

2019

Report to the Colorado General Assembly



Water Resources Review Committee



Prepared by Legislative Council Staff
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December 2019

Water Resources Review Committee

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December 2019

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December 2019

To Members of the Seventy-second General Assembly:

Submitted herewith is the final report of the Water Resources Review Committee. This committee was created pursuant to Article 98 of Title 37, Colorado Revised Statutes. The purpose of this committee is to oversee the conservation, use, development, and financing of Colorado's water resources.

At its meeting on November 15, 2019, the Legislative Council reviewed the report of this committee. A motion to forward this report and the bills therein for consideration in the 2020 session was approved.

Sincerely,

/s/ Senator Leroy Garcia
Chair

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The text of each bill is included as Attachments A through D after the resource materials page(s).

This report is also available online at:

<https://leg.colorado.gov/committees/water-resources-review-committee/2019-regular-session>

Committee Charge

The Water Resources Review Committee (WRRC) was created to contribute to and monitor the conservation, use, development, and financing of Colorado's water resources for the general welfare of the state (Section 37-98-102, C.R.S.). It is also required to review statewide planning for water resources. The WRRC reviews and proposes legislation to further its purpose. In conducting its review, the WRRC consults with experts in the field of water conservation, quality, use, finance, and development. The WRRC was authorized to meet up to eight times in 2019 and to take two field trips.

Committee Activities

During the 2019 interim, the WRRC held five meetings and took two field trips. The WRRC met with a broad range of water users and government officials, including local water providers, water policy experts, state water planners, and concerned citizens. The committee received briefings on major water issues affecting the state, including issues in the Colorado River basin, emerging technologies, economics and finance, the water quality permitting process, Colorado's instream flow program, educational activities, the Colorado Water Plan, the basin roundtables, Colorado climate and weather, water conservation, reuse, water supply, and land use planning. The committee also drafted legislation about two additional topics on which the committee has received briefings in previous years, including water well inspectors and speculation under Colorado water law.

Field trips. In June, the committee made a two-day field trip in the South Platte River Basin, where it visited water diversion and storage facilities, agricultural operations, and restoration projects. This tour was organized by Water Education Colorado. In August, the committee attended the Colorado Water Congress summer conference in Steamboat Springs, where it held a public meeting about the state's instream flow program and attended presentations about water infrastructure, financing, water planning, ongoing water supply studies, and other water management issues.

Colorado River

The committee heard presentations from the Colorado Water Conservation Board within the Department of Natural Resources (DNR), the Colorado State University Water Institute, the Nature Conservancy, Hydros Consulting, Denver Water, Northern Water, the Colorado River Water Conservation District, and the Southwestern Water Conservation District regarding on-going discussions about potential demand management programs, drought contingency plans, and other issues in the Colorado River Basin. The demand management program framework currently under consideration involves temporary, voluntary, and compensated reductions in diversions in an effort to conserve water that would otherwise be consumed or consumptively used. The Colorado Water Conservation Board (CWCB) and other stakeholders within the Colorado River Basin have formed work groups to investigate how a demand management program would operate in Colorado. Drought contingency plans have also been recently approved in the basin in an effort to ensure downstream water obligations continue to be met under the interstate Colorado River Compact.

Committee recommendations. As a result of its discussions, the committee recommends Bill A, which concerns public involvement in developing a Colorado River demand management program.

Emerging Technologies for Water Management

The committee heard presentations from the University of Colorado Mortenson Center in Global Engineering and the Governor's Office of Information Technology regarding emerging technologies that could be used for water management. Technologies discussed included distributed ledger technologies such as blockchain, which can be used for efficient trading of water rights; satellite technology, which can improve forecasting and measurement of surface water and snowpack; and water flow and quality sensors. Australia's water trading system was described as a potential model of efficient water rights trading.

Committee recommendations. As a result of its discussions, the committee recommends Bill B, which concerns a study of emerging technologies that have the potential to improve water management.

Water Well Inspectors

In 2018, the committee heard a presentation from the Division of Water Resources about the state's Water Well Inspection Program, which was created in 2003. The State Board of Examiners of Water Well Construction and Pump Installation Contractors has authority over the construction of wells, installation of equipment, and licensing of contractors. The program is funded by the Well Inspection Cash Fund, which consists of contractor license fees, well permit fees, and fines. In FY 2017-18, about 4,000 new water wells were constructed, 310 of which were inspected by the program's three staff members. A performance audit of the program was completed by the Office of the State Auditor in May 2019. Among other findings, the report recommends that the division prioritize inspection of high-risk wells and key phases of construction. The division agreed with these recommendations.

Committee recommendations. As a result of its discussions, the committee recommends Bill C, which establishes a minimum staffing level for the state's well inspection program.

Speculation under Colorado Water Law

In 2014, the committee heard a presentation from Colorado Supreme Court Justice Greg Hobbs about why water speculation is prohibited under the Colorado Constitution. Water speculation can generally be defined as acquiring water rights explicitly for profit as opposed to using them for beneficial use. In 2018, the committee also received a briefing from the Colorado River Water Conservation District and a water law firm about recent land and water transfers in the state and other activity involving investment groups purchasing land and associated water rights in Colorado.

Committee recommendations. As a result of its discussions, the committee recommends Bill D, which convenes a work group to explore ways to strengthen anti-speculation within Colorado water law.

Proposition DD

The committee heard a presentation from Legislative Council Staff regarding the ballot information booklet analysis for Proposition DD concerning the legalization and taxation of sports betting to fund water projects and obligations. In May 2018, a U.S. Supreme Court ruling allowed all states to legalize sports betting. Following this ruling, the state legislature referred Proposition DD to the voters asking to legalize and tax sports betting. The measure was approved by voters in November 2019. The majority of the tax and fee revenue from sports betting will be used to create a source of funding for the Colorado Water Plan and other water-related obligations.

Committee recommendations. The committee recommended that a bill on the legislative oversight of sports betting revenue used for water projects be drafted, but the draft bill was not approved by the committee.

Water Quality Permitting Process

Senate Bill 13-073, which was recommended by the WRRC, required the Water Quality Control Division within the Colorado Department of Public Health and Environment to follow certain procedures for public comment and cost-benefit analyses when proposing changes to water quality control permits. The current permitting system differentiates general permits, which are typically used for sources with predictable discharge characteristics and well-established best management practices, from individual permits, which contain unique or site-specific discharge characteristics.

Committee recommendations. The committee requested the drafting of a bill that would expand permitting procedures that are currently in place for general permits to also apply to individual permits, but the draft bill was not approved by the committee.

Instream Flow Program

Senate Bill 73-097 initiated Colorado's instream flow program by changing the statutory definition of beneficial use to include water right appropriations by the state for minimum stream flows or natural lake levels that are required to preserve the natural environment to a reasonable degree. It also changed the definition of appropriation to remove the requirement that water must be diverted for beneficial use. Since its enactment, the CWCB has appropriated instream flow water rights on about 1,700 stream segments covering 9,700 miles.

Several legislative changes to the program have occurred from 1973 to 2019. House Bill 19-1218 and House Bill 19-1271, which were both postponed indefinitely, would have made changes to the state's instream flow program. Under current law, the CWCB may use water for instream flows if the loaned water is used to preserve the natural environment of a stream reach that is subject to a decreed instream flow water right held by the CWCB. HB 19-1218 would have expanded the number of years within a ten-year period that a loan may be exercised from three to five and would have allowed a loan to be renewed for up to two additional ten-year periods. HB 19-1271 would have clarified the authority of the CWCB to augment stream flows with water that has been previously decreed for

augmentation, without requiring a further change of the water right. The committee heard from stakeholders across the state and discussed potential changes to the state's instream flow program at several meetings during the 2019 interim.

Water Education Colorado

The committee heard a presentation from Water Education Colorado, a non-profit foundation created by House Bill 02-1152. The organization's mission is to ensure a sustainable water future for Colorado by educating and engaging Colorado citizens around water as a limited resource. The committee received an update about educational opportunities for water professionals and the public about Colorado's water resources, as well as other water programs and publications, including Headwaters Magazine, Fresh Water News, and its water policy citizen guides.

Colorado Headwaters Region

Colorado is a headwaters state, which means the state's water originates as snowpack in the mountains and flows out of state through its many rivers. Colorado's headwaters region is the mountainous area in which these rivers begin. The committee heard a presentation from the Northwest Colorado Council of Governments concerning the economic perspectives and challenges of Colorado's headwaters region, including the impact of reduced streamflows. Defining characteristics of the region include being comprised of 70 percent public lands and having economies that are dependent on water resources and other recreational opportunities.

Colorado Water Plan and Technical Update

The committee heard a presentation from the CWCB concerning the 2019 Analysis and Technical Update to the Colorado Water Plan. The 2019 technical update provides the underlying water supply and demand analyses that informs state water planning decisions. In this capacity, it replaces the document originally known as the Statewide Water Supply Initiative (SWSI). The technical update estimates future water supplies and demands under five planning scenarios, each with varying assumptions about water supply, climate, social values, agricultural needs, and water demands. The update also includes tools and datasets that can be used by the basin roundtables in forthcoming updates to their basin implementation plans, which serve as detailed portfolios of projects and methods to address basin-specific water supply and demand gaps.

Interbasin Compact Committee and Basin Roundtables

In 2005, the General Assembly enacted the Colorado Water for the 21st Century Act, which established a process to address the state's growing water demand. This law created nine basin roundtables including: the Denver metropolitan area; South Platte River Basin; Arkansas River Basin; Rio Grande River Basin; Gunnison River Basin; Colorado River Basin; Yampa-White River Basin; Dolores-San Miguel-San Juan River Basin; and North Platte River Basin. These roundtables are charged with

identifying water needs within each basin and conducting discussions with other basins to address interbasin water issues. The act also created the 27-member Interbasin Compact Committee (IBCC) to facilitate negotiations between the roundtables and to address water issues around the state. The committee heard updates from the IBCC and each of the nine basin roundtables, including an overview of the IBCC's mission and values, history, membership, activity, and future goals, as well as individual needs assessments for each basin.

Colorado Climate and Weather

The committee heard several presentations regarding Colorado's climate and weather from the CWCB, the Division of Water Resources, and the Colorado Agricultural Meteorological Network (CoAgMET) program within Colorado State University (CSU). The CWCB discussed recent floods from rain and snowpack and the impact on summer runoff. The CWCB also provided information about how the state forecasts streamflow and prepares for snowmelt, including the increased risk of flooding near recent wildfire burn scars. The Division of Water Resources updated the committee on drought conditions, snowpack, environmental impacts, drought monitoring, risk assessment, and reservoir storage. CoAgMET was created in the 1990s to better measure local weather conditions near irrigated agricultural areas. CoAgMET is used across Colorado to calculate evapotranspiration, assist with irrigation timing, more efficiently use water, and monitor changing weather. The committee also heard about coordination, data management, web support, and funding for the CoAgMET program.

Water Conservation, Reuse, and Supply Alternatives

The Colorado State Demography Office estimates that 8.5 million people will live in Colorado by 2050. The 2019 technical update to the Colorado Water Plan estimates that an additional 250,000 to 750,000 acre-feet of water will be needed each year to meet these needs in 2050. This range is based on the five planning scenarios previously discussed. This gap must be met by a combination of water conservation and supply alternatives. The committee heard several presentations about some of these alternatives, including water conservation, precipitation harvesting, graywater, reuse, and new water supply projects. The CWCB presented a report to the committee about how water conservation data collected under House Bill 10-1051 has been used to improve state water planning in recent years. The Division of Water Resources presented two reports to the committee about rainwater collection as required by House Bill 16-1005 and House Bill 15-1016. The University of Colorado presented to the committee about its recent graywater research efforts. Western Resource Advocates, Denver Water, and Colorado Springs updated the committee about water reuse practices in Colorado. The Lower South Platte Water Conservancy District and the South Metro Water Supply Authority gave a presentation to the committee about the South Platte Regional Opportunities Working Group, which is a collaborative effort to provide new water supplies in the South Platte River Basin.

Water and Land Use Planning

Land use planning in Colorado is primarily a function of local governments. However, the Colorado Water Plan sets a local land use goal that states, "by 2025, 75 percent of Coloradans will live in

communities that have incorporated water-saving actions into land-use planning." It also calls for a partnership among water providers and local communities. The CWCB works with the Department of Local Affairs, local governments, water providers, local government associations, councils of governments, and homebuilders associations to help reach this goal. The committee heard a presentation from the American Planning Association and Western Resource Advocates about how local governments can better integrate water and land use planning. For example, potential legislative changes include authorizing local governments to incorporate water conservation and water management goals into their land use plans. Western Resource Advocates also demonstrated its state policy database, which features an inventory of land use and water programs from other states.

Summary of Recommendations

As a result of the committee's activities, the committee recommended four bills to the Legislative Council for consideration in the 2020 session. At its meeting on November 15, 2019, the Legislative Council approved the bills for introduction. The approved bills are described below.

Bill A – Require Public Input on Water Demand Management Program

Bill A requires the Colorado Water Conservation Board and the Water Resources Review Committee to involve the public and provide opportunities for public comment before adopting a Colorado River demand management program. This process is similar to that used for the Colorado Water Plan under Senate Bill 14-115.

Bill B – Study Emerging Technologies for Water Management

Bill B directs the University of Colorado, in collaboration with the Colorado Water Institute at Colorado State University, to conduct feasibility studies and pilot deployments of new and emerging technologies that have the potential to improve water management.

Bill C – Add Water Well Inspectors Identify High-Risk Wells

Bill C establishes a minimum staffing level for the state's well inspection program and directs the Board of Examiners of Water Well Construction and Pump Installation Contractors to promulgate rules for identifying high-risk wells that should be prioritized for inspection.

Bill D - Study Strengthening Water Anti-Speculation Laws

Bill D requires the Executive Director of the Department of Natural Resources to convene a work group during the 2020 interim to explore ways to strengthen anti-speculation within Colorado water law. The work group is required to provide a written report to the WRRRC by August 15, 2021.

Resource Materials

Meeting summaries are prepared for each meeting of the committee and contain all handouts provided to the committee. The summaries of meetings and attachments are available at the Division of Archives, 1313 Sherman Street, Denver (303-866-2055). The listing below contains the dates of committee meetings and the topics discussed at those meetings. Meeting summaries are also available on our website at:

<http://leg.colorado.gov/committees/water-resources-review-committee/2019-regular-session>

Meeting Date and Topics Discussed

August 21, 2019

- ◆ Overview and discussion on Colorado's instream flow program
- ◆ Public testimony
- ◆ Overview of committee procedures and deadlines

September 11, 2019

- ◆ Colorado River drought contingency planning and demand management
- ◆ Colorado River issues and challenges
- ◆ Colorado River water users panel
- ◆ Public testimony

September 12, 2019

- ◆ Update from Water Education Colorado
- ◆ Overview of Colorado headwaters region economy
- ◆ Legislative Council Staff overview of Proposition DD
- ◆ Technologies to monitor, conserve, and trade water resources
- ◆ Potential water applications of blockchain technologies in Colorado
- ◆ Update from Colorado Water Congress instream flow subgroup
- ◆ Requests for draft committee legislation

October 23, 2019

- ◆ Colorado Water Plan and 2019 Technical Update
- ◆ Update from the Interbasin Compact Committee
- ◆ Updates from the basin roundtables
- ◆ Public testimony

October 24, 2019

- ◆ Drought and flood update
- ◆ CoAgMET weather network
- ◆ Statutory reports related to water conservation and precipitation collection
- ◆ Update on graywater research at the University of Colorado
- ◆ South Platte Regional Opportunities Water Group
- ◆ Water and land use planning
- ◆ Public testimony
- ◆ Approval of committee legislation

Second Regular Session
Seventy-second General Assembly
STATE OF COLORADO

Attachment A

BILL A

LLS NO. 20-0326.01 Richard Sweetman x4333

SENATE BILL

SENATE SPONSORSHIP

Coram and Donovan, Bridges, Sonnenberg

HOUSE SPONSORSHIP

Arndt and Catlin, Saine, Titone

Senate Committees

House Committees

A BILL FOR AN ACT

101 **CONCERNING THE INCLUSION OF PUBLIC INPUT IN THE DEVELOPMENT**
102 **OF A STATE WATER RESOURCES DEMAND MANAGEMENT**
103 **PROGRAM.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov/>.)

Water Resources Review Committee. The bill requires the Colorado water conservation board and the water resources review committee to involve the public and provide opportunities for public comment, using procedures similar to those used for initial adoption of the state water plan, before adopting any final or significantly amended

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters or bold & italic numbers indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

water resources demand management program as part of the Colorado upper basin states' drought contingency plan.

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

2 **SECTION 1.** In Colorado Revised Statutes, **add** 37-60-106.7 as
3 follows:

4 **37-60-106.7. Water resources demand management program**
5 **- public hearings. (1) Legislative declaration.** (a) THE GENERAL
6 ASSEMBLY FINDS THAT:

7 (I) TO REDUCE THE RISK OF A DECLARED WATER SHORTAGE ON THE
8 COLORADO RIVER, IN 2019 THE STATES OF THE UPPER COLORADO RIVER
9 BASIN, INCLUDING COLORADO, ADOPTED DROUGHT CONTINGENCY PLANS,
10 WHICH PLANS CONTEMPLATE THE DEVELOPMENT OF WATER DEMAND
11 MANAGEMENT PROGRAMS;

12 (II) TO THIS END, THE GENERAL ASSEMBLY SUPPORTED THE
13 DEVELOPMENT OF A WATER RESOURCES DEMAND MANAGEMENT
14 PROGRAM, REFERRED TO IN THIS SECTION AS THE "PROGRAM", BY PASSING
15 SENATE BILL 19-212, ENACTED IN 2019, WHICH APPROPRIATED ONE
16 MILLION SEVEN HUNDRED THOUSAND DOLLARS FROM THE GENERAL FUND
17 TO THE DEPARTMENT OF NATURAL RESOURCES FOR USE BY THE COLORADO
18 WATER CONSERVATION BOARD; AND

19 (III) THE BOARD IS DIRECTED TO USE THIS MONEY FOR
20 STAKEHOLDER OUTREACH AND TECHNICAL ANALYSIS TO DEVELOP THE
21 PROGRAM.

22 (b) THE GENERAL ASSEMBLY ALSO FINDS THAT:

23 (I) CURRENT LAW REQUIRES THE BOARD AND THE WATER
24 RESOURCES REVIEW COMMITTEE CREATED IN SECTION 37-98-102,
25 REFERRED TO IN THIS SECTION AS THE "COMMITTEE", TO DEVELOP THE

1 STATE WATER PLAN WITH THE INVOLVEMENT OF THE PUBLIC AND TO
2 PROVIDE OPPORTUNITIES FOR PUBLIC COMMENT BEFORE ADOPTING ANY
3 FINAL OR SIGNIFICANTLY AMENDED PLAN; AND

4 (II) IN DEVELOPING THE PROGRAM, THE BOARD AND THE
5 COMMITTEE SHOULD ALSO INVOLVE THE PUBLIC AND PROVIDE
6 OPPORTUNITIES FOR PUBLIC COMMENT BEFORE ADOPTING ANY FINAL OR
7 SIGNIFICANTLY AMENDED PROGRAM.

8 (c) THEREFORE, THE GENERAL ASSEMBLY DECLARES THAT THE
9 BOARD AND THE COMMITTEE ARE REQUIRED TO INVOLVE THE PUBLIC AND
10 PROVIDE OPPORTUNITIES FOR PUBLIC COMMENT BEFORE ADOPTING ANY
11 FINAL OR SIGNIFICANTLY AMENDED PROGRAM.

12 (2) **Development of program - board duties.** IN DEVELOPING A
13 PROGRAM AS PART OF THE COLORADO UPPER BASIN STATES' DROUGHT
14 CONTINGENCY PLAN, THE BOARD SHALL:

15 (a) DEVELOP THE PROGRAM WITH THE INVOLVEMENT OF THE
16 PUBLIC AND THE BASIN ROUNDTABLES, AS CREATED IN SECTION 37-75-104
17 (3)(b), AND PROVIDE OPPORTUNITIES FOR PUBLIC COMMENT BEFORE
18 ADOPTING ANY FINAL OR SIGNIFICANTLY AMENDED PROGRAM;

19 (b) PRESENT THE SCOPE, FUNDAMENTAL APPROACH, AND BASIC
20 ELEMENTS OF THE PROGRAM TO THE COMMITTEE;

21 (c) IN DEVELOPING THE DRAFT PROGRAM, CONSIDER THE
22 FEEDBACK FROM THE COMMITTEE SUBMITTED TO THE BOARD PURSUANT
23 TO SUBSECTION (3)(a) OF THIS SECTION;

24 (d) PRESENT THE DRAFT PROGRAM TO THE COMMITTEE;

25 (e) IN DEVELOPING THE FINAL PROGRAM, CONSIDER THE FEEDBACK
26 FROM THE COMMITTEE SUBMITTED PURSUANT TO SUBSECTION (3)(b) OF
27 THIS SECTION; AND

1 (f) NOTIFY THE COMMITTEE OF ANY PROPOSED SIGNIFICANT
2 AMENDMENTS TO THE PROGRAM, AS DETERMINED BY THE BOARD, PRESENT
3 THE PROPOSED AMENDMENT TO THE COMMITTEE, AND CONSIDER THE
4 COMMITTEE'S FEEDBACK SUBMITTED PURSUANT TO SUBSECTION (3)(c) OF
5 THIS SECTION.

6 (3) **Development of program - committee duties.** (a) WHEN THE
7 BOARD SUBMITS THE SCOPE, FUNDAMENTAL APPROACH, AND BASIC
8 ELEMENTS OF THE PROGRAM TO THE COMMITTEE AS SPECIFIED IN
9 SUBSECTION (2)(b) OF THIS SECTION, THE COMMITTEE SHALL HOLD AT
10 LEAST ONE PUBLIC HEARING ON THE SCOPE, FUNDAMENTAL APPROACH,
11 AND BASIC ELEMENTS OF THE PROGRAM IN EACH GEOGRAPHIC REGION
12 ASSOCIATED WITH THE BASIN ROUNDTABLES, AS CREATED IN SECTION
13 37-75-104 (3)(b), FOR THE PURPOSE OF RECEIVING THE PUBLIC'S
14 FEEDBACK. THE COMMITTEE SHALL PROVIDE A SUMMARY OF THE PUBLIC'S
15 FEEDBACK, AS WELL AS THE COMMITTEE'S OWN FEEDBACK, TO THE BOARD.

16 (b) WHEN THE BOARD SUBMITS A DRAFT PROGRAM TO THE
17 COMMITTEE AS SPECIFIED IN SUBSECTION (2)(d) OF THIS SECTION, THE
18 COMMITTEE SHALL HOLD AT LEAST ONE PUBLIC HEARING ON THE DRAFT
19 PROGRAM IN EACH GEOGRAPHIC REGION ASSOCIATED WITH THE BASIN
20 ROUNDTABLES FOR THE PURPOSE OF RECEIVING THE PUBLIC'S FEEDBACK.
21 THE COMMITTEE SHALL PROVIDE A SUMMARY OF THE PUBLIC'S FEEDBACK,
22 AS WELL AS THE COMMITTEE'S OWN FEEDBACK, TO THE BOARD.

23 (c) WHEN THE BOARD SUBMITS A SIGNIFICANT AMENDMENT TO THE
24 PROGRAM TO THE COMMITTEE AS SPECIFIED IN SUBSECTION (2)(f) OF THIS
25 SECTION, THE COMMITTEE MAY HOLD AT LEAST ONE PUBLIC HEARING ON
26 THE AMENDMENT IN EACH GEOGRAPHIC REGION ASSOCIATED WITH THE
27 BASIN ROUNDTABLES FOR THE PURPOSE OF RECEIVING THE PUBLIC'S

1 FEEDBACK. IF THE COMMITTEE HOLDS THE HEARING, THE COMMITTEE
2 SHALL PROVIDE A SUMMARY OF THE PUBLIC'S FEEDBACK, AS WELL AS THE
3 COMMITTEE'S OWN FEEDBACK, TO THE BOARD.

4 (d) HEARINGS HELD PURSUANT TO THIS SUBSECTION (3):

5 (I) DO NOT COUNT AGAINST THE NUMBER OF MEETINGS OR FIELD
6 TRIPS ALLOWED BY SECTION 37-98-102 (1)(a); AND

7 (II) MAY BE HELD BEFORE THE BOARD SUBMITS THE DOCUMENTS
8 SPECIFIED IN SUBSECTION (2)(b) OR (2)(d) OF THIS SECTION IF DEEMED
9 APPROPRIATE BY THE CHAIR OF THE COMMITTEE.

10 (e) NO LATER THAN NOVEMBER 1, 2023, AND NO LATER THAN
11 EVERY FIVE YEARS THEREAFTER, THE COMMITTEE SHALL PREPARE A LIST
12 OF SPECIFIC TOPICS THAT IT DEEMS NECESSARY TO BE ADDRESSED IN THE
13 PROGRAM. THE BOARD SHALL PROVIDE ITS RECOMMENDATIONS,
14 INCLUDING SUGGESTIONS FOR POTENTIAL LEGISLATION, FOR THE
15 COMMITTEE'S CONSIDERATION WITHIN EIGHT MONTHS AFTER RECEIPT OF
16 THE LIST OF SPECIFIC TOPICS.

17 **SECTION 2. Act subject to petition - effective date.** This act
18 takes effect at 12:01 a.m. on the day following the expiration of the
19 ninety-day period after final adjournment of the general assembly (August
20 5, 2020, if adjournment sine die is on May 6, 2020); except that, if a
21 referendum petition is filed pursuant to section 1 (3) of article V of the
22 state constitution against this act or an item, section, or part of this act
23 within such period, then the act, item, section, or part will not take effect
24 unless approved by the people at the general election to be held in
25 November 2020 and, in such case, will take effect on the date of the
26 official declaration of the vote thereon by the governor.

Second Regular Session
Seventy-second General Assembly
STATE OF COLORADO

Attachment B

BILL B

LLS NO. 20-0327.01 Duane Gall x4335

HOUSE BILL

HOUSE SPONSORSHIP

Arndt and Saine, Catlin, Roberts, Titone

SENATE SPONSORSHIP

Sonnenberg and Bridges, Coram, Donovan

House Committees

Senate Committees

A BILL FOR AN ACT

101 **CONCERNING A REQUIREMENT THAT THE UNIVERSITY OF COLORADO**
102 **STUDY POTENTIAL USES OF EMERGING TECHNOLOGIES TO MORE**
103 **EFFECTIVELY MANAGE COLORADO'S WATER SUPPLY, AND, IN**
104 **CONNECTION THEREWITH, MAKING AN APPROPRIATION,**
105 **CONDITIONED ON THE RECEIPT OF MATCHING FUNDS FROM**
106 **GIFTS, GRANTS, AND DONATIONS.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov/>.)

Water Resources Review Committee. The bill declares that new

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Capital letters or bold & italic numbers indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

technologies, such as blockchain, telemetry, improved sensors, and advanced aerial observation platforms, can improve monitoring, management, conservation, and trading of water and enhance confidence in the reliability of data underlying water rights transactions. To advance the potential use of these new technologies, the bill:

- Authorizes and directs the university of Colorado, in collaboration with the Colorado water institute at Colorado state university, to conduct feasibility studies and pilot deployments of these new technologies to improve water management in Colorado; and
- Appropriates \$40,000 from the general fund, contingent on the university of Colorado's receipt of a matching \$40,000 in gifts, grants, and donations, for the purpose of funding the studies and pilot programs.

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

2 **SECTION 1. Legislative declaration.** (1) The general assembly
3 finds and determines that emerging new and improved technologies may
4 offer significant benefits to Colorado water users and managers by:

5 (a) Improving the monitoring, management, conservation, and
6 trading of both surface water and groundwater;

7 (b) Reducing inefficiency and waste in the process of recycling,
8 reclaiming, or disposing of produced water and wastewater; and

9 (c) Allowing parties to water rights transactions to have more
10 confidence in the data on which those transactions are based.

11 (2) Therefore, the general assembly declares that it is in the public
12 interest to authorize and direct the university of Colorado, in
13 collaboration with the Colorado water institute, to conduct feasibility
14 studies and pilot deployments of these technologies and to report to the
15 general assembly on the potential of these technologies to improve
16 Colorado water management.

17 **SECTION 2.** In Colorado Revised Statutes, **add** 23-20-141 as

1 follows:

2 **23-20-141. Emerging technologies for water management -**

3 **study - report - repeal.** (1) (a) SUBJECT TO SUBSECTION (2) OF THIS

4 SECTION AND IN COLLABORATION WITH THE COLORADO WATER INSTITUTE

5 CREATED IN SECTION 23-31-801 OR ITS SUCCESSOR, THE UNIVERSITY OF

6 COLORADO SHALL CONDUCT FEASIBILITY STUDIES AND PILOT

7 DEPLOYMENTS OF NEW AND EMERGING TECHNOLOGIES THAT HAVE

8 POTENTIAL TO IMPROVE THE MONITORING, MANAGEMENT, CONSERVATION,

9 AND TRADING OF SURFACE WATER AND GROUNDWATER AND TO REDUCE

10 INEFFICIENCY AND WASTE IN THE PROCESS OF RECYCLING, RECLAIMING, OR

11 DISPOSING OF PRODUCED WATER AND WASTEWATER.

12 (b) THE TECHNOLOGIES TO BE INVESTIGATED BY THE UNIVERSITY

13 PURSUANT TO SUBSECTION (1)(a) OF THIS SECTION MAY INCLUDE:

14 (I) IN-SITU SENSORS TO MONITOR SURFACE AND GROUNDWATER
15 USE;

16 (II) DIRECT OR REMOTE SENSORS TO MONITOR WATER QUALITY;

17 (III) CELLULAR AND SATELLITE TELEMETRY SYSTEMS ALLOWING
18 REMOTE ACCESS TO SENSOR DATA;

19 (IV) AERIAL OBSERVATION PLATFORMS, INCLUDING
20 HIGH-ALTITUDE BALLOONS AND UNMANNED AERIAL VEHICLES;

21 (V) SATELLITE-BASED REMOTE SENSING AND WATER RESOURCE
22 FORECASTING TECHNOLOGIES; AND

23 (VI) BLOCKCHAIN-BASED DOCUMENTATION, COMMUNICATION,
24 AND AUTHENTICATION OF DATA REGARDING WATER USE, TRADING, AND
25 CONSERVATION.

26 (c) ON OR BEFORE JULY 15, 2021, AND UPON REQUEST OF THE

27 WATER RESOURCES REVIEW COMMITTEE IN ANY YEAR THEREAFTER,

1 NOTWITHSTANDING SECTION 24-1-136 (11), THE UNIVERSITY SHALL
2 PROVIDE LIVE TESTIMONY AND A WRITTEN REPORT ON THE PROGRESS OF
3 THE STUDIES AND PILOT DEPLOYMENTS CONDUCTED PURSUANT TO THIS
4 SUBSECTION (1), INCLUDING ANY CONCLUSIONS REGARDING THE
5 POTENTIAL OF THESE TECHNOLOGIES TO IMPROVE COLORADO WATER
6 MANAGEMENT AND ANY RECOMMENDATIONS FOR ADMINISTRATIVE OR
7 LEGISLATIVE ACTION TO PROMOTE THEIR USE, TO THE WATER RESOURCES
8 REVIEW COMMITTEE OF THE GENERAL ASSEMBLY.

9 (2) (a) THE UNIVERSITY OF COLORADO MAY SEEK, ACCEPT, AND
10 EXPEND GIFTS, GRANTS, OR DONATIONS FROM PRIVATE OR PUBLIC SOURCES
11 FOR THE PURPOSES OF THIS SECTION. THE UNIVERSITY SHALL NOT
12 CONDUCT THE STUDIES OR PILOT DEPLOYMENTS DESCRIBED IN SUBSECTION
13 (1) OF THIS SECTION UNTIL IT HAS RECEIVED AT LEAST FORTY THOUSAND
14 DOLLARS PURSUANT TO THIS SUBSECTION (2). AFTER THE UNIVERSITY HAS
15 CERTIFIED TO THE STATE CONTROLLER THAT THE UNIVERSITY HAS
16 RECEIVED AT LEAST FORTY THOUSAND DOLLARS FROM GIFTS, GRANTS,
17 AND DONATIONS FOR THE PURPOSES OF CARRYING OUT THIS SECTION, THE
18 GENERAL ASSEMBLY SHALL APPROPRIATE AN ADDITIONAL FORTY
19 THOUSAND DOLLARS FROM THE GENERAL FUND TO THE UNIVERSITY.

20 (b) THIS SUBSECTION (2) WILL BE REPEALED IF THE UNIVERSITY
21 DETERMINES THAT INSUFFICIENT MONEY HAS BEEN RECEIVED TO SATISFY
22 THE CONDITION STATED IN SUBSECTION (2)(a) OF THIS SECTION. THE
23 UNIVERSITY SHALL NOTIFY THE REVISOR OF STATUTES IN WRITING OF THE
24 DATE ON WHICH A CONDITION SPECIFIED IN THIS SUBSECTION (2) HAS
25 OCCURRED BY E-MAILING THE NOTICE TO
26 REVISOROFSTATUTES.GA@STATE.CO.US. THIS SUBSECTION (2) IS
27 REPEALED, EFFECTIVE THE SEPTEMBER 1 FOLLOWING THE DATE IDENTIFIED

1 IN THE NOTICE THAT THE CONDITION SPECIFIED IN THIS SUBSECTION (2)
2 HAS OCCURRED OR, IF THE NOTICE DOES NOT SPECIFY THAT DATE,
3 FOLLOWING THE DATE OF THE NOTICE TO THE REVISOR OF STATUTES.

4 (3) THIS SECTION IS REPEALED, EFFECTIVE JULY 1, 2022.

5 **SECTION 3.** In Colorado Revised Statutes, 23-31-801, **amend**
6 (4)(e)(V) and (4)(f); and **add** (4)(g) as follows:

7 **23-31-801. Colorado water institute - creation.** (4) It is the duty
8 of the institute to:

9 (e) Facilitate and stimulate scientific research and policy analysis
10 that:

11 (V) Examines the interconnections between climate change, water
12 supply, and water quality and provides tools water managers and
13 policymakers need to adapt to global climate change; ~~and~~

14 (f) Establish and maintain a clearinghouse and archive of water
15 research, water quality, and climate projection data; AND

16 (g) COLLABORATE WITH THE UNIVERSITY OF COLORADO IN
17 STUDYING THE FEASIBILITY OF NEW AND IMPROVED WATER-RELATED
18 TECHNOLOGIES IN ACCORDANCE WITH SECTION 23-20-141.

19 **SECTION 4. Appropriation.** In addition to any other
20 appropriation, there is hereby appropriated, out of any money in the
21 general fund not otherwise appropriated, to the university of Colorado, for
22 the fiscal year beginning July 1, 2020, the sum of forty thousand dollars
23 (\$40,000), or so much thereof as may be necessary, for the
24 implementation of this act.

25 **SECTION 5. Act subject to petition - effective date.** (1) Except
26 as otherwise provided in subsection (2) of this section, this act takes
27 effect at 12:01 a.m. on the day following the expiration of the ninety-day

1 period after final adjournment of the general assembly (August 5, 2020,
2 if adjournment sine die is on May 6, 2020); except that, if a referendum
3 petition is filed pursuant to section 1 (3) of article V of the state
4 constitution against this act or an item, section, or part of this act within
5 such period, then the act, item, section, or part will not take effect unless
6 approved by the people at the general election to be held in November
7 2020 and, in such case, will take effect on the date of the official
8 declaration of the vote thereon by the governor.

9 (2) Section 4 of this act shall only take effect if the university of
10 Colorado certifies in writing to the state controller that the university has
11 received at least forty thousand dollars (\$40,000) in gifts, grants, and
12 donations for the purposes of this act. After receiving this certification,
13 the state controller shall notify the joint budget committee in writing that
14 the state controller has received the certification from the university.

Second Regular Session
Seventy-second General Assembly
STATE OF COLORADO

Attachment C

BILL C

LLS NO. 20-0329.01 Richard Sweetman x4333

HOUSE BILL

HOUSE SPONSORSHIP

Saine and Titone,

SENATE SPONSORSHIP

Sonnenberg and Coram,

House Committees

Senate Committees

A BILL FOR AN ACT

101 **CONCERNING THE INSPECTION OF WATER WELLS.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov/>.)

Water Resources Review Committee. The bill requires the state engineer to employ a minimum of 4 water well inspectors in the state's water well inspection program.

The bill requires the state board of water well construction and pump installation contractors, on or before November 1, 2020, to promulgate rules for identifying high-risk water wells that should be prioritized for inspection. Thereafter, the state engineer shall use the rules to identify high-risk water wells and shall prioritize the inspection of

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.
Capital letters or bold & italic numbers indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

high-risk water wells.

The bill clarifies that money in the well inspection cash fund shall be appropriated to and expended by the state engineer only for the well inspection program.

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

SECTION 1. In Colorado Revised Statutes, 37-91-113, **amend** (1); and **add** (4) as follows:

37-91-113. Well inspection program - high-risk wells - rules.

(1) The state engineer shall monitor compliance with this ~~article~~ ARTICLE 91, including by inspecting water well construction and pump installation.

~~and may~~ ON AND AFTER THE EFFECTIVE DATE OF THIS SUBSECTION (1), AS AMENDED, THE STATE ENGINEER SHALL **employ** A MINIMUM OF FOUR inspectors for ~~such~~ THIS purpose. AT LEAST ONE INSPECTOR MUST BE PRIMARILY CONCERNED WITH THE INSPECTION OF WATER WELL CONSTRUCTION AND PUMP INSTALLATION IN WATER DIVISION 1, AS DEFINED IN SECTION 37-92-201 (1)(a), AND AT LEAST ONE INSPECTOR MUST BE PRIMARILY CONCERNED WITH THE INSPECTION OF WATER WELL CONSTRUCTION AND PUMP INSTALLATION IN WATER DIVISION 2, AS DEFINED IN SECTION 37-92-201 (1)(b). THE STATE ENGINEER SHALL PAY the costs of ~~such~~ monitoring and inspection ~~shall be paid~~ from the well inspection cash fund created ~~by~~ IN section 37-80-111.5.

(4) ON OR BEFORE NOVEMBER 1, 2020, THE BOARD SHALL PROMULGATE RULES FOR IDENTIFYING HIGH-RISK WELLS THAT SHOULD BE PRIORITIZED FOR INSPECTION. THEREAFTER, THE STATE ENGINEER SHALL:

- (a) USE THE RULES TO IDENTIFY HIGH-RISK WELLS; AND
- (b) PRIORITIZE THE INSPECTION OF HIGH-RISK WELLS.

SECTION 2. In Colorado Revised Statutes, 37-80-111.5, **amend**

1 (1)(d) as follows:

2 **37-80-111.5. Fees - rules - satellite monitoring system cash**
3 **fund - well inspection cash fund - created.** (1) (d) Of each fee collected
4 pursuant to sections 37-90-105 (3)(a)(I) and (4)(a); 37-90-107 (7)(d)(I);
5 37-90-116 (1)(a), (1)(c), and (1)(h); 37-90-137 (2)(a); and 37-92-602
6 (3)(a) and (5), forty dollars shall be credited to the well inspection cash
7 fund, which fund is hereby created. ~~Moneys~~ MONEY in the well
8 inspection cash fund shall be appropriated to and expended by the state
9 engineer ONLY for the purposes established in section 37-91-113. Any
10 ~~moneys~~ MONEY credited to the well inspection cash fund and unexpended
11 at the end of any given fiscal year ~~remain~~ REMAINS in the fund and ~~do~~
12 DOES not revert to the general fund. All interest derived from the deposit
13 and investment of ~~this~~ MONEY IN THE fund ~~remain~~ REMAINS in the fund
14 and ~~do~~ DOES not revert to the general fund.

15 **SECTION 3. Act subject to petition - effective date.** This act
16 takes effect at 12:01 a.m. on the day following the expiration of the
17 ninety-day period after final adjournment of the general assembly (August
18 5, 2020, if adjournment sine die is on May 6, 2020); except that, if a
19 referendum petition is filed pursuant to section 1 (3) of article V of the
20 state constitution against this act or an item, section, or part of this act
21 within such period, then the act, item, section, or part will not take effect
22 unless approved by the people at the general election to be held in
23 November 2020 and, in such case, will take effect on the date of the
24 official declaration of the vote thereon by the governor.

Second Regular Session
Seventy-second General Assembly
STATE OF COLORADO

Attachment D

BILL D

LLS NO. 20-0330.02 Thomas Morris x4218

SENATE BILL

SENATE SPONSORSHIP

Donovan and Coram, Bridges

HOUSE SPONSORSHIP

Roberts and Catlin, Arndt, Titone

Senate Committees

House Committees

A BILL FOR AN ACT

101 **CONCERNING A STUDY TO CONSIDER THE STRENGTHENING OF THE**
102 **PROHIBITION ON SPECULATIVE APPROPRIATIONS OF WATER.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov/>.)

Water Resources Review Committee. Current law specifies that an appropriation of water cannot be based on speculation, as evidenced by either of the following:

- The applicant does not have either a legally vested interest or a reasonable expectation of procuring such an interest in the lands or facilities to be served by the appropriation,

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Capital letters or bold & italic numbers indicate new material to be added to existing statute.
Dashes through the words indicate deletions from existing statute.

unless the appropriator is a governmental agency or an agent in fact for the persons proposed to be benefited by the appropriation; or

- The applicant does not have a specific plan and intent to divert, store, or otherwise capture, possess, and control a specific quantity of water for specific beneficial uses.

The bill requires the executive director of the department of natural resources to convene a work group to explore ways to strengthen current anti-speculation law and to report to the water resources review committee by August 15, 2021, regarding any recommended changes.

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

2 **SECTION 1.** In Colorado Revised Statutes, 37-98-103, **add** (8)
3 as follows:

4 **37-98-103. Annual recommendations - bill limitation -**
5 **deadlines for introduction - repeal.** (8) (a) THE EXECUTIVE DIRECTOR
6 OF THE DEPARTMENT OF NATURAL RESOURCES SHALL CONVENE A WORK
7 GROUP DURING THE 2020 INTERIM TO EXPLORE WAYS TO STRENGTHEN
8 CURRENT WATER ANTI-SPECULATION LAW. THE DEPARTMENT AND THE
9 ATTORNEY GENERAL SHALL SUPPORT THE EFFORTS OF THE WORK GROUP.

10 (b) THE WORK GROUP CONSISTS OF CURRENT OR FORMER
11 EMPLOYEES OF THE DEPARTMENT FROM THE STATE ENGINEER'S OFFICE
12 AND THE COLORADO WATER CONSERVATION BOARD APPOINTED BY THE
13 EXECUTIVE DIRECTOR, ONE OR MORE CURRENT EMPLOYEES OF THE
14 ATTORNEY GENERAL'S OFFICE APPOINTED BY THE ATTORNEY GENERAL,
15 ONE OR MORE CURRENT OR FORMER EMPLOYEES OF THE JUDICIAL
16 DEPARTMENT APPOINTED BY THE CHIEF JUSTICE OF THE SUPREME COURT,
17 AND SUCH OTHER STAKEHOLDERS AS THE EXECUTIVE DIRECTOR
18 DETERMINES WOULD BE HELPFUL TO PROMOTE THE WORK GROUP PROCESS
19 OR WORK PRODUCT.

20 (c) THE WORK GROUP SHALL SUBMIT A WRITTEN REPORT TO THE

1 COMMITTEE BY AUGUST 15, 2021, REGARDING ANY RECOMMENDED
2 CHANGES.

3 (d) THIS SUBSECTION (8) IS REPEALED, EFFECTIVE SEPTEMBER 1,
4 2022.

5 **SECTION 2. Act subject to petition - effective date.** This act
6 takes effect at 12:01 a.m. on the day following the expiration of the
7 ninety-day period after final adjournment of the general assembly (August
8 5, 2020, if adjournment sine die is on May 6, 2020); except that, if a
9 referendum petition is filed pursuant to section 1 (3) of article V of the
10 state constitution against this act or an item, section, or part of this act
11 within such period, then the act, item, section, or part will not take effect
12 unless approved by the people at the general election to be held in
13 November 2020 and, in such case, will take effect on the date of the
14 official declaration of the vote thereon by the governor.