A BILL FOR AN ACT

CONCERNING A REQUIREMENT THAT COLORADO INSTITUTIONS OF HIGHER EDUCATION STUDY POTENTIAL USES OF EMERGING TECHNOLOGIES TO MORE EFFECTIVELY MANAGE COLORADO'S WATER SUPPLY, AND, IN CONNECTION THEREWITH, MAKING AN APPROPRIATION CONDITIONED ON THE RECEIPT OF MATCHING FUNDS FROM 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.)

The bill declares that new 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 and Colorado state university, 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 $20,000 to each university from the general fund, contingent on the universities' receipt of a matching $40,000 in gifts, grants, and donations, for the purpose of funding the feasibility studies and pilot deployments.

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

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

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

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

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

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

SECTION 2. In Colorado Revised Statutes, add 23-20-141 as
follows:

**23-20-141. Emerging technologies for water management - study - report - legislative declaration - repeal.** (1) (a) **SUBJECT TO** SUBSECTION (2) OF THIS SECTION AND IN COLLABORATION WITH COLORADO STATE UNIVERSITY AND THE COLORADO WATER INSTITUTE CREATED IN SECTION 23-31-801, THE UNIVERSITY OF COLORADO SHALL CONDUCT FEASIBILITY STUDIES AND PILOT DEPLOYMENTS OF NEW AND EMERGING TECHNOLOGIES THAT HAVE POTENTIAL TO IMPROVE THE MONITORING, MANAGEMENT, CONSERVATION, AND ALLOCATION OF SURFACE WATER AND GROUNDWATER AND TO REDUCE INEFFICIENCY AND WASTE IN THE PROCESS OF RECYCLING, RECLAIMING, OR DISPOSING OF PRODUCED WATER AND WASTEWATER.

(b) THE TECHNOLOGIES TO BE INVESTIGATED BY THE UNIVERSITIES AND THE INSTITUTE PURSUANT TO SUBSECTION (1)(a) OF THIS SECTION MAY INCLUDE:

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

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

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

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

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

(VI) BLOCKCHAIN-BASED DOCUMENTATION, COMMUNICATION, AND AUTHENTICATION OF DATA REGARDING WATER USE; FULFILLMENT OF OBLIGATIONS UNDER COLORADO'S SYSTEM OF PRIOR APPROPRIATION,
INCLUDING AUGMENTATION PLANS; AND WATER CONSERVATION.

(c) ON OR BEFORE JULY 15, 2022, AND UPON REQUEST OF THE
WATER RESOURCES REVIEW COMMITTEE OF THE GENERAL ASSEMBLY IN
ANY YEAR THEREAFTER, THE UNIVERSITIES SHALL PROVIDE LIVE
TESTIMONY AND A WRITTEN REPORT ON THE PROGRESS OF THE FEASIBILITY
STUDIES AND PILOT DEPLOYMENTS CONDUCTED PURSUANT TO THIS
SUBSECTION (1), INCLUDING ANY CONCLUSIONS REGARDING THE
POTENTIAL OF THESE TECHNOLOGIES TO IMPROVE COLORADO WATER
MANAGEMENT AND ANY RECOMMENDATIONS FOR ADMINISTRATIVE OR
LEGISLATIVE ACTION TO PROMOTE THEIR USE, TO THE WATER RESOURCES
REVIEW COMMITTEE.

(d) ANY FEASIBILITY STUDIES OR PILOT DEPLOYMENTS MADE
PURSUANT TO THIS SECTION, AND ANY RECOMMENDATIONS FOR
ADMINISTRATIVE OR LEGISLATIVE ACTION TO PROMOTE THE USE OF THE
TECHNOLOGIES CONSIDERED, MUST TAKE ACCOUNT OF THE EXISTING
SYSTEM OF PRIOR APPROPRIATION UNDER ARTICLE XVI OF THE STATE
CONSTITUTION AND COLORADO WATER LAW. THE GENERAL ASSEMBLY
FINDS, DETERMINES, AND DECLARES THAT NOTHING IN THIS SECTION
SHALL BE CONSTRUED TO ENCOURAGE OR ENABLE SPECULATION IN WATER
OR WATER RIGHTS.

(2) THE UNIVERSITY OF COLORADO AND COLORADO STATE
UNIVERSITY MAY SEEK, ACCEPT, AND EXPEND GIFTS, GRANTS, OR
DONATIONS FROM PRIVATE OR PUBLIC SOURCES FOR THE PURPOSES OF THIS
SECTION. THE UNIVERSITIES SHALL NOT CONDUCT THE FEASIBILITY
STUDIES OR PILOT DEPLOYMENTS DESCRIBED IN SUBSECTION (1) OF THIS
SECTION UNLESS THEY HAVE RECEIVED AT LEAST FORTY THOUSAND
DOLLARS PURSUANT TO THIS SUBSECTION (2) ON OR BEFORE JUNE 1, 2022.
THE GENERAL ASSEMBLY SHALL APPROPRIATE FORTY THOUSAND DOLLARS FROM THE GENERAL FUND TO THE DEPARTMENT OF HIGHER EDUCATION, WITH TWENTY THOUSAND DOLLARS ALLOCATED TO EACH UNIVERSITY, FOR THE PURPOSES OF THIS SECTION; EXCEPT THAT THE APPROPRIATION IS CONTINGENT ON THE UNIVERSITIES RECEIVING FORTY THOUSAND DOLLARS IN GIFTS, GRANTS, AND DONATIONS ON OR BEFORE JUNE 1, 2022, AND CERTIFYING IN WRITING TO THE STATE CONTROLLER THAT SAID AMOUNT HAS BEEN RECEIVED ON OR BEFORE JUNE 1, 2022.

(3) (a) The universities shall notify the revisor of statutes in writing, by e-mail sent to revisorofstatutes.ga@state.co.us, whether the universities received, by June 1, 2022, the amount of money specified in subsection (2) of this section.

(b) (I) If the notice from the universities states that, as of June 1, 2022, the universities did not receive the amount of money specified in subsection (2) of this section, this section is repealed, effective September 1, 2022.

(II) If the notice from the universities states that, as of June 1, 2022, the universities did receive the amount of money specified in subsection (2) of this section, this subsection (3) is repealed, effective upon the date identified in the notice that the money was received or, if the notice does not specify that date, upon the date of the notice to the revisor of statutes.

(4) Each of the universities shall:

(a) Report and regularly update on its website the amount and source of money received pursuant to subsection (2) of this section and, if the money is a gift, grant, or donation, the identity of the donor and the purpose and period of time for
WHICH THE MONEY IS AVAILABLE;


(c) INCLUDE THE INFORMATION SPECIFIED IN SUBSECTION (4)(a) OF THIS SECTION IN ANY PUBLISHED REPORT ON THE OUTCOME OF ANY FEASIBILITY STUDY OR PILOT DEPLOYMENT AND ANY PUBLISHED RECOMMENDATIONS BASED ON THAT OUTCOME.

(5) THIS SECTION IS REPEALED, EFFECTIVE JULY 1, 2023.

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

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

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

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

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

(g) COLLABORATE WITH THE UNIVERSITY OF COLORADO AND COLORADO STATE UNIVERSITY IN STUDYING THE FEASIBILITY OF NEW AND IMPROVED WATER-RELATED TECHNOLOGIES IN ACCORDANCE WITH
SECTION 4. In Colorado Revised Statutes, 23-3.3-103, add (9) as follows:

23-3.3-103. Annual appropriations - repeal. (9) (a) The provisions of subsection (1) of this section concerning appropriations for student financial assistance under this article 3.3 do not apply to appropriations made for the purpose of conducting feasibility studies and pilot deployments to investigate emerging technologies for water management pursuant to section 23-20-141.

(b) This subsection (9) is repealed, effective July 1, 2023.

SECTION 5. In Colorado Revised Statutes, 23-18-308, add (1)(h) as follows:

23-18-308. Fee-for-service contracts - limited purpose - repeal. (1) Subject to available appropriations, the department shall enter into fee-for-service contracts for the following purposes:

(h) (I) The conduct of feasibility studies and pilot deployments to investigate emerging technologies for water management pursuant to section 23-20-141.

(II) This subsection (1)(h) is repealed, effective July 1, 2023.

SECTION 6. Appropriation. (1) For the 2021-22 state fiscal year, $40,000 is appropriated to the department of higher education. This appropriation is from the general fund. To implement this act, the department may use this appropriation for the college opportunity fund program created in section 23-18-201, C.R.S., to be used for limited purpose fee-for-service contracts with state institutions.

(2) For the 2021-22 state fiscal year, $40,000 is appropriated to
the department of higher education. This appropriation is from reappropriated funds received from the limited purpose fee-for-service contracts with state institutions under subsection (1) of this section. To implement this act, the department may use this appropriation as follows:

(a) $20,000 for the board of governors of the Colorado state university system; and

(b) $20,000 for the regents of the university of Colorado.

SECTION 7. Effective date. (1) Except as otherwise provided in subsection (2) of this section, this act takes effect upon passage.

(2) Section 6 of this act takes effect only if the university of Colorado, Colorado state university, or both, certify in writing to the state controller that a total of at least $40,000 in gifts, grants, and donations has been received for the purposes of this act. After receiving this certification, the state controller shall notify the joint budget committee in writing that the state controller has received the certification.

SECTION 8. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, or safety.