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A Look at Laws Authorizing Uses of Conserved and Saved Water in California, Montana, Oregon, and Washington

Cassidy Woodard

April 2016

I. Introduction

This working paper examines laws in four western states that allow the holder of a water right to continue to use any saved consumptive use resulting from conservation improvements or to make that water available for new uses or other users. The paper represents an accumulation of both legal research and interviews conducted with water law leaders in each state studied, including California, Montana, Oregon, and Washington. For each state, this paper provides an overview of the law, information regarding the statutes in practice, and other important details learned from our interviews with experienced stakeholders. It begins with a discussion of the different terminology used in the four study states as compared to that used in Colorado.

II. A Note on Terminology

Each state uses different terminology for what Colorado refers to as either conserved or saved water. In the Colorado Water Plan, conserved water refers to reductions in historic consumptive beneficial use; saved water means reductions in historic beneficial diversions. To set the foundation for this paper, the following is an outline of the relevant language:

- **California** – “water conservation” is obtained in one of two ways:
 - (1) A water user’s reduction in diversions; or
 - (2) Conservation efforts that decrease consumptive use of water historically diverted.
- **Montana** – Currently, Montana allows several different legal mechanisms:
 - “Salvaged water” – actual reduced diversions of water that can be protected only to the water user’s headgate.
 - “Water conservation” – saved consumptive use where a water user utilizes the state’s “change of use” provision to apply the consumptive portion of the water right to another purpose.
 - “Consumed to the source” water – a common law mechanism to restore stream flows that protects a water right (in the amount historically diverted or less)

from a water user's headgate to the place where the water right's return flows would normally return to the source.

- **Oregon** – “conserved water” – the amount of water resulting from conservation measures. It can be measured as the difference between the amount stated on the water right certificate and the amount needed for diversion after implementing conservation measures to meet the beneficial use under the water right certificate.
- **Washington** – a state program provides financial assistance to promote agricultural water conservation projects, which result in one of two types of water savings:
 - “Net water savings” – reductions in consumptive use, taking into account return flows and an impairment analysis.
 - “Gross water savings” – reductions in historical diversions.

III. California

A. California Conserved Water Program

California Water Code section 1011(a) provides:

When any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of the appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of the cessation or reduction in use.¹

Importantly, California's five-year forfeiture period will not apply to conserved water under this provision.² The California State Water Resources Control Board (the “Board”) must approve the use of section 1011(a).³

To take advantage of the provision, the water user must comply with reporting requirements to and established by the Board, including the filing of periodic reports detailing the water use reduction achieved through conservation efforts.⁴ According to Lew Moeller, Chief of the Water Resources Evaluation Section of the California Department of Water Resources, the reporting requirements ensure that water users do not later change their intentions to conserve the amount of water committed to under the statute by reverting back to former water practices.⁵

¹ CAL. WATER CODE § 1011(a) (West 2016).

² *Id.*; see also CAL. WATER CODE § 1241 (West 2016) (“If the person entitled to the use of water fails to use beneficially all or any part of the water claimed by him or her, for which a right of use has vested, for the purpose for which it was appropriated or adjudicated, for a period of five years, that unused water may revert to the public and shall, if reverted, be regarded as unappropriated public water.”).

³ *Id.* § 1011(a).

⁴ *Id.*

⁵ Telephone Interview with Lew Moeller, Chief, Cal. Dep't Water Res. Water Res. Evaluation Section (Nov. 3, 2015) (notes on file with author) [hereinafter Telephone Interview with Lew Moeller].

For the purpose of section 1011(a), the provision deems “water conservation” to mean “the use of less water to accomplish the same purpose of use allowed under the existing appropriative right.”⁶ Under this broad definition, water conservation may include either undiverted water or unconsumed water. Examples of section 1011(a) water conservation include irrigation water unused under temporary land fallowing or crop rotation, weed control, and ditch lining.⁷ Specifically, in the past, the Board has interpreted water conservation to require the user to present evidence of a “deliberate effort to save water.”⁸ Earlier interpretations of section 1011(a) indicated that merely reducing irrigated acreage by fallowing would not suffice because the statute’s purpose—indicated by the statutory language that water conserved is “as a result of water conservation efforts”—is to encourage actual, concrete improvements to conserve water.⁹ In more recent interpretations, however, the Board, did not think twice about approving use of section 1011 when the user fallowed 900 acres of irrigated land, exerting no additional “efforts” other than reducing irrigated acreage.¹⁰ Interestingly, these conflicting interpretations exist even though section 1011(a) has always deemed water conservation to include “water appropriated for irrigation purposes . . . not used by reason of land fallowing or crop rotation.”¹¹

After section 1011(a) sets forth California’s policy to promote water conservation by protecting the water conservation from forfeiture, section 1011(b) clarifies a user’s ability to transfer the right to the water conservation to another person pursuant to the various transfer provisions already in place under the California Water Code.¹² Specifically, the water conservation may be “sold, leased, exchanged, or otherwise transferred” similar to any other

⁶ CAL. WATER CODE § 1011(a) (West 2016).

⁷ See *id.*

⁸ *In the Matter of Licenses 1050 et al. (Application 534 et al.), Natomas Central Mutual Water Company*, 1999 WL 335122, at *19 (Cal. Div. Wat. Res. Bd., Dec. 28, 1999) [hereinafter *Natomas*].

⁹ *Id.* The Board’s differing interpretations demonstrate a particularly interesting shift in section 1011 approval. In a petition granted by the Board in 1999, the Board very deliberately interpreted section 1011 to require additional efforts to conserve water through a study of the statute’s plain language that a reduction of use must be either “because of water conservation efforts” or “as a result of conservation efforts.” *Id.*; CAL. WATER CODE §§ 1011(a)–(b) (West 2016).

¹⁰ *In the Matter of License 2637 (Application 5155) Petition for Temporary Change Involving the Transfer of 885.22 Acre-Feet of Water from Island Reclamation District 2062 to Lloyd Phelps and Gary Phelps*, 2007 WL 2221023, at *1 (Cal. Div. Wat. Rights, July 25, 2007) [hereinafter *In the Matter of License 2637*].

¹¹ CAL. WATER CODE § 1011(a) (West 2016).

¹² *Id.* § 1011(b). A water user is not legally obligated to use both section 1011(a) and (b). Instead, the user may only use section 1011(a) to protect his or her own right from forfeiture without actually transferring the water conservation to another. As pointed out in our discussion with Mr. Moeller, because the original water user retains the ability to call for his entire right in a later year when he chooses not to conserve, an interesting challenge may arise if a user takes advantage of section 1011(a)—sending additional water downstream that another user relies upon—then decides to start placing the former water conservation toward a consumptive use once again in a later year. Telephone Interview with Lew Moeller, *supra* note 5.

transfer of water right.¹³ But the transfer remains subject to laws that govern any transfer, such as changes in point of diversion, place of use, and purpose of the use, which provide the framework governing when a transfer may occur.¹⁴ In California, section 1011 approval is often used in conjunction with the state's temporary change provision in California Water Code section 1725:

A permittee or licensee may temporarily change the point of diversion place of use, or purpose of use due to a transfer or exchange of water or water rights if the transfer [1] would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change, [2] would not injure any legal user of the water, and [3] would not unreasonably affect fish, wildlife, or other instream beneficial uses. For the purposes of this article, "consumptively used" means the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion.¹⁵

In essence, so long as the transfer of the water conservation stays within the legal bounds of section 1725, by satisfying the three required elements for a temporary change, section 1011 preserves the entire appropriative water right of the water user while also creating a market for the water conservation to be transferred to other uses. In doing so, the water conservation is itself deemed a reasonable beneficial use not subject to the state's forfeiture laws.¹⁶ If the transfer of water conservation under section 1011(b) is temporary, the right to the water conservation may revert to the original owner after the completion of the term of the temporary transfer as though the water transfer had never occurred.¹⁷ Transfers of water conservation may also be permanent.¹⁸

An excerpt from a decision of the Board best summarizes how the California legislature intended for sections 1011(a) and (b) to work together and with the separate transfer/change provisions:

Taken together, the legislative history for subdivisions (a) and (b) of section 1011 indicates that the Legislature intended merely to place those who conserve water on a par with those who continue to fully exercise their rights. Nothing in the legislative history suggests that the Legislature intended to place those who conserve water in a better position than those who continue to fully exercise their rights by allowing the

¹³ CAL. WATER CODE § 1011(b) (West 2016).

¹⁴ *Id.*

¹⁵ *Id.* § 1725.

¹⁶ *Id.* § 1011(a); *see id.* § 1241 (West 2016) (deeming a five-year period of non-use equivalent to a forfeiture of a water right to the public).

¹⁷ *Id.* § 1011(c).

¹⁸ *Id.* § 1011(b) ("[W]ater conservation efforts . . . may be sold . . .").

wholesale transfer of conserved water without regard to the provisions that govern water transfer generally.

In fact, the drafter of subdivision (b) expressly stated that conserved water transfers would be subject to the no injury rule, which was then and remains now a critical component of all transfer provisions. . . . [When passing this legislation, it was understood that this] bill “would provide an additional flexibility by allowing for transfers without jeopardizing the water right, providing there is no harm to other users.” If the Legislature did not intend for subdivision (b) to supersede the no injury rule, it follows that the Legislature did not intend to supersede the other components of the various transfer provisions either.¹⁹

B. The Statute in Practice

To initiate a transaction under section 1011, a water user starts by stating intent to conserve water on the annual progress report for his or her water right permit.²⁰ The report, submitted online, requires a water user to report records of actual water diversion and use made under the permit.²¹ Under “Part 7” of the filing, water users can indicate whether they implemented any water conservation efforts and whether they intend to claim credit for the water conserved in accordance with section 1011.²²

For a better understanding of how section 1011 applies in practice, it is useful to look at a “Petition for Temporary Change” that appeared to adequately represent the typical use of the statute in a year of normal flows.²³ In the petition, Island Reclamation District 2062 temporarily fallowed approximately 900 irrigated acres.²⁴ To protect that portion of the water right from forfeiture, the reclamation district requested a temporary change under sections 1011 and 1727 to facilitate a transfer of up to 885.22 acre-feet to the Phelps for application to their farmland.²⁵

Before approving this temporary change and use of section 1011, the Board had to do three things pursuant to an investigation required by section 1726(e) of the California Water

¹⁹ *Natomas*, *supra* note 8, at 13–14 (internal citations omitted).

²⁰ CAL. CODE REGS. tit. 23 § 847 (2016) (requiring annual progress reports to be filed by water users on forms provided by the Board).

²¹ *Sample Annual Progress Report for Permittee, Cal. State Water Res. Control Bd.*, http://www.waterboards.ca.gov/waterrights/water_issues/programs/ewrims/docs/permit.pdf (last visited Mar. 1, 2016).

²² *Id.*

²³ See *In the Matter of License 2637*, *supra* note 10.

²⁴ *Id.* at 1.

²⁵ *Id.*

Code.²⁶ First, it had to address public comments from interested parties, including in this instance the California Department of Fish and Game and the San Joaquin River Group. Second, a finding of fact was required that showed that the water conservation—the fallowing of 900 irrigated acres in this instance—did result in an availability of water for transfer. Third, the Board had to make two findings of fact required by section 1727(b) of the Water Code for temporary changes.²⁷ Pursuant to section 1727(b), the Board had to find that the temporary change would (1) not injure another water user or (2) not unreasonably affect fish, wildlife, or another instream beneficial use.²⁸ After making both findings, the Board approved the temporary change on July 25, 2007, and the water conservation returned to the reclamation district after the agreed upon date of September 30, 2007.²⁹

Mr. Moeller recommended a petition submitted by Natomas Central Mutual Water Company as particularly helpful for our study because it provided strong discussion and analysis on how the Board interprets section 1011 and calculates water conservation.³⁰ In *Natomas*, a water company requested a temporary change under section 1725 to transfer its water conservation under section 1011 to the Santa Margarita Water District, covering Orange County, California.³¹ Originally, Natomas requested a transfer of 30,000 acre-feet on the basis of reduced diversions since the early 1980s.³² Natomas later revised the requested amount to 8,860 acre-feet, the amount by which it claimed at one point in the proceeding to have reduced its consumptive use.³³ The petition does not indicate why Natomas shifted its request from 30,000 acre-feet in claimed reduced diversions to a claimed reduction in consumptive use two months later.³⁴ It held multiple water licenses used primarily for irrigation and claimed to obtain water conservation over the past almost twenty years through efforts like water recirculation, improved water management, crop shifts, laser leveling of fields, canal lining, and weed control.³⁵ Before approving the transfer, the Board had to follow the change requirements: first, confirming the availability of water conservation; second, finding that the transfer would not injure other water users; and third, finding that the transfer would not unreasonably affect fish, wildlife, or other instream beneficial uses.³⁶

²⁶ *Id.* at 2–5; CAL. WATER CODE § 1726(e) (West 2016) (requiring the Board to commence an investigation within ten days after being petitioned for a temporary change for water conserved pursuant to section 1011).

²⁷ CAL. WATER CODE § 1727(b) (West 2016) (setting forth a preponderance of the evidence standard for two requirements to approve a petition for a temporary change).

²⁸ *Id.*

²⁹ *In the Matter of License 2637*, *supra* note 10, at 6.

³⁰ *Natomas*, *supra* note 8. *Natomas* did, in fact, provide very helpful analysis in my research. Much of the new structure and in-depth insights of this section resulted from *Natomas*' excellent description of the statute in action.

³¹ *Id.* at 1.

³² *Id.* at 2.

³³ *Id.* at 2–3.

³⁴ *Id.*

³⁵ *Id.* at 22–26.

³⁶ CAL. WATER CODE § 1725 (West 2016).

As mentioned by Mr. Moeller, *Natomas* presented a fairly complex petition.³⁷ Determining the amount that Natomas reduced its consumptive use proved difficult. The water company originally claimed to have reduced its consumptive use by more than 14,000 acre-feet during the period in question based on a water balance analysis, which involved subtracting total outflow from the basin from total inflow for each year from 1979 to 1998.³⁸ This calculation provided Natomas with a “total consumptive use value” for each year.³⁹ Then,

[i]n order to measure the consumptive use savings that resulted from its conservation efforts, Natomas used as a baseline the average of the three highest years of consumptive use from the period 1979 (the year when Water Code section 1011 was enacted) to 1985 (the year when Natomas completed implementation of its conservation efforts). Natomas compared this average to a performance standard . . . roughly equivalent to its average consumptive use, as measured by its water balance, for the period 1986–1998.⁴⁰

The Board rejected this approach as an acceptable way of measuring water conservation because “by definition, there will always be a difference between the highest years and the average, regardless whether any conservation efforts were made. To make a fair comparison, average consumptive use for the period prior to implementation of conservation efforts should be compared to average consumptive use for the period following implementation of conservation efforts.”⁴¹

The Board also denied any attempts by Natomas to attribute a reduction in water use to a reduction in irrigated acreage. Compared to the period from 1979 to 1985, Natomas irrigated 2,500 fewer acres from 1986 to 1998.⁴² “In order to determine whether Natomas’s reduction in consumptive use is attributable to the reduction in acreage, the average consumptive use per irrigated acre was calculated for each period by dividing the average annual consumptive use by the average annual number of irrigated acres.”⁴³ The resulting averages for consumptive use

³⁷ To further add to the complexity of the petition, the United States Bureau of Reclamation (USBR) challenged the adequacy of Natomas’s water rights to the extent that they exceeded the base supply (98,200 acre-feet per year) in a contract for diversions between Natomas and the USBR. *Natomas*, *supra* note 8, at 5–7. The USBR argued that any of Natomas’s diversions in excess of 98,200 acre-feet may actually be water released from storage under a separate water project rather than from natural flows under Natomas’s licensed rights. The USBR, however, failed to present evidence that diversions from natural flows would be inadequate to fully satisfy Natomas’s licensed rights during the time period. Therefore, nothing in the record indicated that Natomas’s water *supply* would be inadequate to support the transfer.

³⁸ *Natomas*, *supra* note 8, at 16.

³⁹ *Id.*

⁴⁰ *Id.* at 17.

⁴¹ *Id.* at 18.

⁴² *Id.*

⁴³ *Id.*

per acre were 3.77 acre-feet per acre in 1979–1985 and 3.85 acre-feet per year for 1986–1998, indicating that the “reduction in consumptive use between the two periods is attributable to a reduction in total irrigated acreage.”⁴⁴ Turning to section 1011, the Board honed in on a reduction in irrigated acreage not being the result of conservation action undertaken by Natomas.⁴⁵ Specifically, section 1011(a) “protects a right to use water to the extent of a reduction in use ‘because of water conservation efforts.’”⁴⁶ And section 1011(b) provides for the transfer of water conserved “as a result of water conservation efforts.”⁴⁷ Section 1011 intends to encourage users to conserve water. Therefore, the Board concluded “a water user who claims to have conserved water must present some evidence of a deliberate effort to save water.”⁴⁸

Ultimately, the Board conducted an evaluation of each various conservation effort claimed to have been conducted by Natomas during the time period at question. One-by-one the Board rejected claims that the water company reduced its consumptive use in five different projects: (1) recirculation system and improved water management, (2) changing varieties of rice and other crop shifts, (3) laser leveling of fields, (4) canal lining and bank compaction, and (5) reductions in deep percolation.⁴⁹ Finally, the Board studied Natomas’s weed control program implemented in 1984.⁵⁰ By spraying weeds around 567,000 linear feet of canals and 665 acres of lands, the Board agreed that Natomas reduced its consumptive use by approximately 1,995 acre-feet per year—an effort that continued to the present time and resulted in water conservation that could be transferred under section 1011 pursuant to the temporary transfer provisions of section 1725.

After finding an availability of water conservation in the amount of 1,995 acre-feet, the Board continued through the approval process by making the various findings required under section 1725.⁵¹ No further issues arose, and limits were placed on the timing and rate of implementation of the transfer (during Natomas’s usual diversion season between March 1 and October 31). Accordingly, findings were also made that the transfer would not injure other water users or result in unreasonable harm to fish, wildlife, or other instream beneficial uses. Arrangements were made regarding the delivery of the water. Although not approved in the entirety requested, the Board partially approved the water conservation and transfer requested by the parties.

As referenced earlier, California’s water conservation statute does not by itself protect the water conservation sent downstream from appropriation by others, unless being delivered

⁴⁴ *Id.* at 19.

⁴⁵ *Id.*; CAL. WATER CODE § 1011(a) (West 2016).

⁴⁶ *Natomas*, *supra* note 8, at 19; CAL. WATER CODE § 1011(b) (West 2016).

⁴⁷ *Natomas*, *supra* note 8, at 19.

⁴⁸ *Id.* As described above, this position appears to have been reversed by the Board in more recent decisions.

⁴⁹ *Id.* at 22–26.

⁵⁰ *Id.* at 26–27.

⁵¹ *Id.* at 32.

to another user for consumptive use purposes or being held as instream water rights. Instead, section 1011's intent is to protect the water user implementing the conservation effort from forfeiture.⁵² Others may rely upon the water conservation sent downstream unless the water user invokes the right to transfer the water right under section 1011(b).⁵³

Two primary statutes have been used in conjunction with section 1011. First, in many instances, like the two petitions discussed above, a temporary change of water right under section 1725 occurs to lease the water conservation to a downstream use, protecting the water conservation until it reaches the intended destination.⁵⁴ Second, if instead the water conservation is intended for instream purposes, then section 1707(1) of the California Water Code must be used to dedicate the water to preserving or enhancing the environment.⁵⁵ To approve such a water right, the Board will use the same three-part test mentioned above from section 1725.⁵⁶

Stakeholders in California, however, view the approval procedure, costs, and delay in utilizing section 1707(1) as barriers to entering these types of transactions.⁵⁷ Since its enactment in 2000, only thirty-nine environmental water rights transfers have been approved.⁵⁸ As of April 2014, the average approval time for a petition for instream flows took 270 days—480 days for approval of permanent and long-term transfers and 128 days for approval of short-term transfers.⁵⁹

Forty administrative decisions on WestLaw have cited section 1011 since 1984, indicating some interest in using the provision to protect water conservation. But compared to Oregon and Washington, California does not do as much formal marketing to promote use of the statute as a water conservation program. Mr. Moeller finds it difficult to answer whether section 1011 effectively incentivizes water users to implement conservation efforts.⁶⁰ He agrees that the statute certainly removes the disincentive to conserve (by declaring water conservation to be a beneficial use and protecting against forfeiture). But absent the money brought in by leasing or selling the water conservation, Mr. Moeller does not view section 1011 as a strong incentive to consciously decide to conserve water.

⁵² CAL. WATER CODE § 1011(a) (West 2016).

⁵³ *Id.* § 1011(b).

⁵⁴ *Id.* § 1725.

⁵⁵ *Id.* § 1707(1) (providing “any person” the ability to petition to dedicate a water right’s purpose to instream flows).

⁵⁶ *Id.*

⁵⁷ ENVIRONMENTAL WATER RIGHTS TRANSFERS: A REVIEW OF STATE LAWS, WATER IN THE WEST 22 (Stanford Univ., Aug. 31, 2015) [hereinafter STANFORD REPORT].

⁵⁸ *Id.* at 23; but see *Petitions for Instream Flow Dedication (Water Code Section 1707)*, CAL. STATE WATER RES. CONTROL BD.,

http://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/instream_flow_dedication/ (last updated Feb. 2, 2016) (providing public notice for the petitions for instream flow dedication).

⁵⁹ STANFORD REPORT, *supra* note 57, at 24.

⁶⁰ Telephone Interview with Lew Moeller, *supra* note 5.

IV. Montana

Three different legal mechanisms exist in Montana to incentivize users to conserve water. Each of the three mechanisms will be discussed in turn: the salvaged water statute, “water conservation,” and “consumed to the source” water. But before discussing the three mechanisms, it is important to note a 2006 case from the Supreme Court of Montana that fundamentally changed how the Montana Department of Natural Resources and Conservation (DNRC) manages the state’s water resources.

In *Montana Trout Unlimited v. Montana Department of Natural Resources and Conservation*, Trout Unlimited filed suit to require the DNRC to consider whether groundwater was “immediately or directly connected to surface water” prior to processing additional groundwater applications.⁶¹ The dispute arose after the legislature passed the Basin Closure Law for the Upper Missouri River Basin. Because streams in the basin were already fully appropriated, the law prevented the DNRC from processing or granting additional permit applications, unless the application fell under certain enumerated exceptions. One of the exceptions was for new groundwater applications, except for when groundwater is “immediately or directly connected” to the basin’s surface water. The DNRC interpreted this language to only prevent the issuing of permits when a groundwater well would pull surface water directly from a stream or other surface water source. Montana Trout Unlimited filed suit, arguing that this interpretation was too narrow and that the DNRC must make a threshold determination of whether the groundwater applications fell under the exception before issuing a permit.

Because the legislature did not define “immediately or directly connected to surface water” in the Basin Closure Law, the DNRC conducted an administrative rulemaking process to provide an interpretation of the term. The agency formally defined “immediately or directly connected to surface water” as “ground water which, when pumped at the flow rate requested in the application and during the proposed period of diversion, induces surface water infiltration.”⁶² Montana Trout Unlimited specifically argued that this interpretation failed “to account for impacts to surface flows caused by the prestream capture of tributary groundwater.”⁶³ The Court agreed, noting to the agency’s own internal memorandum written by its own hydrogeologist.⁶⁴ According to the memorandum, groundwater pumping contributes to streamflow depletion in two separate ways:

The first component, groundwater capture, is interception of groundwater flow tributary to the stream, that [sic] ultimately reduces the hydraulic gradient near the stream and baseflow to the stream. Streamflow depletion from groundwater capture usually continues after pumping ends and may require long periods of time to recover.

⁶¹ *Mont. Trout Unlimited v. Mont. Dep’t Nat. Res. & Conservation*, 331 Mont. 483 (2006).

⁶² *Id.* at 494 (quoting MONT. ADMIN. R. 36.12.101(33), which has since been amended).

⁶³ *Id.* at 494–95.

⁶⁴ *Id.* at 495.

The second component, induced streambed infiltration, usually has less impact on streamflow depletion, and its effects dissipate soon after pumping ends.⁶⁵

By failing to account for prestream capture of tributary groundwater, the DNRC's interpretation failed to provide sufficient protection to the basin to further the purpose of the Basin Closure Law. "It makes no difference to senior appropriators whether groundwater pumping reduces surface flows because of induced infiltration or from the prestream capture of tributary groundwater. The end result is the same: less surface flow in direct contravention of the legislature's intent."⁶⁶ According to Tim Davis, Water Resources Administrator of the DNRC, the *Montana Trout Unlimited* 2006 decision fundamentally changed operations in the DNRC.⁶⁷ As a result, the DNRC conjunctively manages surface water and groundwater. Quantification issues became more complex because applicants needed to prove that any changes in their water rights do not harm someone else that relies on their seepage water.⁶⁸

A. Montana Salvaged Water Statute

Under Montana's Water Code, "holders of appropriation rights who salvage water may retain the right to the salvaged water for beneficial use."⁶⁹ The salvaged water statute does not provide a formal definition of the term. But in Mr. Davis's words, salvaged water includes any actual reduced diversions of water.⁷⁰ The salvaged portion of the diversion, however, can still be protected or called to the headgate to its place of previous diversion in priority under the original right.⁷¹ According to Mr. Davis, these savings usually come from evaporation losses on a conveyance, but improvements made are often too small for water users to justify moving forward with salvage applications.⁷² The Water Resources Division of the Montana DNRC must approve any use of the salvaged water outside the original appropriation.⁷³ The DNRC's approval will be subject to normal change of appropriation right requirements.⁷⁴ For salvaged

⁶⁵ *Id.* (quoting an internal memorandum by a DNRC hydrogeologist).

⁶⁶ *Id.* at 496.

⁶⁷ Interview with Tim Davis, Water Resources Administrator, Mont. Dep't Nat. Res. & Conservation (Oct. 30, 2015) (notes on file with author).

⁶⁸ For example, if an applicant sought to use the state's salvaged water statute, as discussed later in this section, the applicant faced a more complicated and burdensome process to demonstrate that someone else was not relying on the applicant's salvaged water as seepage water. Mr. Davis partially attributes this 2006 decision in use of the salvaged water statute over the past decade.

⁶⁹ MONT. CODE ANN. § 85-2-419 (2016).

⁷⁰ Interview with Tim Davis, *supra* note 67.

⁷¹ *Id.*

⁷² *Id.*

⁷³ MONT. CODE ANN. § 85-2-419 (2016).

⁷⁴ See *id.* § 85-2-402(2)(a)–(g) (discussing criteria for approving a change of water right, such as the no injury rule, adequate means of diversion, beneficial use, a possessory interest in the water, and no adverse effects on water quality or effluent limitations).

water, it must be proved that the proposed water saving methods will salvage at least the amount of water claimed by the applicant.⁷⁵

Importantly, Montana's salvaged water statute may be used in conjunction with section 85-2-436, allowing for the Montana Department of Fish, Wildlife, and Parks (MFWP) to hold a water right for instream purposes to benefit fishery resources.⁷⁶ To accomplish this, MFWP may hold the water right in fee simple by purchasing the salvaged water or lease the salvaged water from the original holder for a period of time—both options retain a priority date identical to that of the original water right.⁷⁷ “The maximum quantity of water that may be changed to maintain and enhance streamflows to benefit the fishery resource is the amount historically diverted. However, only the amount historically consumed, or a smaller amount if specified by the [DNRC] in the lease authorization, may be used to maintain or enhance streamflows to benefit the fishery resource below the existing point of diversion.”⁷⁸ Private individuals and entities may also hold water rights to enhance instream flows through temporary instream flow leases and conversions.⁷⁹ The most burdensome hurdle to using the salvaged water statute in conjunction with Montana's instream flow program involves the burden of proof under the “no injury” requirement.⁸⁰ The applicant must “prove by a preponderance of the evidence” that the temporary change for instream benefit of the fishery resource, as measured at a specific point, “will not adversely affect the water rights of other persons.”⁸¹ This includes demonstrating a “no injury” showing across the entire river basin, rather than merely the water rights in the vicinity of the change.⁸² Interestingly, applicants believe that, in practice, the DNRC sets higher standards of proof than required by the statute.⁸³ And generally, the administrative rules lack guidance for evidentiary standards for evaluating a change's adverse effects.⁸⁴

When submitting a salvage water application, the applicant must include a report detailing the water volume being saved by the proposed conservation method.⁸⁵ Further, salvaged water includes “seepage, wastewater, or deep percolation water,” but does not include destroying phreatophytes, like cottonwoods or other trees or brush, near a water source to obtain water savings.⁸⁶

⁷⁵ *Id.* § 85-2-402(2)(e).

⁷⁶ *Id.* § 85-2-436(1).

⁷⁷ *Id.* §§ 85-2-436(1), (3)(g).

⁷⁸ *Id.* § 85-2-408(7).

⁷⁹ *Id.* § 85-2-408(2).

⁸⁰ STANFORD REPORT, *supra* note 57, at 35.

⁸¹ MONT. CODE ANN. § 85-2-408(3)(a) (2016).

⁸² *Id.* (“as measured at a specific point”); STANFORD REPORT, *supra* note 57, at 36.

⁸³ STANFORD REPORT, *supra* note 57, at 36.

⁸⁴ *Id.*

⁸⁵ MONT. ADMIN R. 36.12.2001(2) (2016).

⁸⁶ *Id.* R. 36.12.2001(1), (3).

Very little is known about the success of Montana’s salvaged water program in practice.⁸⁷ The statute has no administrative agency decision citations. Only one case cites the statute, but the decision provides no practical legal analysis of the statute. According to 2013 research by the University of Arizona, an interview with a representative from the DNRC revealed that the statute has had limited application because irrigators have not chosen to take advantage of the statute to improve irrigation efficiency.⁸⁸ Our discussion with Mr. Davis confirmed this fact.⁸⁹ The DNRC downplays the utility of the salvaged water statute and would prefer a legislative modification to more clearly define other legal mechanisms that exist in Montana law, including “water conservation” and “consumed to the source” water. Both terms will be discussed in more detail below.

B. “Water Conservation” (Saved Consumptive Use)

Currently, rather than utilize the salvaged water statute for actual reduced diversions, many water users in Montana rely on the normal “change” provision to make adjustments in the consumptive portion of their water rights.⁹⁰ According to Mr. Davis, this use typically involves farmers making efficiency improvements and pursuing three different options for the saved consumptive use—deemed “water conservation” in Montana.⁹¹

First, farmers may petition to apply the water conservation to a new irrigation project on land not previously authorized for irrigation under the original right.⁹² Pursuing an additional irrigation project will involve complying with the state’s “change” provision, section 85-2-402, discussed in more detail below.⁹³

Second, the farmers may obtain temporary instream flow rights themselves—similar to the intent of the Hohenlohes, as discussed in the next section.⁹⁴ Instream flow rights allow the farmer to temporarily dedicate the water to the benefit of a fishery resource while he or she searches for a buyer or lessee for water conservation (essentially, the saved consumptive use) out of the original water right.⁹⁵ In the meantime, the water conservation is not subject to abandonment.⁹⁶ To utilize this legal mechanism, the farmer must comply with three statutes: (1) the change of use provision in section 85-2-402, which is discussed below; (2) the temporary change in water right provision in section 85-2-407, which places a ten-year time period on

⁸⁷ DARI DUVAL & BONNIE COLBY, OVERVIEW: WESTERN STATES CONSERVED & SALVAGED WATER PROGRAMS 2 (Univ. of Ariz., 2013).

⁸⁸ *Id.*

⁸⁹ Interview with Tim Davis, *supra* note 67.

⁹⁰ MONT. CODE ANN. § 85-2-402 (2016).

⁹¹ Interview with Tim Davis, *supra* note 67.

⁹² *Id.*

⁹³ MONT. CODE ANN. § 85-2-402 (2016).

⁹⁴ Interview with Tim Davis, *supra* note 67; MONT. CODE ANN. § 85-2-408 (2016).

⁹⁵ MONT. CODE ANN. § 85-2-408 (2016).

⁹⁶ *Id.* § 85-2-404(4) (declaring that temporary instream flow rights under section 85-2-408 do not constitute an abandonment of any part of the water right).

temporary changes, but allows for an unlimited number of renewals; and (3) the temporary changes in instream flow provision in section 85-2-408, which requires, by a preponderance of the evidence, a no injury determination and that the quantity of water proposed is necessary to benefit the fishery resource.⁹⁷ Certain requirements of all three statutes will overlap to some extent.

Third, the farmer may simply sell his water conservation (consumptive use savings), which severs the water conservation from the original water right to make it transferable to another.⁹⁸ The transfer, however, must comply with the no injury rule and other standards for permanently changing a water right.⁹⁹ Section 85-2-402 provides a relatively complex and detailed process for petitioning the DNRC for approval of a change in water right.¹⁰⁰ The petitioning applicant must prove by a preponderance of the evidence that:

- (a) The proposed change will not adversely affect the existing water rights of another;
- (b) The proposed means of diversion is adequate, except in instances of changes for instream flows, temporary changes, and changes for mitigation or marketing for mitigation;
- (c) The proposed use of water is a beneficial use;
- (d) The applicant has a possessory interest in the place where water will be put to beneficial use, except in instances of changes for instream flows, temporary changes, and changes for mitigation or marketing for mitigation;
- (e) If the change is for salvaged water, then the proposed water-savings method will salvage at least the amount of water the applicant asserts;
- (f) The water quality of an appropriator will not be adversely affected; and
- (g) The ability of a discharge permit holder to satisfy effluent limitations will not be adversely affected.¹⁰¹

Under certain circumstances, additional conditions and procedures exist to comply with the “change” process, but those details are not relevant to the discussion at hand.

C. Montana’s “Consumed to the Source” Water

Montana case law developed a legal mechanism called “consumed to the source” water. In *Hohenlohe v. Montana Department of Natural Resources and Conservation*, the Hohenlohes filed suit after the DNRC denied their change of use petition.¹⁰² The Hohenlohes (ranchers) received a grant from the Montana Department of Fish, Wildlife, and Parks to convert 150 acres from flood to sprinkler irrigation, creating a significant amount of salvaged water, which would

⁹⁷ *Id.* §§ 85-2-402, -407(2)–(3), -408(3).

⁹⁸ Interview with Tim Davis, *supra* note 67.

⁹⁹ See MONT. CODE ANN. § 85-2-402 (2016).

¹⁰⁰ *Id.*

¹⁰¹ *Id.* §§ 85-2-402(2)(a)–(g).

¹⁰² *Hohenlohe v. Mont. Dep’t Nat. Res. & Conservation*, 357 Mont. 438 (2010).

no longer be diverted, that the grant conditioned must be left instream for at least thirty years.¹⁰³ Pursuant to this condition, the Hohenlohes filed an application for a temporary change from irrigation rights to instream flow rights. The DNRC denied the Hohenlohes petition, claiming that they failed to prove historic consumptive use as well as information on the frequency and timing of their diversions. Without additional evidence on historical consumptive use, the DNRC claimed the Hohenlohes failed to meet their burden to show how the consumptive volume implicated the return flow analysis and potentially impacted downstream users.

Upon judicial review, the district court reversed the DNRC's decision in disbelief at how "such a beneficial change" to the stream could have been denied—the water right originally held by the Hohenlohes could have easily dewatered the entire creek.¹⁰⁴ The court focused on the fact that Montana's change of water rights provisions did not require an analysis of return flows.¹⁰⁵ Because of this fact, and because Hohenlohes current use was not wasteful, the court found that "so long as the increased stream flows do not adversely affect downstream users . . . these types of change requests should be summarily granted."¹⁰⁶ The DNRC appealed, arguing that without a "complete" return flow analysis, water users will attempt to bootstrap a temporary instream flow right (of "water historically diverted, but used only for conveyance purposes") into a larger consumptive use right.¹⁰⁷

According to Mr. Davis, *Hohenlohe* created the DNRC's current approach to "consumed to the source" water. Mr. Davis describes consumed to the source water as water efficiency savings (similar to Colorado's Senate Bill 23 in 2014).¹⁰⁸ The legal mechanism arises from an interpretation of Montana's temporary change provision:

The maximum quantity of water that may be changed to maintain and enhance streamflows to benefit the fishery resource is the amount historically diverted. However, only the amount historically consumed, or a smaller amount if specified by the department in the lease authorization, may be used to maintain or enhance streamflows to benefit the fishery resource below the existing point of diversion.¹⁰⁹

Typically, un-diverted water (water historically diverted but no longer required for diversion) can only be protected down to the headgate.¹¹⁰ Through *Hohenlohe's* consumed to the source doctrine, Montana tries to protect a water right's entire decree from the headgate

¹⁰³ *Id.* at 440; MONT. CODE ANN. §§ 85-2-408, -439 (2016) (authorizing the temporary use of existing water rights to provide instream flows to benefit fisheries for a maximum thirty-year lease term).

¹⁰⁴ *Hohenlohe*, 357 Mont. at 443.

¹⁰⁵ See MONT. CODE ANN. §§ 85-2-402, -408 (2016).

¹⁰⁶ *Hohenlohe*, 357 Mont. at 443 (quoting the district court).

¹⁰⁷ *Id.* at 445.

¹⁰⁸ Interview with Tim Davis, *supra* note 67.

¹⁰⁹ MONT. CODE ANN. § 85-2-408(7) (2016).

¹¹⁰ Interview with Tim Davis, *supra* note 67.

to where that portion of the water returns to the source.¹¹¹ This protection can apply even if it is to only the portion of the water right that is not diverted as a result of conservation measures, unless it causes injury to other water rights.¹¹² In *Hohenlohe*, the Supreme Court of Montana stated:

The [DNRC] still possesses discretion under appropriate circumstances to limit or reduce that portion suitable for instream flow from “the amount historically diverted” to “the amount historically consumed, or a smaller amount.” [Mont. Code Ann. § 85-2-408(7) (2016).] Section 85-2-402(8), MCA, likewise allows the [DNRC] to approve an application for a change in appropriation right “subject to the terms, conditions, restrictions, and limitations that it considers necessary to satisfy the criteria of this section.” . . .

We recognize, however, that the [DNRC’s] own past interpretation of the phrase “amount historically consumed” . . . reflects the reality that under some circumstances[,] the diverted amount and consumed amount will be the same. These circumstances likely will arise in situations where no water historically had returned to the protected reach, and no downstream users likely would be affected adversely. The [DNRC] properly exercises the discretion bestowed by [section 85-2-408(7)] to limit that amount of water that an applicant may dedicate to instream flow when questions arise as to whether a proposed change would adversely affect other right holders. These questions generally arise in change applications in which some portion of the historically diverted water returns directly to the protected reach and in which identifiable downstream users potentially will be affected adversely by the proposed change of use.

The [DNRC] must evaluate, on a case by case basis, whether an instream flow application may be approved for the full historically diverted amount, the “amount historically consumed,” or a smaller amount. . . . The [DNRC] retains the discretion to take into account reasonable or wasteful use and to amend or modify a proposed change of use application according to those determinations. . . .

In exercising this discretion, however, the [DNRC] must not lose sight of the ultimate purpose of the instream flow statute—to restore water to streams for the benefit of the fishery resource. The [DNRC] must balance this purpose with the realistic likelihood of adverse effect to *existing* right holders. . . .¹¹³

Essentially, pursuant to this legal mechanism, a water right owner can protect his entire diverted amount past the headgate to the point where return flows from the original use historically flowed back into the system—if this amount of water can be quantified.¹¹⁴ This means protecting water historically consumed from its diversion point down to its place of

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Hohenlohe*, 357 Mont. at 458–59.

¹¹⁴ Interview with Tim Davis, *supra* note 67.

return flow. Still a relatively new concept, consumed to the source water is fairly controversial in Montana.¹¹⁵

V. Oregon

A. Oregon Allocation of Conserved Water Program

Oregon has by far the most detailed and thorough conserved water program—the Allocation of Conserved Water Program (ACWP).¹¹⁶ Oregon created a voluntary program for water rights holders to implement conservation measures and subsequently apply for an approval of an allocation of the conserved water.¹¹⁷ The Water Resources Commission (the “Commission”), upon receipt of an application, will then determine the quantity of conserved water and allocate twenty-five percent of the water to the state and the remaining seventy-five percent of the water to the applicant.¹¹⁸ The applicant may suggest a higher allocation to the state. *Id.* If more than twenty-five percent of the funding for implementing the conservation measures came from the state or federal government, the Commission must allocate a percentage of the water at least equivalent to the percentage of government funding provided.¹¹⁹ If the Commission determines that the water allocated to the state is “necessary to support instream flow purposes,” the water must become an instream water right held by the state.¹²⁰ Otherwise, the state’s allocated water becomes available to the public for appropriation.¹²¹

It is important to note that the Oregon ACWP does not provide an option to temporarily transfer water rights.¹²² Permanent changes are made to the certificates of the water rights holders.¹²³ After the conservation project is complete, the Commission issues new certificates for the non-conserved portion owned by the person implementing the conservation project and portions of the conserved water belonging to the user and the Commission.¹²⁴ Ultimately, this means that the original water user holds two separate certificates to water rights at the end of the project and the Commission holds a water right to at least twenty-five percent of the conserved water.

¹¹⁵ *Id.*

¹¹⁶ See OR. REV. STAT. §§ 537.455-.500 (2016).

¹¹⁷ *Id.* § 537.465.

¹¹⁸ *Id.* § 537.470(3).

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.* § 537.470(6).

¹²³ *Id.*

¹²⁴ *Id.*

The transfer of the right to use conserved water takes the same priority date—or one minute after—held by the appropriator implementing the conservation measure.¹²⁵ Importantly, Oregon allows any state agency to purchase or accept a gift of a right to conserved water.¹²⁶ Using this statute, an agency or third party may acquire conserved water and request the Commission to manage the water as an instream flow right.¹²⁷ Importantly, a water right for conserved water has the same legal status as any other water right.¹²⁸

Approval of an ACWP project remains subject to any necessary mitigation requirements to avoid injury to existing water rights.¹²⁹ An ACWP applicant must provide a description of the mitigation measures planned for the project.¹³⁰ In particular, an ACWP project must be cautious when taking water that was seepage and devoting it to an out-of-stream consumptive use.¹³¹ Often, seepage water in the Deschutes Basin ultimately makes its way back to the stream and becomes available for diversion by downstream users.¹³² Therefore, complications arise when the applicant wants to apply the conserved water to an additional consumptive use.¹³³ “If there are unmet junior rights downstream[,] then allocating this water to the applicant for consumptive use is likely to injure the junior user.”¹³⁴

Under the agency’s regulations, the OWRD must make a determination that an ACWP conserved water proposal will not cause harm to existing water rights.¹³⁵ Ms. Teri Hranac, ACWP Administrator for the Oregon Water Resources Department (OWRD), shed additional light on the determination of “harm” or “injury” to other water rights.¹³⁶ According to Ms. Hranac, “harm” is a broader concept than “injury.” It includes water quality considerations, reduction of carriage water in the ditch after the license point of diversion, and economic hardship caused by an increased cost to divert or apply water to beneficial use. Ms. Hranac provided a draft definition of harm:

¹²⁵ *Id.* § 537.485.

¹²⁶ *Id.* § 537.495.

¹²⁷ *Id.*

¹²⁸ *Id.* § 537.500(1).

¹²⁹ OR. ADMIN. R. 690-018-0050(4)(d) (2016); BRUCE AYLWARD, RESTORING WATER CONSERVATION SAVINGS TO OREGON RIVERS: A REVIEW OF OREGON’S CONSERVED WATER STATUTE 17 (Ecosystem Economics, July 2008), *available at* [http://www.ecosystemeconomics.com/Resources_files/Aylward%20\(2008\)%20Oregon's%20Conserved%20Water%20Program.pdf](http://www.ecosystemeconomics.com/Resources_files/Aylward%20(2008)%20Oregon's%20Conserved%20Water%20Program.pdf).

¹³⁰ OR. ADMIN. R. 690-18-0040(14) (2016) (discussing the ACWP application requirements).

¹³¹ AYLWARD, *supra* note 129, at 18.

¹³² *Id.* at 17–18.

¹³³ *Id.* at 18.

¹³⁴ *Id.*

¹³⁵ OR. ADMIN. R. 690-018-0050(4) (2016).

¹³⁶ Interview by Anne Castle with Teri Hranac, ACWP Administrator, Or. Water Res. Dep’t (Jan. 3, 2016) (notes on file with author).

Conceptually, in the allocation of conserved water context, the term “harm” has a broader meaning and is less defined than is the definition of “injury” for water right transfers. A simplistic definition of harm suggests it means physical injury or damage. As used in these rules, “harm” addresses the affect(s) [sic] of conservation measures on the ability of other water users to divert or beneficially use water.

The term “harm” contemplates, but is not limited to meaning:

- 1) A reduction in the quantity of water available to other uses; e.g., a reduction in the “head” or amount of water in an irrigation canal that deprives a user near the end of the canal of the ability to divert their legal allocation of water;
- 2) An alteration to the quality of water available to other users; e.g., concentrating pollutants or increasing salinity or acidity of water available for beneficial use; or
- 3) Causing economic hardship; e.g., other users incur significant increased costs to divert and apply the quantity of water to which they are legally entitled.¹³⁷

As portrayed in the flow chart below, if the OWRD’s preliminary determination regarding the ACWP application is protested, then the application goes to the Commission for further determination of whether the proposed allocation conserved water is likely to “injure” existing water rights.¹³⁸ According to Ms. Hranac, injury is determined at the point of diversion, rather than behind the headgate, and is defined similar to way the term is defined in Colorado. This means a situation in which “a proposed transfer would result in another, existing water right not receiving previously available water to which it is legally entitled.”¹³⁹

Ms. Hranac also discussed how the OWRD determines the quantity of conserved water needed when mitigation is necessary to avoid harm to existing water rights.¹⁴⁰ The first quantification determination is made by the watermaster (the equivalent of Colorado’s water commissioners).¹⁴¹ The watermaster uses AgriMet, which estimates crop consumptive use for areas in the Pacific Northwest.¹⁴² Specifically, the watermaster uses the most consumptive crop for the area in which the applicant’s water right is located to determine assumed consumptive use, then subtracts that amount of water from the certificated amount of the water right (or the lesser amount representing the physical limits of the diversion structure). The remainder represents the assumed return flow, which determines the required mitigation. The mitigation is calculated in cfs, subtracted from the conserved water amount, and the remainder is divided seventy-five percent/twenty-five percent (or the appropriate proportion relevant to the application) between the water user and the ORWD. Note that the use of the most consumptive crop means that the estimated return flows are limited to the minimum

¹³⁷ *Id.*

¹³⁸ OR. ADMIN. R. 690-018-0050(9) (2016).

¹³⁹ *Id.* R. 690-380-100(3).

¹⁴⁰ *See id.* R. 690-018-0050(4)(d).

¹⁴¹ Interview by Anne Castle with Teri Hranac, *supra* note 136.

¹⁴² *See AgriMet*, U.S. BUREAU OF RECLAMATION, <http://www.usbr.gov/pn/agrimet/> (last visited Apr. 15, 2016).

possible amount. It is quite possible that more return flows from the historical use of the water right were previously available to downstream users and that the assumed mitigation is insufficient.

Ms. Hranac provided an example from a recent application. The certificated water right provided a duty of water at 4.5 acre feet per acre. AgriMet calculated a consumptive use amount at 4.35af/acre, providing a return flow of 0.15 af/acre (4.5 – 4.35). The return flow of 0.15 af/acre was converted to cfs and deducted from the gross amount to be conserved and left in the stream for mitigation. The Deschutes Basin, however, has been more thoroughly studied than any others in the state, and in that basin, the ORWD uses a standard consumptive use of 1.8 af/acre for any crop.

The ACWP has been predominately used by the holders of irrigation water rights that have chosen to implement conservation measures to generate water savings.¹⁴³ Irrigation conservation measures fall into one of two groups: (1) individual irrigators undertaking water efficiency improvements, like moving diversion points downstream, piping ditches, or switching to low-water use irrigation technologies, and (2) a large-scale piping of an irrigation district or company canal.¹⁴⁴ Often, an intermediary, such as the Oregon Water Trust or the Deschutes River Conservancy, plays an important role in incentivizing landowners and irrigation districts to participate by offering to lease the conserved water for instream use, as allowed by Oregon law, or funding the implementation of projects.¹⁴⁵ Intermediaries commonly undertake the bulk of the paperwork during the application process to the OWRD.¹⁴⁶ Without the involvement of an intermediary, landowners and irrigation districts participate with the incentive to be rewarded with the ability to “spread” water—a practice that allows users to enlarge the number of acres historically irrigated beyond the number of acres originally authorized.¹⁴⁷ In the instances without an intermediary, the OWRD, by default, takes a larger role in helping the landowner navigate the application process.¹⁴⁸

B. Oregon’s Instream Flows Program

The ACWP is used largely in conjunction with Oregon’s instream flows program. After the conserved water is divided between the water user and the OWRD, the state’s share (twenty-five percent or greater) is devoted to instream use if necessary to support stream flows.¹⁴⁹ The new instream water right obtains the priority date of the irrigation right from which it was derived.¹⁵⁰

¹⁴³ AYLWARD, *supra* note 129, at 15.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*; see OR. REV. STAT. § 537.348 (2016) (allowing “any person” to purchase or lease an existing water right for instream use).

¹⁴⁶ AYLWARD, *supra* note 129, at 15.

¹⁴⁷ *Id.* at 5.

¹⁴⁸ *Id.* at 16.

¹⁴⁹ OR. REV. STAT. § 537.470(3) (2016).

¹⁵⁰ *Id.* § 537.485(1).

Oregon's program for acquiring instream flows has been called "one of the most comprehensive and advanced water rights transaction schemes in the West."¹⁵¹ Oregon's state agencies may request the OWRD to hold instream flow rights in trust for fish and wildlife habitat, pollution abatement, or recreational uses.¹⁵² As in other states, the OWRD must approve the water rights change, and the "no injury" rule applies.¹⁵³ The transfers for instream use may be permanent or leased.¹⁵⁴ Leasing is the preferred method in Oregon with almost 1,800 leases in the first twenty years of the program between 1994 and 2014.¹⁵⁵ The lease approval process only takes between thirty to forty days.¹⁵⁶ Importantly, the burden of proof has been shifted. Rather than satisfy the "no injury" rule at the outset, the instream leasing program provides the OWRD with the power to modify or terminate a lease if an injury or a valid complaint arises after approval.¹⁵⁷ The leasing program is often combined with the ACWP.¹⁵⁸

C. Oregon's ACWP Program in Practice

Initially, little interest existed in the ACWP.¹⁵⁹ The Commission received only ten applications in the program's first twelve years leading up to 2000.¹⁶⁰ Between 2000 and 2013, the Commission received eighty-six applications due to the increase in public support for restoration of instream flows and the desire to expand water supplies.¹⁶¹ The Columbia and Deschutes Basins have seen the most use of the ACWP.¹⁶² But in recent years, according to Ms. Hranac, applications for the ACWP have declined.¹⁶³ This decrease may be attributable to the significant drought in Oregon (with only 10% of normal snowpack in 2015).¹⁶⁴ The OWRD received eight applications in 2013, two applications in 2014, and three applications in 2015.¹⁶⁵ On average, ACWP transfers take approximately 1.3 years to approve.¹⁶⁶ Starting in 2005, the Commission started to market the conserved water program in conjunction with the state's Instream Leasing Program, which allows water users to enter five-year leases for environmental

¹⁵¹ STANFORD REPORT, *supra* note 57, at 44.

¹⁵² OR. REV. STAT. §§ 537.336(1)–(3) (2016).

¹⁵³ OR. ADMIN. R. 690-077-0077(2)–(6) (2016).

¹⁵⁴ OR. REV. STAT. § 537.348(1) (2016).

¹⁵⁵ STANFORD REPORT, *supra* note 57, at 43.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 43–44.

¹⁵⁸ *Id.*

¹⁵⁹ *Allocation of Conserved Water*, OR. WATER RES. DEP'T, http://www.oregon.gov/OWRD/pages/mgmt_conserved_water.aspx (last visited Mar. 1, 2016).

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² Interview by Anne Castle with Teri Hranac, *supra* note 136.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ STANFORD REPORT, *supra* note 57, at 44.

purposes without water rights being subject to forfeiture.¹⁶⁷ Any person or entity can hold leases under this provision.¹⁶⁸ Therefore, conservation agencies, like the Oregon Water Trust, Deschutes River Conservancy, and Klamath Basin Rangeland Trust, became heavily involved in working with water rights holders to promote conserved water as an ideal option for instream leasing.¹⁶⁹

The ACWP has not been litigated. The Commission has adopted several regulations to further clarify the process used in administering the program. Notably, the regulations include a public notice-and-comment period for proposed conservation projects, application of the no injury rule, beneficial use requirements, and requirements to prove the water has been conserved and dedicated as claimed.¹⁷⁰

The Oregon ACWP finds particular success in the Deschutes Basin due to a geologic advantage, making it the dominant location for ACWP transactions.¹⁷¹ The basin contains largely a volcanic rock base that causes significant seepage losses.¹⁷² In the Deschutes Basin, sometimes up to 80% of a decreed water right goes to seepage while only 20% of the water is consumptively used.¹⁷³ Therefore, a great amount of opportunity arises to implement large piping projects that will conserve substantial amounts of water.¹⁷⁴ Further, a pre-existing U.S. Geological Survey (USGS) study expedited the process for the Deschutes River Conservancy in implementing conservation measures in this basin.¹⁷⁵ The USGS study strengthened the state's understanding under the "no injury" rule of how groundwater percolation and discharges in the basin impacts instream and downstream flows.¹⁷⁶ Prior to the study, little was known regarding the impact of groundwater on stream flow in the region.¹⁷⁷ Now, the geologic advantage is of particular significance because, in practice, projects under Oregon's program must be large-scale to obtain sufficient water savings to be economical.¹⁷⁸ Substantial costs and time go into developing, applying for, and implementing the program.¹⁷⁹ As a result, participants need to

¹⁶⁷ OR. REV. STAT. § 537.348(1) (2016).

¹⁶⁸ *Id.*

¹⁶⁹ *Instream Leasing Program*, OR. WATER RES. DEP'T, http://www.oregon.gov/owrd/pages/mgmt_leases.aspx (last visited Mar. 1, 2016).

¹⁷⁰ See OR. ADMIN. R. 690-018-010-0090 (2016).

¹⁷¹ Adam Schempp, *Western Water in the 21st Century: Policies and Programs that Stretch Supplies in a Prior Appropriation World*, 40 ENVTL. L. REP. NEWS & ANALYSIS 10394, 10410 (Apr. 2010).

¹⁷² *Id.*

¹⁷³ AYLWARD, *supra* note 129, at 2.

¹⁷⁴ Schempp, *supra* note 171, at 10410.

¹⁷⁵ *Id.*; MARSHALL W. GANNETT, ET. AL, GROUND-WATER HYDROLOGY OF THE UPPER DESCHUTES BASIN, OREGON, U.S. GEOLOGICAL SURVEY WATER-RESOURCES INVESTIGATIONS REPORT 00-4162 (2001), *available at* <http://pubs.usgs.gov/wri/wri004162/pdf/WRIR004162.pdf>.

¹⁷⁶ GANNETT, ET. AL., *supra* note 175, at 1-2.

¹⁷⁷ *Id.*

¹⁷⁸ Schempp, *supra* note 171, at 10410.

¹⁷⁹ *Id.*

obtain enough water available for their own use at the end of the program to be worth the investment.¹⁸⁰

Generally, five stages exist in the ACWP process¹⁸¹:

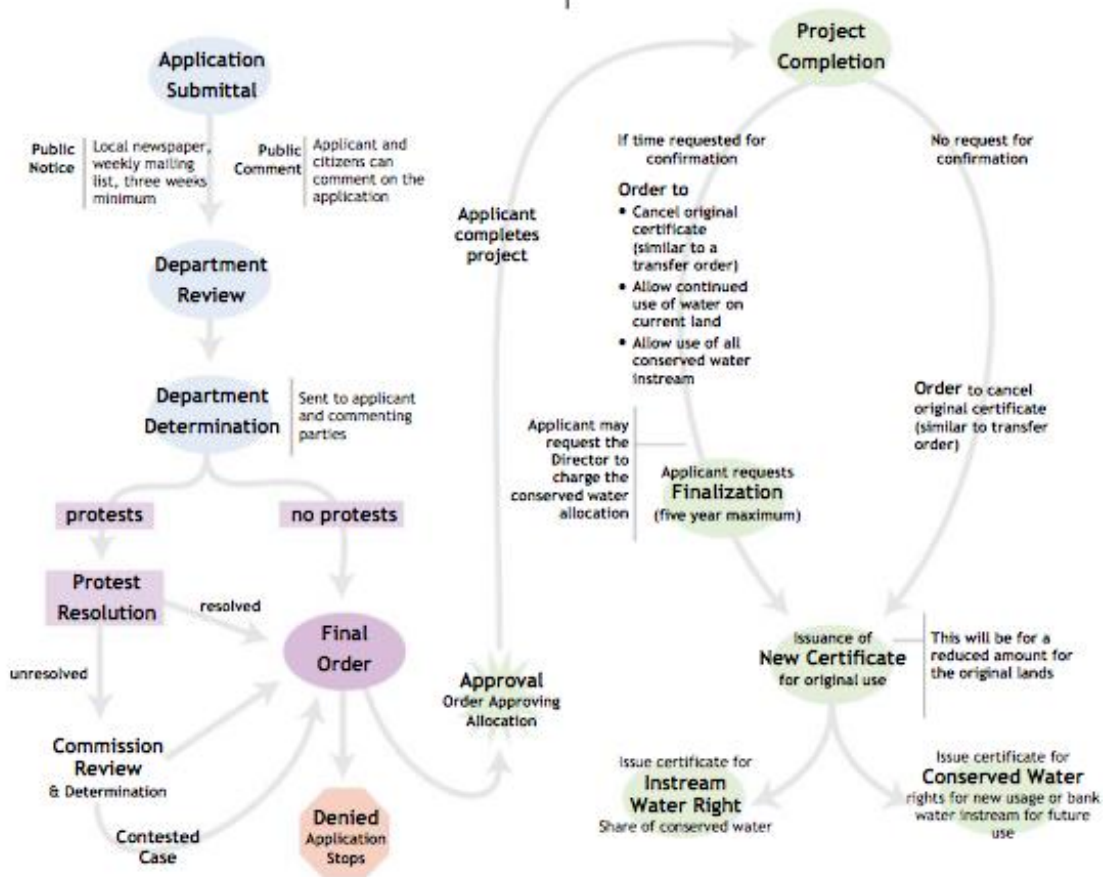
- (1) Application – An applicant submits an application to the OWRD. Public notice is given with three weeks provided for public comment.
- (2) Review – The OWRD reviews the application and any public comments received. The OWRD makes a determination to either approve or reject the application and notifies the applicant and any commenters. At this time, the applicant or commenting parties may protest the decision. If no protests are received, the application moves to a final order. If protests are made, the application moves into Resolution.
- (3) Resolution – The OWRD, applicant, and commenting parties attempt to fashion mitigation measures for the project. If a protest cannot be resolved, the Water Resources Commission reviews the application before making a final order. The Commission may elect to hold a contested case hearing before issuing the final order.
- (4) Completion – After approval, the applicant may begin construction of the project. Once operational, the applicant may request a “test period” of up to five years to confirm that the project provides enough conserved water to meet the beneficial uses outlined on the new water rights certificates.
- (5) Finalization – The OWRD issues new water rights certificates. The new certificates have the same priority dates as the original certificates but with quantities that reflect the conserved water now in the system and that add up to the same amount as the original certificate.

The ACWP process, however, can probably be best described by the OWRD’s flow chart.

¹⁸⁰ *Id.*

¹⁸¹ *Applying for the Allocation of Conserved Water Program: Overview and Process Diagram*, OR. WATER RES. DEP’T (March 2006), available at <http://www.oregon.gov/owrd/pubs/docs/reports/conserved.pdf>.

Allocation of Conserved Water Process



Applying for the Allocation of Conserved Water Program: Overview and Process Diagram, Or. Water Res. Dep't (March 2006), available at
<http://www.oregon.gov/owrd/pubs/docs/reports/conserved.pdf>.

Ms. Hranac credits the ACWP with providing a legal mechanism to “spread water,” meaning the ability to use a water right on additional land or to sell or lease the conserved water to another party.¹⁸² By doing so, the conserved water becomes a marketable commodity. As explained on the ACWP website:

Without this law, the water user would not be entitled to use conserved water to meet new needs; instead, the water would return to the stream where it would be available for the next downstream appropriator. This program provides economic return on conservation investments by allowing water for use on additional lands and allowing for

¹⁸² Interview by Anne Castle with Teri Hranac, *supra* note 136.

new uses of water. In exchange for granting the user the right to allocate a portion of the conserved water, the law dedicates a portion to instream use.¹⁸³

VI. Washington

A. Washington's Statute

Under Washington Revised Code sec. 90.42.030, the state may enter contracts to provide financial assistance to agricultural water conservation projects.¹⁸⁴ In consideration for the financial assistance provided by the state, public benefits must be obtained:

If the public benefits to be obtained require conveyance or modification of a water right, the recipient of funds shall convey to the state the recipient's interest in that part of the water right or claim constituting all or a portion of the resulting net water savings for deposit in the trust water rights program. The amount to be conveyed shall be finitely determined by the parties [. . .] before the expenditure of state funds.¹⁸⁵

Conserved water can include both "net water savings" and "gross savings." Washington law provides an encompassing definition of net water savings that even mentions consideration of the "no injury" rule:

"Net water savings" means the amount of water that is determined to be conserved and usable within a specified stream reach or reaches for other purposes without impairment or detriment to water rights existing at the time that a water conservation project is undertaken, reducing the ability to deliver water, or reducing the supply of water that otherwise would have been available to other existing uses.¹⁸⁶

The Washington Department of Ecology (the "Department") specifies that gross water savings are the reduction in historical diversions while the net savings account for return flows and any other water needed to satisfy other existing rights.¹⁸⁷ In essence, net water savings equals consumptive use.

B. Washington Water Trust Program in Practice

¹⁸³ ALLOCATION OF CONSERVED WATER PROGRAM: BENEFITS FOR OREGON AGRICULTURE AND INSTREAM FLOWS, OR. WATER RES. DEP'T, http://www.oregon.gov/owrd/PUBS/docs/forms/ACW_One_Pager_11_13.pdf (last visited Feb. 7, 2016).

¹⁸⁴ WASH. REV. CODE § 90.42.030(1) (2016).

¹⁸⁵ *Id.* § 90.42.030(2).

¹⁸⁶ *Id.* § 90.42.020(3).

¹⁸⁷ WASH. DEP'T ECOLOGY, TRUST WATER RIGHTS PROGRAM GUIDELINES 9 (1992), *available at* <https://fortress.wa.gov/ecy/publications/documents/92088.pdf>. The 2011 Guidelines do not mention the concept of "gross water savings."

In return for project funding, the state deposits its portion of the net water savings into the Washington Trust Water Rights Program (TWRP).¹⁸⁸ Through the TWRP, the Department may acquire any type of water right, temporarily or permanently, for instream flows, irrigation, municipal, or other beneficial uses.¹⁸⁹ Water held in trust will retain its original priority date.¹⁹⁰ The Department holds authority to use trust water for the purpose of water banking to make water available to third parties on a temporary or permanent basis.¹⁹¹ But a water holder may donate the water right to the Department on the express condition that water only be used for instream flows for a period of time not to exceed five years.¹⁹² The Washington legislature left many of the details regarding TWRP administration up to the Department.¹⁹³ Pursuant to that authority, the Department wrote *Guidance for Processing and Managing Trust Water Rights*, a detailed report on navigating trust water rights in the state.¹⁹⁴

If the water is being donated to the trust program to benefit instream flows on a temporary or permanent basis, then the Department quantifies the water by evaluating the highest use within the previous five years before the acquisition.¹⁹⁵

For each permanent trust water right, the Department will issue a new water right certificate.¹⁹⁶ A certificate may also be issued for a temporary trust water right as needed to provide for changes of use.¹⁹⁷ For water rights altered by water conservation actions, the Department issues a “superseding” water right certificate that redefines the right as necessary.¹⁹⁸ When a permanent transfer or long-term lease (more than five years) will benefit instream flows, the Department, prior to approval, conducts an extensive analysis of the water right.¹⁹⁹ The Department’s analysis includes a review of the water right’s validity, historical consumptive use, and quantity available for instream flow dedication.²⁰⁰ This also includes an

¹⁸⁸ WASH. REV. CODE § 90.42.030(2) (2016).

¹⁸⁹ *Id.* § 90.42.040(1).

¹⁹⁰ *Trust Water Rights Program*, WASH. DEP’T ECOLOGY, <http://www.ecy.wa.gov/programs/wr/market/trust.html> (last visited Mar. 1, 2016).

¹⁹¹ WASH. REV. CODE §§ 90.42.100(1)–(2)(c) (2016).

¹⁹² *Id.* §§ 90.42.080(1)(a), (4).

¹⁹³ *Id.* § 90.42.050 (specifying that the Department must establish guidelines “governing the acquisition, administration, and management of water trust rights”).

¹⁹⁴ See *GUIDANCE FOR PROCESSING AND MANAGING TRUST WATER RIGHTS*, WASH. DEP’T ECOLOGY (last revised June 2011), *available at* http://www.ecy.wa.gov/programs/wr/rules/images/pdf/guid_1220.pdf [hereinafter *GUIDANCE FOR TRUST WATER RIGHTS*].

¹⁹⁵ *Id.* at 4; WASH. REV. CODE § 90.03.380(4) (2016) (providing an exception to the regular change of water right provision when the state acquires trust water rights through funding water conservation projects).

¹⁹⁶ WASH. REV. CODE § 90.42.040(2) (2016).

¹⁹⁷ *Id.*

¹⁹⁸ Even though the priority of the trust right established by conservation is the same as the original water right, it will be administered as junior to that right. *Id.* § 90.42.040(3).

¹⁹⁹ *Id.* § 90.03.380(1).

²⁰⁰ *Id.*

“impairment” analysis and consideration of the public interest.²⁰¹ In total, the process takes between nine and twelve months.²⁰² Washington tries to incentivize donations of water rights for instream flows by bypassing the formal review process, waiving the application fee, and offering tax deductions for permanent donations.²⁰³

For water rights accepted into the trust program not for the benefit of instream flows, like water rights intended to be transferred to another user, the Department quantifies the water right by conducting an “extent and validity review.”²⁰⁴ The extent and validity review is mandatory if a transfer of the water right to another user takes place.²⁰⁵ When an extent and validity review is conducted, the Department checks that the water use was lawfully originated and determines the amount applied to a beneficial use.²⁰⁶ The review assesses “historical records, maps, aerial photography, and other available documents” to determine (1) “the maximum amounts of water used as described in the claim, permit, or certificate” and (2) “if there are any periods of non-use greater than five successive years.”²⁰⁷ The Department’s review is not final, only tentative, until a superior court makes a final determination.²⁰⁸

Kelsey Collins, Director for the TWRP, remains cautious regarding the program’s instream flow benefits.²⁰⁹ Because the Department does not try to shepherd water beyond the point of the return flow, the instream flow benefits are limited to between the headgate and the return flow point(s). Generally, TWRP projects are expensive—producing only limited improvements in stream flows. Instead, Ms. Collins favors simply purchasing the rights or having the rights placed voluntarily into the TWRP to improve flows.

C. Washington Irrigation Efficiencies Grant Program

Through its authority to promote water conservation activities,²¹⁰ Washington’s Irrigation Efficiencies Grant Program, located in the Washington Conservation Commission

²⁰¹ *Id.* § 90.42.040(4).

²⁰² STANFORD REPORT, *supra* note 57, at 52.

²⁰³ *Id.* at 53.

²⁰⁴ GUIDANCE FOR TRUST WATER RIGHTS, *supra* note 194, at 4.

²⁰⁵ *Id.*; WASH. REV. CODE § 90.03.380 (2016).

²⁰⁶ GUIDANCE FOR TRUST WATER RIGHTS, *supra* note 194, at 4; WASH. REV. CODE § 90.03.380 (2016).

²⁰⁷ GUIDANCE FOR TRUST WATER RIGHTS, *supra* note 194, at 4.

²⁰⁸ *Id.*

²⁰⁹ Interview by Larry MacDonnell with Kelsey Collins, Director, Washington Trust Water Rights Program (Nov. 13, 2015) (notes on file with author).

²¹⁰ “The legislature finds that a need exists to develop and test a means to facilitate the voluntary transfer of water and water rights, including conserved water, to provide water for presently unmet needs and emerging needs. Further, the legislature finds that water conservation activities have the potential of affecting the quantity of return flow waters to which existing water right holders have a right to and rely upon. It is the intent of the legislature that persons holding rights to water, including return flow, not be adversely affected in the implementation of the provisions of this chapter.” WASH. REV. CODE § 90.42.010 (2016).

(WCC), is specifically designed to target improving stream flows in reaches identified as critical for protected species of fish.²¹¹ “Each project must have valid water rights and produce a biological improvement to the stream”²¹² Projects commence when local soil and water conservation districts in the areas covering these critical reaches work with irrigators to find opportunities for water conservation.²¹³ Subsequently, the district and irrigator submit a project proposal to the WCC.²¹⁴ The Department reviews the plan for water rights implications while the Washington Department of Fish and Wildlife assesses the fisheries benefits.²¹⁵ Funding is available for up to eighty-five percent of the project costs.²¹⁶ According to a spreadsheet provided by Jon Culp, Program Director of the WCC, the program has funded seventy-one projects since 2001 at a total cost of approximately \$14 million.²¹⁷ In total, the projects produced savings of nearly 16,000 acre-feet of water at a cost of \$891 per acre-foot.²¹⁸

Funding for the Irrigation Efficiencies Grant Program has dropped sharply in recent years, corresponding with the downturn in state revenues.²¹⁹ Mr. Culp also noted that collaborating with the local soil and water conservation districts has been a positive experience. The local districts know the irrigators, draw up the plans, and develop the budget. John Kirk, Project Manager for the program in the Department, leads the preliminary investigation of the validity and extent of the water rights and provides a check on estimates of saved water. He feels that the water quality may benefit more than the actual stream flows.

²¹¹ *Irrigation Efficiencies Program*, WASH. STATE CONSERVATION COMM’N, <http://www-test.scc.wa.gov/irrigation-efficiencies-program/> (last visited Mar. 1, 2016).

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.*

²¹⁵ Interview by Larry MacDonnell with Jon Culp, Program Director Wash. Conservation Comm’n (Nov. 13, 2015) (notes on file with author).

²¹⁶ *Id.*

²¹⁷ Spreadsheet provided by Jon Culp, Program Director, Wash. Conservation Comm’n (Nov. 13, 2015) (on file with Larry MacDonnell).

²¹⁸ Interview by Larry MacDonnell with Jon Culp, *supra* note 215.

²¹⁹ *Id.*