

# South Platte Basin Implementation Plan

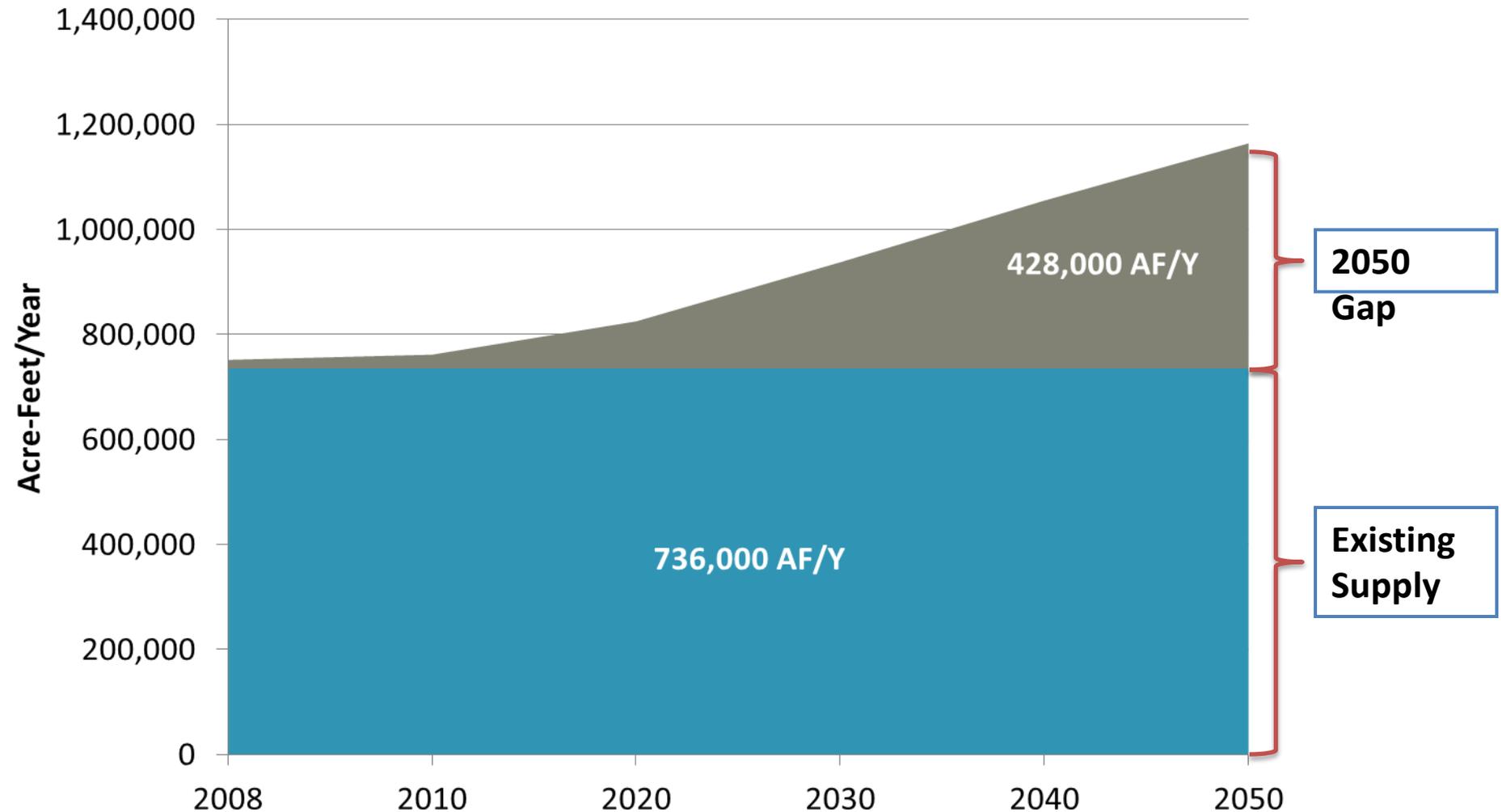
Sean T. Cronin

Chair, South Platte Basin Roundtable

# Presentation Outline

- What is the problem?
- What/who is a Roundtable?
- Why have a plan?
- Colorado's Water Plan
- South Platte Basin Implementation Plan
  - Overarching Themes
  - Vision
  - Plan Elements
- Questions?

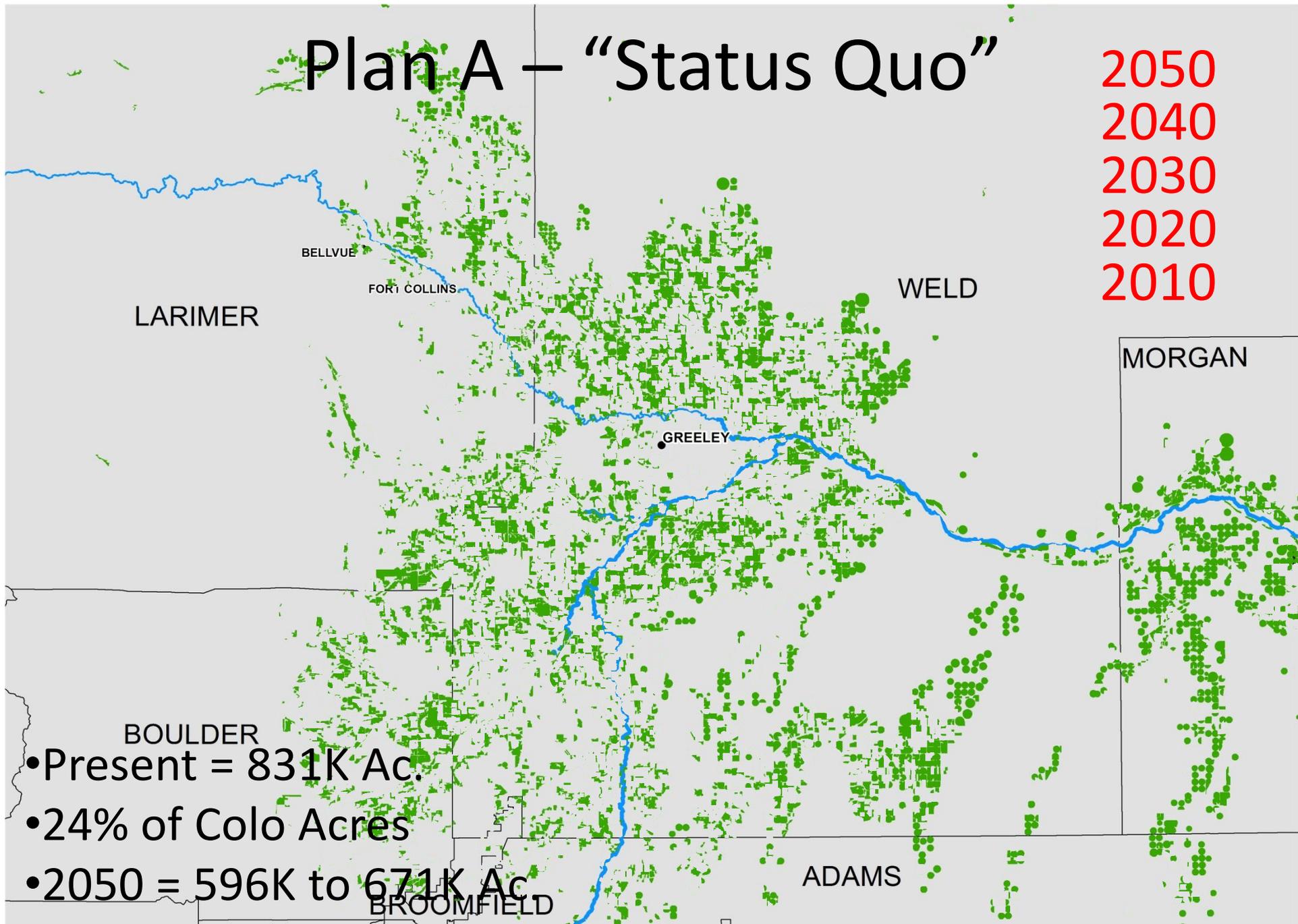
# Municipal & Industrial (M&I) Water Supply Gap in the South Platte Basin



\*Based on SWSI 2010 Medium Water Demands

# Plan A – “Status Quo”

2050  
2040  
2030  
2020  
2010



- Present = 831K Ac.
- 24% of Colo Acres
- 2050 = 596K to 671K Ac

# HB05-1177 (2005)

## Water for the 21st Century Act

### 9 Basin Roundtables



TO FACILITATE  
CONTINUED  
DISCUSSIONS WITHIN  
AND BETWEEN  
BASINS ON WATER  
MANAGEMENT  
ISSUES, AND TO  
ENCOURAGE LOCALLY  
DRIVEN  
COLLABORATIVE  
SOLUTIONS TO WATER  
SUPPLY CHALLENGES...

# HB05-1177 (2005)

## Water for the 21st Century Act

### 9 Basin Roundtables



DEVELOP A BASIN-WIDE CONSUMPTIVE AND NONCONSUMPTIVE WATER SUPPLY NEEDS ASSESSMENT, CONDUCT AN ANALYSIS OF AVAILABLE UNAPPROPRIATED WATERS WITHIN THE BASIN, AND PROPOSE PROJECTS OR METHODS, BOTH STRUCTURAL AND NONSTRUCTURAL, FOR MEETING THOSE NEEDS AND UTILIZING THOSE UNAPPROPRIATED WATERS WHERE APPROPRIATE.

# HB05-1177 (2005)

## Water for the 21st Century Act

### 9 Basin Roundtables



BASIN ROUNDTABLES SHALL ACTIVELY SEEK THE INPUT AND ADVICE OF AFFECTED LOCAL GOVERNMENTS, WATER PROVIDERS, AND OTHER INTERESTED STAKEHOLDERS AND PERSONS IN ESTABLISHING ITS NEEDS ASSESSMENT, AND SHALL PROPOSE PROJECTS OR METHODS FOR MEETING THOSE NEEDS.

# Who – Metro Roundtable

Metro Roundtable Seats	Member	Affiliation
Broomfield City & County Rep	David Allen	City and County of Broomfield
Denver City & County Rep	Marc Waage	Denver Water
Arapahoe County Rep	Julio Iturreria	Arapahoe County
Arapahoe County Muni Rep	Joe Stibrich	Aurora Water
Douglas County Rep	Tim Murrell	Douglas County
Douglas County Muni Rep	Eric Hecox	South Metro Water Supply Authority
Jefferson County Rep	Pat O'Connell	Jefferson County
Jefferson County Muni Rep	Sharon Williams	City of Westminster
Adams County Muni Rep	Mark Koleber	City of Thornton
El Paso County Rep	Cortney Brand	Brown and Caldwell
El Paso County Muni Rep	Mark Pifher	Colorado Springs Utilities
Elbert County Rep	Robert Roland	Elbert County
Elbert County Muni Rep	Diana Robins	Town of Elizabeth
Central Colorado WCD	Jim Reasoner	Central Colorado Water Conservancy District
Upper South Platte WCD	Gary Thompson	WW Wheeler & Associates
Legislative Appointment	Jim Lochhead	Denver Water
Environment Rep	Dave Nickum	Colorado Trout Unlimited
Agriculture Rep	Rob Sakata	Sakata Farms
Recreation Rep	Jeff Shoemaker	Greenway Foundation
Local Domestic Water Provider Rep	John Kaufman	Centennial Water and Sanitation District
Industrial Rep	Barbara Biggs	Metro Wastewater Reclamation District
At-Large Water Holder Rep	Janet Bell	
At-Large Water Holder Rep	Peter Nichols	Berg Hill Greenleaf Ruscitti LLP
At-Large Water Holder Rep	Mark Harding	Pure Cycle
At-Large Water Holder Rep	Mark Shively	
At-Large Water Holder Rep	Britta Strother	HDR, inc.
At-Large Business Rep	Susan Nedell	Environmental Entrepreneurs (E2)
At-Large	Casey Davenhill	Cherry Creek Stewardship Partners

# Who - Metro Roundtable Cont...

At-Large	Peter Binney	Merrick & Company
Nonvoting out-of-basin rep	Tom Cech	Metropolitan State University of Denver
Nonvoting out-of-basin rep	Alan Berryman	Northern Water
Non-voting rep (liaison?) S. Platte	Doug Robotham	The Nature Conservancy
Nonvoting rep	Rick Marsicek	South Metro Water Supply Authority
Nonvoting rep	Heather Justus	
Nonvoting rep	Beorne Courtney	Element Water, inc.
Nonvoting rep	Tom Bellinger	Metropolitan State University of Denver
CWCB Rep	Patty Wells	Denver Water
BOR (liaison)	Ed Warner	US Bureau of Reclamation
CWQCD (liaison)	Randal Ristau	Colorado Geological Survey
CSU Extension Service (liaison)	Carl Wilson	Colorado State University
Division of Wildlife (liaison)	Pete Conovitz	Colorado Division of Parks and Wildlife
Division of Wildlife (liaison)	Jay Skinner	Colorado Division of Parks and Wildlife
Division of Wildlife (liaison)	Mark Uppendahl	Colorado Division of Parks and Wildlife
Forest Service (liaison)	Polly Hays	US Forest Service
Forest Service (liaison)	Scott Ludwig	US. Fish and Wildlife Service
U.S. Army Corps of Engineers (liaison)	Tim Carey	US Army Corps of Engineers

# Who – South Platte Basin Roundtable

South Platte Roundtable Seat	Name	Affiliation
Agricultural Representative	Gene Manuello	Colorado Cattlemen's Association
Arapahoe County	Julio Iturreria	Arapahoe County
At Large Representative	Douglas Rademacher	Weld County
At Large Representative	Doug Robotham	The Nature Conservancy
At-Large Representative	Gary Herman	Central Water Water Conservancy District
At-Large Representative	Mike Shimmin	Vranesh and Raisch,LLP Attorneys at Law
At-Large Representative	Jim Yahn	North Sterling Irrigation District
Boulder County	Karen Martinez	Boulder County
Boulder Muni	Ken Huson	City of Longmont
Broomfield	Stephen Larson	City of Broomfield
Center of Colorado Conservancy District	Lisa McVicker	Center of Colorado Conservancy District
Central CO Water Conservancy District	Frank Eckhardt	Central Colorado Water Conservancy District
Cheyenne County	Leon Allen	Cheyenne County
Clear Creek County/South Platte Liaison	Bert Weaver	Clear Creek County/South Platte Liaison
El Paso County	Kevin Lusk	El Paso County
Elbert County Rep.	Larry Ross	Elbert County
Elbert Muni	Clay Hurst	Hurst and Associates
Environmental Representative	Bob Streeter	Colorado Trout Unlimited
Gilpin County	Connie McLain	Gilpin County
Gilpin Municipality	James Ford	City of Blackhawk
Industrial Representative	Rich Belt	Xcel Energy
Jefferson County	John Wolforth	Jefferson County
Jefferson Muni	Bill Ray	City of Arvada
Kit Carson Muni	Richard Mann	Town of Stratton
Larimer County Rep	Jeffrey Boring	Larimer County
Larimer Muni	Larry Howard	City of Loveland
Legislative Appointment	John Stencil	
Local Domestic Water Provider	Jim Hall	City of Greeley
Logan County	Kent Swedlund	

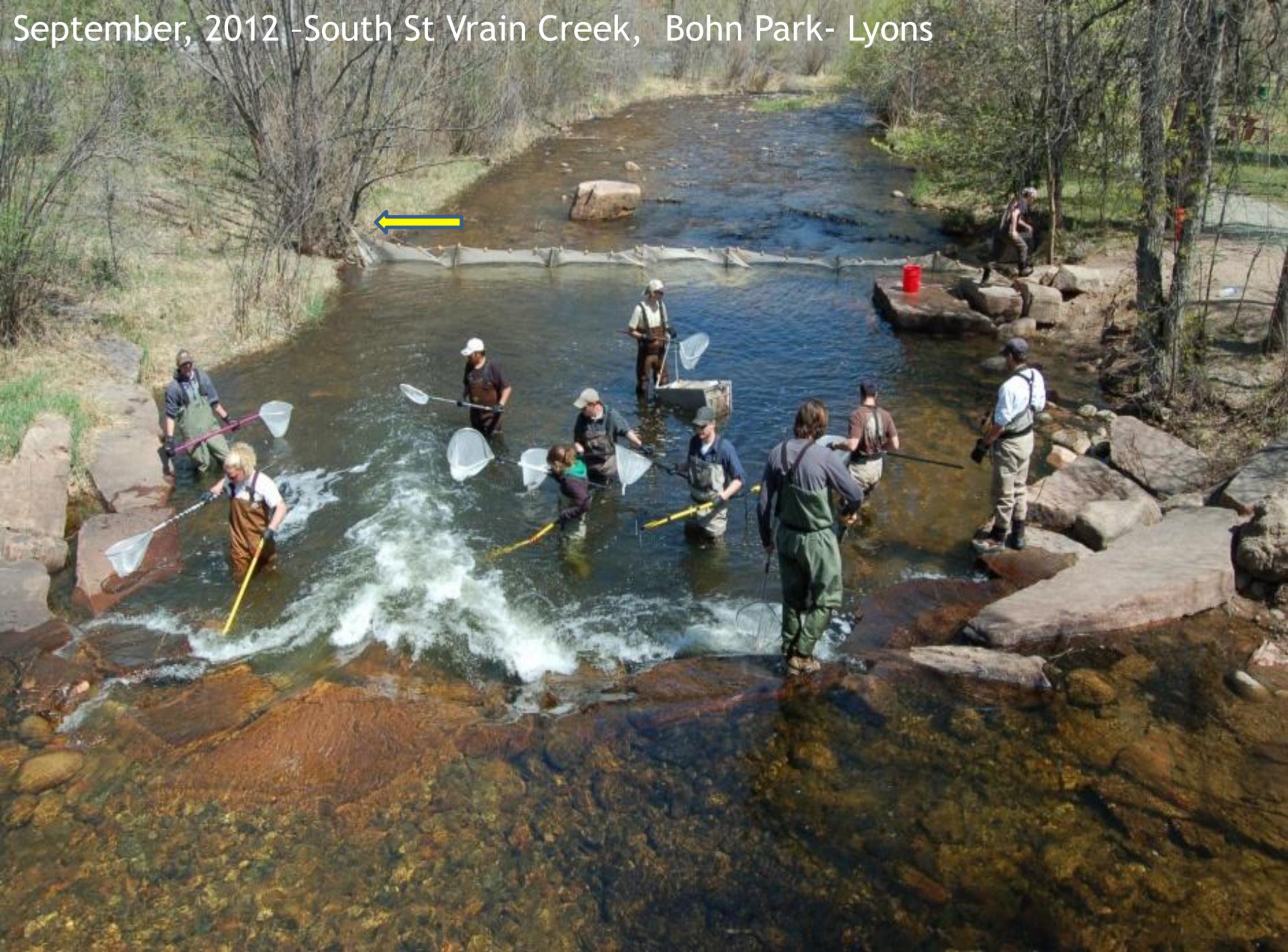
# Who – SP Roundtable Cont...

Logan Muni	Bob Brown	City of Sterling
Lower South Platte Water Conservancy District	Joe Frank	Lower South Platte Water Conservancy District
Morgan County	Allyn Wind	
Morgan Muni	Brent Nation	Fort Morgan Utilities/Water Resources
Northern Colorado Water Conservancy District	Mike Applegate	Applegate Group
Park County	Mike Brazell	Park County
Park Muni	Earl Mortemeyer	
Recreational Representative	Greg Kernohan	Ducks Unlimited
Republican River Water Conservation District	Eugene Bauerle	Republican River Water Conservation District
Sedgwick County	Chuck Powell	
Sedgwick Muni	Bruce Gerk	Colorado Rural Electric Association
St. Vrain & Left Hand Water Conservancy District	Sean Cronin	St. Vrain and Left Hand Water Conservancy District
Teller County	Bill Buckhanan	Teller County
Upper South Platte Water Conservancy District	Lynda James	Upper South Platte Water Conservancy District
Weld County	Sean Conway	Weld County
Weld County Municipal	Harold Evans	Eans Group, LLC
Yuma County	Robin Wiley	Yuma County
Yuma Muni	Stan Holmes	Yuma County
CWCB Member	Diane Hoppe	Colorado Water Conservation Board
Non-Voting At Large Member	Brett Gracely	Colorado State University
Non-Voting At Large Member	Dave Little	Denver Water
Non-Voting At Large Member	Randy Ray	Central Colorado Water Conservancy District
Non-Voting At Large Member	Eric Wilkinson	Northern Colorado Water Conservancy District
BOR (liaison)	James VanShaar	Bureau of Reclamation
CO. Water Quality Control Division(liaison)	Randal Ristau	Colorado Water Quality Control Division
CSU Extension Service (liaison)	Dennis Kaan	CSU Extension Service
CSU Extension Service (liaison)	Joel Schneekloth	CSU Extension Service
Division of Wildlife(liaison)	Pete Conovitz	Unites States Division of Wildlife
Division of Wildlife(liaison)	Ed Perkins	Unites States Division of Wildlife
Division of Wildlife(liaison)	Jay Skinner	Unites States Division of Wildlife
Forest Service (liaison)	Carl Chambers	Unites States Forest Service
U.S. Army Corps of Engineers (liaison)	Fred Rios	United States Army Corps of Engineers
Deputy Recorder	Matt Betz	St. Vrain and Left Hand Water Conservancy District

# Why have a plan?

- Water for the 21st Century Act
- May 14, 2013 – Governor Hickenlooper issued Executive Order
  - “The South Platte Basin is our largest agriculture producing basin” and “**Coloradoans** [emphasis] find the current rate of buy and dry is **unacceptable** [emphasis added]”
  - “When drafting the Colorado Water Plan, the CWCB is directed to utilize...the Basin Roundtables...and build upon points of consensus...”
- And...

September, 2012 -South St Vrain Creek, Bohn Park- Lyons



South Fork St Vrain Creek  
Bohn Park  
10/23/2013





# Damage to bridges and US Highway 36

Lyons, Colorado

40.224503N 105.268955W



**Bohn Park**

**Lyons Waste Water Treatment Plant**

**Damage to US Highway 36**

**McConnell Drive bridge washed out**

**Lyons Junior-Senior High School**

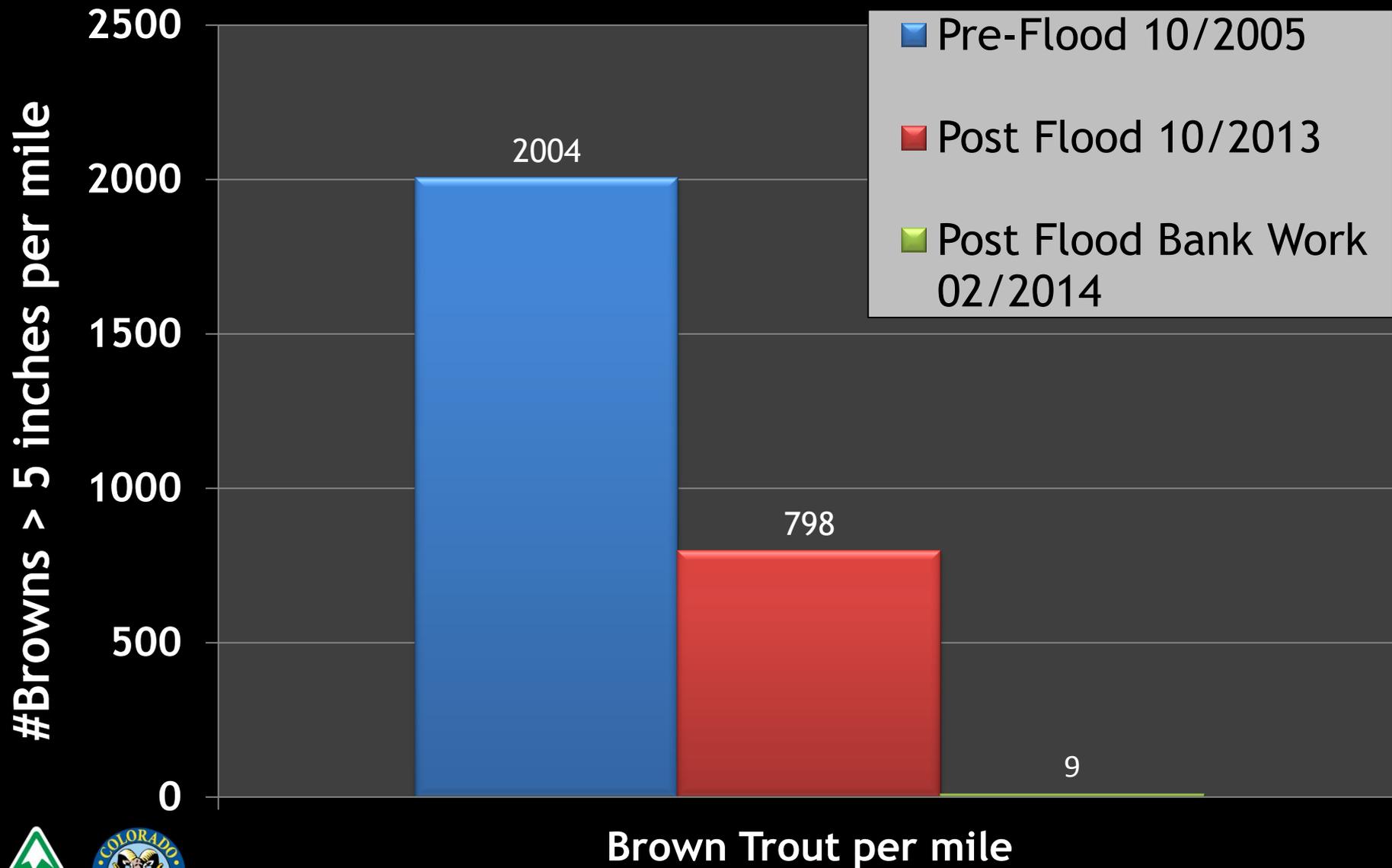
**US Highway 36**

**St. Vrain River**

South Fork St Vrain Creek  
Bohn Park  
2/13/2014



# South Fork St. Vrain @ Bohn Park - Lyons



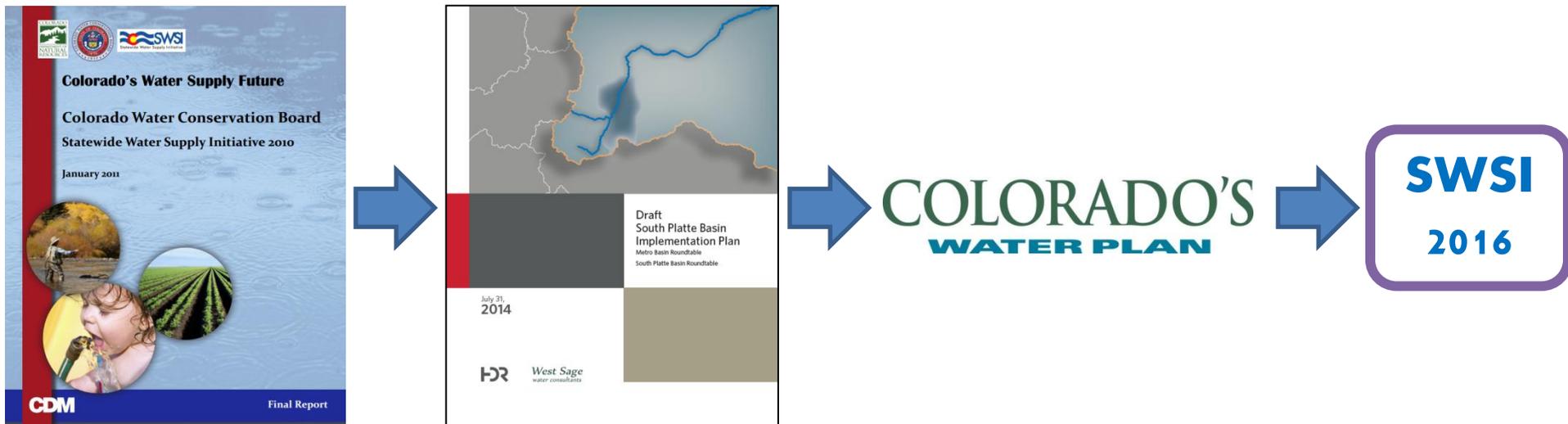
Brown Trout per mile

# Slow moving train?



# Colorado's Water Plan

- Statewide Water Supply Initiative (SWSI) 2010 was a technical assessment of the State's water issues. This information defined the basin "Gaps" – the difference between future demand and future supply.
- Each Basin Roundtable drafted a Basin Implementation Plan to address local solutions to water supply gaps identified in SWSI 2010
- The Basin Implementation Plans will comprise a significant portion of Colorado's Water Plan
- SWSI 2016 is currently being developed and will build off of the Basin Implementation Plans and the Colorado Water Plan



# SOUTH PLATTE BIP & COLORADO'S WATER PLAN TIMELINE

CWP = Colorado's Water Plan CWCB = Colorado Water Conservation Board BIP = Basin Implementation Plan 2015 = All 2015 events are recommendations

## SOUTH PLATTE BIP KEY DATES

**Today**

Draft BIPs Submitted to CWCB

Final BIPs Submitted to CWCB

Public Comment for Draft BIPs



Public Comment Deadline for Draft CWP Sections

Public Comment Deadline for Draft CWP

Second Draft CWP Released for Public Review

Public Comment Deadline for Second Draft CWP

Executive Order to CWCB

Draft CWP Delivered to Governor

Final 2015 CWP Submitted to Governor

## CWP KEY DATES



Draft  
South Platte Basin  
Implementation Plan

Metro Basin Roundtable

South Platte Basin Roundtable

July 31,  
2014



*West Sage*  
water consultants

# Overarching Themes for SP BIP

- “A Good Colorado Plan Needs a Good South Platte Plan”
- Solutions must be pragmatic, balanced, and consistent with Colorado law and property rights
- The South Platte River Basin will continue its leadership role in efficient use and management of water
- A balanced program is needed to investigate, preserve, and develop Colorado River options

# The South Platte Vision

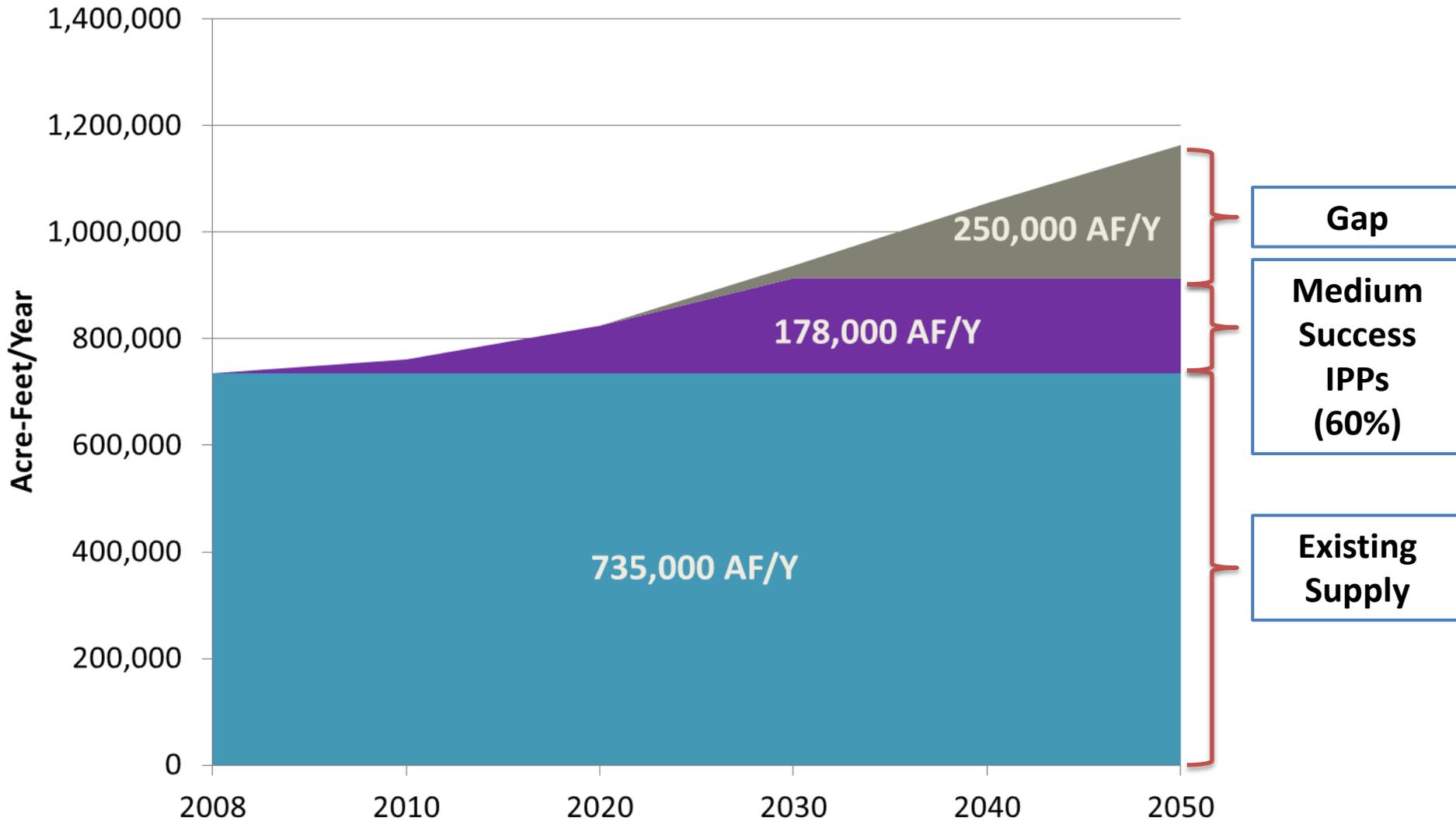
- Meet the Municipal Supply Gap
- Minimize Traditional Agricultural “buy and dry”
- Protect environmental and recreational attributes
- Support a collaborative Statewide approach

# 10 SP BIP Elements

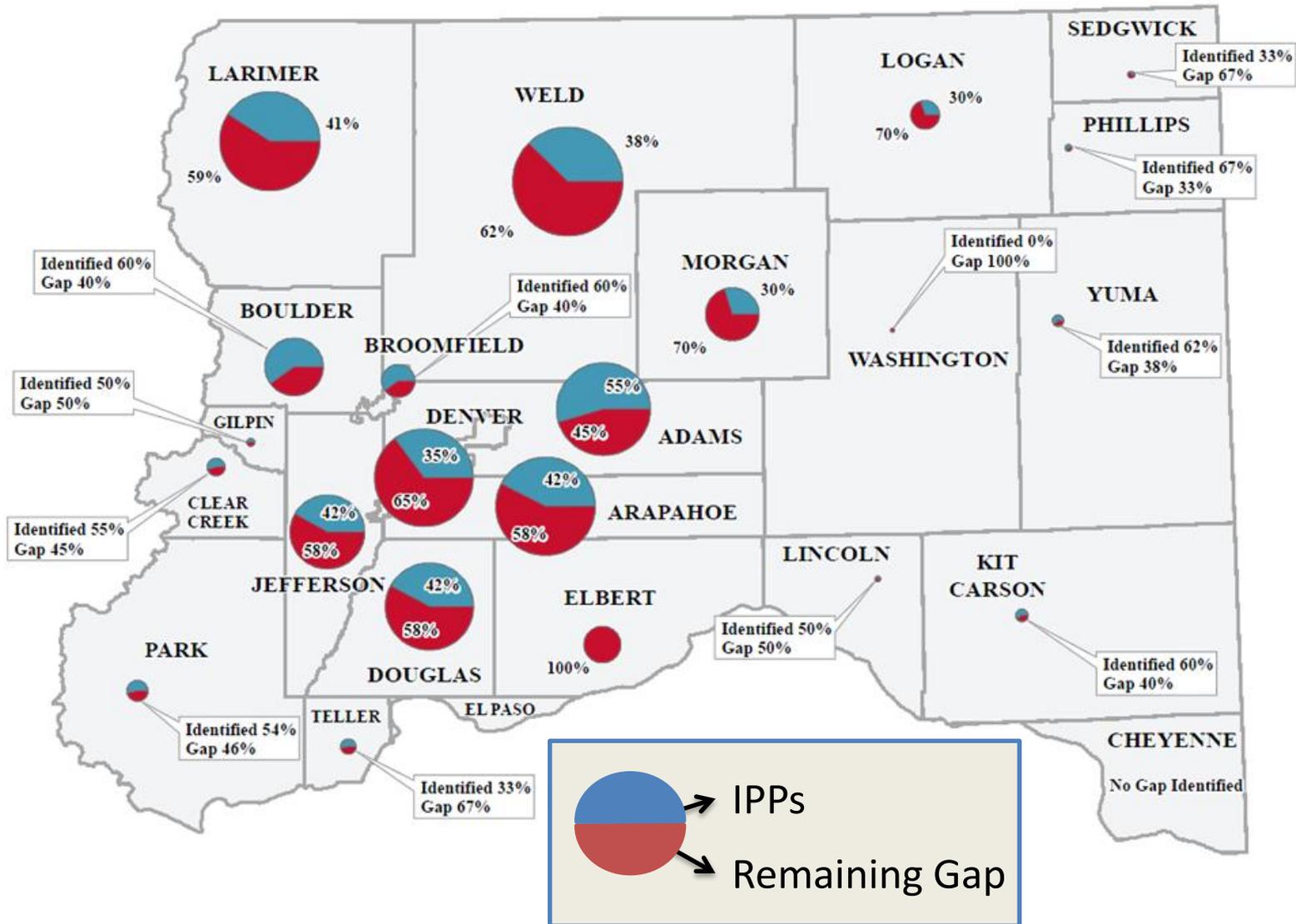
# 1. Maximize Implementation of Identified Projects and Processes

Basin	Project	Estimated Yield (AFY)
South Platte	Northern Integrated Supply Project	40,000
South Platte	Windy Gap Firing Project	30,000
Metro	Moffat Collection System Project (Denver Water, Arvada)	18,000
Metro	Rueter Hess Reservoir Enlargement (Parker WSD, Town of Castle Rock, Castle Pines North, Stonegate)	14,810
Metro	Thornton Northern Project	13,500
Metro	ECCV Northern Expansion	12,700
Metro	Aurora's Eagle River Joint-Use Project (Eagle River MOU)	10,000
South Platte	Chatfield Reservoir Storage Reallocation Project	8,500
South Platte	Fort Collins Halligan Reservoir Enlargement	7,000
South Platte	Greeley's Milton Seaman Reservoir Enlargement	6,600

# M&I Medium Scenario Gap



# M&I Gap by County



## 2a. Maintain Leadership in M&I Conservation

- South Platte Basin municipalities are among the national leaders in water conservation
- South Platte Basin municipalities are pursuing even more aggressive conservation goals

Measure	Metro			Rest of South Platte Basin		
	Baseline 2010	2050	Reduction (%)	Baseline 2010	2050	Reduction (%)
Residential Indoor	43.7	34	22%	60.1	40	33%
Non-Residential Indoor	37.5	32	15%	39.2	33	15%
Outdoor	62.8	54	15%	73.7	63	15%
Water Loss	10.9	9	17%	15	10	33%
<b>TOTAL GPCD</b>	<b>155</b>	<b>129</b>	<b>17%</b>	<b>188</b>	<b>146</b>	<b>22%</b>

<i>SINCE 2000</i>	Metro			Rest of South Platte Basin		
	2000	2050	Reduction (%)	2000	2050	Reduction (%)
<b>TOTAL GPCD</b>	<b>191</b>	<b>129</b>	<b>32%</b>	<b>200</b>	<b>146</b>	<b>27%</b>

## 2b. Maintain Leadership in Reuse

- Reuse is being pursued by nearly all water providers
- Opportunities for future reuse in Metro and South Platte are limited due to regulatory and supply constraints

Basin	Project	Estimated Yield (AFY)
Metro	Aurora's Prairie Waters Project Expansion & Storage	Variable
Metro	Denver Water Reuse	17,500
Metro	WISE (SMWSA, Denver Water, Aurora)	7,225

***“South Platte River Basin will continue its Leadership Role in Efficient Use and Management of Water”***

### 3. Maximize effective use of South Platte Supplies

- Develop new multipurpose projects
- Effectively use tributary and non-tributary groundwater
- Explore further integration of supply systems

## 4. Minimize traditional agricultural buy and dry – use ATMs where practical

- Alternative Transfer Methods (ATMs)
  - Minimize impact on local economy
  - Minimize societal impacts
  - Minimize environmental and recreational impacts
  - Provide funding sources for agricultural users
  - Optimize both agricultural and nonagricultural benefits
- Pilot projects underway through CWCB's ATM Grant Program
- While promising, there are numerous technical, legal, institutional and financial issues that need to be addressed

## 5. Protect and enhance environmental and recreational attributes

### Types of projects:

- Instream flow and lake level
- Channel restoration
- Stewardship
- Species reintroduction
- Cooperative and multipurpose projects

## 5. Protect and enhance environmental and recreational attributes

- Municipal and Industrial Projects
  - Agricultural Dry-up
- 
- Reduction of return flows impacting environmental and recreational attributes
- 
- Alternative Transfer Methods
  - Multi-Purpose Projects
    - Storage
    - Recharge
    - Diversion Modification or Reoperation
  - Trans-Basin Projects
- 
- Enhancement and/or reduction of streamflows
  - Benefits and impacts to wetlands and other wildlife habitat

## 6. Simultaneously advance new Colorado River supply options

- ***South Platte and Metro RTs support on-going IBCC discussions***
- South Platte Alternative Concepts include:
  - A single, larger project: various configurations of Flaming Gorge, Green River and Yampa River projects
  - Smaller or incremental projects
- BRTs do ***not*** support the default agricultural transfer only plan
- Seek to develop balanced, integrated plan including Colorado River projects and agricultural transfers for the overall benefit of Colorado

***“A Balanced Program is needed to Plan and Preserve Colorado River Options”***

## 7. Manage risk of climate change impacts

- Resilient water storage and conveyance infrastructure
- Use of safety factors
- Evaluate potential system vulnerabilities
- Collaborative, regional approaches (such as WISE)

## 8. Facilitate effective South Platte communication and outreach programs

### Suggested Activities:

- Develop consistent message to describe water supply gaps
- Leverage communication professionals
- Complement existing state efforts
- Develop and maintain basin-specific tools and approaches
- Establish success metrics

## 9. Research new technologies and strategies

- Make use of lower quality water sources:
  - Blending strategies and advanced water treatment technologies
  - Research and develop new technologies

# 10. Advocate for improvements to federal and state permitting processes

## Goals:

- Save public money
- Provide same assurance of quality and due diligence
- Retain existing environmental protections
- Provide greater efficiency, predictability, and consistency in the permitting process



Questions?