LEGISLATIVE GENERAL COUNSEL
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H.B. 393

WATER REPORTING AMENDMENTS

2022 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Joel Ferry

Senate Sponsor: _____

LONG TITLE

General Description:

This bill requires a study and makes changes regarding the use of electrolysis to create hydrogen from water.

Highlighted Provisions:

This bill:

- adds to the powers of the state engineer the power to conduct studies regarding use of water;
- requires the state engineer to conduct a study regarding:
  - the current effect on the water cycle of the use of water to cool power plants;
  - the potential effect on the water cycle of the use of water to create hydrogen through coal gasification or steam methane reforming; and
  - the potential effect on the water cycle of the use of electrolysis with water to create hydrogen to power a power plant;
- establishes a reporting requirement for the results of the study;
- requires the state engineer to create the Sevier River Distribution Accounting Report; and
- requires a person to submit a change application if the person intends to use electrolysis on water to create hydrogen.

Money Appropriated in this Bill:

This bill appropriates in fiscal year 2023:

H.B. 393

▸ to the Division of Water Rights -- Water Rights Administration, as a one-time appropriation:

• from the General Fund, One-time, $230,000.

▸ to the Division of Water Rights -- Water Rights Administration, as an ongoing appropriation:

• from the General Fund -- $150,000.

Other Special Clauses:

None

Utah Code Sections Affected:

AMENDS:

73-2-1, as last amended by Laws of Utah 2020, Chapters 60 and 352

73-3-8, as last amended by Laws of Utah 2020, Chapter 421

ENACTS:

73-2-1.7, Utah Code Annotated 1953

73-5-17, Utah Code Annotated 1953

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **73-2-1** is amended to read:

73-2-1. State engineer -- Term -- Powers and duties -- Qualification for duties.

(1) There shall be a state engineer.

(2) The state engineer shall:

(a) be appointed by the governor with the advice and consent of the Senate;

(b) hold office for the term of four years and until a successor is appointed; and

(c) have five years experience as a practical engineer or the theoretical knowledge, practical experience, and skill necessary for the position.

(3) (a) The state engineer shall be responsible for the general administrative supervision of the waters of the state and the measurement, appropriation, apportionment, and distribution of those waters.

(b) The state engineer may secure the equitable apportionment and distribution of the water according to the respective rights of appropriators.

(4) The state engineer shall make rules, in accordance with Title 63G, Chapter 3, Utah

Administrative Rulemaking Act, consistent with the purposes and provisions of this title, regarding:

(a) reports of water right conveyances;

(b) the construction of water wells and the licensing of water well drillers;

(c) dam construction and safety;

(d) the alteration of natural streams;

(e) geothermal resource conservation;

(f) enforcement orders and the imposition of fines and penalties;

(g) the duty of water; and

(h) standards for written plans of a public water supplier that may be presented as evidence of reasonable future water requirements under Subsection 73-1-4(2)(f).

(5) The state engineer may make rules, in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, consistent with the purposes and provisions of this title, governing:

(a) water distribution systems and water commissioners;

(b) water measurement and reporting;

(c) groundwater recharge and recovery;

(d) wastewater reuse;

(e) the form, content, and processing procedure for a claim under Section 73-5-13 to surface or underground water that is not represented by a certificate of appropriation;

(f) the form and content of a proof submitted to the state engineer under Section 73-3-16;

(g) the determination of water rights; or

(h) the form and content of applications and related documents, maps, and reports.

(6) The state engineer may bring suit in courts of competent jurisdiction to:

(a) enjoin the unlawful appropriation, diversion, and use of surface and underground water without first seeking redress through the administrative process;

(b) prevent theft, waste, loss, or pollution of surface and underground waters;

(c) enable the state engineer to carry out the duties of the state engineer's office; and

(d) enforce administrative orders and collect fines and penalties.

(7) The state engineer may:

(a) upon request from the board of trustees of an irrigation district under Title 17B, Chapter 2a, Part 5, Irrigation District Act, or another local district under Title 17B, Limited Purpose Local Government Entities - Local Districts, or a special service district under Title 17D, Chapter 1, Special Service District Act, that operates an irrigation water system, cause a water survey to be made of the lands proposed to be annexed to the district in order to determine and allot the maximum amount of water that could be beneficially used on the land, with a separate survey and allotment being made for each 40-acre or smaller tract in separate ownership; and

(b) upon completion of the survey and allotment under Subsection (7)(a), file with the district board a return of the survey and report of the allotment.

(8) (a) The state engineer may establish water distribution systems and define the water distribution systems' boundaries.

(b) The water distribution systems shall be formed in a manner that:

(i) secures the best protection to the water claimants; and

(ii) is the most economical for the state to supervise.

(9) The state engineer may conduct studies of current and novel uses of water in the state.

Section 2. Section **73-2-1.7** is enacted to read:

73-2-1.7. Water for power study.

(1) As used in this section:

(a) "Coal gasification" means the process of using a gasifier to convert coal into synthesis gas which can then be converted to hydrogen.

(b) "Electrolysis" means the process of using electricity to split water into hydrogen and oxygen.

(c) "Steam methane reforming" means the process of chemical synthesis to use a catalyst to produce hydrogen from methane derived from natural gas.

(d) "Water cycle" means the biogeochemical cycle that describes the continuous movement of water on, above, and below the surface of the earth.

(2) The state engineer shall commission a study to determine the quantitative impacts to the state's water cycle from:

(a) electrolysis;

(b) the generation of electricity by burning as fuel hydrogen resulting from electrolysis; and

(c) the generation of electricity by burning as fuel a blend of natural gas and hydrogen.

(3) The study shall compare the quantitative impacts to the water cycle to generating electricity by:

(a) burning coal;

(b) burning natural gas;

(c) solar energy;

(d) wind energy;

(e) burning a combination of hydrogen and natural gas; and

(f) burning hydrogen produced from:

(i) electrolysis;

(ii) coal gasification; and

(iii) steam methane reforming.

(4) The impacts quantified in Subsections (3)(e) and (f) shall include the quantitative impacts to the water cycle of:

(a) burning the hydrogen; and

(b) producing the hydrogen from fuel through:

(i) electrolysis;

(ii) coal gasification; and

(iii) steam methane reforming.

(5) The study described in Subsection (3) shall describe factors that influence the findings described in Subsection (3), including efficiency of the power.

(6) The state engineer shall report the findings of the study described in Subsection (3) to the Public Utilities, Energy, and Technology Interim Committee and to the Legislative Water Development Commission on or before November 1, 2022.

Section 3. Section **73-3-8** is amended to read:

73-3-8. Approval or rejection of application -- Requirements for approval -- Application for specified period of time -- Filing of royalty contract for removal of salt or minerals -- Request for agency action.

(1) (a) It shall be the duty of the state engineer to approve an application if there is

reason to believe that:

(i) for an application to appropriate, there is unappropriated water in the proposed source;

(ii) the proposed use will not impair existing rights or interfere with the more beneficial use of the water;

(iii) the proposed plan:

(A) is physically and economically feasible, unless the application is filed by the United States Bureau of Reclamation; and

(B) would not prove detrimental to the public welfare;

(iv) the applicant has the financial ability to complete the proposed works;

(v) the application was filed in good faith and not for purposes of speculation or monopoly; and

(vi) if applicable, the application complies with a groundwater management plan adopted under Section 73-5-15.

(b) If the state engineer, because of information in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, has reason to believe that an application will interfere with the water's more beneficial use for irrigation, municipal and industrial, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, the state engineer shall withhold approval or rejection of the application until the state engineer has investigated the matter.

(c) If an application does not meet the requirements of this section, it shall be rejected.

(2) (a) An application to appropriate water for industrial, power, mining development, manufacturing purposes, agriculture, or municipal purposes may be approved for a specific and certain period from the time the water is placed to beneficial use under the application, but in no event may an application be granted for a period of time less than that ordinarily needed to satisfy the essential and primary purpose of the application or until the water is no longer available as determined by the state engineer.

(b) At the expiration of the period fixed by the state engineer the water shall revert to the public and is subject to appropriation as provided by this title.

(c) No later than 60 calendar days before the expiration date of the fixed time period,

the state engineer shall send notice by mail or by any form of electronic communication through which receipt is verifiable, to the applicant of record.

(d) Except as provided by Subsection (2)(e), the state engineer may extend any limited water right upon a showing that:

(i) the essential purpose of the original application has not been satisfied;

(ii) the need for an extension is not the result of any default or neglect by the applicant; and

(iii) the water is still available.

(e) An extension may not exceed the time necessary to satisfy the primary purpose of the original application.

(f) A request for extension of the fixed time period must be filed in writing in the office of the state engineer on or before the expiration date of the application.

(3) (a) Before the approval of any application for the appropriation of water from navigable lakes or streams of the state that contemplates the recovery of salts and other minerals therefrom by precipitation or otherwise, the applicant shall file with the state engineer a copy of a contract for the payment of royalties to the state.

(b) The approval of an application shall be revoked if the applicant fails to comply with terms of the royalty contract.

(4) (a) The state engineer shall investigate all temporary change applications.

(b) The state engineer shall:

(i) approve the temporary change if the state engineer finds there is reason to believe that the temporary change will not impair an existing right; and

(ii) deny the temporary change if the state engineer finds there is reason to believe the temporary change would impair an existing right.

(5) (a) With respect to a change application for a permanent or fixed time change:

(i) the state engineer shall follow the same procedures provided in this title for approving an application to appropriate water; and

(ii) the rights and duties of a change applicant are the same as the rights and duties of a person who applies to appropriate water under this title.

(b) The state engineer may waive notice for a permanent or fixed time change application if the application only involves a change in point of diversion of 660 feet or less.

(c) The state engineer may condition approval of a change application to prevent an enlargement of the quantity of water depleted by the nature of the proposed use when compared with the nature of the currently approved use of water proposed to be changed.

(d) A condition described in Subsection (5)(c) may not include a reduction in the currently approved diversion rate of water under the water right identified in the change application solely to account for the difference in depletion under the nature of the proposed use when compared with the nature of the currently approved use.

(6) (a) Except as provided in Subsection (6)(b), the state engineer shall reject a permanent or fixed time change application if the person proposing to make the change is unable to meet the burden described in Subsection 73-3-3(5).

(b) If otherwise proper, the state engineer may approve a change application upon one or more of the following conditions:

(i) for part of the water involved;

(ii) that the applicant acquire a conflicting right; or

(iii) that the applicant provide and implement a plan approved by the state engineer to mitigate impairment of an existing right.

(c) (i) There is a rebuttable presumption of quantity impairment, as defined in Section 73-3-3, to the extent that, for a period of at least seven consecutive years, a portion of the right identified in a change application has not been:

(A) diverted from the approved point of diversion; or

(B) beneficially used at the approved place of use.

(ii) The rebuttable presumption described in Subsection (6)(c)(i) does not apply if the beneficial use requirement is excused by:

(A) Subsection 73-1-4(2)(e);

(B) an approved nonuse application under Subsection 73-1-4(2)(b);

(C) Subsection 73-3-30(7); or

(D) the passage of time under Subsection 73-1-4(2)(c)(i).

(d) The state engineer may not consider quantity impairment based on the conditions described in Subsection (6)(c) unless the issue is raised in a:

(i) timely protest that identifies which of the protestant's existing rights the protestant reasonably believes will experience quantity impairment; or

(ii) written notice provided by the state engineer to the applicant within 90 days after the change application is filed.

(e) The written notice described in Subsection (6)(d)(ii) shall:

(i) specifically identify an existing right the state engineer reasonably believes may experience quantity impairment; and

(ii) be mailed to the owner of an identified right, as shown by the state engineer's records, if the owner has not protested the change application.

(f) The state engineer is not required to include all rights the state engineer believes may be impaired by the proposed change in the written notice described in Subsection (6)(d)(ii).

(g) The owner of a right who receives the written notice described in Subsection (6)(d)(ii) may not become a party to the administrative proceeding if the owner has not filed a timely protest.

(h) If a change applicant, the protestants, and the persons identified by the state engineer under Subsection (6)(d)(ii) come to a written agreement regarding how the issue of quantity impairment shall be mitigated, the state engineer may incorporate the terms of the agreement into a change application approval.

(7) An owner of a water right may use the right to produce hydrogen fuel with electrolysis only if the state engineer has approved a change application requesting a change of beneficial use, unless the water right is currently specifically authorized to produce hydrogen fuel with electrolysis.

(8) When considering a change application requesting a change of beneficial use to produce hydrogen fuel with electrolysis, the state engineer shall consider quantity impairment of a proposed change under Subsection (7) using the results of the study commissioned in Section 73-2-1.7.

Section 4. Section **73-5-17** is enacted to read:

73-5-17. Sevier River distribution accounting report.

(1) As used in this section:

(a) "Natural flow" means the computed amount of water available within a defined portion of a natural stream.

(b) "Sevier River" means the portion of the Sevier River and its tributaries where

regulation and accounting are required but does not include the San Pitch River.

(2) The state engineer shall conduct a review of distribution and accounting procedures on the Sevier River.

(3) After conducting the review described in Subsection (2), the state engineer shall provide a report identifying:

(a) actively administered:

(i) water rights;

(ii) diversions; and

(iii) reservoirs;

(b) accounting practices, including:

(i) computation of natural flow;

(ii) allocation of natural flow to individual water rights;

(iii) storage delivery and loss of storage;

(iv) accounting for imports and exports; and

(v) system losses including:

(A) conveyance losses; and

(B) reservoir losses;

(c) recommendations for:

(i) additional measurement and automation; and

(ii) refinement of distribution or accounting practices in accordance with:

(A) existing water rights;

(B) the prior appropriation doctrine; and

(C) relevant court decrees; and

(d) the data and computations relied upon to provide the information described in Subsections (3)(a) through (c).

(4) The state engineer shall make the report described in Subsection (3) available to the public on the Division of Water Rights website annually at least one week prior to the annual distribution system meeting.

Section 5. **Appropriation.**

The following sums of money are appropriated for the fiscal year beginning July 1, 2022, and ending June 30, 2023. These are additions to amounts previously appropriated for

fiscal year 2023. Under the terms and conditions of Title 63J, Chapter 1, Budgetary Procedures Act, the Legislature appropriates the following sums of money from the funds or accounts indicated for the use and support of the government of the state of Utah.

ITEM 1

To Division of Water Rights - Water Rights Administration

From General Fund, One-time		$230,000
Schedule of Programs:		
Water for Power Study	$150,000	
Sevier River Distribution Accounting Report	$80,000	
From General Fund		$150,000
Schedule of Programs:		
Sevier River Distribution Accounting Report	$150,000	