

Colorado's Water Plan

John Stulp, 33rd Annual Water Seminar, Durango CO
April 3, 2015



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

COLORADO'S
WATER PLAN

NOTE: This bill has been prepared for the signature of the appropriate legislative officers and the Governor. To determine whether the Governor has signed the bill or taken other action on it, please consult the legislative status sheet, the legislative history, or the Session Laws.

An Act

HOUSE BILL 05-1177

BY REPRESENTATIVE(S) Penry, Buescher, Decker, Liston, Massey, White, Berens, Clapp, Crane, Gallegos, Hall, Hoppe, Jahn, Kerr, Knoedler, Paccione, Rose, Stafford, Stengel, Sullivan, Romanoff, Boyd, Brophy, Coleman, Frangas, Harvey, King, Madden, May M., McChuskey, Merrifield, and Todd;
also SENATOR(S) Isgar, Tapia, Taylor, Entz, Grossman, Kester, Fitz-Gerald, Groff, Teck, and Tupa.

CONCERNING THE NEGOTIATION OF INTERBASIN COMPACTS REGARDING THE EQUITABLE DIVISION OF THE STATE'S WATERS, AND MAKING AN APPROPRIATION IN CONNECTION THEREWITH.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. Title 37, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW ARTICLE to read:

ARTICLE 75 Interbasin Compacts

37-75-101. **Short title.** THIS ARTICLE SHALL BE KNOWN AND MAY BE CITED AS THE "COLORADO WATER FOR THE 21ST CENTURY ACT".

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

COLORADO MOTHER OF RIVERS

By Justice Greg Hobbs

When I was young the waters sang
of being here before I am,
of falling sweet and soft and slow
to berry bog and high meadow.
And held me in her lap and cooed
the willow roots, the gaining pools,
and called me through bright dappled grass
and called me O, My Shining One;
And shaped a bed to lay me on
and played the flute so high and clear.
And shape the stones to carry me,
when I am young and full of fight
for roaring here and roaring there,
for pouring torrents in the air.
When I am young as mountain snow
in crag and cleft and cracked window;
I call the green-backed cutthroat trout,
I call the nymph and hellgrammite,
I call the hatch to catch a wind,
I call upon the mountain track;
I call the scarlet to the jaw
as morning calls her own hatchlings,
call Yampa, White, the Rio Grande,
San Juan, the Platte, the Arkansas.
(in celebration of the 30th year
of Colorado's instream flow law)

STATE OF COLORADO

OFFICE OF THE GOVERNOR

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Denver, Colorado 80203
Phone (303) 866-2471
Fax (303) 866-2013



John W. Hickenlooper
Governor

D 2013-005

EXECUTIVE ORDER

DIRECTING THE COLORADO WATER CONSERVATION BOARD TO COMMENCE WORK ON THE COLORADO WATER PLAN

Pursuant to the authority vested in the Governor of the State of Colorado, and in particular, pursuant to powers vested in the Governor pursuant to article IV, section 2 of the Colorado Constitution, I, John W. Hickenlooper, Governor of the State of Colorado, hereby direct the Colorado Water Conservation Board to commence work on the Colorado Water Plan.

I. Background

Colorado has long been on the leading edge of water innovation and solutions. We are the home of the "Colorado Doctrine" of prior appropriation and the birthplace of the interstate water compact, of which we have nine. We are a headwater state – vital rivers and streams begin here, provide water to Colorado uses, and exit to water 18 downstream states as well as the United Mexican States. Colorado has benefited much from its water and has taken seriously its responsibilities as a headwater state. The creation of a Colorado Water Plan is in keeping with Colorado's water heritage and continued respectability.

The Colorado Water Conservation Board (CWCB) was created in 1937 "[f]or the purpose of aiding in the protection and development of the waters of the state, for the benefit of the present and future inhabitants of the state." C.R.S. § 37-60-102. More than 75 years later, we reaffirm this purpose and seek to tap Colorado collaboration and innovation in addressing our water challenges. The Board's recently-adopted strategic framework is consistent with this mission.

We also recognize the important role the Office of the State Engineer has played throughout Colorado's water history. This office administers water rights, issues water well permits, represents Colorado in certain interstate water compact proceedings, monitors streamflow and water use, approves construction and repair of dams and performs dam safety inspections, assures the safe and proper construction of water wells, and maintains numerous databases of state water information.

The Interbasin Compact Committee and Basin Roundtable processes, established by House Bill 05-1177, have produced more than eight years worth of important discussion and information about the basins from Coloradans in each basin.



COLORADO'S WATER PLAN

Colorado's Water Plan: The path to a secure water future.

- Vibrant & sustainable cities
- Healthy watersheds & environment
- Robust recreation & tourism
- Viable & productive agriculture



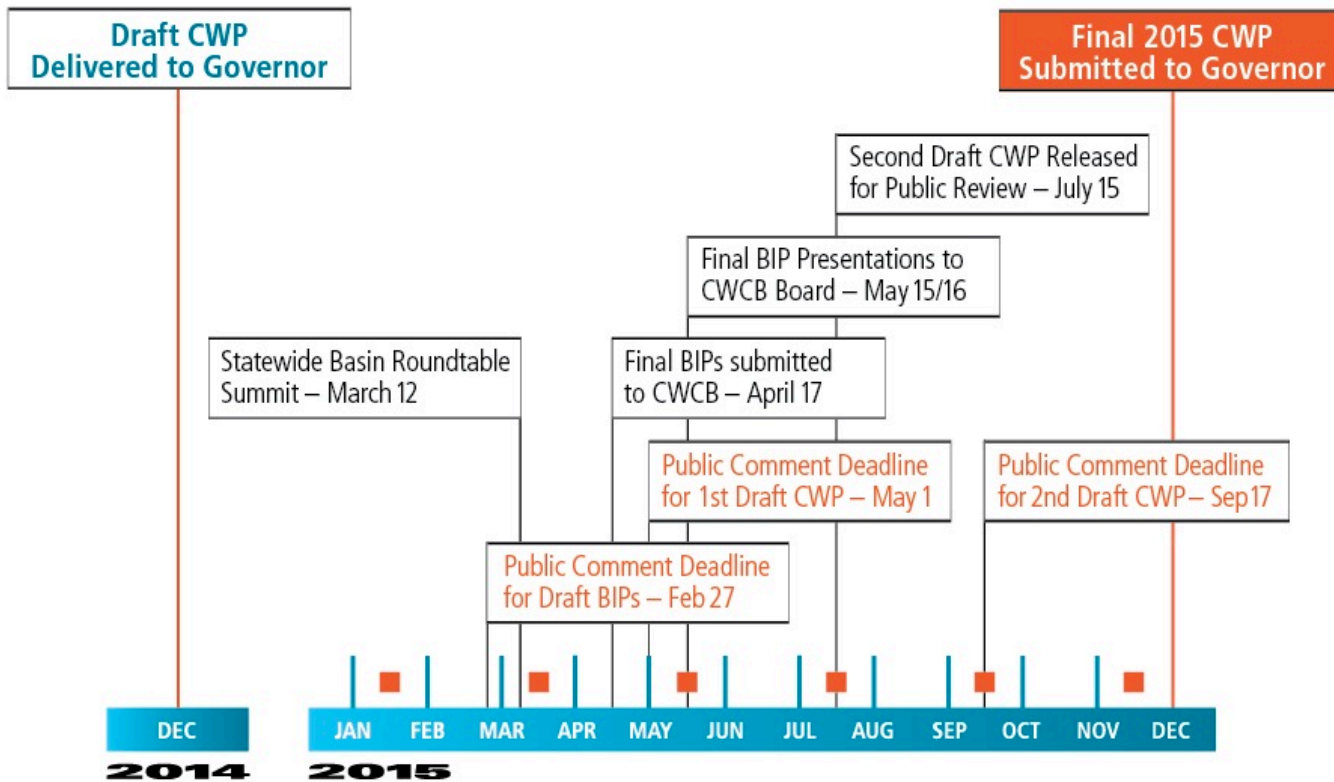
COLORADO'S
WATER PLAN



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COLORADO'S WATER PLAN 2015 TIMELINE

CWP = Colorado's Water Plan **CWCB** = Colorado Water Conservation Board **BIP** = Basin Implementation Plan
■ = Public Comment Opportunities at CWCB Board Meeting



Colorado's Water Plan Chapters

1. **Introduction** *(initial draft in January, 2014; revised draft reflecting new approach in November 2014)*
2. **The Legal & Institutional Setting**
 - 2.1. Colorado water law & administration
 - 2.2. Interstate compacts & equitable apportionment decrees
 - 2.3. [Colorado's local-control structure](#)
 - 2.4. Local, state, tribal, & federal permitting
 - 2.5. [Tribal & federal water rights](#)
3. **Overview of Each Basin**
4. **Water Supply**
5. **Water Demand by Sector**
6. **Water Supply Management for the Future**
 - 6.1. Scenario planning, adaptive strategies, & no/low regrets
 - 6.2. Meeting Colorado's water gaps
 - 6.3. Conservation & reuse
 - 6.3.1. Municipal & industrial conservation
 - 6.3.2. Reuse
 - 6.3.3. Land use
 - 6.3.4. Agricultural conservation, efficiency, & reuse
 - 6.3.5. Self-supplied industrial (e.g. conservation of mining & energy water use)
 - 6.3.6. State agency conservation (e.g. Parks & Wildlife, Corrections, State Land Board, etc.)
 - 6.4. Alternative agricultural to urban transfers
 - 6.5. Municipal, industrial, & agricultural infrastructure projects & methods
 - 6.6. Environmental & recreational projects & methods
7. **Water Resource Management & Protection**
 - 7.1. Watershed health & management
 - 7.2. Natural disaster management
 - 7.3. Water quality
8. **Interbasin Projects & Agreements**



Chapters (cont.)

9. Alignment of State Resources & Policies

- 9.1. Protecting Colorado's compacts & upholding Colorado water law
- 9.2. Economics & funding
- 9.3. State water rights & alignment
- 9.4. Framework on more efficient water project permitting processes
- 9.5. Outreach, education, & public engagement

10. Legislative Recommendations to Assist in Implementing CWP *(availability of this chapter TBD based on plan content)*

11. Updating Colorado's Water Plan



Why Do We Need a Water Plan?

1. Gap between supply and demand: Declining or flat-lining water supplies and population growth
2. Unacceptable pace of agricultural dry up
3. Environmental stress and recreational opportunities
4. Inefficient and ineffective regulatory processes
5. Fiscal challenges of our water infrastructure systems



Why Now?

1. We face an undesirable future for Colorado with unacceptable consequences; these challenges demand urgency
2. We have sufficient data
3. Unprecedented grassroots structure
4. Paradigm-shift on both sides of the divide



5 Things Colorado's Water Plan Will Do

1. Foster collaborative solutions to responsibly address the looming gap between supply and demand (effect of this is to fortify Prior Appropriation Doctrine, not undermine it)
2. Identify and test cost-effective alternatives to the permanent “buy & dry” of irrigated lands
3. Affirm that Colorado will protect its compact entitlements, act affirmatively to avoid compact curtailments where possible, and demonstrate effective state-based policy to prevent federal erosion of state water authority
4. Push federal regulatory processes to move “quicker” by front-loading state activity
5. Align state policies and dollars to support Colorado's water values and policy objectives

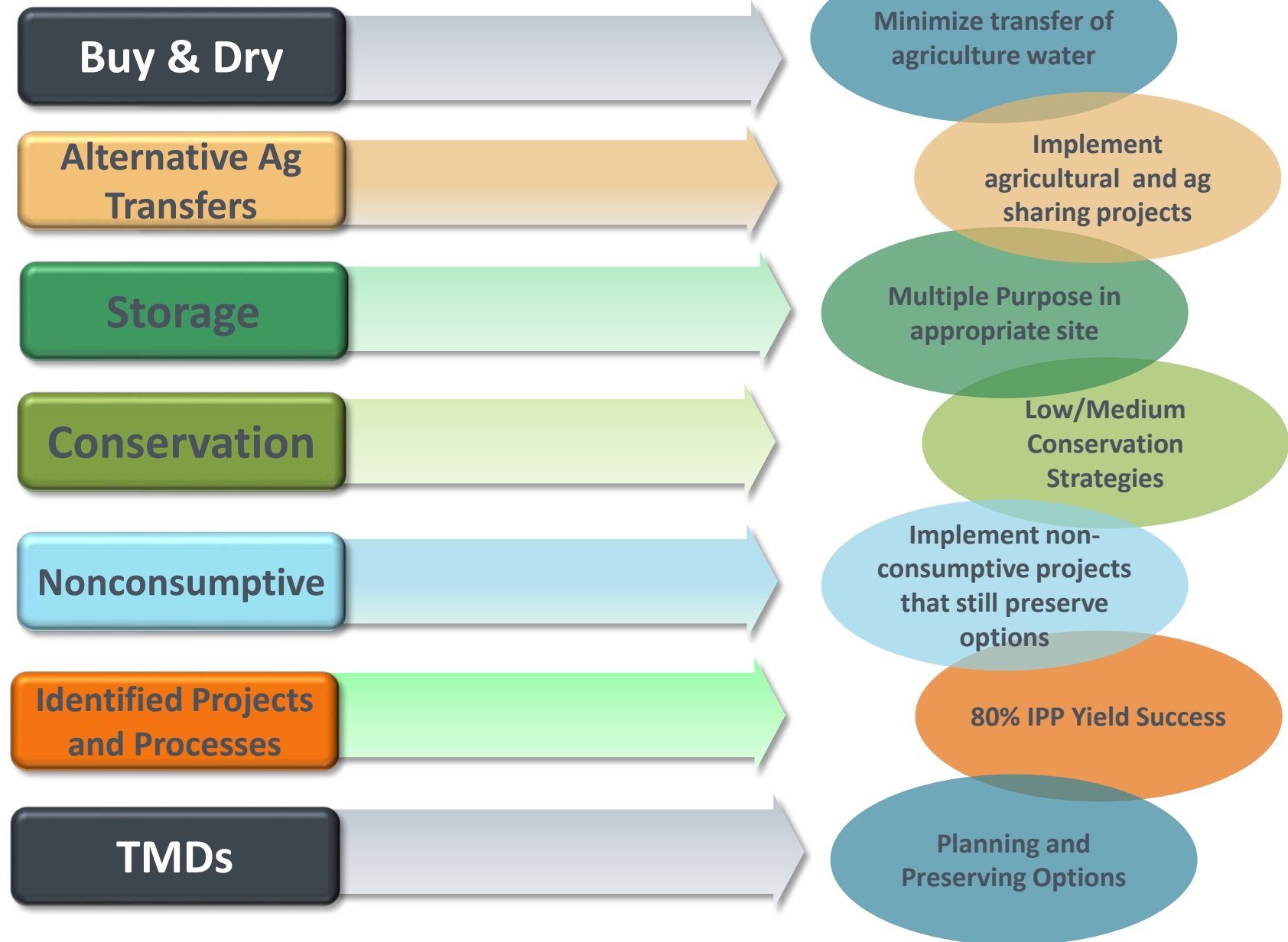


A group of approximately 20 people, including men, women, and children, are standing in a large, open grassy field. They are dressed in casual outdoor attire, including hats and jackets, suggesting a field trip or a community gathering. The background features a dense line of green trees, with rolling blue mountains visible in the distance under a sky filled with white and grey clouds. The overall scene is bright and natural.

IBCC Conceptual Framework Update

- The IBCC is currently working on incorporating the West Slope Caucus clarification.
- 5 out of the 6 IBCC subcommittees have met since the last IBCC meeting and will be reporting back to the full IBCC on April 30, stay tuned.

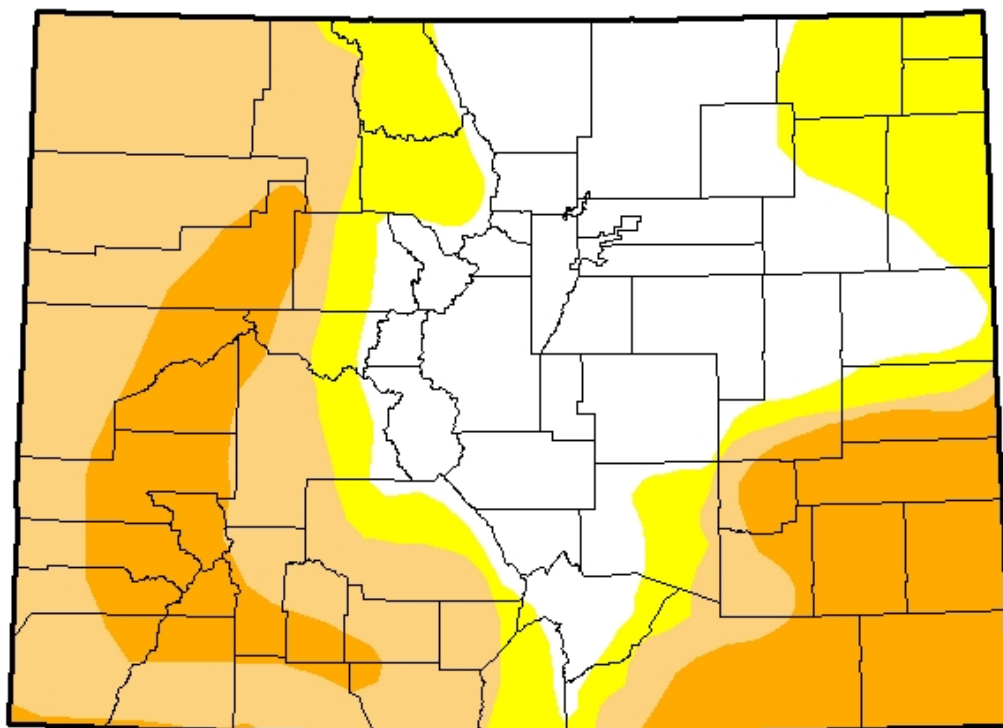
IBCC "No / Low Regrets" Actions



U.S. Drought Monitor

Colorado

March 24, 2015
 (Released Thursday, Mar. 26, 2015)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|-------|-------|-------|-------|-------|------|
| Current | 32.22 | 67.78 | 51.62 | 21.71 | 0.00 | 0.00 |
| Last Week <i>3/17/2015</i> | 36.34 | 63.66 | 51.51 | 12.20 | 0.00 | 0.00 |
| 3 Months Ago <i>12/23/2014</i> | 69.87 | 30.13 | 21.26 | 12.26 | 0.00 | 0.00 |
| Start of Calendar Year <i>12/31/2014</i> | 69.87 | 30.13 | 21.26 | 12.26 | 0.00 | 0.00 |
| Start of Water Year <i>9/30/2014</i> | 68.96 | 31.04 | 22.94 | 13.82 | 2.31 | 0.00 |
| One Year Ago <i>3/25/2014</i> | 38.38 | 61.62 | 22.62 | 14.93 | 5.66 | 1.47 |

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

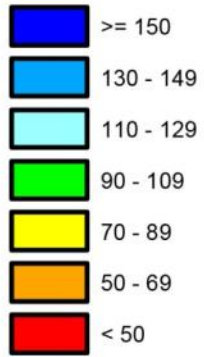
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
 Eric Luebehusen
 U.S. Department of Agriculture

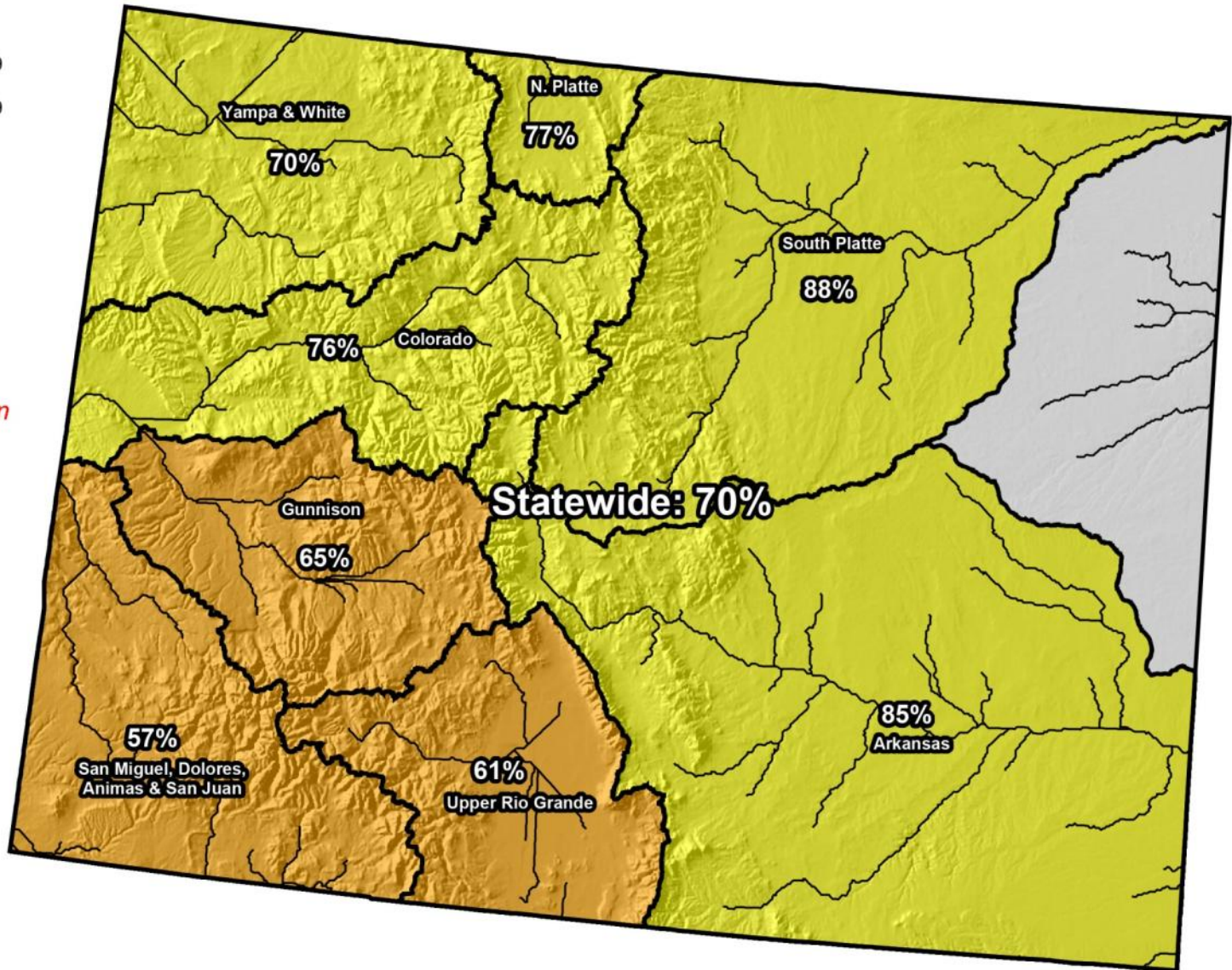


Colorado SNOTEL Snowpack Update Map

Percent of Median



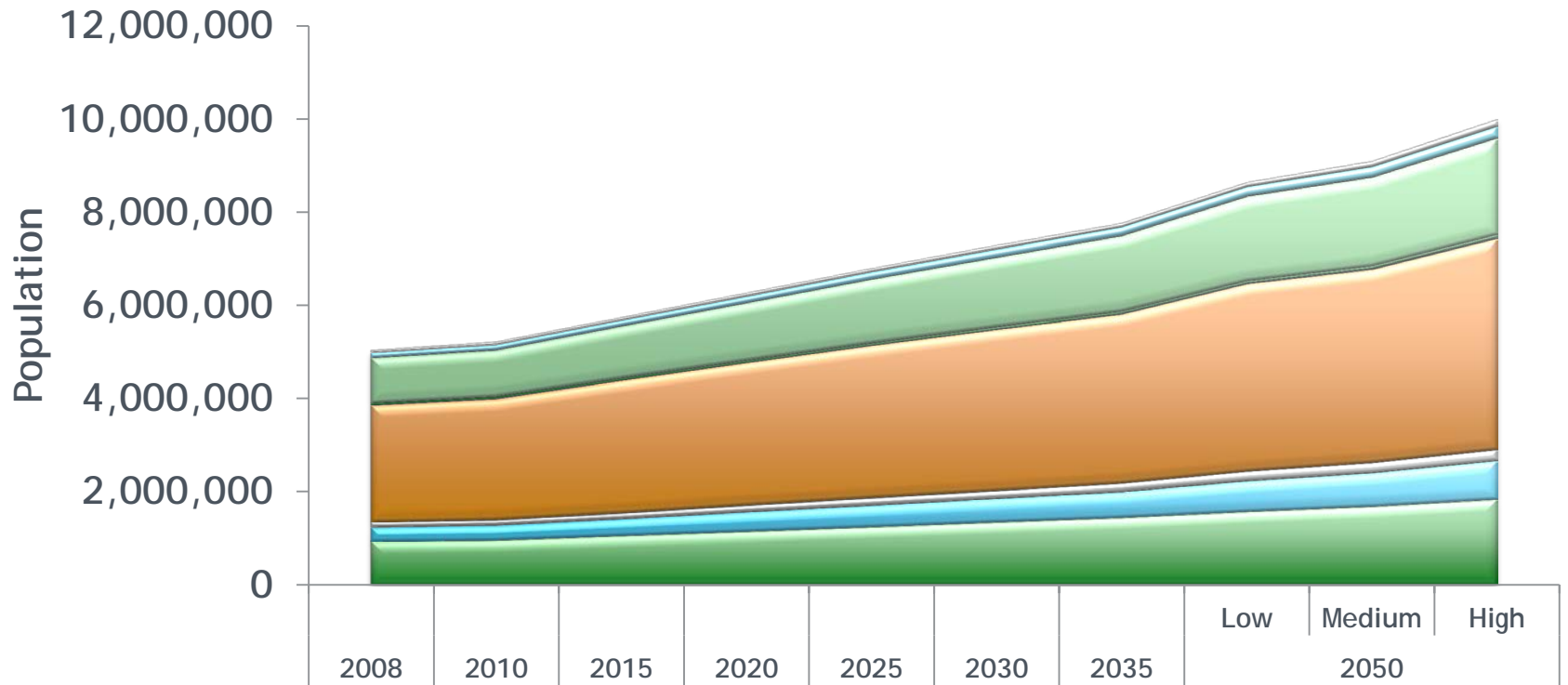
*Provisional Data
Subject to Revision*



Current as of 04/01/2015

*Data may not provide a valid measure of conditions

By 2050, Colorado's Population is Expected to Nearly Double



- Arkansas Basin
- Colorado Basin
- Gunnison Basin
- Metro Basin
- North Platte Basin
- Rio Grande Basin
- South Platte Basin
- Southwest Basin
- Yampa Basin



Colorado - A Land of Extremes



FLOOD



WILDFIRE

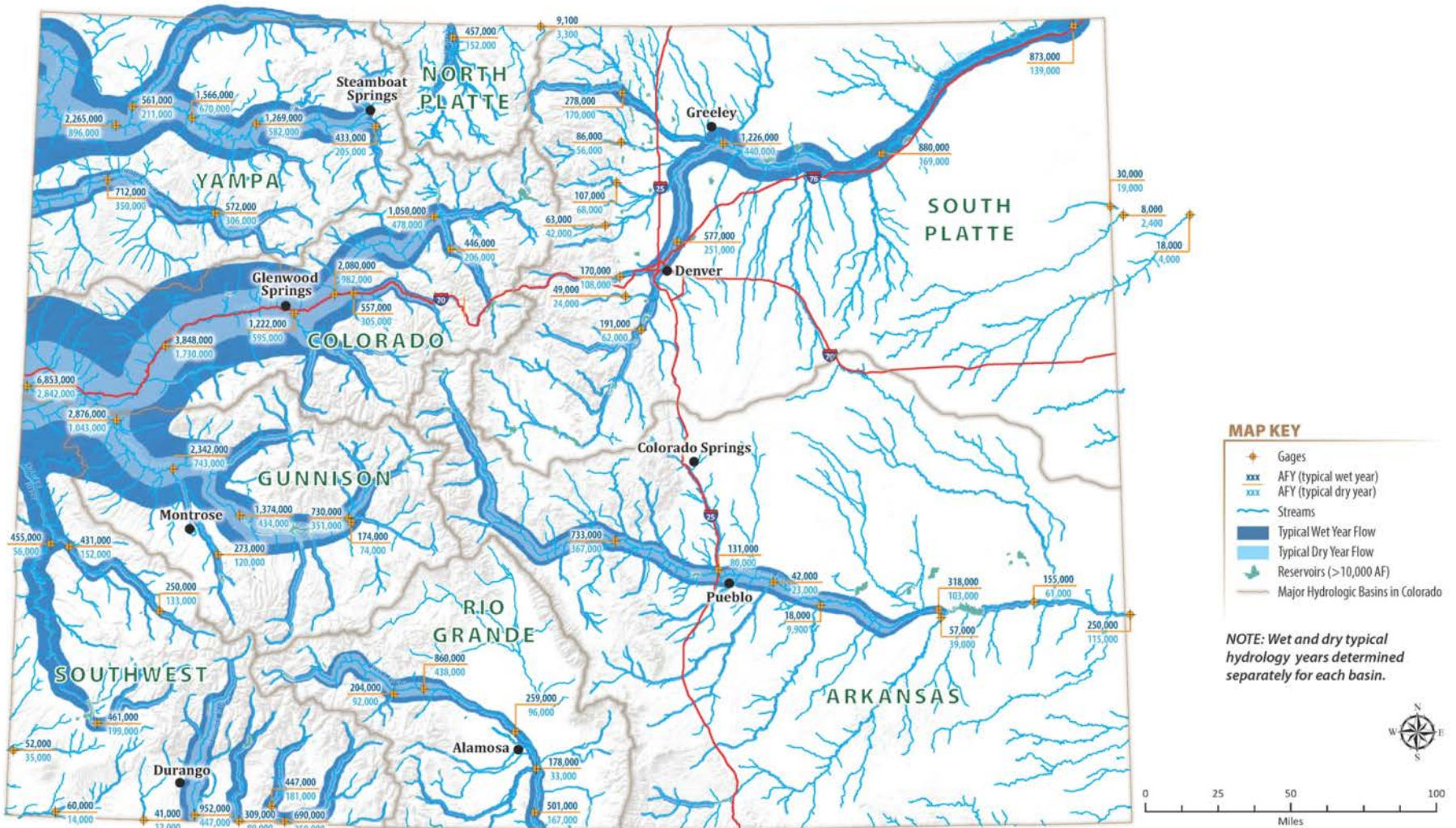


DROUGHT

DRAFT

STATEWIDE

Summary of Observed Wet & Dry Surface Water Hydrology



Chapter 5 - Water Demand and Ag Water Needs

Statewide irrigated acreage could decrease from 3.5 million irrigated acres to 2.7 million acres statewide* for a variety of reasons:

- Municipalities turning to agricultural water rights
- Urban areas expand onto irrigated farmlands
- Due to aquifer sustainability and some compact-related issues, the South Platte, Republican, and Rio Grande Basins have reduced, or are in the process of reducing, irrigated acreage.

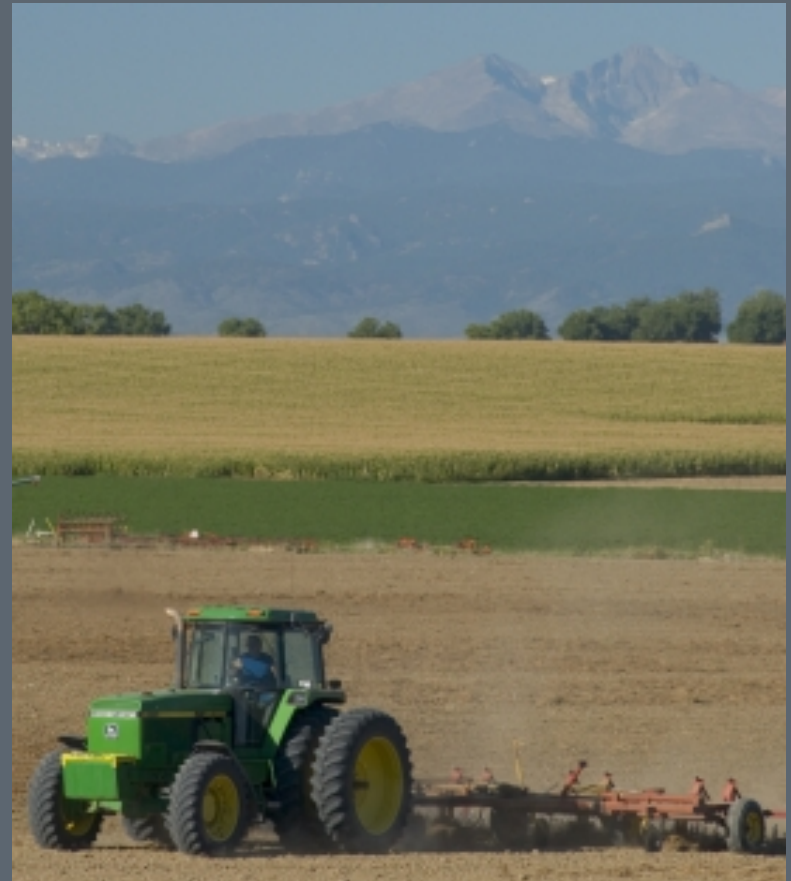


Table 5-3: Summary of agricultural goals indicated in the BIPs

| Basin | Identified Agricultural Goals |
|--------------------|---|
| Arkansas | Increase amount of agricultural augmentation water by 30,000-50,000 acre-feet |
| Colorado | Reduce agricultural shortages |
| Gunnison | Reduce agricultural shortages by approximately 17,000 acre-feet |
| Metro/South Platte | Reduce agricultural shortages |
| North Platte | Add an additional 28,000 acres of irrigated farmland; continue to restore, maintain, and modernize critical water infrastructure to preserve current uses and increase efficiencies |
| Rio Grande | Manage water use to sustain optimal agricultural economy throughout the Basin's communities |
| Southwest | Reduce agricultural shortages by implementing at least 10 projects |
| Yampa/White/Green | Add an additional 14,000 acres of irrigated farmland; reduce agricultural shortages |



6.4 Alternative Agricultural to Urban Transfers



Alternatives to 'Buy and Dry'

- Rotational Fallowing
- Interruptible Supply
- Deficit Irrigation
- Water Cooperative
- Water Bank
- Municipal-Ag Water Use Sharing
- Water Conservation Easement
- HB 13-1248
- Flex water market



Actions

- Implement existing ATM legislation
- Evaluate effects of ATMs
- Support existing and future incentive programs
- Continue ATM Grant Program
- Update SWSI



CWCB's ATM Grant Program



- Colorado Senate Bill 07-122 authorized grants to fund: lease-fallowing, pilot projects, flex market studies, demonstration efforts
- Nearly two dozen grants have been awarded, ranging from approximately \$8,000 to almost \$500,000 each
- Initially funded with a total of \$4 million, with an additional \$750,000 approved in the CWCB 2015 Projects Bill (Colorado House Bill 14-1333)

6.3.4 Agricultural Conservation, Efficiency & Reuse



BIPs Goals for Increasing Ag Efficiencies and Modernizing Ag


- Arkansas Roundtable: Provide increasing quantities of augmentation water for increased farm efficiencies.
- Colorado Roundtable: Improve agricultural efficiency, preservation, and conservation.
- Gunnison Roundtable: Restore, maintain, and modernize critical water infrastructure, including hydropower.
- North Platte Roundtable: “Continue to restore, maintain, and modernize critical water infrastructure to preserve current uses and increase efficiencies.”



BIPs Goals for Increasing Ag Efficiencies and Modernizing Ag (continued)

- Rio Grande Roundtable: Operate, maintain, rehabilitate, and create necessary infrastructure to the Basin's long-term water needs, including storage.
- Southwest Roundtable: Developed a draft goal to "Implement efficiency measures to maximize beneficial use and production".
- Yampa/White/Green Roundtable: Restore, maintain, and modernize water storage and distribution infrastructure.





*6.5 Municipal, industrial,
& agricultural
infrastructure projects &
methods*

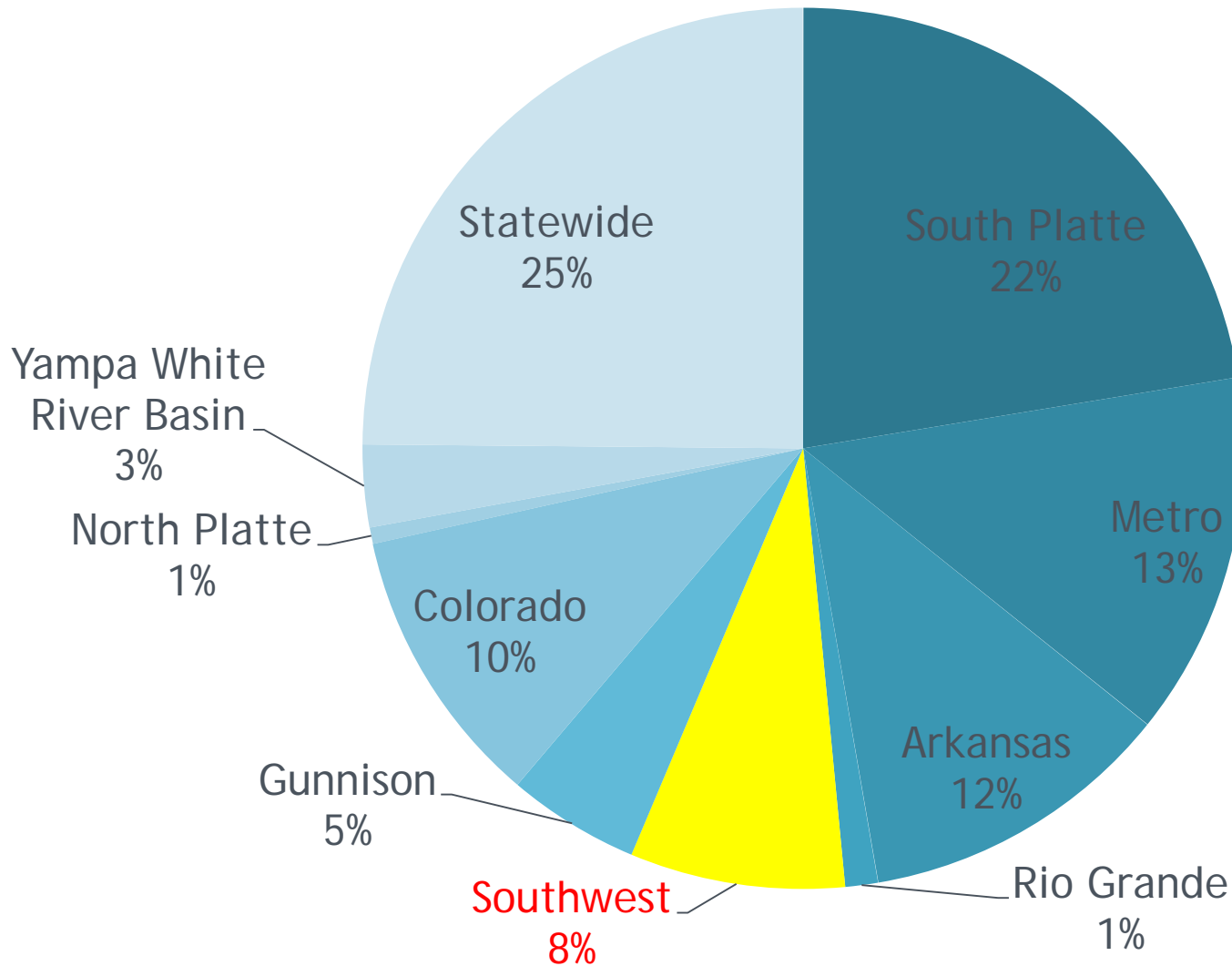


Public Engagement

- Over 16,000 comments submitted
- Over 150 basin outreach meetings
- Over 800 regular roundtable meetings
- Nearly 15,000 unique inquiries to website, over 30,000 pages viewed
- SB115 outreach by (IWRRC) legislature - more hearings this summer
- CWCB Board meetings through September 2015
- All input and CWCB responses available online

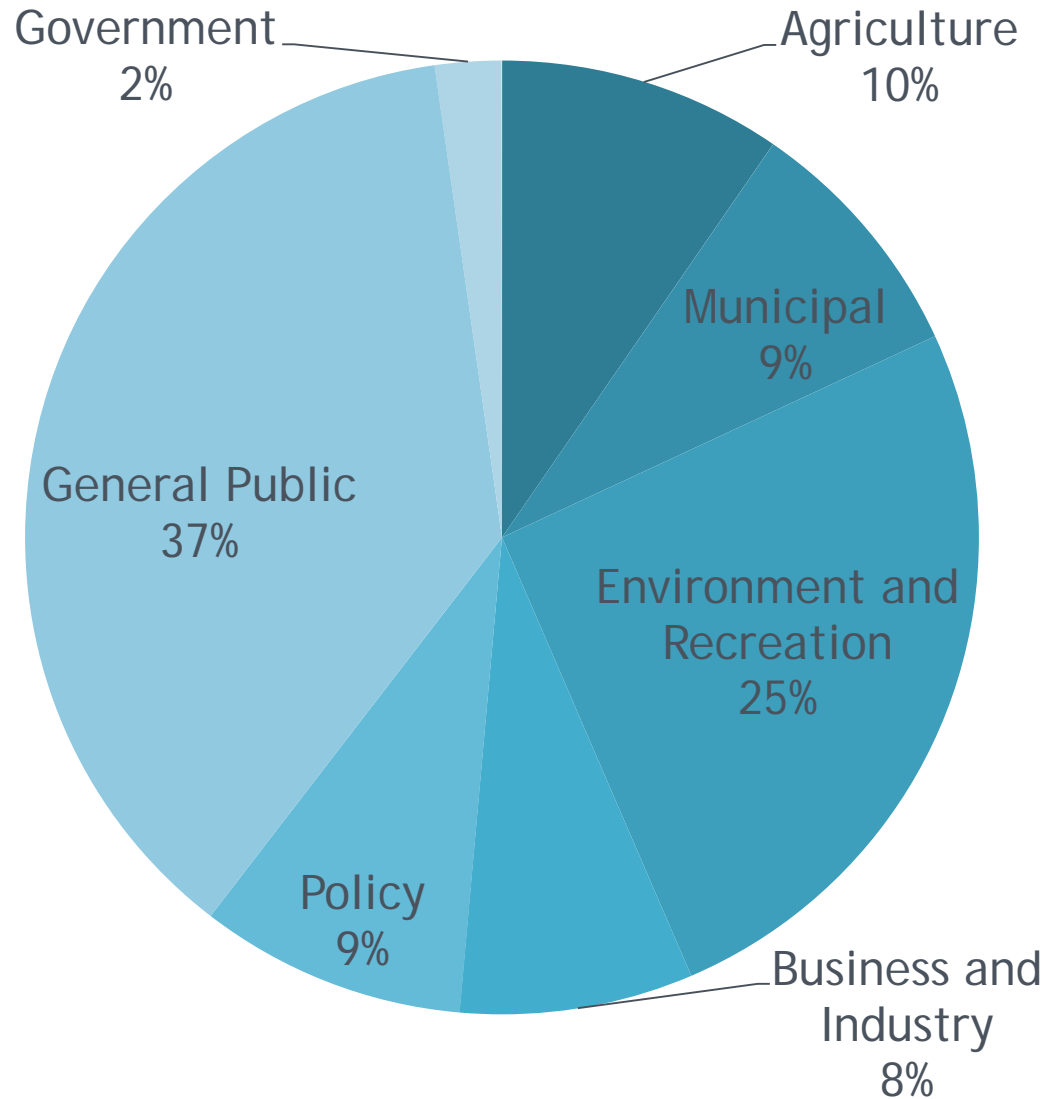


Where is Input on Colorado's Water Plan Coming From?



Over the past 8 months people within the Southwest basin increased their level of input from 3% to 8% of the total comments on received by the CWCB on Colorado's Water Plan. The Colorado and Arkansas basins also increased their comments. These figures are based on a total of 170 webforms generated from the Colorado's Water Plan website between 9/20/2013 and 3/4/2015.

Which Consituent Groups are Submitting Input?



In the past 8 months, CWCB heard more from the municipal, agriculture, policy, business and industry constituent groups than the first 8 month period. The environment and recreation constituent group remained about the same. These figures are based on a total of 170 webforms generated from the Colorado's Water Plan website between 9/20/2013 and 3/4/2015.

How can you engage in this process?

- Continue to engage with the Southwest basin roundtable and CWCB as the water plan process continues.
- Public input on Colorado's Water Plan continues to increase, and input has been received from every basin across the state.
- The public input process will continue through 2015.
- Visit www.coloradowaterplan.com to learn more.



We're looking for photos!
Please send them to cowaterplan@state.co.us.



Photo by Travis Harvey, Submitted by CO Dept of Ag





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www.coloradowaterplan.com