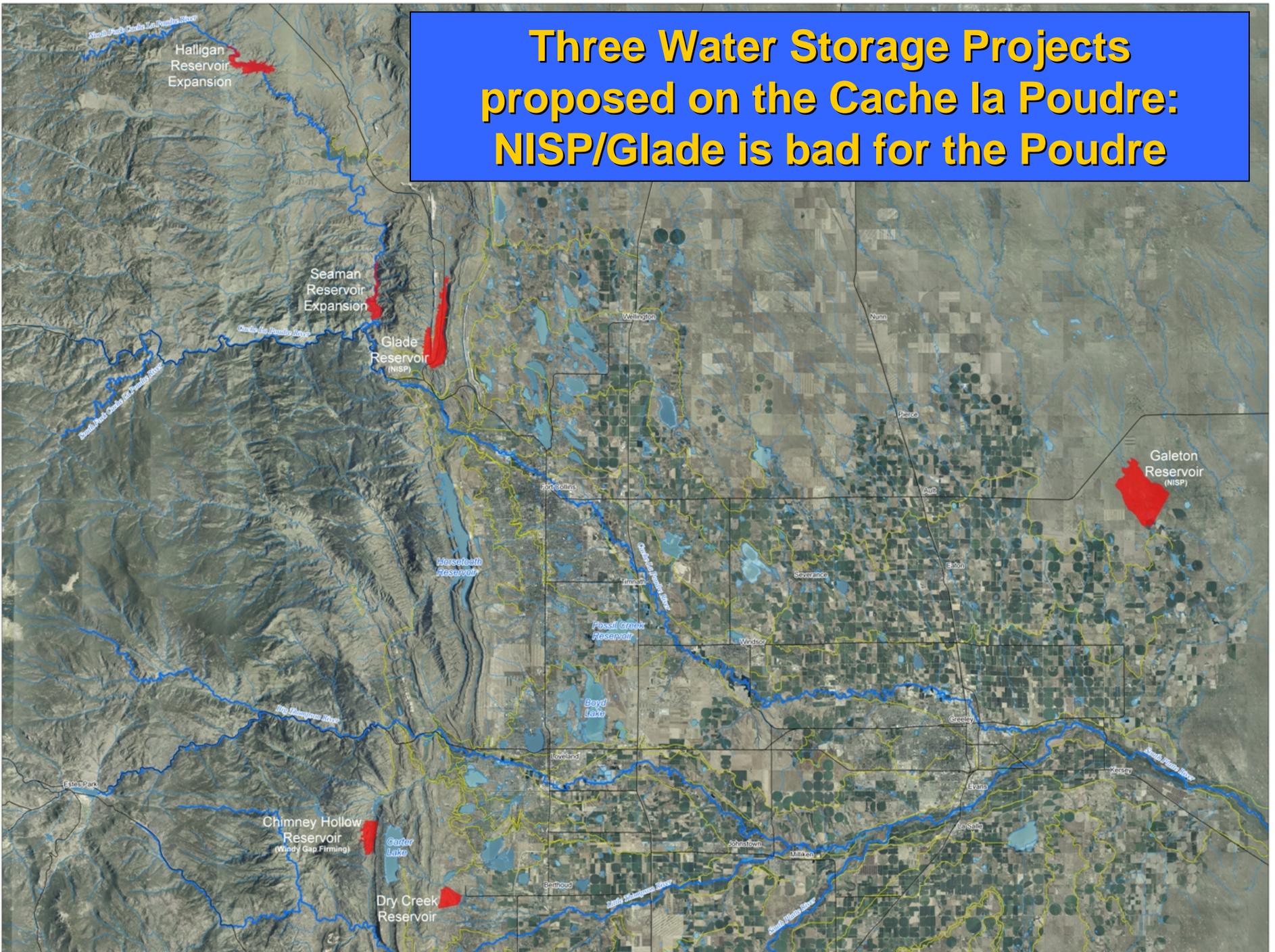
# We Support **BALANCE!**



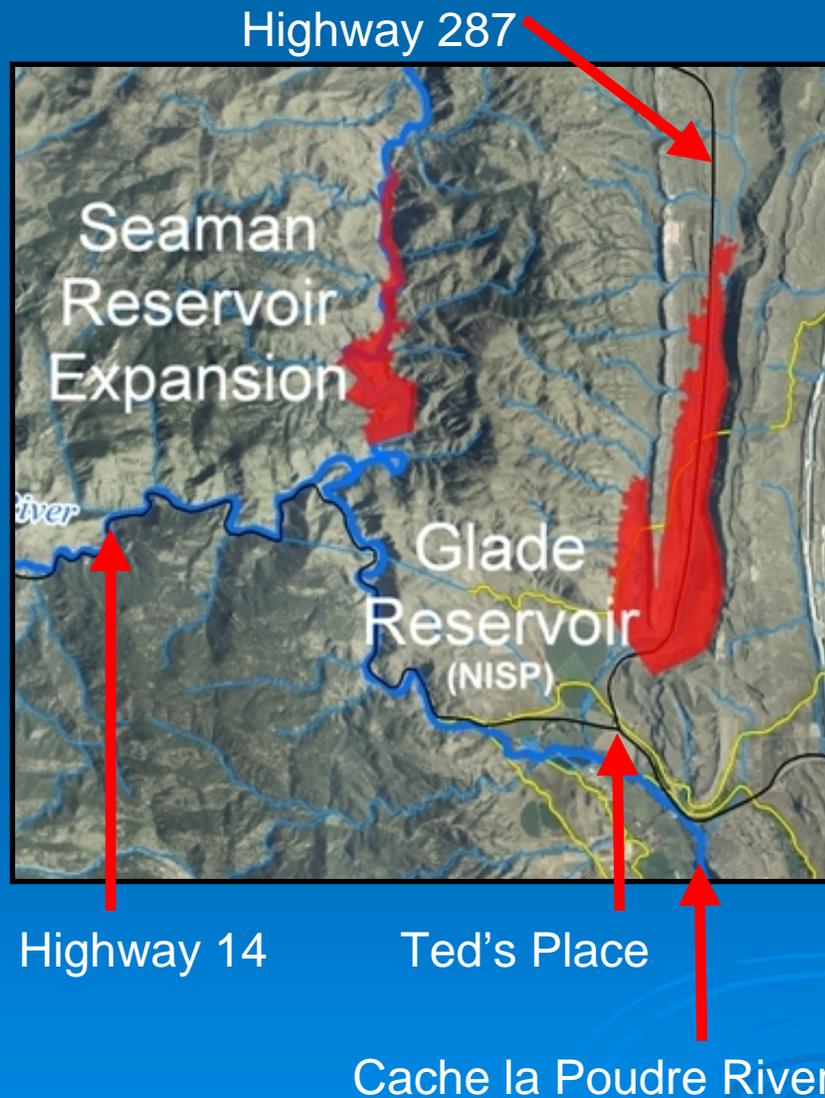
## **Take-home Messages Supported by the Save The Poudre Coalition:**

1. We oppose projects that take more water out of the already severely degraded Cache la Poudre River.
2. We support positive alternatives that fully utilize water conservation and efficiency, and partnerships with the agricultural community.
3. We support restoring the Poudre River through a “community-based river management” approach that includes the establishment of a “water trust” to legally ensure streamflows.

# Three Water Storage Projects proposed on the Cache la Poudre: NISP/Glade is bad for the Poudre



# NISP/Glade Threat to the Poudre, Farms, and our Quality of Life



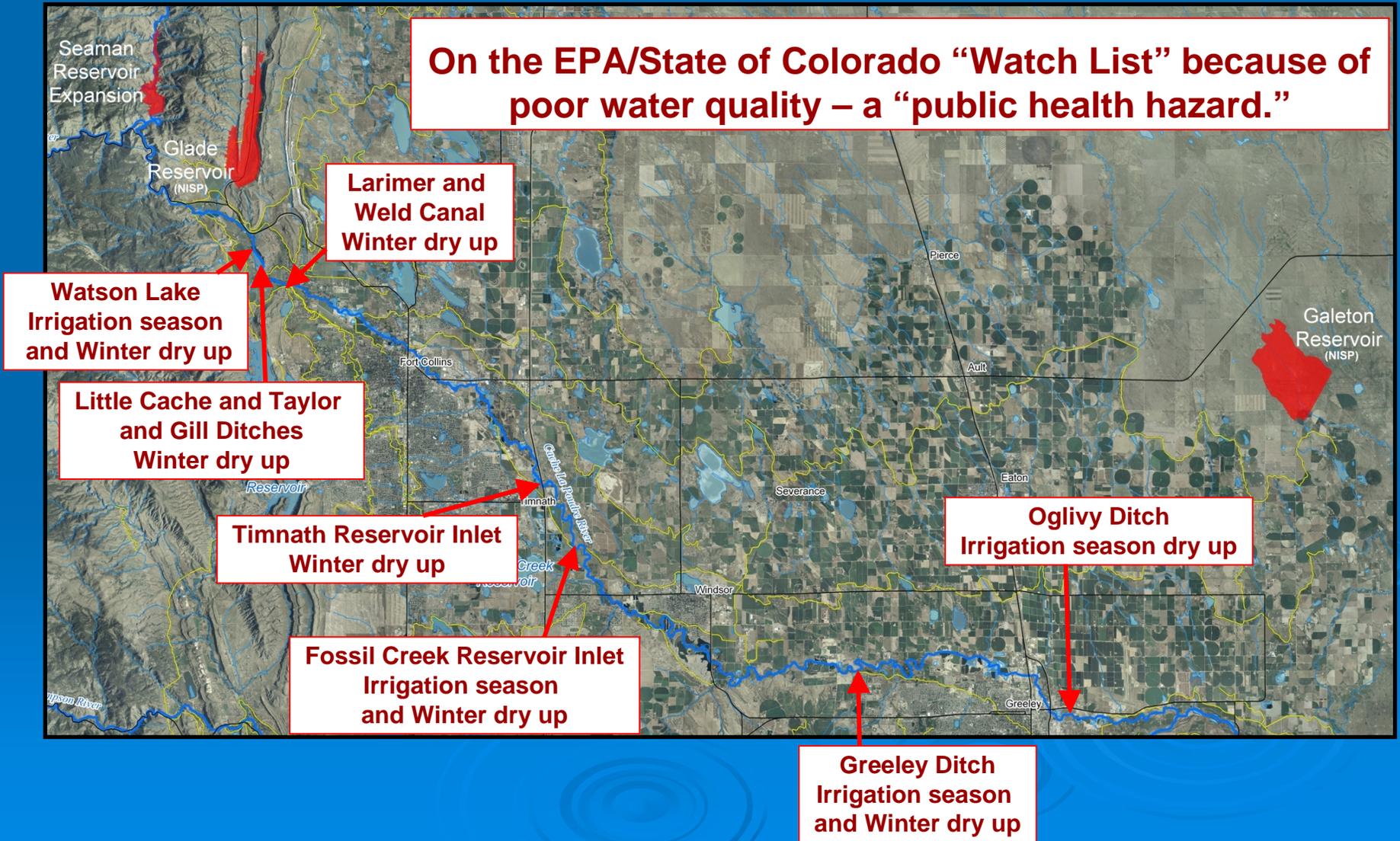
- **Cost?** \$~ 825 million (including interest).
- **Size?** Glade - 177,000 acre feet, or ~57,000,000,000 gallons of water that will come directly from the Poudre River.
- **Location?** On Highway 287, 1 mile north of Ted's Place.
- **How will Glade Fill?** Take water out of the Poudre River pump it to the reservoir.
- **Who wants the water?** Sixteen cities and water districts, most of whom are outside the Poudre River Basin.

# Serious Concerns About NISP/Glade

1. Drain ever-more water out of the Poudre resulting in negative recreational and biological impacts and the death of the “June Rise.”
2. Fort Collins citizens would suffer all the negative impacts of this project, while the benefits would mostly go to future residents in outlying areas.
3. NISP is a one-size-fits-all debt-funded project. Some cities would finance debt of up to \$20,000 per household. This debt would occur to pay for draining half the water out of the Poudre River as it flows through Fort Collins.

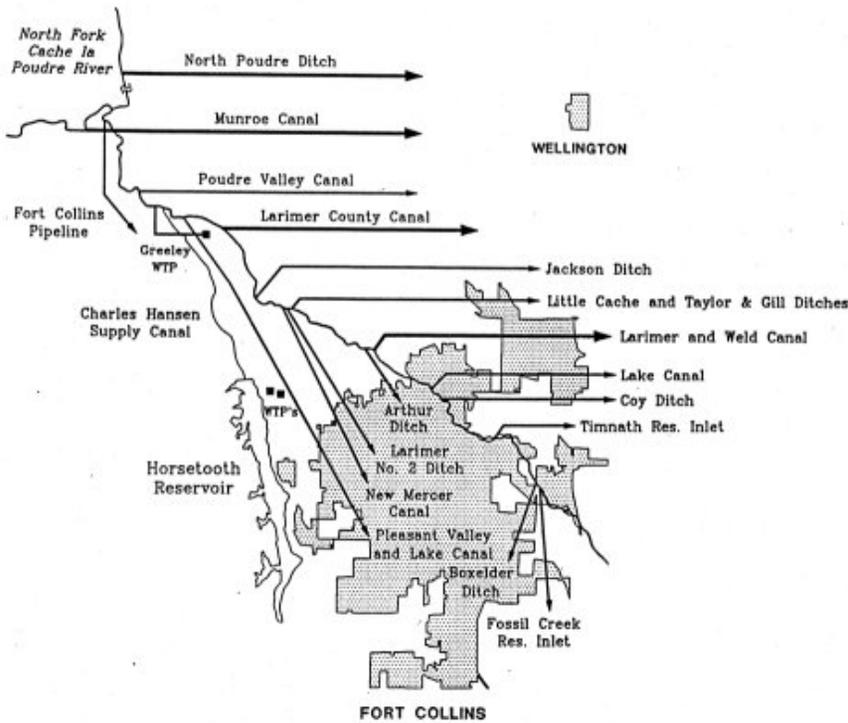
# Bad News: The Poudre is wildly out of balance. Many Dry-Ups and Bad Water Quality.

On the EPA/State of Colorado "Watch List" because of poor water quality – a "public health hazard."



# Bad News: The Poudre is wildly out of balance. Bad Water Quality.

## POUDRE RIVER DIVERSIONS



of Colorado “Watch List” because of quality – a “public health hazard.”

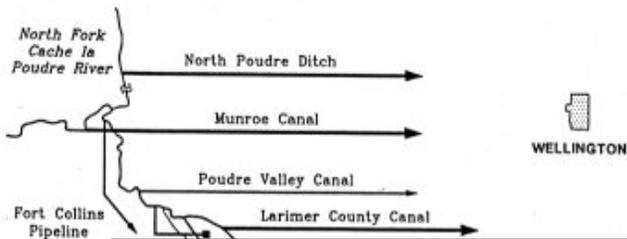


Fossil Creek Reservoir Inlet  
Irrigation season  
and Winter dry up

Greeley Ditch  
Irrigation season  
and Winter dry up

# Bad News: The Poudre is wildly out of balance. Bad Water Quality.

## POUDRE RIVER DIVERSIONS



of Colorado “Watch List” because of quality – a “public health hazard.”

### ***Take-Home Messages:***

- ***The Poudre is almost completely plumbed. Shut on and off like the faucet at your house.***
- ***Water is only in the river channel because that is the easiest conveyance to get the water from one owner to the next.***
- ***Below the mouth of the canyon, the Poudre has no legal right to exist.***
- ***People and companies that own senior water rights from the Poudre can drain the river, and they routinely do.***

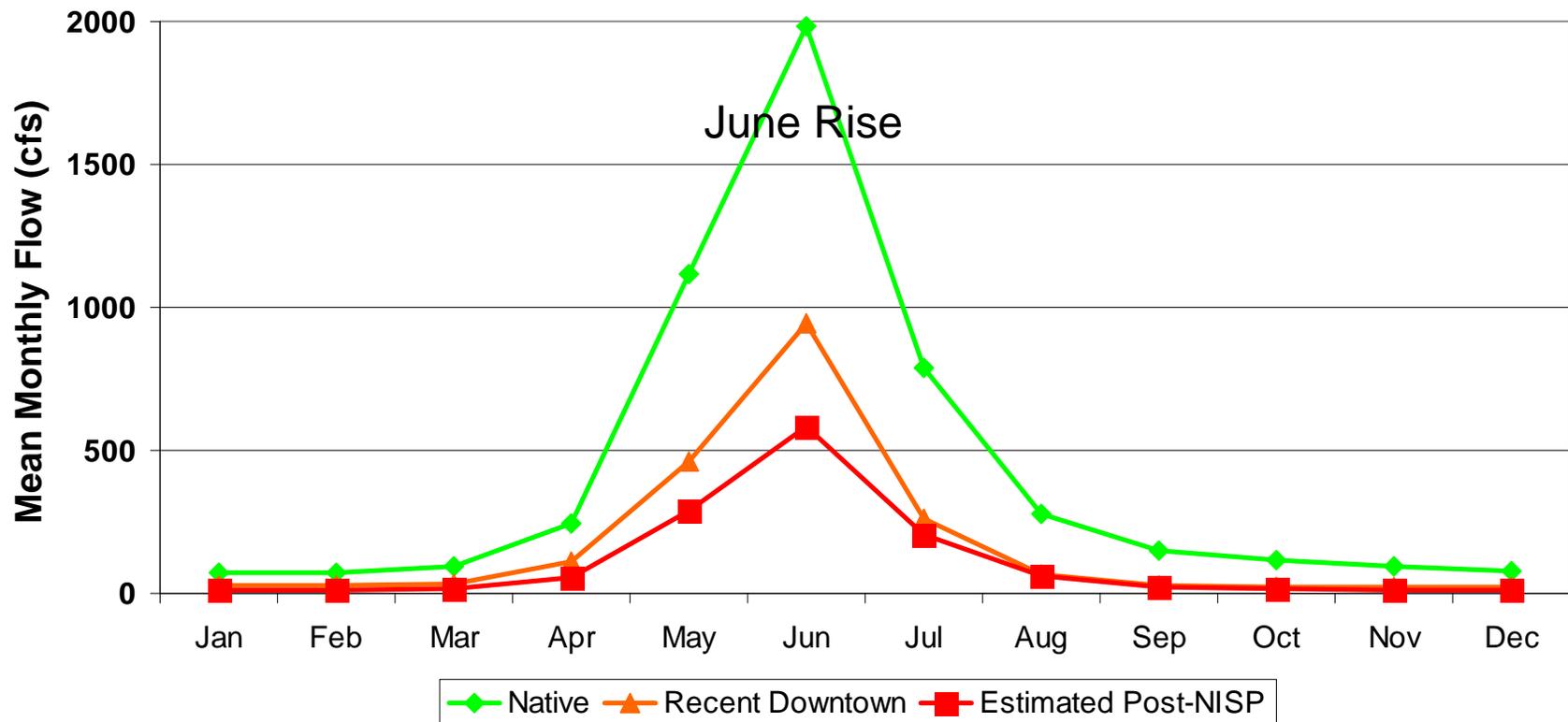
Irrigation season  
and Winter dry up

# Death of the “June Rise”



- Overall hydrograph flatlined in Fort Collins.
- Springtime peak flows already reduced over ~50%. NISP will take out ~50% more, approximately 40,000 acre-feet.
- Winter flows already reduced up to 90%, further losses likely.

Average Poudre River Flow Regime



# Biological, Recreational, Economic Impacts

## ➤ Biological

- Water quality: ammonia, nitrates, carbon (\$\$ cost for Fort Collins water treatment)
- Fish and wildlife
- Wetlands
- Riparian Forest



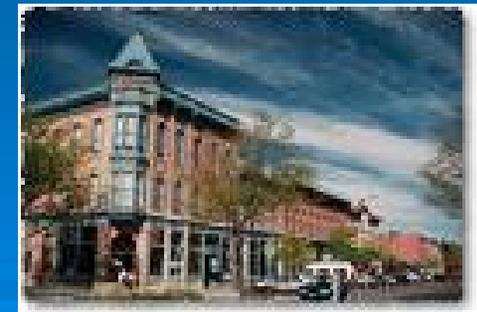
## ➤ Recreational

- River “dry-ups” pervasive already
- Existing flows would be reduced yet again by half
- Fishery impacted from the mouth to the confluence
- Boating below the Canyon mouth impacted
- Riparian ecosystem and wetlands threatened



## ➤ Economic

- UniverCity Connections, Downtown economy, Stryker amphitheatre, amenity migrants.





# NISP Will Take Financial Risks to Drain Half the Water out of the Poudre

~\$400 mil ~\$800 mil

<u>Entity</u>	<u>Share of NISP (AF)</u>	<u>NISP Capital Debt</u>	<u>Approx NISP Debt plus Interest</u>	<u>Outside Poudre Basin</u>
Berthoud	1,300	\$13,162,500	\$27,000,000	Outside
CWCWD*	7,100	\$71,887,500	\$146,000,000	Outside
Eaton	1,300	\$13,162,500	\$27,000,000	Inside
Erie	6,500	\$65,812,500	\$136,000,000	Outside
Evans	1,600	\$16,200,000	\$33,000,000	Outside
FCLWD	3,000	\$30,375,000	\$63,000,000	Inside
Ft. Lupton	3,000	\$30,375,000	\$63,000,000	Outside
Ft. Morgan	3,600	\$36,450,000	\$75,000,000	Outside
Lafayette	1,800	Cash (\$18 mil)	Cash	Outside
LHWD	4,900	\$49,612,500	\$102,000,000	Outside
Morgan County	1,300	\$13,162,500	\$27,000,000	Outside
Severance	1,300	\$13,162,500	\$27,000,000	Inside
Windsor	3,300	\$33,412,500	\$69,000,000	Inside

Paid for by:

- Revenue Bonds (Not voted on by the citizens)
- Tap fees on new homes.
- State Loans backed by taxpayers.
- Raise water rates on existing water users.



**Do better alternatives exist?**

---

**Yes! A BALANCED Approach  
will save water, save farms, save  
money, and Save The Poudre!**

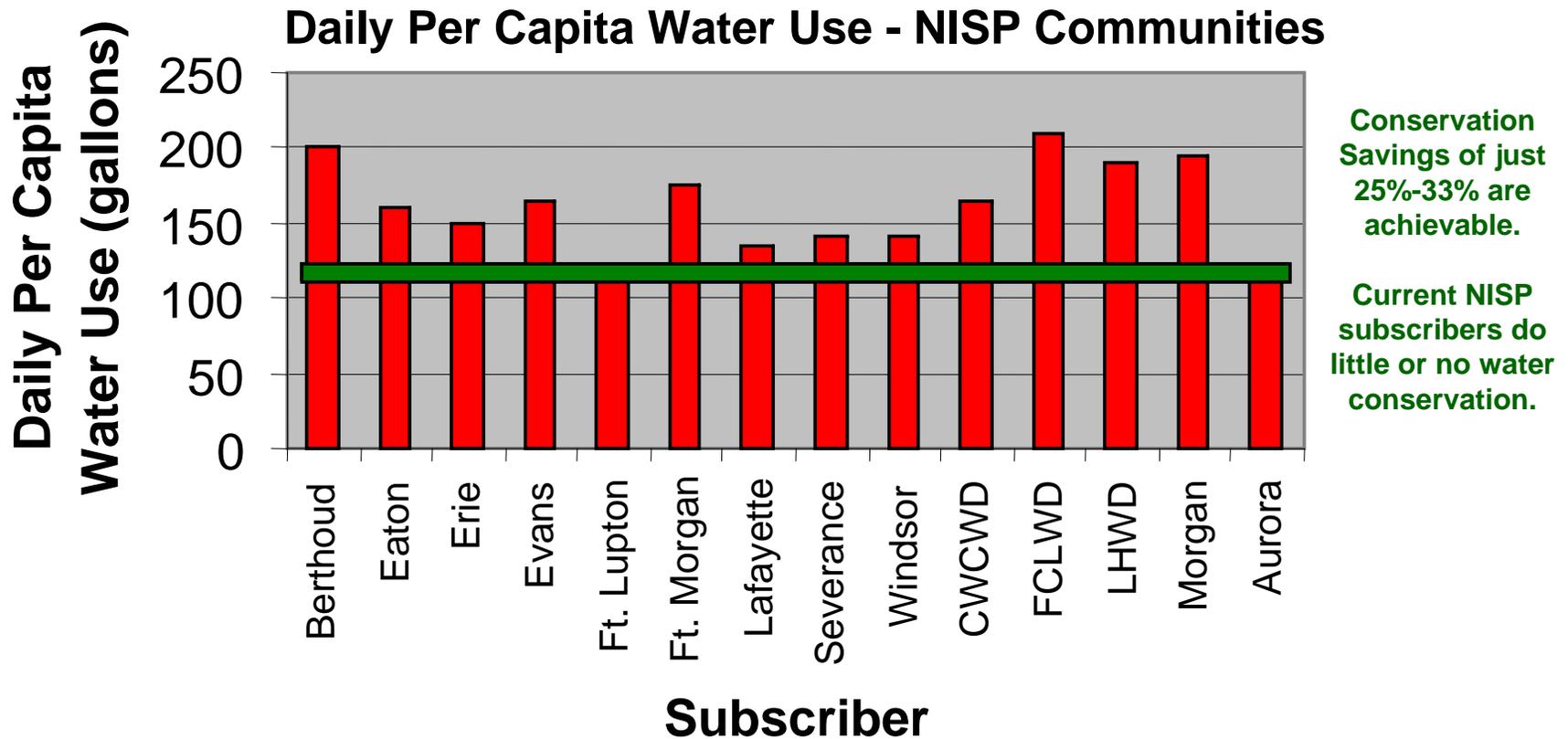
# Balance Through Conservation and Efficiency in Homes and Cities!

- Conservation and efficiency can save 50% of water or more!
  - Use water-efficient appliances and fixtures
  - Use water-wise landscaping and irrigation
  - Educate the public (important!)
  - Improve delivery efficiency
  - Fully utilize existing reservoirs
  - Facilitate municipal/agricultural water sharing (important!)
- An acre-foot of water yielded by conservation is five to twenty times cheaper than water yielded from new reservoirs in Colorado! Opportunities for new homeowners to save money on tap fees? (note office)



“Protecting nature is protecting ourselves.”

# Potential Household Water Conservation Savings



Experts in water conservation research who have studied growing cities in the arid west believe that new technology can yield a 37% water savings, and changes in behavior can yield an additional 37% water savings. -- Peter Mayer, Aquacraft, a City of Fort Collins consultant

(Aurora 77, Fort Collins drought, Boulder \$\$)

# Balance Through Conservation and Efficiency on Farms!

- **Conservation and efficiency can save 50% of water or more!**
  - Upgrade to efficient irrigation sprinklers
  - Line ditches and use pipes where possible
  - Fully utilize existing reservoirs
  - Convert to lower consumptive crops
  - Upgrade equipment to achieve best management practices
  - Create interruptible supply agreements and partnerships – share water with cities and agricultural users so farmers can keep farming (important!)
- **Two to ten times cheaper than new reservoirs in Colorado!**



“Education is the key to conservation.”

# Potential Water Efficiency Savings with Agricultural Irrigation

Type of Irrigation	Efficiency Level
Flood	40%
Furrow	50%
Gated Pipe	60%
Center Pivot Circle	85%
Center Pivot with Corner	85%

Three quarters of the farms in the South Platte basin use flood or furrow irrigation.

If we conserve 15% of ag water, we can double the amount of water available for cities.





# We Support BALANCE!



## A balanced approach will allow:

- Cities to keep growing at normal, manageable rates.
- City governments and citizens to minimize public debt.
- Water to be supplied through a **pay-as-you-go** method, rather than a **debt-ridden one-size-fits-all** method.
- The Poudre River to be protected.

## A balanced approach would require that we:

- Change the prevailing attitude and laws that lead to draining the river first, leaving conservation/efficiency as a last resort.
- Do not build or expand more reservoirs until conservation, efficiency, and water sharing (interruptible supply agreements) have been fully implemented.
- Adopt a “community-based river management” approach that:
  - **Works with water users to modify deliveries and exchanges to keep more water in the river, and keep the river corridor more ecologically healthy.**
  - **Establishes a water trust for senior water rights to support restoration.**















[www.SaveThePoudre.org](http://www.SaveThePoudre.org)

