# Voluntary Agreement Analysis

## Harney Community-Based Water Planning Collaborative

**REVIEW DRAFT - APRIL 18, 2022**

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Jennifer Diffley, Rachel O'Connor

Culp & Kelly LLP

EDF ENVIRONMENTAL DEFENSE FUND
Finding the ways that work

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- The elements of a voluntary agreement that may be important for the Harney Basin context;
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- Areas for which additional research may be needed.

# Voluntary Agreement Analysis

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## About Environmental Defense Fund

Environmental Defense Fund (EDF), founded in 1967, is a non-profit guided by science and economics to develop practical and lasting solutions to natural resource problems. Working in some of the most water-stressed regions in the U.S., EDF's Water Team is dedicated to developing water policy and management solutions that balance water supply and demand and increase the resilience of water systems that equitably support communities and ecosystems.

## About Culp & Kelly

Culp & Kelly, LLP is a mission-driven law and policy firm that is focused on supporting innovation and change in Western natural resources management, serving the communities, industries, NGOs, farmers, ranchers, and entrepreneurs that are leading the way to a more vibrant, resilient, sustainable American West.

## Disclaimer

The information provided in this report is for general informational purposes only. This information does not, and is not intended to, constitute legal advice. Readers of this report should contact their attorney to obtain advice with respect to the application of any particular legal interpretation, policy, or concept discussed in this report related to Harney CBWP Collaborative strategies.

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# Contents

**Introduction** **2**

Purpose & Scope of Analysis 2
Issue Overview 3

**Framework for Analysis** **5**

Statutory Interpretation 5
Agency Deference 6
Relation to Voluntary Agreements 7

**Purpose of & Approaches for Voluntary Agreements** **8**

Overview of O.R.S. § 537.745 8
Potential Scope & Approach Options for Voluntary Agreements 9
*Approach 1: Basin/Subbasin/Subarea Holistic Management Agreement* *9*
*Approach 2: Management Strategy/Tool Implementing Agreement* *10*
*Approach 3: Management Framework Agreement* *12*

**Legal Elements, Constraints, & Considerations** **15**

Geographic Scope 15
Subject-Matter Scope 16
Parties 19
Procedure 20
Effect & Term 22

**Application of Voluntary Agreements for Harney Basin Strategies** **23**

Management Goals & Objectives 23
Foundational Strategies 26
Operational Strategies 30



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Tactical Strategies 33
Organizational/Infrastructure Strategies 37
**Conclusions 39**
**Appendix A – Questions & Responses 40**
**Appendix B – Case Studies 41**
Butter Creek Critical Groundwater Area (Oregon) 41
San Pedro Riparian National Conservation Area (SPRNCA) MOU & Cooperative Monitoring & Adaptive Management Plan (Arizona) 42
Mojave Basin Settlement (California) 44
Groundwater Management District 4 / Sheridan 6 Locally Enhanced Management Area (Kansas) 46
Diamond Valley Groundwater Management Plan (Nevada) 48
**References 50**



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# Introduction

## Purpose & Scope of Analysis

Culp & Kelly, LLP was engaged to provide research, analysis, and support services related to collaborative groundwater management strategies and policies relevant to the Harney Basin in Oregon. Directed by Environmental Defense Fund staff and informed by the Harney Community-Based Water Planning (CBWP) Collaborative Steering Committee, this work consisted of an analysis of Oregon Revised Statute 537.745, which authorizes the use of voluntary agreements, to help inform how such agreements might be developed and implemented in the Harney Basin to address groundwater overdraft. Activities conducted as part of this analysis included:

- Meetings with members of the Harney Community-Based Water Planning Collaborative, Committees of the Collaborative, various stakeholders in the Collaborative, and the Oregon Water Resources Department.
- Literature review of existing analyses of the voluntary agreements statute.
- Review and analysis of voluntary agreements used in other contexts that could inform Harney Basin strategies.



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## Issue Overview

The Harney Community-Based Water Planning (CBWP) Collaborative is currently undertaking a place-based approach to water resources planning. The Collaborative has been working together to gather information, identify strategies, and determine water resources needs to develop solutions to meet the area's water resources needs now and into the future.[1] As part of this effort, the Collaborative is exploring how a Voluntary Agreement under Oregon Revised Statute (O.R.S.) § 537.745 might be utilized to implement the identified strategies for water resources management.

O.R.S. § 537.745 authorizes the Water Resources Commission to "encourage, promote and recognize voluntary agreements among ground water users from the same ground water reservoir." The statute creates an opportunity for groundwater users to implement locally-defined measures to manage groundwater use, so long as those measures are consistent

[1] HC Watershed Council, CBWP, http://hcwatershedcouncil.com/community-based-water-planning/



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with the intent, purposes, and requirements of Oregon's Groundwater Act. However, the use of voluntary agreements in this context is still untested. Consequently, there are significant uncertainties related to development and implementation of voluntary agreements for the purpose of groundwater management.

Some of the questions raised by Collaborative stakeholders regarding voluntary agreements include:

- What is the appropriate scope of a voluntary agreement?
- Which management strategies might require a voluntary agreement?
- Could a voluntary agreement be used to execute a transfer between two people, as part of a pilot demonstration for building up to a water market?
- Who needs to approve of the agreement and who is responsible for ensuring it is carried out? What are the roles of the landowners, the county, and the state?
- What level of participation is needed to implement a voluntary agreement? Is it 100%?
- What metrics do you use to evaluate the agreement to ensure that the goals are being met?

A full list of stakeholder questions received during the meetings held under this scope, with references to relevant information and analysis within this report, is in Appendix A.



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To address these questions and other potential legal uncertainties/risks, the following sections will provide a high-level overview of the voluntary agreement statute O.R.S. § 537.745, discuss application of the statute in the context of Harney Basin CWBP Collaborative's planning effort and priority management strategies, identify other legal considerations related to specific elements that might be incorporated into a potential future voluntary agreement, and discuss ways to mitigate the various legal uncertainties/risks.

Additionally, there are several examples of voluntary agreements and other collaborative groundwater planning and management efforts around the West that may provide useful lessons and examples for implementing Harney strategies. Various examples are discussed throughout this report where specific elements are relevant to the Harney planning context. Additional case study information, along with links to the full example agreements and plans, where available, is in Appendix B.



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## Framework for Analysis

In evaluating potential elements of a voluntary agreement for the Harney Basin context and exploring legal constraints and considerations, we looked to the legal analysis and standard of review that a court would likely employ in reviewing a voluntary agreement developed by water users and reviewed/approved by the Water Resources Commission. In general, this framework looks at:

1) Interpretation of the statute that is consistent with and advances the legislative policy.

2) Scope of agency discretion in interpreting and applying the statutory policy to the facts in the administrative record with sufficient findings and connective reasoning.[2]

These two components guide the basic analysis of legal supportability of a voluntary agreement - it is the review process that a court would be likely to use in analyzing whether a voluntary agreement approved by the Commission was an appropriate interpretation and application of O.R.S. § 537.745. This framework (and the analysis in this report) will not answer all of the outstanding questions about the Oregon Legislature's intent for voluntary agreements. But it aims to provide some initial boundaries to the grey area around interpreting and applying the concept and identifies some options to mitigate uncertainties and legal risk in developing voluntary agreement approaches for the Harney context.

[2] *See generally Doherty v. Or. Water Res. Dir.,* 308 Ore. 543, 783 P.2d 519 (1989).



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This section provides an overview of the general legal principles for statutory interpretation and agency determinations of statutory policy asthese terms and principles will be used throughout the discussion sections of this report.

## Statutory Interpretation

When there is a question as to the correct meaning and interpretation of a statute, a reviewing court is tasked with determining the intent of the legislature.[3] The first step in determining legislative intent is looking to the text and context of the statute. If the legislature's intent is clear from the text and context, the inquiry of legislative intent is complete. If legislative intent is still not clear, a court may then look to legislative history, then to other general maxims of statutory construction in statute and case law[4] and "their own intuitive sense of the meaning which legislators probably intended to communicate by use of the particular word or phrase."[5]

## Agency Deference

Where a disputed statutory term or phrase is part of a regulatory framework administered by a state agency in Oregon, "the standard of review depends on whether the disputed phrase is an

[3] ORS 174.020; Hon. Jack L. Landau, *Oregon Statutory Construction*, 97 Or. L. Rev. 585 (2019); *Doherty v. Or. Water Res. Dir.,* 308 Ore. 543, 783 P.2d 519 (1989).
[4] Hon. Jack L. Landau, *Oregon Statutory Construction*, 97 Or. L. Rev. 585 (2019).
[5] *Springfield Education Assn. v. School Dist*., 290 Ore. 217, 621 P.2d 547(1980).



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exact term, an inexact term, or a delegative term."[6] Exact terms are those that "impart relatively precise meaning"[7]. Court review is limited to determining whether the agency's application of the term to the facts at hand were supported by substantial evidence in the record.[8]

Inexact terms are less precise and the legislative intent or meaning may be unclear. In such cases, agencies and courts are tasked with determining the legislative intent of the term through the text, context, legislative history, and the other rules of statutory construction (the same inquiry a reviewing court would undertake, described above).[9] A fundamental inquiry is whether the interpretation and/or application "is consistent with or tends to advance a more generally expressed legislative policy".[10] Agencies may express and effectuate their interpretation of the statutory policy through agency orders or through rulemaking.[11] If done through orders, the agency should include the rationale for the interpretation as well as the application of the policy to the facts of the matter. A court reviewing a policy interpreted and applied through an order is limited to reviewing for error of law.[12]

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[6] Hon. Jack L. Landau, *Oregon Statutory Construction*, 97 Or. L. Rev. 585 (2019).
[7] *WaterWatch of Or., Inc. v. Water Res. Dep't*, 268 Ore. App. 187, 342 P.3d 712 (2014) (referring to *Springfield Education Assn. v. School Dist.*, 290 Ore. 217, 621 P.2d 547(1980)).
[8] *Id.*
[9] *Id.*
[10] *Id.*
[11] *Id.*
[12] ORS 183.482(8)(a)



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Delegative terms are those that express incomplete legislative meaning and give the agency authority to complete it.[13] The agency's task is "to complete the general policy decision by specifically applying it at retail to various individual fact situations."[14] A court reviewing an agency's application of a delegative term reviews by looking at "whether it is within the range of discretion allowed by the more general policy of the statute."[15] An inappropriate use of discretion is one that is "(A) Outside of the range of discretion delegated to the agency by law; (B) Inconsistent with an agency rule, an officially stated agency position, or a prior agency practice, if the inconsistency is not explained by the agency; or (C) Otherwise in violation of a constitutional or statutory provision."[16]

## Relation to Voluntary Agreements

These analysis components matter in the context of voluntary agreements, which inherently involve agency interpretation and application of the terms of the voluntary agreement statute (described in more detail in the following sections). The Commission is charged with reviewing

[13] *Springfield Education Assn. v. School Dist.*, 290 Ore. 217, 621 P.2d 547(1980); Hon. Jack L. Landau, *Oregon Statutory Construction*, 97 Or. L. Rev. 585 (2019).
[14] *Springfield Education Assn. v. School Dist.*, 290 Ore. 217, 621 P.2d 547(1980) (citing *Dickinson v. Davis*, 277 Ore. 665, 561 P.2d 1019 (1977); *see also WaterWatch of Oregon, Inc. v. Water Res. Dep't*, 268 Ore. App. 187 (2014).
[15] *WaterWatch of Oregon, Inc. v. Water Res. Dep't*, 268 Ore. App. 187 (2014) (citing *Coast Sec. Mortg. Corp. v. Real Estate Agency*, 331 Ore. 348, 15 P.3d 29 (2000); *Springfield Education Assn. v. School Dist.*, 290 Ore. 217, 621 P.2d 547(1980)).
[16] ORS 183.482(8)(b).



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voluntary agreements to ensure the requirements of the statute are met. A Commission order approving an agreement becomes a vehicle to carry out legislative policy, and correspondingly becomes a mechanism to challenge the interpretation and application of that policy and therefore the terms of the agreement. Itis thus important for groundwater users to develop a voluntary agreement that clearly identifies and explains how it meets the statutory requirements and advances relevant legislative policies. Although there may still be legal risks and challenges due to the inherent complexity of and conflict around groundwater laws and the untested nature of voluntary agreements, including these components can help minimize or mitigate those risks.



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# Purpose of & Approaches for Voluntary Agreements

## Overview of O.R.S. § 537.745

Oregon's statutory groundwater policy gives preference to voluntary joint actions between groundwater users and the Water Resources Commission to address declining ground water levels and overdrawing of groundwater supplies, whenever possible.[17] The formal mechanism to implement such voluntary joint actions is through a voluntary agreement among groundwater users that is reviewed and approved by the Water Resources Commission.[18] The Commission must approve filed agreements that are "consistent with the intent, purposes and requirements" of Oregon's groundwater statutes (O.R.S. §§ 537.505 - 537.795) and enforcement/civil penalties authorities and limitations (O.R.S. § 537.992), in particular:

- The Legislature's groundwater policy (ORS § 537.525)

[17] "Whenever wasteful use of ground water, impairment of or interference with existing rights to appropriate surface water, declining ground water levels, alteration of ground water temperatures that may adversely affect priorities or impair the long-term stability of the thermal properties of the ground water, interference among wells, thermal interference among wells, overdrawing of ground water supplies or pollution of ground water exists or impends, controlled use of the ground water concerned be authorized and imposed under voluntary joint action by the Water Resources Commission and the ground water users concerned whenever possible, but by the commission under the police power of the state except as specified in ORS 537.796, when such voluntary joint action is not taken or is ineffective." ORS 537.525(9).

[18] ORS 537.745(1) authorizes the Commission to "encourage, promote and recognize voluntary agreements among ground water users from the same ground water reservoir."



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- General groundwater, aquifer storage and recovery, and groundwater appropriation statutes (O.R.S. §§ 537.730 - 537.740), and
- Water Resources Commission powers, rules, and limitations on authority (O.R.S. § 537.780).

Upon approval, the agreement controls for the relevant aspects of administration and mangement of groundwater resources in the defined area "in lieu of a formal order or rule of the commission" until terminated.[19] However, if joint voluntary action is either not taken or it is ineffective at maintaining reasonably stable ground water levels or achieving the other stated management policies, the Commission may control the use of groundwater via regulatory actions undertaken through a rulemaking process.[20] For example, designating a Critical Groundwater Area and adopting rules to restrict/limit existing and future uses to stabilize the resource, proscribe a preference for certain uses over others, etc.[21]

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[19] ORS 537.745(1). Termination occurs "by the lapse of time provided in the agreement, by consent of the parties to the agreement or by order of the commission" following a hearing and finding "that the agreement is not being substantially complied with by the parties thereto or that changed conditions have made the continuance of the agreement a detriment to the public welfare, safety and health or contrary in any particular intent, purposes and requirements of ORS 537.505 to 537.795 and 537.992."
[20] ORS 537.525(9), 537.730, 537.735, 537.745(1).
[21] ORS 537.730, 537.735. *See also* OWRD 2010, Water Rights in Oregon - An Introduction to Oregon's Water Laws; OWRD, Justin Iverson, *Presentation to Harney CBWP Collaborative,* *Groundwater Statutes & Rules* (Sept. 2020). Critical Groundwater Areas may be designated where the Commission finds certain groundwater conditions exist; notably, where groundwater levels are declining or have declined excessively in the area; there is a pattern of substantial interference between wells and/or surface water rights; or available groundwater supply is being or is about to be overdrawn.



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## Potential Scope & Approach Options for Voluntary Agreements

### *Approach 1: Basin/Subbasin/Subarea Holistic Management Agreement*

Within these guiding management policies, voluntary agreements are typically discussed as a substitute for or supplement to a CGWA designation and rules. Thus, existing CGWA rules can be looked to as an example for scope and content of a voluntary agreement. For example, this form of voluntary agreement might include:

- Subbasin or subarea objectives, agreement purpose (i.e., to achieve reasonably stable water levels)
- Definitions and general requirements (i.e., what does 'reasonably stable water level' mean within the specific subbasin/subarea? What water budget/sustainable annual yield will achieve reasonably stable water level in the subbasin/subarea?)
- General requirements (i.e., defines total yield limitation, irrigation season limitations, restrictions on new applications for appropriation from certain areas/reservoirs within the subbasin/subarea)
- Subarea boundaries, objectives/limitations (i.e., definition of subareas within the subbasin, subarea yield limitations and methodologies)
- Exemptions (i.e., O.R.S. § 537.545 exempt uses, other exempt uses like schools)



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- Requirements, duties, standards for *new* water uses (i.e., limitations or conditions on types of new uses like no new irrigation, mitigation requirement, flow meters, uniform standards for flow meter specifications/installation/maintenance, annual reporting)
- Requirements, duties, standards for *existing* water uses (i.e., limitations or conditions on certain existing uses like annual allotments, flow meters, uniform standards for flow meter specifications/installation/maintenance, annual reporting)
- Distribution of available annual yield (i.e., determining annual allocation based on the annual available resource, considering factors such as priority, type of use, etc.)
- Adaptive management (i.e., periodic review of progress, yield limitation, effectiveness of tools)
- Enforcement/Violation policy

(See Butter Creek Critical Groundwater Area case study in **Appendix B**.)

Depending on the geographic scope of such an agreement and the number of parties involved (see discussions in next section), this approach could involve significant effort to develop and reach full consensus. However, in certain circumstances (often with a specific regulatory process driving the negotiation), groundwater users have developed and are successfully implementing basin-wide management agreements (see Mohave Basin Settlement case study in Appendix B).



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Two key questions have arisen that are particularly applicable to this potential form/scope of a voluntary agreement: (1) can an agreement be limited to a subarea within a basin or subbasin to address localized hydrologic issues, and (2) who are the required parties for a voluntary agreement and what is the level of participation required? These are discussed in further detail below.

### *Approach 2: Management Strategy/Tool Implementing Agreement*

Another option for framing a voluntary agreement is to use itto implement a specific management action or group of actions. It could be framed as a way to advance the existing relevant Basin and/or Area rules, including already-established management objectives. It would supplement the existing rules by establishing a new or modified strategy/tool to achieve those objectives. One hypothetical example could be implementing a new management tool (i.e., a groundwater use offset/mitigation framework) within an established CGWA subarea to provide another mechanism by which to achieve a regulatorily-defined sustainable annual yield for the subarea.

Proposed management actions different than or additive to existing regulations could be good candidates for such a voluntary agreement. Some actions and tools could potentially include, for example, new ways to flexibly manage and reduce groundwater use while also accommodating new/changes in use, such as:

- groundwater "storage accounts" that provide a mechanism to account for groundwater left in the ground that becomes a 'credit' for later use or transfer (see Diamond Valley



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and Mojave Basin case studies in Appendix B; see also Arizona's long term storage credits and irrigation grandfathered right flexibility accounts[22]);

- a groundwater mitigation or offset program to balance the impact of new uses (see Mojave Basin case study in Appendix B);
- streamlined temporary or permanent transfer procedures for certain types of transfers to facilitate new or changes in existing uses that would advance the management objective (i.e., encouraging transfers that move an existing use further from an important, imperiled resource; facilitating transfers that voluntarily provide a "cut to the aquifer". See Diamond Valley and Mojave Basin case studies in Appendix B; see also );
- an annual allocation- or shares-based system that reduces use over time and facilitates trades (see Diamond Valley and Mojave Basin case studies in Appendix B).[23]

In addition to the general questions raised related to Approach 1, two other questions are particularly applicable to this potential form/scope of a voluntary agreement: (1) where a voluntary agreement institutes a management approach not currently contemplated by Oregon law, how to ensure it is consistent with Oregon's groundwater management laws; (2) what role

[22] See generally, ADWR, https://new.azwater.gov/recharge/accounting; A.R.S. § 45-467.
[23] Although Arizona-specific, the resource Arizona Rural Groundwater: Potential Tools for Local Management, describes a variety of tools that have been used to manage groundwater at the local level. Prepared by the Water for Arizona Coalition (of which EDF is a member).



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the Commission and Department can have in approving and implementing the terms of the new management tool.

It is worth noting that there could be strategy/tool implementation agreements that would advance the management objectives but not necessarily be a 'voluntary agreement' as contemplated by O.R.S. § 537.745 requiring Commission approval, because they do not institute a new or change to an OWRD-administered regulatory requirement. For example, the Conservation Reserve Enhancement Program (CREP) is essentially a strategy/tool implementation agreement. Similarly, other conservation incentives and management tools could be implemented via separate agreements, such as coordination and joint funding for a town or county residential/building/industrial conservation program, or stormwater and/or wastewater management and recharge projects and infrastructure. The point at which these types of implementation agreements become a voluntary agreement under O.R.S. § 537.745 and need Commission approval is when a component of the agreement has implications for how OWRD administers and enforces its Groundwater Act authorities.[24]

[24] To distinguish this further through one existing example, the CREP does involve OWRD administration, but carrying out the program does not have implications for OWRD's administration of the Groundwater Act because it does not change or add to how OWRD is exercising its Groundwater Act authorities. Importantly for due process considerations (discussed in further detail below), the program supports voluntary, temporary actions that do not have implications related to the legal nature and character of existing water rights. Conversely, as a hypothetical example, a tool that is still a voluntary process but which does involve OWRD's Groundwater Act authorities and would require Commission approval under O.R.S. § 537.745 is streamlined transfer procedures, because those would add new procedures or requirements to the existing statutory standards that OWRD administers under the Groundwater Act.



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Although these types of implementing agreements can be done as one-offs (as opposed to being integrated into a holistic, Approach 1-style option), they can be linked together in various ways to facilitate buy-in and implementation. For example, packaging a set of actions together, even where one action may not otherwise require Commission approval, could be useful and powerful for coordinating funding and implementation between entities with shared objectives and different management authorities. Including incentive-based tools that may not otherwise require Commission approval in a package with regulatory tools that do require approval could help obtain community buy-in.

### *Approach 3: Management Framework Agreement*

Another approach for voluntary agreements could be establishing the management objectives, monitoring plan, and general adaptive management framework for a Basin, Area, or subarea. This could provide a way to reach initial consensus on some of the less-controversial components of a holistic management agreement and create the framework and defined process for other strategies and tools to be implemented later (whether through other voluntary agreements or rulemaking approaches).

One hypothetical example could be (1) defining one or more subareas within the Greater Harney Valley Groundwater Area of Concern (GHVGAC), (2) defining the annual sustainable yield (or other agreed-upon standard) which would advance the existing GHVGAC management objective (ensuring that groundwater in the GHVGAC is appropriated within the capacity of the resource and that new appropriations of groundwater assure the maintenance of reasonably stable



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groundwater levels and prevent depletion of the groundwater resource, OAR 690-512-0020), (3) defining the important indicators and establishing a monitoring plan to track and evaluate subarea progress towards the subarea objective, and (4) establishing a process to evaluate, agree to, and cooperatively fund and implement later actions. (See San Pedro Riparian National Conservation Area case study in Appendix B.)

Although this approach may not necessarily require Commission approval and Department implementation if it does not also include a regulatory management tool requiring Department administration, it may be amenable to a voluntary agreement because it could:

- replace or supplement certain existing Basin or Area rules through collaborative agreement;
- test out less-controversial components (or test potentially controversial components in a phased approach);
- establish a way to coordinate with other relevant agencies and incorporate/recognize existing monitoring and management actions that are beneficial in advancing the area management objective;
- encourage continued community participation in an adaptive, ongoing manner.



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TABLE 1

## Summary of Approaches

| | Description | Considerations |
|---|---|---|
| Subbasin/Subarea Holistic Plan Agreement | Similar to CGWA designation and rules for other areas in OR; establishes a subbasin or subarea objective, general requirements & budget, exemptions, requirements for new and current uses, enforcement | • Holistic approach that involves all interested parties within an area together to develop objectives, requirements & management tools<br>• May involve more parties and a wider range of issues, could be difficult to reach consensus<br>• May minimize parties and range of issues by defining smaller sub-areas, so long as they are justifiable boundaries and would advance higher-level subbasin and basin goals |
| Strategy/Tool Implementing Agreement | Implements specific management tool or strategy, based on the existing (or to-be-developed) basin/subbasin objectives and rules | • May minimize parties and/or range of issues by defining smaller subject-matter scope, so long as it is justifiable within higher-level subbasin and basin goals<br>• Provides an opportunity to pilot various management tools/strategies in separate agreements<br>• Linking together various individual actions/tools in a single agreement could facilitate implementation by helping to coordinate funding, actions that involve management authorities of different entities/jurisdictions, and could help with community buy-in when incentives are included in a package with regulatory tools |
| Management Framework Agreement | Implements basin/subbasin/subarea management objectives, monitoring plan, and adaptive management framework | • Does not immediately implement management actions/tools, but creates collaborative framework for later tools to be integrated<br>• Provides an opportunity to develop less-controversial components first and/or utilized a phased approach<br>• Provides a formal way to keep stakeholders and various entities working together to develop next steps, seek funding, recognize and utilize all useful authorities and |



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| | |
|---|---|
| | roles (i.e. integrating town, county roles as well as Commission/OWRD) |



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# Legal Elements, Constraints, & Considerations

## Geographic Scope

Many stakeholders have raised the question of the appropriate and legally supportable geographic scope for a potential voluntary agreement. The statute states that "[t]he voluntary agreement must be among users of the *same ground water reservoir*."[25] *Ground water reservoir* is defined within the same chapter to mean "a designated body of standing or moving ground water having exterior boundaries which may be ascertained or reasonably inferred."[26] This statutory term is arguably inexact, given the uncertainties inherent in defining boundaries for hydrogeological systems, particularly without clear structural boundaries.

Interpretation of this inexact term could potentially generate different boundaries for defining ground water reservoirs. Boundaries could potentially involve a mix of hydrologic, geologic, and administrative factors, but they should have a firm basis in hydrogeologic or physical boundaries to be the most legally supportable. The context of the Ground Water Act, legislative history, and general maxims of statutory construction may be looked to in interpreting the intended legislative intent and meaning of the term "ground water reservoirs". Elsewhere in the Ground Water Act, the term "ground water reservoir" is used to refer to a distinct source of groundwater,

[25] ORS 537.745(1) (emphasis added)
[26] ORS 537.515(6)



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typically for the purposes of determining and administering the relative rights from each distinct source.[27] Throughout Oregon's water laws and regulations there are other terms also used to refer to distinct sources of groundwater or areas of groundwater use, such as "aquifer" [28] and "groundwater basin".[29]

Use of these various terms over time follows our growing understanding of groundwater science. Groundwater is not confined in perfectly contained underground 'rivers' or 'reservoirs'. Groundwater and surface water are different parts of a hydrological cycle which involves "the continuous movement of water above, on, and below the surface of the Earth."[30] This matters because it supports a variety of considerations being incorporated into the determination of the boundaries for a groundwater reservoir – not only one type of hydrogeologic boundary matters, but also other considerations of the hydrology, geology, and administrative considerations.

Defining a smaller boundary area can help address very localized areas of concern. Smaller boundaries can have the dual benefit of limiting the number of parties that would be required to

[27] See, i.e., ORS §§ 537.665 (Investigation of ground water reservoirs; defining characteristics and assigning names and numbers); 537.675 (determination of rights in several reservoirs or of critical ground water area in same proceeding);
[28] See, i.e., OAR 690-200-0050. Note that this section specifically only applies to well construction standards in Chapter 690, Division 200, but is provided here as an example of a general definition used by the Department in other contexts. See also, Water Resources Commission Order 55-1088, *In the Matter of the Withdrawal of Aquifers Within the Designated Woodland, Edison, Victor Point Area* (2001).
[29] See, i.e., ORS 537.135 (relating to the use of water stored/recharged in any "ground water basin or reservoir")
[30] Winter, T.C., Harvey, J.W., Franke, O.L., and Alley, W.M., 1998, *Ground water and surface water—A single resource*: U.S. Geological Survey Circular 1139, 79 p. 3.



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participate in the voluntary agreement, and limit the amount of regulations placed on others around the broader Basin or Area. (See the Kansas Sheridan LEMA case study in **Appendix B**.)

To provide legal support for a limited, sub-area geographic scope, there should likely be some basis on hydrogeologic considerations, but other factors could also be used. All factors influencing the definition of the groundwater reservoir for purposes of a voluntary agreement should be thoroughly explained, particularly how they relate to and advance the Groundwater Act policies and any relevant overarching Basin- or Area-specific management objectives.

The case studies in Appendix B describe a variety of approaches to geographic scope taken in other places, noting relevant lessons of the approach in relation to Oregon's regulatory framework and the Harney Collaborative's identified strategies.

Although a variety of different ground water reservoir boundary options could potentially be legally supportable, there could still be some risk of challenge. Ensuring that the voluntary agreement and the order approving the agreement include a thorough description of how the agreement (and the boundary definition) are consistent with and advance the statutory policy for voluntary agreements, the overarching GHVGAC management objective, and the state's groundwater policies should help mitigate the risk of a successful challenge on this point.

## Subject-Matter Scope



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Another common question raised is about the appropriate and legally supportable subject-matter scope for a potential voluntary agreement. For example, whether a voluntary agreement must (or may) be used for various of the specific management strategies and tools raised by the Collaborative. The statute leaves the potential subject matter scope of voluntary agreements inexact and very open-ended, with the simple guidance that: the "Commission may encourage, promote and recognize voluntary agreements among ground water users"; the Commission must approve agreements that are "consistent with the intent, purposes and requirements" of Oregon's groundwater laws, and that such approved agreements "shall control in lieu of a formal order or rule of the commission".[31]

Interpretation of these sections could potentially allow a variety of different subjects for inclusion in a voluntary agreement. Interpreting these phrases together indicates some relatively clearer options, such as any management rules that would affect groundwater users that would otherwise (or are already) the subject of Basin-, area- or subarea-specific rules or orders. Commission approval would be needed for voluntary agreements with these types of actions and controls because they have implications for how OWRD administers and enforces its Groundwater Act authorities.

Based on management actions undertaken in these ways in other parts of Oregon, voluntary agreements could potentially include actions and corrective controls such as:

[31] ORS 537.745(1).



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- Defining specific management objectives, i.e., sustainable annual yield, and methodology for determining[32]
- Defining certain uses exempt from corrective controls[33]
- Limiting or restricting certain types of new and existing water uses based on type of use[34]
- Limiting irrigation use to a certain acre-foot per acre per year[35]
- Limiting or restricting existing uses based on a sustainable annual yield allocation[36]
- Closing the area to new appropriations[37]
- Establishing mitigation requirements to offset impacts of groundwater pumping[38] (note, however, that this example only contemplates credit generation through surface water conservation; conservation of groundwater in-place is an outstanding question) [for input/confirm with local stakeholders/partners – has this tool been utilized in Oregon in a groundwater-only context?]

[32] i.e., Butter Creek Critical Ground Water Area, OAR 690-507-0650; 690-507-0660
[33] i.e., Stage Gulch Critical Ground Water Area, OAR 690-507-0775
[34] i.e., Amity Hills/Walnut Hill Ground Water Limited Area, OAR 690-502-0210; Chehalem Mountain, Eola Hills and South Salem Hills Ground Water Limited Areas, OAR 690-502-0200; others
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[36] i.e., Butter Creek Critical Ground Water Area, OAR 690-507-0670
[37] i.e., Water Resources Commission Special Order Vol 10 Pg 216, Cow Valley (1959); others
[38] i.e., Deschutes Basin Groundwater Mitigation Rules, OAR 690-505-0605.



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- Requiring water meters, withdrawal records, and reporting[39]

As discussed above, there are potentially a variety of actions that could be implemented by an agreement that does not require Commission approval under O.R.S. § 537.525 because they do not require OWRD's Groundwater Act authorities to administer. However, they may be useful to include in a voluntary agreement pursuant to O.R.S. § 537.525 as a way to balance regulatory requirements with incentive-based options. Some examples of actions and incentive-based controls could include:

- CREP program (i.e., CREP program eligibility requirement that participant must be a party to the voluntary agreement that also institutes some level of regulatory corrective control);
- Town or county residential, building, and/or industrial conservation programs (parties agree to jointly seek funding for and encourage conservation upgrades);
- Stormwater and/or wastewater management and recharge projects (i.e., consolidating seasonal stormflows for recharge in target impact areas, with coordinated funding and implementation between the parties)

As discussed above, there are benefits and challenges to the different subject-matter scope options for a potential voluntary agreement. Determining the appropriate subject-matter scope will involve weighing legal as well as other interrelated factors, i.e.:

[39] i.e., Water Resources Commission Special Order Vol 10 Pg 216, Cow Valley (1959); others



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- legal supportability/challenge risk (Are the actions well-understood, already-utilized in other places? Are they controversial?),
- stakeholder willingness (Are there enough 'carrots' to encourage participation despite the 'sticks'?),
- and ease of administration (Are the actions new, complicated, expensive?).

The case studies in Appendix B describe a variety of approaches to subject-matter scope taken in other places, noting relevant lessons of the approach in relation to Oregon's regulatory framework and the Harney Collaborative's identified strategies.

Although a variety of different actions could potentially be legally supportable, there could still be some risk of challenge. Ensuring that the voluntary agreement and the order approving the agreement include a thorough description of how the agreement (and the specific actions included) are consistent with and advance the statutory policy for voluntary agreements, the overarching GHVGAC management objective, and the state's groundwater policies, should help mitigate the risk of a successful challenge on this point.

## Parties

The voluntary agreement statute is not explicit regarding the required parties to a voluntary agreement. The statute generally refers to voluntary agreements as being "among ground water



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users from the same ground water reservoir".[40] Stakeholders have asked whether agreement among *all* ground water users is required or if it may be some other number, i.e., a majority. Given that the statute does not specifically state the required parties, the element is arguably inexact and open to agency interpretation of the legislative policy.

Considering the text and context of the statute and constitutional due process considerations, the most legally supportable interpretation of the required parties is likely *all* ground water users within the defined area. However, it could potentially also be legally supportable to interpret the requirement to be *all interested/affected* ground water users. Depending on the subject-matter scope of the agreement, that interpretation could mean that a subset of ground water users within the area could join as parties to a voluntary agreement if the terms of the agreement do not affect other ground water users.

Due process requires that a person be given the opportunity to be heard before being deprived of a property or liberty interest.[41] Although there is no set rule for how the opportunity to be heard should be given,[42] there should be some level of notice and opportunity to participate before regulatory controls are instituted. In the context of a voluntary agreement, voluntarily signing onto the agreement is likely sufficient to assure a court that a groundwater user has had sufficient notice and opporutnity to be heard. However, if the terms of the agreement could

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[40] ORS 537.745(1)
[41] *See generally, Matthews v. Eldridge*, 424 US 319 (1976); *Skinner v. Jordan Valley Irr. Dist.*, 137 Ore. 480, 300 P. 499 (1931) (internal citations omitted).
[42] *Matthews v. Eldridge*, 424 US 319 (1976).



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affect the water rights of an individual that has not signed onto the agreement, there are likely due process issues.

There potentially is some flexibility to develop voluntary agreements that only apply to certain groundwater users. One hypothetical example could be implementing higher water use restrictions only on irrigation water users within a certain geographic area that is experiencing high rates of drawdown. The geographic and subject matter scope would limit the number of impacted groundwater users who would be required parties.

The management framework approach could be another way to implement limited-applicability tools. Through agreement of as many ground water users as possible, a voluntary agreement could be developed that incorporates the management objective and a framework for taking subsequent management actions. For example, an agreement could (1) establish the area target for reduced water use (explaining how the target advances the broader GHVGAC management objective) and (2) establish a procedure to review and approve exhibits to the agreement for participation in an agreement-defined conservation program. The agreement could lay out conservation program eligibility and participation requirements; participants must agree to the regulatory requirement (i.e., an annual irrigation limit) but may choose a variety of methods to achieve it (rotational or seasonal fallowing, changes to crops that require less irrigation, offset generated by converting from septic to consolidated wastewater treatment with effluent



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recharge, etc.) and may access incentives to do so (i.e., CREP, ability to do year-to-year storage, supportive funding for septic conversion, etc.).[43]

These types of limited-applicability tools could be a way to pilot voluntary agreements by working within a smaller group of people to reach consensus.

The case studies in Appendix B describe a variety of approaches to determining the appropriate required parties taken in other places, noting relevant lessons of the approach in relation to Oregon's regulatory framework and the Harney Collaborative's identified strategies.

Even with wide support and participation of groundwater users as parties in a voluntary agreement, there could still be some risk of challenge. The risk of a successful challenge may be mitigated by ensuring that the voluntary agreement and the order approving the agreement each include a thorough description of how the agreement (and determination of appropriate parties thereto) is consistent with and advances the statutory policy for voluntary agreements, the overarching GHVGAC management objective, and the state's groundwater policies.

## Procedure

[43] One example which relates to a very different regulatory context and source of water is the Lower Colorado River Basin ICs Forbearance Agreement. Water rights holders agreed to allow others to leave water unused and each would forbear on their right to take any unused amount. The conserving party must meet certain requirements to participate, and are incentivized to participate because of the management flexibility value in being able to store water from year to year without risk of a junior or other downstream water user taking the unused water.



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The voluntary agreement statute includes limited description of the procedures for submission and review of a voluntary agreement. The statute requires that an agreement be "executed [by ground water users] in writing and filed with the commission".[44] Once filed, the Commission *must* approve a voluntary agreement if it meets those form requirements and it "is consistent with the intent, purposes and requirements of O.R.S. §§ 537.505 to 537.795 and 537.992 [the Grounwater Act], and in particular O.R.S. §§ 537.525, 537.730 to 537.740 and 537.780."[45] These call-out provisions include:

- Oregon's statutory groundwater policy (O.R.S. § 537.525)
- Critical ground water area designation, rules, and notice (O.R.S. § 537.730)
- Rules designating critical ground water area (O.R.S. § 537.735)
- Filing rules designating critical ground water area (O.R.S. § 537.740)
- Powers of Water Resources Commission; rules; limitations on authority (O.R.S. § 537.780)

Given that the statute does not specifically describe any other details of review, approval, or implementation, the element is arguably inexact and open to agency interpretation of the legislative policy. Text, context, and legislative history give little other guidance on procedure. Unlike agency rulemaking proceedings which are legislative in nature, the voluntary agreements

[44] ORS 537.745(1)
[45] ORS 537.745(1)



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statute likely to be interpreted as administrative in nature with its "check-the-box" requirements. If a filed voluntary agreement checks all of the boxes, failure to approve might be considered arbitrary and capricious.

To mitigate the risk of such approval challenges, the Commission could undertake a rulemaking to clarify and provide additional detail to ensure that a voluntary agreement meets the form and consistency requirements of the statute. However, even with additional regulatory procedures for review, approval, and implementation of a voluntary agreement, there could still be some risk of challenge. The risk of a successful challenge may be mitigated by ensuring that the voluntary agreement and the order approving the agreement each include a thorough description of how the agreement (and the process for review, approving, and implementing it) is consistent with and advances the statutory policy for voluntary agreements, the overarching GHVGAC management objective, the state's groundwater policies, and the Administrative Procedures Act.

## Effect & Term

The statute clearly states that an approved voluntary agreement "shall control in lieu of a formal order or rule of the commission" under the Groundwater Act.[46] The agreement will remain in force until "terminated by the lapse of time as provided in the agreement, by consent of the

[46] ORS 537.745(1)



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parties to the agreement or by order of the commission if the commission finds, after investigation and public hearing upon adequate notice, that the agreement is not being substantially complied with by the parties thereto or that changed conditions have made the continuance of the agreement a detriment to the public welfare, safety and health or contrary in any particular to the intent, purposes and requirements of [the Groundwater Act]".[47]

These terms appear fairly exact. And consistent with the state's groundwater policy, the statute gives preference to voluntary joint action by the Commission and ground water users.[48] Voluntary agreements must be consistent with the Groundwater Act, but otherwise may override or supplement existing regulations. However, if the agreement is not being upheld or if there are conditions requiring intervention, there are clear standards and procedures for the Commission to terminate the agreement.

[47] ORS 537.745(1)

[48] ORS 537.525(9) ("Whenever wasteful use of ground water, impairment of or interference with existing rights to appropriate surface water, declining ground water levels, alteration of ground water temperatures that may adversely affect priorities or impair the long-term stability of the thermal properties of the ground water, interference among wells, thermal interference among wells, overdrawing of ground water supplies or pollution of ground water exists or impends, controlled use of the ground water concerned be authorized and imposed under voluntary joint action by the Water Resources Commission and the ground water users concerned whenever possible, but by the commission under the police power of the state except as specified in ORS 537.796, when such voluntary joint action is not taken or is ineffective."



To assist the Harney CBWP Collaborative, this final report provides additional information, considerations, and initial recommendations related to:

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# Application of Voluntary Agreements for Harney Basin Strategies

## Management Goals & Objectives

The following statutory, regulatory, and planning goals and objectives apply to the Greater Harney Valley Groundwater Area of Concern:

- Statutory (O.R.S. § 537.525)
  Voluntary agreement terms must be consistent with these and other stated policies:
    - Acknowledge and protect rights to appropriate groundwater and priority thereof, except when the public welfare, safety and health require otherwise.
    - Beneficial use without waste, within the capacity of the resource, is the basis, measure, and extent of the right to appropriate water.
    - Assure adequate and safe supplies of ground water for human consumption, while conserving maximum supplies of ground water for agriculture, commercial, industrial, thermal, recreation and other beneficial uses.
    - Determine the location, extent, capacity, quality and other characteristics of particular sources of ground water.



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- Determine and maintain reasonably stable ground water levels.
- Prevent or control within practicable limits the depletion of ground water supplies below economic levels, impairment of natural quality of ground water by pollution and wasteful practices.

- Regulatory (OAR § 690-512-0020(1))
  Voluntary agreement terms may override or supplement these policies:
  - Ensure that groundwater in the GHVGAC is appropriated within the capacity of the resource and
  - New appropriations of groundwater assure the maintenance of reasonably stable groundwater levels and prevent depletion of the groundwater resource.

- Planning – Desired Conditions (DRAFT Desired Conditions from the Harney Basin Groundwater Portion of Integrated Water Plan Draft 2)[49]
  *Voluntary agreement terms could potentially integrate all or some of the Desired Conditions to the extent useful for implementing and enforcing priority strategies:*

[49] Harney Community-Based Water Planning Collaborative, Harney Basin Groundwater Portion of Integrated Water Plan – DRAFT 2 (Mar. 7, 2022)



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- Sustainably managed supply of quality water for people, the economy and the environment
    - Groundwater Supply:
        - Groundwater recharge deficit reduced
        - Groundwater storage depletion reduced via slowing groundwater use through reductions in agricultural groundwater use and other techniques
        - Groundwater level changes are stabilized in deep and shallow aquifers (recognizing that groundwater level changes are variable, depend on location, and different tools may be applied in areas of acute decline)
    - Groundwater Quality:
        - Groundwater in the basin is of adequate quality for municipal, domestic, irrigation and stockwater purposes and to support groundwater dependent ecosystems and species
    - Groundwater Uses:



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- Agricultural use is reduced to stabilize groundwater levels and address impacts to other uses while maintaining a vibrant agriculture community
    - CREP could fallow up to 20,000 acres of actively irrigated cropland over a 15-yr period
    - There is need for agricultural users to reduce groundwater use considerable; reduction in use would likely be more significant in area(s) of acute decline. There is no consensus regarding appropriate time frame for reductions that allows for economic transformation of agricultural uses while recognizing the need to stabilize groundwater levels to address impacts to other uses.
- Domestic water use is maintained at a reasonable range; domestic water users have a stable supply of clean water; domestic water is available at depths that are affordable to drill to and assured water production
- Stockwater users have an adequate quantity and quality of groundwater on a ear-round basis



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- Municipal providers are able to maintain their consistent, safe supply of quality drinking water, to ensure that supply meets both present and future needs of residences and businesses, and to have the ability to access additional groundwater in the future if needed.
- Other
    - Non-municipal, non-irrigation water systems are able to maintain groundwater use.
    - Communities served by those systems and communities desiring to move to community systems have the legal rights and financial ability to drill community wells if necessary
    - Groundwater used for commercial-industrial purposes are maintained
    - Groundwater used by the Burns Paiute Tribe is maintained
- GDEs & Species
    - The rate of groundwater decline is reduced



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        - Spring discharge is monitored in a consistent manner

    - GDEs are protected, restored, and maintained now and in the future



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## Foundational Strategies

The Collaborative idenfied several foundational strategies and recommended actions,[50] which have the following considerations related to voluntary agreements: [Check for consistency with/missing items from most recent table in final review; add additional Critical Issues]

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| **CI-1** | Implement irrigation conservation measures to help slow the rate of decline and assist in achieving reasonably stable groundwater levels | Provide a clear explanation of the "ready, willing, and able" (ORS 540.610) to address irrigators' concern about use it or lose it. | CBWP Collaborative | N/A | |
| | | Demonstrate successes of irrigators reducing groundwater use for others to learn and to be encouraged (e.g. "demonstration farms"). | CBWP Collaborative | yes | An agreement could facilitate coordination and funding for carrying out the RA. Could conduct demonstration as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | Obtain legal recommendations of where barriers lie in the Allocation of Conserved Water program (e.g., in statute, rule, etc.), | CBWP Collaborative | N/A | |

[50] Harney Community-Based Water Planning Collaborative, Draft Implementation Framework (2022).



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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
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| | | and what options exist for overcoming those barriers. | | | |
| | | Provide incentives for irrigators who can prove reduction in their groundwater use. | OWRD | yes | An agreement could facilitate coordination and funding for carrying out the RA. Could implement as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | Set benchmarks and timelines for reducing groundwater use. | OWRD | yes | An agreement could facilitate utilization of the RA. Include information related to how the RA is expected advance the relevant management objectives and how that will be monitored. |
| | | Implement the conservation implementation strategy by NRCS to reduce groundwater use by 3000 acre-feet/year. | CBWP Collaborative | yes | An agreement could facilitate coordination and funding for carrying out the RA. Could be identified as a shared objective. Could implement identified strategies as an incentive-only options which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| **CI-1** | Research policy or planning mechanisms to | Obtain legal recommendations of where barriers lie in the Allocation of Conserved Water program (e.g., in statute, rule, etc.), | OWRD | no | |



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|---|---|---|---|---|---|
| | ensure that conserved water remains in the ground | and what options exist for overcoming those barriers. | | | |
| | | State agencies and others identify existing policy mechanisms to ensure that water remains in the ground. | State Agencies | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | State agencies and CBWP partners, such as The Nature Conservancy and/or others, explore development of a novel policy protection such as in-place ("in situ") groundwater rights | State Agencies, CBWP Partners, WRC | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | Local-scale planning protections for conserved water, such as voluntary agreements and/or contractual obligations, are established for water users in the Harney Basin. These agreements or contracts could be entered into between or among private parties, OWRD, and/or a local governance body. | Private parties, OWRD, and/or local governance structure | possible | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. Could be a part of a management framework agreement to coordinate inter-governmental planning and implementation to advance shared objectives. |
| **CI-2** | Provide financial and technical solutions to domestic well users experiencing declines in groundwater quantity/quality | Explore ways to generate funding for domestic well owners such as how an insurance fund, where users pay a fee, that could be administered locally | CBWP collaborative Oregon Legislature OWRD | yes | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. Could be a part of a management framework agreement to coordinate inter-governmental planning and implementation to advance shared objectives. Once concept is developed, could be part of a holistic or tool-specific agreement. If implementation is fully local, the implementing agreement may not necessarily require Commission approval, unless included in a package with other |



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|---|---|---|---|---|---|
| | due to declining groundwater levels | | | | tools that do implicate OWRD Groundwater Act-related authorities. |
| | | Continue discussions on additional financial and technical solutions | CBWP collaborative | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. Could be a part of a management framework agreement to coordinate inter-governmental planning and implementation to advance shared objectives. |
| | | Continue discussions on eligibility, coverage, and administration of the insurance fund | OWRD CBWP collaborative | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. Could be a part of a management framework agreement to coordinate inter-governmental planning and implementation to advance shared objectives. |
| **CI-2** | Implement actions that protect and conserve GDEs | Identify and prioritize incentives (like CREP) to reduce groundwater use in areas where it would otherwise impact GDEs | OWRD CBWP collaborative | possibly | An agreement could facilitate coordination and funding for carrying out the RA. Could implement identified incentives as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | When data are available, identify areas that could impact GDEs from groundwater withdrawals | TNC OWRD | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. Could be integrated into an agreement to coordinate inter-governmental planning and implementation to advance shared objectives. Results of RA could be integrated into any voluntary agreement |



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|---|---|---|---|---|---|
| | | | | | approach as an objective, indicator of progress, and/or a way to prioritize beneficial actions. |
| | | Encourage management of springs on public lands (BLM, USFWS, USFS) for ecological benefit including consideration for managing cold water refugia. | TNC USFWS BLM USFS | no | An agreement could facilitate coordination and funding for carrying out the RA among agencies and stakeholders. Could be integrated into a management framework agreement as a beneficial action toward shared objectives. |
| | | Identify management tools that could help reduce groundwater use where it would otherwise impact GDEs. | TNC USFWS BLM USFS | no | An agreement could facilitate coordination and funding for carrying out the RA among agencies and stakeholders. Could be integrated into a management framework agreement as a beneficial action toward shared objectives. |
| | | Pursue more aggressive reductions in groundwater withdrawal in areas that affect GDEs | TNC OWRD | no | An agreement could facilitate coordination and funding for carrying out the RA among agencies and stakeholders. Could be integrated into a management framework agreement as a beneficial action toward shared objectives. |
| | | Assess what legal protections exist for springs | See strategy above on legal protection of groundwater | | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| **CI-2** | Integrate water availability into land use planning | Build an understanding of City and County authorities, tools, and limitations pertaining to land use and water planning (can lay out a vision for the community that State cannot--Refer to OAR 690 10) | CBWP Collaborative Harney County Court | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | County planning department take up the issue of considering water under goals 3 and 5 | Harney County Court | no | An agreement could facilitate coordination and funding for carrying out the RA. Could be implemented without a voluntary |



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|---|---|---|---|---|---|
| | | given the info that has been developed by both the GW study and PBP effort | | | agreement. Could be integrated into an agreement as a beneficial action toward shared objectives. |
| **CI-2** | Research policy or planning mechanisms to ensure that conserved water remains in the ground | Obtain legal recommendations of where barriers lie in the Allocation of Conserved Water program (e.g., in statute, rule, etc.), and what options exist for overcoming those barriers. | See above | | |
| | | State agencies and others identify existing policy mechanisms to ensure that water remains in the ground. | State Agencies | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | State agencies and CBWP partners, such as The Nature Conservancy and/or others, explore development of a novel policy protection such as in-place ("in situ") groundwater rights | State Agencies, CBWP Partners, WRC | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | Local-scale planning protections for conserved water, such as voluntary agreements and/or contractual obligations, are established for water users in the Harney Basin. These agreements or contracts could be entered into between or among private parties, OWRD, and/or a local governance body. | Private parties, OWRD, and/or local governance structure | possibly | An agreement could facilitate coordination and funding for implementing the RA among agencies and stakeholders. Could be a part of a management framework agreement to coordinate inter-governmental planning and implementation to advance shared objectives. Once concepts are developed, could be part of a holistic or tool-specific agreement. If implementation is fully local, the implementing agreement may not necessarily require Commission approval, unless included in a package with other tools that do implicate OWRD Groundwater Act-related authorities. |



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|---|---|---|---|---|---|
| **CI-3** | Integrate water availability into land use planning | Build an understanding of City and County authorities, tools, and limitations pertaining to land use and water planning (can lay out a vision for the community that State cannot--Refer to OAR 690 10) | CBWP Collaborative Harney County Court | no | An agreement could facilitate coordination and funding for further developing the RA among agencies and stakeholders. |
| | | County planning department take up the issue of considering water under goals 3 and 5 given the info that has been developed by both the GW study and PBP effort | Harney County Court | no | An agreement could facilitate coordination and funding for carrying out the RA. Could be implemented without a voluntary agreement. Could be integrated into an agreement as a beneficial action toward shared objectives. |



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## Operational Strategies

The Collaborative idenfied several operational strategies and recommended actions,[51] which have the following considerations related to voluntary agreements: [Check for consistency with/missing items from most recent table in final review; add additional Critical Issues]

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| CI-2 | Implement a monitoring program for GDEs and priority plants and animals that depend on them | Recommend that OWRD implement groundwater monitoring for the basin, and other state agencies as needed, include specifically monitoring GDEs (water table, spring flow, etc.) | OWRD CBWP collaborative | no | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |
| | | Request that state agencies (OWRD, ODFW, etc.) and other organizations develop a comprehensive GDE monitoring program that includes priority species of flora and fauna | OWRD CBWP collaborative TNC ODFW | no | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |
| CI-2 | Implement a monitoring program for GDEs and priority plants and animals that depend on them | Utilize GDE monitoring data to inform the adaptive management and implementation of water management strategies. | CBWP collaborative | no | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |
| CI-2 | Explore how OpenET or other | Continue participation of the Harney Basin as a pilot project of OpenET | EDF OWRD | no | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a |

[51] Harney Community-Based Water Planning Collaborative, Draft Implementation Framework (2022).



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| | remote-sensing applications could be used as a tool to assess water use | | | | way to monitor progress towards and identify additional beneficial actions for shared objectives |
| | | Compare OpenET data with OWRD-approved water meter information to assess the effectiveness of OpenET, to potentially monitor water use in fields that are irrigated by temporarily broken meters, and to potentially monitor water use for points of diversion that did not have appropriate plumbing (in consultation with a technical committee described in Section 1, Strategy 11). Assess the ability of OpenET to measure water use of unmetered PODs adjacent to metered PODs; use that information to adaptively manage the implementation of the metering and reporting strategy. | OWRD | possibly | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |
| | | Explore how OpenET can be used for understanding and transparently communicating groundwater use in the GHVGAC | CBWP Collaborative OWRD | N/A | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |
| CI-2 | Advocate for additional information with early focus on groundwater | Using the Step 2 documents, identify information needs and prioritize those that have a direct implication for groundwater management | TNC CBWP Collaborative | no | An agreement could facilitate coordination and funding for implementing the RA. Results could be integrated into an agreement as a way to monitor progress towards and identify additional beneficial actions for shared objectives |



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|---|---|---|---|---|---|
| | dependent ecosystems and economic effects of changing groundwater uses. When the USGS/OWRD groundwater study is available, identify other information needs. | Clearly identify what is known about aquifer structure as well as what is unknown about the structure, boundaries, and groundwater movements. | OWRD USGS | no | |
| | | Recognize that most of the groundwater used is ancient and for all practical purposes non-renewable. | OWRD | no | |
| CI-2 | Develop a plan to help mitigate and respond to the impacts of drought on the basin's groundwater. | Collect and summarize information to help understand how the Harney Basin is affected by and responds to the impacts of drought events, as related to water supply and use. | CBWP Collaborative | possibly | An agreement could facilitate coordination and funding for implementing the RA. Could be integrated into an agreement as a factor related to current and future conditions important in identifying additional beneficial actions for shared objectives |
| | | Develop a basin plan with specific actions and tools to help mitigate and respond to meteorological drought impacts. Develop this plan in conjunction with, or as part of, the Harney County's Natural Hazards Mitigation Plan, based on the Harney Community-Based Water Plan, and in consideration of other drought plans from similar basins (e.g., temporary fallowing programs for | CBWP Collaborative | possibly | An agreement could facilitate coordination and funding for implementing the RA. Resulting plan and actions could be integrated into an agreement as a shared objective and set of mutually-beneficial actions. If implementation of the plan is fully local, the implementing agreement may not necessarily require Commission approval, unless included in a package with other tools that do implicate OWRD Groundwater Act-related authorities. |



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- The elements of a voluntary agreement that may be important for the Harney Basin context;
- Potential legal constraints or considerations for executing and implementing voluntary agreements;
- Ways in which voluntary agreements could be implemented, including the path/process to getting an agreement developed and approved (i.e., stakeholder engagement, agency review/approval process, etc.) as well as how to implement the terms of the agreement;
- A discussion of the questions or concerns raised by the Steering Committee, OWRD, and Collaborative stakeholders during the meetings conducted as part of this analysis; and
- Areas for which additional research may be needed.

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | groundwater irrigated fields during times of drought). | | | |
| | | Collect measurements that can be used to ground-truth remotely sensed and airborne data, and develop higher resolution Groundwater Drought Indicator Maps for the Harney Basin through the National Integrated Drought Information System (NIDIS) | CBWP Collaborative OWRD | no | An agreement could facilitate coordination and funding for implementing the RA. Results could inform/prioritize data collection tools most effective for an agreement for monitoring progress towards and identifying additional beneficial actions for shared objectives |
| | | Explore the accuracy and utility of Arizona's long-term drought mapping methods, and consider supporting similar methodology for Oregon to help provide drought projections for the Harney Basin | CBWP Collaborative | no | An agreement could facilitate coordination and funding for implementing the RA. Results could inform/prioritize data collection tools most effective for an agreement for monitoring progress towards and identifying additional beneficial actions for shared objectives |



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## Tactical Strategies

The Collaborative idenfied several tactical strategies and recommended actions,[52] which have the following considerations related to voluntary agreements: [Check for consistency with/missing items from most recent table in final review; add additional Critical Issues]

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| CI-1 | Increase use of efficient irrigation technology | Identify incentives for adopting more efficient technology (e.g., finding equipment grants to help convert to more efficient technology, such as Natural Resources Conservation Service's Environmental Quality Incentives Program, Bonneville Power Administration/Harney Electric Cooperative, Oregon Trail Electric Co-Op). | CBWP Collaborative | yes | An agreement could facilitate coordination and funding for carrying out the RA. Could implement identified options as an incentive-only agreement which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | Promote precision irrigation and irrigation scheduling, informed by data such as AgriMet data. | HCWC and HCSWCD | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | Support a full time equivalent (FTE) position in the basin to help support irrigators in utilizing efficient technology (i.e., a crop advisor for irrigation efficiency). | HC Court and OSU | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |

[52] Harney Community-Based Water Planning Collaborative, Draft Implementation Framework (2022).



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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | Demonstrate successful use of efficient technology to help gain local support to implement new conservation technologies (e.g., "smart farms" like in Columbia River Basin). | HCWC and HCSWCD | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | Ensure technical support is available in the basin to help maintain the equipment (e.g., technicians, technician school/courses for people to educate themselves). | HCSWCD | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | Continue researching irrigation technology, including sub-surface irrigation, and disseminate information (outreach) so irrigators know how to use the technology. | HC Court and OSU | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | Utilize data and data-collecting technology for increased water use efficiency (AgriMet). | HCSWCD, HC Farm Bureau, and HC Hay Growers Association | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| CI-1 | Support, as a Collaborative, the CREP program described in the application to FSA and encourage voluntary | The interagency team convened by the Oregon Watershed Enhancement Board (OWEB) develops a draft groundwater CREP proposal to be reviewed by Harney Basin stakeholders. The draft proposal should: a) meet federal requirements, including stewardship of enrolled lands (e.g., crop-cover | Interagency Team | yes | An agreement could facilitate coordination and funding for carrying out the RA. Could implement as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive |



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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | enrollment by water users | and weed-management requirements), and b) have state willingness to participate. If the proposal lacks buy-in from stakeholders, the interagency team should create an avenue for further stakeholder input for improvement. | | | is expected to advance relevant management objectives and how that will be monitored. |
| | | If the CREP proposal is funded and a program is implemented, the CBWP Collaborative helps conduct outreach to encourage irrigator enrollment. | CBWP Collaborative | no | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | Design a mechanism(s) that helps ensure that water 'saved water' through reduced use remains in the aquifer. | See strategy above | | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| CI-1 | Explore and consider a voluntary groundwater market approach; Review feasibility study (Upon review, the Collaborative should make a recommendation to implement or not) | CBWP partners, such as The Nature Conservancy, secure funding for a scoping assessment to determine potential implementation pathways of a voluntary groundwater market approach in the Harney Basin. | TNC | possibly | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. A market approach will likely require an OWRD role related to allocating the available resource (i.e., annual allocations or shares) and processing (i.e., procedures and criteria for evaluating temporary and permanent transfers and/or changes in use, tailored to meet area/sub-area management objectives) |
| | | The CBWP Collaborative reviews the results of the assessment and evaluates different approaches | CBWP Collaborative | possibly | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the |



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- Areas for which additional research may be needed.

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | | | | Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | The CBWP Collaborative determines whether it supports the establishment of a groundwater market in the Harney Basin as well as immediate next steps to support implementation | CBWP Collaborative | N/A | An agreement could facilitate decision-making for RA by creating the governance framework / procedural process for coordinating evaluation, planning, funding, and implementation of actions (like this RA) that are expected to advance shared objectives. |
| CI-2 | Support, as a Collaborative, the CREP program described in the application to FSA and encourage voluntary enrollment by water users | The interagency team convened by the Oregon Watershed Enhancement Board (OWEB) develops a draft groundwater CREP proposal to be reviewed by Harney Basin stakeholders. The draft proposal should: a) meet federal requirements, including stewardship of enrolled lands (e.g., crop-cover and weed-management requirements), and b) have state willingness to participate. If the proposal lacks buy-in from stakeholders, the interagency team should create an avenue for further stakeholder input for improvement. | Interagency Team | possibly | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |
| | | If the CREP proposal is funded and a program is implemented, the CBWP Collaborative helps conduct outreach to encourage irrigator enrollment. | CBWP Collaborative | possibly | An agreement could facilitate coordination and funding for developing the RA. An agreement would need approval by the Commission only if it includes other actions that require a role for OWRD related to its Groundwater Act-related authorities. |



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- Areas for which additional research may be needed.

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | Design a mechanism(s) that helps ensure that water 'saved water' through reduced use remains in the aquifer. | See strategy above | | |
| CI-2 | Explore and consider a voluntary groundwater market approach; Review feasibility study (Upon review, the Collaborative should make a recommendation to implement or not) | CBWP partners, such as The Nature Conservancy, secure funding for a scoping assessment to determine potential implementation pathways of a voluntary groundwater market approach in the Harney Basin. | TNC | no | |
| | | The CBWP Collaborative reviews the results of the assessment and evaluates different approaches | CBWP Collaborative | no | |
| | | The CBWP Collaborative determines whether it supports the establishment of a groundwater market in the Harney Basin as well as immediate next steps to support implementation | CBWP Collaborative | no | An agreement could facilitate decision-making for RA by creating the governance framework / procedural process for coordinating evaluation, planning, funding, and implementation of actions (like this RA) that are expected to advance shared objectives. |
| CI-3 | Support, as a Collaborative, the CREP program described in the | The interagency team convened by the Oregon Watershed Enhancement Board (OWEB) develops a draft groundwater CREP proposal to be reviewed by Harney Basin | Interagency Team | possibly | An agreement could facilitate coordination and funding for carrying out the RA. Could implement as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would |



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- Areas for which additional research may be needed.

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | application to FSA and encourage voluntary enrollment by water users | stakeholders. The draft proposal should: a) meet federal requirements, including stewardship of enrolled lands (e.g., crop-cover and weed-management requirements), and b) have state willingness to participate. If the proposal lacks buy-in from stakeholders, the interagency team should create an avenue for further stakeholder input for improvement. | | | then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | If the CREP proposal is funded and a program is implemented, the CBWP Collaborative helps conduct outreach to encourage irrigator enrollment. | CBWP Collaborative | possibly | An agreement could facilitate coordination and funding for carrying out the RA. Could implement as an incentive-only option which may not necessarily need Commission approval. Integrating into package with other tools such as a regulatory option would then subject the agreement to Commission approval, but could also facilitate buy-in. Include information about how the incentive is expected to advance relevant management objectives and how that will be monitored. |
| | | Design a mechanism(s) that helps ensure that water 'saved water' through reduced use remains in the aquifer. | See strategy above | | |
| CI-3 | Explore and consider a voluntary groundwater market approach; Review feasibility study (Upon review, | CBWP partners, such as The Nature Conservancy, secure funding for a scoping assessment to determine potential implementation pathways of a voluntary groundwater market approach in the Harney Basin. | TNC | no | |



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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | the Collaborative should make a recommendation to implement or not) | | | | |
| | | The CBWP Collaborative reviews the results of the assessment and evaluates different approaches | CBWP Collaborative | no | |
| | | The CBWP Collaborative determines whether it supports the establishment of a groundwater market in the Harney Basin as well as immediate next steps to support implementation | CBWP Collaborative | no | |



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- Areas for which additional research may be needed.

## Organizational/Infrastructure Strategies

The Collaborative idenfied several organizational/infrastructure strategies and recommended actions,[53] which have the following considerations related to voluntary agreements: [Check for consistency with/missing items from most recent table in final review; add additional Critical Issues]

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| CI-1 | Recommend to OWRD that it take actions in the short term to reduce the amount of groundwater being pumped for irrigation, including permit compliance | Ask OWRD to enforce existing permit conditions | CBWP Collaborative | yes | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA. An agreement could supplement permit conditions if/where needed to address a localized resource management issue, which would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| | | Ask OWRD to add metering & reporting requirement as rule | CBWP Collaborative | yes? | An agreement could supplement existing or require new metering and reporting requirements, which would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| | | Ask OWRD to evaluate where groundwater decline conditions exist and can be implemented | CBWP Collaborative | no | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA. |

[53] Harney Community-Based Water Planning Collaborative, Draft Implementation Framework (2022).



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- Potential legal constraints or considerations for executing and implementing voluntary agreements;
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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | Ask OWRD if there are short-horizon actions that can be taken to reduce water use | CBWP Collaborative | ? | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA. An agreement could implement identified short-horizon actions. If such actions require OWRD administration, agreement would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| | | Ask OWRD if there are short-horizon actions that can be taken as a priority to reduce water use in areas of serious groundwater decline | CBWP Collaborative | ? | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA. An agreement could implement identified short-horizon actions in priority areas. If such actions require OWRD administration, agreement would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| CI-1 | Work with OWRD to enact improvements in its enforcements of water rights and well construction standards in a publicly | Ensure all permits conditions and water use limits are met | OWRD | possibly | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. |
| | | Ensure all water right data, including water use data as required, is up to date and publicly available | OWRD | yes | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. An agreement could supplement data collection and reporting requirements, |



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| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | transparent manner | | | | which would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| | | Ask Harney County to ask OWRD to enforce certificate conditions | CBWP Collaborative | no | |
| | | Include a recommendation for enforcement in the integrated plan | CBWP Collaborative | yes | An agreement could adopt the integrated plan with enforcement measures that are consistent with the Groundwater Act, which would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |
| | | Enforce well construction standards | OWRD | yes | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA. |
| | | Support OWRD in ensuring that all illegal water use ceases | CBWP Collaborative | yes | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. |
| | | Request OWRD collect data on illegal water use and produce an annual report regarding progress/implementation of RA above | CBWP Collaborative | yes | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. |
| | | Support OWRD in ensuring that illegal water use ceases | CBWP Collaborative | no | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. |



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- Areas for which additional research may be needed.

| Critical Issue | Strategies to address critical issue | Recommended Actions (RAs) | Proposed Lead Entity for Developing/ Implementing RAs | Feasible through VA? | Voluntary Agreement-related Considerations |
|---|---|---|---|---|---|
| | | Request OWRD collect data on illegal water use and produce an annual report regarding progress/implementation of RA above | CBWP Collaborative | no | Within OWRD's existing Groundwater Act-related authorities. An agreement could facilitate coordination and demonstrate community support for implementing the RA, which could assist in garnering political will for funding and resources. An agreement could supplement data collection and reporting requirements, which would require Commission approval. Include information about how the RA is expected to advance relevant management objectives and how that will be monitored. |



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## Conclusions

Voluntary agreements present a significant opportunity for locally-driven, collaborative management of groundwater resources. However, until voluntary agreements are more widely implemented and tested, there will remain some level of uncertainty and risk with implementing groundwater management strategies in this way. The key overarching considerations in framing voluntary agreements for the best chance of legal supportability include:

- ensuring consistency with Groundwater Act statutes and
- considering and thoroughly explaining how the element relates to and advances relevant legislative policies.

Beginning with "pilot" voluntary agreements with limited applicability could be a way to work on targeted areas and strategies with smaller groups of parties to start making progress and learning about the process for developing, approving, and implementing voluntary agreements.



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# Appendix A – Questions & Responses

| Stakeholder Questions | Page Reference |
|---|---|
| What is the appropriate scope of a voluntary agreement? Is there an umbrella agreement or should there be separate agreements to address specific strategies? | [**update on final review**] |
| How can voluntary agreements make things more equitable and improve conditions for all water users, particularly considering the water needs of exempt well users and groundwater-dependent ecosystems, which have been detrimentally impacted? | [address more specifically in possible] |
| Are other places dealing with groundwater depletion using voluntary agreements? And if so, how? | |
| Which strategies might require a voluntary agreement vs. which might be amenable to such an agreement? | |
| Could a voluntary agreement be used to execute a transfer between two people, as part of a pilot demonstration for building up to a water market? | |
| Should and how would supplemental water use be factored into a voluntary agreement? | [address more specifically if possible] |
| How can voluntary agreements be used in conjunction with any rulemakings on designations from OWRD to address groundwater issues? Can we have a regulatory structure in the areas with the most acute issues and voluntary agreement(s) in other parts of the basin to address overdraft? | |
| What happens to the agreement if there is a change in landownership? Does the county have a role in ensuring the agreement remains if land ownership changes? | [address more specifically if possible] |
| Who are the parties involved in a voluntary agreement? | |



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| |
|---|
| Who needs to approve of the agreement and who is responsible for ensuring it is carried out? What are the roles of the landowners, the county, and the state in an agreement? |
| What level of participation is needed in order to successfully implement a voluntary agreement be successful? Is it 100%? |
| What metrics do you use to evaluate the agreement and how do you ensure that the goals are being met? |



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# Appendix B – Case Studies

## Butter Creek Critical Groundwater Area (Oregon)

Established and managed through OWRD rules

> Purpose:
>
> "1) The Director issued an order on August 18, 1986 declaring the Butter Creek Critical Groundwater Area. The order described the exterior boundaries and divided the area into six subareas for the purpose of managing the ground-water resource. The response of ground-water levels to pumpage from each subarea is largely independent of pumpage within other subareas.
>
> (2) To promote optimum use of the limited groundwater supply in the Butter Creek Critical Groundwater Area, the Commission encourages development of water management plans to maintain a high standard of water use efficiency.
>
> (3) The Commission recognizes that exempt users in the North subarea are a stress on the groundwater resource in the Butter Creek Critical Groundwater Area. If, by 2000, reasonably stable water levels have not been achieved, the Department shall determine whether or not to require prior authorization under these rules for groundwater uses that are exempt under O.R.S. § 537.545.



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(4) The purpose of these rules is to stabilize water levels in the basalt groundwater reservoir in the Butter Creek Critical Groundwater Area of Umatilla and Morrow counties. These rules carry out the authority granted to the Commission in O.R.S. §§ 536.900 to 536.935 and O.R.S. §§ 537.505 to 537.745."

OAR 690-507-0610

Water Resources Commision, In the Matter of Determination of a Critical Ground Water Area in the Butter Creek Area in Morrow and Umatilla Counties, Oregon (1986).

[For input: whether Butter Creek is an appropriate case study to include to address the types of geographic scope, subject matter scope, parties, and informative elements and procedures similar to following case studies]



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## San Pedro Riparian National Conservation Area (SPRNCA) MOU & Cooperative Monitoring & Adaptive Management Plan (Arizona)

The MOU is designed to achieve "a series of shared goals to ensure a healthy San Pedro River and ecologically viable SPRNCA, adequate long–term water supplies to meet the reasonable needs of the area's current and future residents and property owners as well as the SPRNCA, opportunities for continued economic growth and development in Cochise County and Sierra Vista; and an operationally secure Fort Huachuca that can accomplish its national defense missions, have a safe and adequate water supply and comply with all obligations under the Endangered Species Act"(*Herald Review*).

The *geographic scope* of the agreement is based on the U.S. boundaries of the hydrologic subbasin. Monitoring and adaptive management indicators are based on 14 defined zones within the subbasin area.

The *subject matter scope* of the agreement is confined to monitoring actions and establishment of an adaptive management process for cooperative management of water resources in the region. The MOU and Plan coordinate monitoring activities, create adaptive management framework to track indicators (riparian health trends) and triggers for additional management, and create a process for the parties to determine when/what additional management actions should be taken.



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The *parties* to the MOU are the government entities and federal agencies with authority to implement the monitoring and adaptive management actions included in the MOU.

There are important *distinguishing elements from the Harney context* to consider related to this example. The MOU does not identify nor implement specific management strategies. It also does not provide an explicit way to manage/reduce current uses or limit new uses.

The potentially *informative elements* of this agreement for the Harney context include:

- Monitoring framework with defined, trend-based indicators and triggers for when additional management actions are needed
- Commitments by the parties to collaboratively plan, evaluate, fund, and implement ongoing monitoring and management actions
- Planned management actions to reduce use and bolster aquifer levels that do not place new requirements on existing water users

Resources:

- SPRNCA MOU & Cooperative Plan [web link hosted by Cochise County]
- Herald Review, *Agreement gives county a seat at San Pedro conservation discussions* (Sept. 16, 2021)



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- Sierra Vista, *Agencies affirm their commitment to address water and ecological conservation near the San Pedro River in Southeast Arizona* (Sept. 21, 2021)



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## Mojave Basin Settlement (California)

As an alternative to continued litigation initiated by ongoing overdraft issues, a committee representing a variety of water users and interests in the Mojave Basin worked together to develop a groundwater allocation system, management zones and tools, and a supply augmentation options.

The *geographic scope* of the agreement is based on the hydrologic basin and defines four subbasins with unique management objectives. The *subject matter scope* of the agreement is based on the underlying litigated matter, which was to adjudicate all of the water rights within the hydrologic basin. The agreement established a system for monitoring and management within and among subbasins to meet downstream water rights obligations, address changes in use, address conjunctive management issues, and protect special status species.

The *parties* to the settlement agreement were most of the water users within the hydrologic basin. The agreement defined a "de minimus" category to exempt certain smaller water users. A few senior water rights holders did not join the settlement agreement.

There are important *distinguishing elements from the Harney context* to consider related to this example. Water users in the Mojave Basin had a 'backstop' to help mitigate overuse (imported surface water). This arguably created a softer landing for reducing overuse – water users can use more than their annual allocation, but they must pay a fee based on the cost of imported surface water in the overage amount. Additionally, judicial settlement provides an arguably greater



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degree of legal cover for the implementing agencies because the management plan is approved by the court and has the force of law.

The potentially *informative elements* of this agreement for the Harney context include:

- Subbasin-based management objectives to address localized hydrologic issues.
- Ramp down schedule brings down overuse over time.
- Incorporates a 'water market' management element, which creates a balancing mechanism to allow new uses or changes in use while maintaining the water budget defined as part of the settlement.
- Incorporates environmental values into management goals and subbasin objectives.

There are also potentially *informative process lessons* for the Harney context:

- Defining 'de minimus' uses helped to simplify the agreement negotiation process and minimize the required parties.
- If potentially-impacted parties do not voluntarily participate, there is risk of a successful legal challenge. However, a successful challenge does not necessarily mean that the agreement is not otherwise supportable and valuable. Seven senior water rights holders did not join the stipulated agreement. They successfully challenged and were exempted from the terms of the agreement, which was otherwise upheld as to the stipulating parties. Most of those parties have eventually joined due to the benefits of participating.



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Resources:

- Mojave River Decree (California Water Board)
- Mojave Water Agency, *History of the Adjudication*, *Summary of the Mojave Basin Area Judgment*, *FAQs*



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## Groundwater Management District 4 / Sheridan 6 Locally Enhanced Management Area (Kansas)

Kansas law enables the creation of local Groundwater Management Districts to help manage and conserve groundwater and prevent economic deterioration. Districts, which are initiated and approved by local petition and vote, are governed by locally-elected boards and charged with creating management programs for conservation and management of groundwater within the district that are reviewed and approved by the Division of Water Resources. To implement the approved Management Program, the Division of Water Resources may establish rules and regulations applicable to the specific District.

Certain designations allow for additional management measures to address groundwater declines and other conditions of concern in certain areas. Intensive Groundwater Use Control Areas (IGUCAs) and Local Enhanced Management Areas (LEMAs) may be designated on the request of a Groundwater Management District or local water users, following reviews, hearings, and a determination by the Chief Engineer. LEMA plans must include goals and corrective control provisions adequate to meet the management problems/goals identified as part of the area designation. The plan may include corrective control provisions that are defined in statute:

- Closing the local enhanced management area to any further appropriation of groundwater;



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- Determining the permissible total withdrawal of groundwater in the local enhanced management area each day, month or year, and apportioning the total quantity among valued groundwater right holders according to priority;
- Reducing the permissible withdrawal of groundwater by any one or more appropriators or by wells in the LEMA;
- Requiring and specifying a system of rotation of groundwater use in the LEMA; or
- Any other additional requirements as are necessary to protect the public interest.

The Sheridan 6 LEMA was designated within Kansas' Groundwater Management District 4 in 2013 on petition of the District and following review and approval by the Chief Engineer. GMD 4's Management Program defines seven overarching management problems, including groundwater depletion issues. To address localized areas of impact for depletion within the broader District, the Sheridan 6 LEMA program established a limit on total permissible water use from within the area over the 5-year LEMA period.

There are important *distinguishing elements from the Harney context* to consider related to this example. This plan is not explicitly a "voluntary agreement," but as noted above, it does require a majority of groundwater users to support the petition for designation of the area. The authorizing statute sets the standard for required parties and the types of corrective actions that may be incorporated into a plan.

The potentially *informative elements* of this management plan for the Harney context include:



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- Subbasin-based management objectives and corrective actions within a broader regulated basin to address localized hydrologic issues.
- Ramp down schedule to bring down overuse over time.
- Incorporates economic, environmental, and social/community values into management goals and subbasin objectives.

There are also potentially *informative process lessons* for the Harney context:

- The localized approach taken with the Sheridan 6 LEMA appears to have generated less conflict/more buy-in than a district-level LEMA approach, allowing implementation to proceed without/with less legal challenge.

Resources:

- Groundwater Management District Act, K.S.A. §§ 82a-1020 – 82a-1042 (Nov. 2018)
- K.S.A. § 82a-1041 Local enhanced management areas
- Order of Designation Approving the Sheridan 6 Local Enhanced Management Area within Groundwater Management District No. 4 (Division of Water Resources, 4/17/2013)
- Northwest Kansas Groundwater Management District No. 4: Revised Management Plan (Adopted by GMD 4 Board and approved by the Chief Engineer 2016)



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- Lessons from Kansas: A More Sustainable Groundwater Approach (Stanford Water in the West)
- Fact Sheet: Intensive Groundwater Use Control Areas (Kansas Department of Agriculture)

## Diamond Valley Groundwater Management Plan (Nevada)

Recognizing the need to stabilize groundwater declines and in anticipation of a critical management area designation, the local community and stakeholders in Diamond Valley came together to develop a local Groundwater Management Plan. The locally-developed Plan was approved by a majority of groundwater users in the Valley and approved by the State Engineer in 2019. The Plan was in effect for two years but is currently on hold while legal questions associated with the plan are undergoing judicial review.

The *geographic scope* of the agreement is based on the hydrologic basin. The *subject matter scope* of the agreement is limited to managing irrigation water uses within the basin. It establishes a shares-based system based on existing water rights, defines a 'ramp down'



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schedule to reduce use over time, allows for 'storage' of unused shares for use in later years, and allows trading of shares to manage new and changes in uses.

The *parties* were a majority of groundwater users in the Basin who joined the petition submitted to the State Engineer in support of the Plan (a standard for approval set by statute).

There are important *distinguishing elements from the Harney context* to consider related to this example. This Plan is not explicitly a "voluntary agreement," but as noted above, it does require a majority of groundwater users to support the petition for approval of the Plan. The authorizing statute sets the standard for required parties.

The potentially *informative elements* of this agreement for the Harney context include:

- Ramp down schedule brings down overuse over time.
- Incorporates a 'water market' management element, which creates a balancing mechanism to allow new uses or changes in use while maintaining the water budget.
- Incorporates environmental, social, and economic community values into management objectives.

Certain aspects of the Plan are currently undergoing judicial review. That ongoing litigation may highlight potentially *informative legal considerations*:

- Whether the relevant state agency can approve a voluntary agreement/plan that includes management tools that the state itself doesn't have the legal authority to implement?



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- Whether instituting a voluntary shares-based system is a legally supportable approach to recognize water rights yet manage water use outside of the prior appropriation system?
- What is a reasonable timeline for a ramp down schedule? What if conflicts with senior water rights are already occurring?
- What is an appropriate use of discretion by the relevant state agency in determining the intended legislative policy of an imprecise statute/delegation of authority?
- What data and information are necessary to satisfy a 'substantial evidence' standard to legally support an agency determination?

Resources:

- Diamond Valley Groundwater Management Plan
- Nevada State Engineer, Order #1302 Granting Petition to Adopt a Groundwater Management Plan for the Diamond Valley Hydrographic Basin (2019)
- Nevada Division of Water Resources, Diamond Valley GMP FAQ
- Nevada Supreme Court, Case Information for Case No. 81224, DIAMOND NAT. RES. PROT. AND CONSERVATION ASS'N VS. DIAMOND VALLEY RANCH, LLC
- The Nevada Independent, *In Diamond Valley farmers are looking to protect their future and testing the limits of Nevada's water laws* (Oct. 28, 2020)



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# References

[To be updated on final review]