Agriculture and the Colorado Water Plan
2004  STATEWIDE WATER SUPPLY INITIATIVE (SWSI I)

2005  WATER FOR THE 21ST CENTURY ACT

2007  SWSI PHASE II

2010  SWSI 2010

2015  THE COLORADO WATER PLAN

2017  RIPPLE EFFECTS

2019  THE TECHNICAL UPDATE
Establishes a “roadmap” to guide strategies and actions to address current and future water resource challenges while honoring Colorado’s water values.

Collective effort and vision of hundreds of stakeholders, dozens of state agencies, nine basin roundtables, thousands of meetings, and over 30,000 public comments.
<table>
<thead>
<tr>
<th>CRITICAL AGRICULTURE ACTIONS</th>
<th>SECTION</th>
<th>PARTNERS</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Establish an education and assistance program for farmers and ranchers to help realize more market-competitive transactions that promote implementation of ATMs, and enable Coloradans to enter the agriculture industry.</td>
<td>6.5, 6.4, 6.3.4</td>
<td>CWCB, CDA</td>
<td>Programmatic</td>
</tr>
<tr>
<td>2 Encourage ditch-wide and regional planning to explore system-wide conservation and efficiency opportunities and tradeoffs, the potential for water sharing, and long-term infrastructure maintenance needs.</td>
<td>6.5, 6.3.4</td>
<td>CWCB, agricultural partners, BRTs</td>
<td>Programmatic</td>
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<tr>
<td>3 Provide grants, loans, and technical support to update and improve Colorado’s aging agricultural infrastructure, especially where improvements provide multiple benefits.</td>
<td>6.5, 6.3.4</td>
<td>CWCB, BRTs, agricultural partners, other stakeholders</td>
<td>Programmatic</td>
</tr>
<tr>
<td>4 Develop model voluntary flow agreement language, facilitation, and technical support to encourage the use of these agreements when paired with irrigation efficiency practices.</td>
<td>6.3.4</td>
<td>CWCB, DWR, agricultural partners, environmental groups, BRTs</td>
<td>Programmatic, state agency policies</td>
</tr>
<tr>
<td>5 Explore the development of administrative means to track and administer agricultural conserved water for the purposes of marketing these waters.</td>
<td>6.3.4, 6.4</td>
<td>DWR, CWCB</td>
<td>Process</td>
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<tr>
<td>6 Explore expanded grant funding that supports implementation of ATM projects, related infrastructure, or entities that would help facilitate alternative transfer methods.</td>
<td>6.4</td>
<td>CWCB, BRTs, DWR, stakeholders</td>
<td>Process</td>
</tr>
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</table>
Sets an objective that agricultural economic productivity will keep pace with the growing state, national and global needs, even if some acres go out of production. The state will work closely with the agricultural community, in the same collaborative manner that has produced agricultural transfer pilot projects. To share at least 50,000 acre-feet of agricultural water using voluntary alternative transfer method by 2030.
• Provided an update made toward meeting Colorado Water Plan objectives, benchmark goals, and actions

• Identifies areas where there may be barriers to implementation

• Underscores that all Coloradans share in responsibility for implementing the Colorado Water Plan
COLORADO WATER PLAN
IMPLEMENTATION

• Technical Assistance
  • Colorado Water Loss Initiative
  • Integrate Land Use and Water Planning

• Education & Public Outreach
  • Statewide Water Education Action Plan

• Financial Support
  • Colorado Water Plan Grant Program
    • Cost-share assistance for projects that further measurable objectives and actions
    • Multi-purpose storage and irrigation infrastructure, ag water conservation and efficiency projects
UPDATING THE WATER PLAN

ANALYSIS + TECHNICAL UPDATE PHASE

BASIN PLAN UPDATE PHASE

COMPREHENSIVE UPDATE PHASE

<table>
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<tr>
<th>TABLE 11-1</th>
<th>CYCLICAL PLANNING PROCESS PROPOSED BY THE CWCB</th>
</tr>
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<tbody>
<tr>
<td>Product</td>
<td>Year Initiated</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------</td>
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<td>Basin Implementation Plans</td>
<td>2013</td>
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<td>Colorado's Water Plan</td>
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<td>Statewide Water Supply Initiative</td>
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<td>Colorado's Water Plan</td>
<td>2020</td>
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<td>Statewide Water Supply Initiative</td>
<td>2022</td>
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</table>

**ACTIONS**

1. The CWCB will work with other state agencies, the basin roundtables, and the people of Colorado to update Colorado's Water Plan, beginning no later than 2020.

2. The CWCB will develop guidelines for Basin Roundtable WSRA grants to help facilitate the implementation of the BIPs.
Technical Update Objectives:

- Update and recharacterize future gaps and the ability to meet municipal, self-supplied industrial, and agricultural water needs using new information and tools.

- Evaluate environmental and recreational flow needs with new tools.

- Create user-friendly, standardized tools and data products to assist basin roundtables update their portfolios of projects & methods for meeting future water needs, with forthcoming updates to their BIPs.
WHAT'S NEW? Scenario Planning and Adaptive Management

[A] Business as Usual
- Water Supply
- Climate Status
- Social Values
- Agriculture Needs
- Water Needs

[B] Weak Economy
- Water Supply
- Climate Status
- Social Values
- Agriculture Needs
- Water Needs

[C] Cooperative Growth
- Water Supply
- Climate Status
- Social Values
- Agriculture Needs
- Water Needs

[D] Adaptive Innovation
- Water Supply
- Climate Status
- Social Values
- Agriculture Needs
- Water Needs

[E] Hot Growth
- Water Supply
- Climate Status
- Social Values
- Agriculture Needs
- Water Needs
The amount of water supply that needs to be diverted or pumped to meet the full crop consumptive use.
WHAT’S NEW?

Estimation of agricultural gaps in parallel with M&I gaps
• Current statewide total agricultural diversion demand is approximately 13 MAF

• Agricultural demands are expected to decrease in most basins due to urbanization, planned agricultural-to-municipal water transfers, groundwater sustainability issues, and emerging technologies

• Demand projected to increase under Hot Growth scenario due to higher crop water requirements
Revisiting the Gaps—Results for Planning Scenarios

- Ag currently experiences a gap, and it is projected to increase statewide
  - **Total gap** – reflects the overall shortage of agricultural water supplies to meet diversion demands required to fully irrigate crops
  - **Incremental gap** – the degree to which the ag gap may increase beyond what has historically been experienced
- M&I users do not currently experience a gap, but a growing population & potential impacts from climate change are projected to create gaps
COLLABORATIVE. ITERATIVE. INTERCONNECTED.