

**\*CONSENSUS ACHIEVED ON STRATEGIES AND OBJECTIVES  
DECEMBER 2021; CBWP COLLABORATIVE CONTINUES TO ADD CLARITY ON  
RECOMMENDED ACTIONS**

Strategies are organized first by sections, then by whether they are foundational, tactical, operational, or organizational/infrastructure, then by timing of implementation (near-term, mid-term, long-term), and finally by their status (ongoing, not started, completed). For more detailed information, refer to Chapter 7 and 8 of the CBWP Groundwater Plan.

**SECTION 1: REDUCING AGRICULTURAL GROUNDWATER USE**

**Protect water rights when reducing groundwater use**

**Objective 1:** To assist groundwater irrigators in using less water; To protect the water rights of an irrigator who conserves by changing their irrigation system to operate at a lower rate and duty than authorized by permit or certificate.

**Strategy 1:** Implement irrigation conservation measures to help slow the rate of decline and assist in achieving reasonably stable groundwater levels. *(Operational; Near-Term; Ongoing)*

**Recommended Actions:**

- 1.1 Provide a clear explanation of the “ready, willing, and able” (ORS 540.610) to address irrigators’ concern about “use it or lose it”.
- 1.2 Demonstrate successes of irrigators reducing groundwater use for others to learn and to be encouraged (e.g. “demonstration farms”).
- 1.3 Explore the application of the Allocation of Conserved Water statute ([ORS 537.455 - 537.500](#)) to groundwater.
- 1.4 Provide incentives for irrigators who can prove reduction in their groundwater use.
- 1.5 Set benchmarks and timelines for reducing groundwater use.
- 1.6 Implement the conservation implementation strategy by NRCS to reduce groundwater use by 3000 acre-feet/year.

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**Ensure conserved water remains in the ground**

**Objective 2:** To ensure that groundwater saved via conservation or efficiency strategies is protected from consumptive use.

**Strategy 2:** Research policy or planning mechanisms to ensure that conserved water remains in the ground *(Foundational; Long-Term; Not Started)*

**Recommended Actions:**

- 2.1 See Section 1, Strategy 1, Recommended Action 1.3.
- 2.2 State agencies and others identify existing policy mechanisms to ensure that water remains in the ground.
- 2.3 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.

- 2.4 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.

*Note: All above Recommended Actions are most effective if coupled with both metering of water use and monitoring of local groundwater levels near the site where water was initially conserved.*

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### Use less water through technology

**Objective 3:** To irrigate with less water by using more efficient technology to help stabilize or recover groundwater levels and maintain a “good” crop in an economically sustainable manner.

**Strategy 3:** Increase use of efficient irrigation technology. (*Tactical; Near-Term; Ongoing*)

#### Recommended Actions:

- 3.1 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).
- 3.2 Promote precision irrigation and irrigation scheduling, informed by data such as AgriMet data.
- 3.3 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).
- 3.4 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).
- 3.5 Ensure technical support is available in the basin to help maintain the equipment (e.g., technicians, technician school/courses for people to educate themselves).
- 3.6 Continue researching irrigation technology, including sub-surface irrigation, and disseminate information (outreach) so irrigators know how to use the technology.
- 3.7 Utilize data and data-collecting technology for increased water use efficiency (AgriMet).

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### Develop alternative crops

**Objective 4:** To increase science-based and basin-specific information about economically-viable alternative crops and reducing groundwater use; To increase adoption of alternative crops and efficient irrigation practices to reduce groundwater use.

**Strategy 4:** Partner with Oregon State University, the County, and the Eastern Oregon Agriculture Research Center to hire a professor of practice, who would research the development of alternative crops and improving irrigation efficiencies. (*Operational; Near-Term; Ongoing*)

**Recommended Actions:**

- 4.1 Partner with Oregon Department of Agriculture’s Market Access Group and other experts (e.g., market-analysis consultants).
  - 4.2 Develop demonstration farms (See Section 1, Strategy 1, Recommended Action 1.2).
  - 4.3 Develop and disseminate market-analysis, economic, and risk-management analysis information to groundwater irrigators.
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**Support a groundwater CREP program**

**Objective 5:** To reduce groundwater use through a groundwater CREP with enrollment of up to 20,000 acres.

**Strategy 5:** Support, as a collaborative, the CREP program described in the application to FSA and encourage voluntary enrollment by water users. (*Tactical; Near-Term; Ongoing*)

**Recommended Actions:**

- 5.1 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. The interagency team should create an avenue for further stakeholder input for improvement.
  - 5.2 If the CREP proposal is funded and a program is implemented, the CBWP Collaborative helps conduct outreach to encourage irrigator enrollment.
  - 5.3 Design a mechanism(s) that helps ensure that water ‘saved water’ through reduced use remains in the aquifer.
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**Develop a drought plan**

**Objective 6:** Prepare for and strategically manage groundwater resources during drought events in a way that helps to meet the short-term needs of the Harney basin’s people, ecosystems, and economy, while helping to keep the basin on track with long-term groundwater-level goals

**Strategy 6:** Develop a plan to help mitigate and respond to the impacts of drought on the basin’s groundwater (meteorological, hydrological, precipitation and seasonal weather) (*Operational; Mid-Term; Not Started*)

**Recommended Actions:**

- 6.1 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.
- 6.2 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 groundwater irrigated fields during times of drought).

- 6.3 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)
- 6.4 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

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### **Increase understanding of groundwater rights**

**Objective 7:** Build understanding how and when supplemental groundwater use influences the basin's groundwater levels, and how reliant the basin is on supplemental groundwater rights. This understanding would help inform the development of a drought-impacts mitigation and response plan, as well as the development of voluntary agreements.

**Strategy 7:** Understand permitted and actual use of supplemental groundwater rights in the basin to better manage water resources during drought events (*Operational; Mid-Term; Ongoing*)

#### **Recommended Actions:**

- 7.1 Determine maximum authorized use of supplemental groundwater rights in the basin
- 7.2 Determine if maximum authorized supplemental groundwater use is significant in the basin and, if so, engage stakeholders to learn what triggers the use of supplemental groundwater rights (e.g., well issues, drought conditions)
- 7.3 Determine actual use of supplemental groundwater rights in the basin as well as how that use changes over time and what factors influence supplemental groundwater use.

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**Recommend OWRD take actions in short-term to reduce irrigation groundwater use, including permit compliance.**

**Objective 8:** Convey to OWRD the urgency of responsible water management, including permit compliance; To start reducing the amount of groundwater being pumped for irrigation; To implement short term actions that could start reducing the amount of GW being pumped.

**Strategy 8:** Recommend to OWRD that it take actions in the short term to reduce the amount of GW being pumped for irrigation, including permit compliance (*Organizational/Infrastructure; Near-Term; Ongoing*)

#### **Recommended Actions:**

- 8.1 Ask OWRD to enforce existing permit conditions
- 8.2 Ask OWRD to add metering & reporting requirement as rule
- 8.3 Ask OWRD to evaluate where groundwater decline conditions exist and can be

implemented.

8.4 Ask OWRD if there are short-horizon actions that can be taken to reduce water use

8.5 Ask OWRD if there are short-horizon actions that can be taken as a priority to water use in areas of serious groundwater decline

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## SECTION 2: ADDRESSING DOMESTIC WELL ISSUES

### Develop a domestic well remediation fund

**Objective 1:** Continue to secure funding for DWUs and ensure effective implementation of the funded programs

**Strategy 1:** Develop a fund to assist impacted domestic well owners, starting with the 2021 session of the Oregon legislature (*Tactical, Near-Term; Completed*)

#### Recommended Actions:

- 1.1 Utilize background information to request funding (for specific actions) from legislature for domestic well users experiencing decline in water quantity/quality that has been affected by declining groundwater levels to remedy well issues identified by the well owner.

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### Develop alternative water delivery for rural residents

**Objective 2:** Develop alternative water delivery mechanisms (i.e. community wells, cisterns, etc.) to meet exempt water supply needs of rural residents and offer support to affected rural areas; In developing alternative water delivery mechanisms, provide protection for exempt livestock use.

**Strategy 2:** Identify feasible alternative water delivery mechanisms to meet exempt water supply needs of rural residents (*Tactical; Mid-Term; Ongoing*)

#### Recommended Actions:

- 2.1 Using the Anderson Perry report and the GIS capacity of the Harney County Planning Department, the county will identify areas of groundwater decline where there is an economically feasible cluster of homes that would benefit from alternative water delivery mechanisms to meet exempt water supply needs of rural residents
  - 2.2 Harney County Court determine community support/interest in alternative water delivery mechanisms to meet exempt water supply needs of rural residents
  - 2.3 Develop a strategy and pursue funding with community support for alternative water delivery mechanisms where feasible to meet exempt water supply needs of rural residents.
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### **Explore long-term approaches to assist domestic water users**

**Objective 3:** To ensure our community has adequate and safe domestic water

**Strategy 3:** To provide financial and technical solutions to domestic well users experiencing declines in groundwater quantity/ quality due to declining groundwater levels (*Tactical; Near-Term; Ongoing*)

**Recommended Actions:**

- 3.1 Explore ways to generate funding for domestic well owners such as an insurance fund, where users pay a fee, that could be administered locally
- 3.2 Continue discussions on additional financial and technical solutions
- 3.3 Continue discussions on eligibility, coverage, and administration of the insurance fund

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## **SECTION 3: CONSERVING GROUNDWATER DEPENDENT ECOSYSTEMS**

### **Conserve groundwater dependent ecosystems**

**Objective 1:** Protect and conserve groundwater dependent ecosystems (refer to [GDE Step 2 + Step 3](#) Report for definition of GDEs)

**Strategy 1:** Implement actions to protect and conserve groundwater dependent ecosystems (*Foundational; Near-Term; Ongoing*)

**Recommended Actions:**

- 1.1 Identify and prioritize incentives (like CREP) to reduce groundwater use in areas where it would otherwise impact GDEs
- 1.2 When data are available, identify areas that could impact GDEs from groundwater withdrawals
- 1.3 Encourage management of springs on public lands (BLM, USFWS, USFS) for ecological benefit including consideration for managing cold water refugia.
- 1.4 Identify management tools that could help reduce groundwater use where it would otherwise impact GDEs.
- 1.5 Pursue more aggressive reductions in groundwater withdrawal in areas that affect GDEs
- 1.6 Assess what legal protections exist for springs

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### **Monitor and inventory groundwater dependent ecosystems**

**Objective 2:** To establish an understanding of baseline conditions for GDEs and monitor their response to water management.

**Strategy 2:** Implement a monitoring program for groundwater dependent ecosystems (GDEs) and priority plants and animals that depend on them (*Operational; Near-Term; Not Started*)

**Recommended Actions:**

- 2.1 Recommend that OWRD implement groundwater monitoring for the basin, and other state agencies as needed, include specifically monitoring GDEs (water table, spring flow, etc.)
- 2.2 Request that state agencies (OWRD, ODFW, etc.) and other organizations develop a comprehensive GDE monitoring program that includes priority species of flora and fauna
- 2.3 Utilize GDE monitoring data to inform the adaptive management and implementation of water management strategies.

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**SECTION 4: MEASURING & REPORTING GROUNDWATER USE**

**Integrate water use in land use decisions**

**Objective 1:** To ensure development does not further deplete available supplies

**Strategy 1:** Integrate water availability into land use planning (*Tactical; Mid-Term; Not Started*)

**Recommended Actions:**

- 1.1 Build an understanding of City and County authorities, tools, and limitations pertaining to land use and water planning (Refer to OAR 690 10)
- 1.1 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

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**Explore remote sensing of groundwater use**

**Objective 2:** To use remote-sensing devices to explore groundwater hydrology in the Harney Basin for purposes of applying the information provided for water management.

**Strategy 2:** Explore how OpenET or other remote-sensing applications could be used as a tool to assess water use. (*Operational; Near-Term; Ongoing*)

**Recommended Actions:**

- 2.1 Continue participation of the Harney Basin as a pilot project of OpenET
- 2.2 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.
- 2.3 Explore how OpenET can be used for understanding and transparently communicating groundwater use in the GHVGAC

*Note: There are important data limitations to consider with OpenET. For example, it does not distinguish between water sources and currently does not account for precipitation.*

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### **Measure groundwater use**

**Objective 3:** Measure and report irrigation groundwater use to inform water management decisions and outcomes and provide accountability. These measures are intended to inform adaptive management of strategies but are not intended to replace or substitute for any regulatory requirements that OWRD may have or impose.

**Strategy 3:** To install accountable water measurement devices on all non-exempt groundwater points of diversion; To develop appropriate reporting procedures for metered non-exempt groundwater points of diversion (*Operational; Near-Term; Not Started*)

#### **Recommended Actions**

- 3.1 In the GHVGAC, require near real-time, accurate, OWRD-approved groundwater meters could be installed on all groundwater points of diversion, except for exempt uses, and report water use from each meter annually to OWRD. Meters should utilize digital data loggers (e.g., USB-compatible) to reduce reporting burden on water users and ensure consistency.
  - 3.1a For all those areas where near real-time meters will not be practical due to technological limitations, the department will be requested to provide a list of approved alternative meters/approaches that could be implemented.
- 3.2 Create a system to maintain accurately calibrated meters.
  - 3.2a For instance, the system could promptly identify and promptly address broken, damaged or improperly calibrated meters. In this case, a process should be created to consult with technical experts (including OpenET founders, OWRD, USGS) to determine whether OpenET could serve as a temporary substitute for broken, damaged, or improperly calibrated meters until they can be fixed to meet the desired purpose of the data and the limitations and appropriate uses of that data; utilize OpenET data in accordance
- 3.3 CBWP Collaborative distribute information on Oregon Water Measurement Cost Share Program (and other incentive and cost-share opportunities) to assist in uniform measurement.
- 3.4 CBWP Collaborative explore whether other cost-share measures are available to assist in reporting and reporting technology
- 3.5 Ensure the water use information reported to OWRD is available to the certificate/permit-holder

- 3.6 Where possible within the GHVGAC, install self-reporting telemetry (e.g., smart meters) to automate reporting of water use to OWRD and certificate/permit-holder.
- 3.7 If it is confirmed by the appropriate technical agency experts that metering data is unreliable for determining water use from a specific well, convene a technical committee of technical agency experts and stakeholders (i.e. OpenET founders, OWRD, USGS, others). The technical committee will determine a process to achieve water use measurement either through requiring changes in plumbing or through other water use measurement (such as OpenET) that meets the purpose of the data; for any PODs determined by the committee to use a significant amount of water, require changes in plumbing and installation of a meter. Sources of cost-share and incentive funding will be sought for cases requiring changes in plumbing.
- 3.8 CBWP Collaborative advocate for OWRD to interpret groundwater use data, report to the community and interested stakeholders, and utilize information in management actions

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## SECTION 5: IMPROVING ACCOUNTABILITY, COMPLIANCE AND PUBLIC PARTICIPATION

### Improve well construction and permit standards

**Objective 1:** Work with OWRD to prioritize compliance to ensure all water is being used legally within accordance of permit and certificates and has accountability to OWRD and the public

**Strategy 1:** Work with OWRD to enact improvements in its enforcements of water rights and well construction standards in a publicly transparent manner (*Organizational/Infrastructure; Near-Term; Ongoing*)

#### Recommended Actions:

- 1.1 Ensure all permits conditions and water use limits are met
- 1.2 Ensure all water right data, including water use data as required, is up to date and publicly available
- 1.3 Ask Harney County to ask OWRD to enforce certificate conditions
- 1.4 Include a recommendation for enforcement in the integrated plan
- 1.5 Enforce well construction standards
- 1.6 Support OWRD in ensuring that illegal water use ceases
- 1.7 Request OWRD collect data on illegal water use and produce an annual report regarding progress/implementation of RA 1.6 and addressing illegal water use

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### Ensure CBWP Representation in Rulemaking

**Objective 2:** Ensure the Collaborative is represented and the strategies proposed in the CBWP Groundwater Plan are considered by the Rules Advisory Committee (RAC) when changes to the groundwater rules are being considered.

**Strategy 2:** Work with OWRD to ensure that Collaborative members are represented and Collaborative developed strategies are presented to the RAC when considering groundwater management rulemaking (*Organizational/Infrastructure; Near-Term; Ongoing*)

**Recommended Actions:**

- 2.1 Work with OWRD on the composition of the RAC (i.e. CBWP Collaborative propose names of Collaborative members for OWRD to consider to participate in the RAC)
  - 2.2 Identify and prioritize strategies and approaches to managing groundwater and present them to the RAC
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**Develop an abandoned well safe harbor program**

**Objective 3:** Identify number of unused wells; Develop cost share program to address unused wells

**Strategy 3:** Develop a well clean up and safe harbor program (*Operational; Mid-Term; Not Started*)

**Recommended Actions:**

- 3.1 Identify funding sources to conduct an inventory of unused wells
  - 3.2 Develop a community outreach program to notify people of the need to address unused wells
  - 3.3 Ask OWRD to provide guidance on developing cost share programs (i.e. Mosier)
  - 3.4 Explore alternative funding sources for cost share program (SWCD, HDP,...) both in the short and long term
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**Improve citizen engagement in OWRD decisions**

**Objective 4:** Water is a public resource, managed by the State; The public will have a robust opportunity to weigh in on the Department's processes

**Strategy 4:** CBWP Collaborative work with OWRD to improve opportunities for public comments and to give meaningful consideration to the voice and comments of the general public regarding OWRD actions on groundwater permit matters and groundwater management (*Organizational/Infrastructure; Mid-Term; Ongoing*)

**Recommended Actions:**

- 4.1 Identify specific activities (regarding groundwater rights transactions and management) where collaborative members find public comment opportunity is lacking.

4.2 Develop information on public input opportunities for groundwater permitting and other matters and make it available locally

4.3 Request OWRD consider specific activities identified in RA 4.1 and form a statewide work group to improve public input processes. The Harney CBWP Collaborative has already identified the following areas that the statewide working group should address:

- Ensure public notice and opportunity for public engagement where the department reverses a decision
- Ensure public engagement is representative of the water users in the basin and other stakeholders.
- Provide information to the public on how to: navigate the public input process, provide effective input on agency decisions, and understand how comments are acknowledged and used.

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### **Work with OWRD to address abandoned wells**

**Objective 5:** To increase accountability and ensure that all water use occurs in compliance with a valid water right; To prevent the reactivation of water rights where five years of consecutive non-use has occurred

**Strategy 5:** OWRD initiate cancellation of all known expired permits and water rights that haven't been beneficially used in 5 years in the Harney Basin and develop a plan to systematically identify those permits that may be subject to forfeit  
*(Organizational/Infrastructure; Mid-Term; Ongoing)*

#### **Recommended Actions:**

- 5.1 Request that OWRD collect information on groundwater use, initiate a continuous cancellation process for expired permits and water rights that haven't been beneficially used in 5 years, and share information on their findings with the public
- 5.2 CBWP Collaborative request that OWRD systematically assess where non-use of groundwater rights is occurring and pursue timely cancellation of unused groundwater rights when five years of consecutive non-use has occurred

*Note: OWRD has not supported the language in this Section 5, Strategy 5 as of yet. The Collaborative is awaiting comments and feedback from the Department.*

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### **Explore groundwater use fees**

**Objective 6:** Explore the use of fees to pay for conservation and management of groundwater that may be applicable to the Harney Basin

**Strategy 6:** Research and explore the idea of assessing fees for groundwater use. (*Operational; Long-Term; Not Started*)

**Recommended Actions:**

- 6.1 Research how fees have been used in other groundwater management activities in Western US and beyond.
- 6.2 From research, determine whether a fee structure/system is working effectively for those locations.
- 6.3 From research, provide examples of a fee structure that *could* work effectively in the Harney Basin.

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**Evaluate well standards for the Harney Basin**

**Objective 7:** Ensure well drilling standards are sufficiently protective of the groundwater resource in the Harney Basin

**Strategy 7:** Evaluate the hydrogeology and potential for adverse effects from groundwater intermingling from new wells and the appropriate sealing requirements. (*Tactical; Mid-Term; Not Started*)

**Recommended Actions:**

7.1 Request OWRD evaluate whether the Harney Basin should be designated as a Special Area pursuant to OAR 690-200-0028 (Designated Special Area Standards) to ensure protection of groundwater resource.

7a: OWRD seek input from the community, including CBWP and well drillers, to consider reasons for differences in sealing depths currently to protect human health and the groundwater resource.

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**SECTION 6: COLLECTING/SHARING INFORMATION**

**Continue groundwater studies**

**Objective 1:** Continue to learn about groundwater conditions in the Harney Basin.

**Strategy 1:** Advocate for additional information with early focus on groundwater dependent ecosystems and economic effects of changing groundwater uses. When the USGS/OWRD groundwater study is available, identify other information needs. (*Operational; Near-Term; Ongoing*)

**Recommended Actions:**

- 1.1 Using the Step 2 documents, identify information needs and prioritize those that have a direct implication for groundwater management

- 1.2 Clearly identify what is known about aquifer structure as well as what is unknown about the structure, boundaries, and groundwater movements.
- 1.3 Recognize that most of the groundwater used is ancient and for all practical purposes non-renewable.

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### **Identify and utilize best available science**

**Objective 2:** Use the GW study, community-based information, and other verified information as a basis for the best information available on GW conditions

**Strategy 2:** Build community understanding of water resource conditions in the Harney Basin (*Organizational/Infrastructure; Near-Term; Ongoing*)

**Recommended Actions:**

- 2.1 Acknowledge the value of data gathering efforts and the ongoing use of such data to management of water resources into the future. Use the products to engage the community's understanding of groundwater quantity and quality in the basin
- 2.2 Improve water resource data collection, interpretation, and information sharing in the Harney Basin
- 2.3 Encourage community support for the development and calibration of a groundwater model for the Harney Basin that is usable for testing alternative water management options
- 2.4 Encourage the continuation of evaluation of groundwater dependent ecosystems and culturally significant species

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### **Improve community information about groundwater conditions**

**Objective 3:** Ensure Harney County residents have access to information on the GW conditions in the basin as well as the current and past efforts of the CBWP Collaborative

**Strategy 3:** Develop a community communications and information program to inform the public about groundwater conditions and planning effort (*Organizational/Infrastructure; Near-Term; Not Started*)

**Recommended Actions:**

- 3.1 Develop communication plan
- 3.2 Build a coordinated communications story of the many components of this collaborative effort
- 3.3 Develop short summary products for the community when major Collaborative milestones are passed
- 3.4 Collaborative members coordinate communications amongst themselves and partners to develop short outreach products for implementation of other strategies (audience: other water users) (i.e. develop short brochure outlining strategy and digestible summary of implementation)

3.5 Explore funding partnerships for outreach/communications endeavors

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**Assess the economic value of groundwater in the Harney Basin**

**Objective 4:** To determine the comprehensive economic value of water in the Harney Basin

**Strategy 4:** Obtain/request state funding to determine the comprehensive economic (including both instream and out-of-stream) value of water in the Harney Basin (*Operational; Mid-Term; Not Started*)

**Recommended Actions:**

4.1 Secure funding to conduct economic analyses

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**Explore a groundwater market**

**Objective 5:** To explore the potential of a voluntary groundwater market to reduce groundwater use in the Harney Basin, with declining allocation of shares overtime.

**Strategy 5:** Explore and consider a voluntary groundwater market approach; Review feasibility study (Upon review, the collaborative should make a recommendation to implement or not) (*Tactical; Mid-Term; Not Started*)

**Recommended Actions:**

- 5.1 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.
  - 5.2 The CBWP Collaborative reviews the results of the assessment and evaluates different Approaches
  - 5.3 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
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**Establish a groundwater quality monitoring program**

**Objective 6:** To establish a voluntary drinking water quality monitoring program

**Strategy 6:** CBWP Collaborative work with the Department of Environmental Quality (DEQ) and Oregon Health Authority (OHA) to set up a permissive drinking water quality monitoring program (*Operational; Mid-Term; Not Started*)

**Recommended Actions:**

6.1 CBWP and DEQ work together to establish monitoring protocols, analysis, and schedule

6.2 DEQ report to CBWP on major drinking water quality issues; CBWP relay information to community members

6.3 If needed, CBWP develop a Legislative Concept to fund drinking water quality monitoring

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### **Expand groundwater quality knowledge**

**Objective 7:** To build understanding of and address the distribution of drinking water quality conditions

**Strategy 7:** Address groundwater quality issues (*Operational; Mid-Term; Not Started*)

**Recommended Actions:**

7.1 Work with USGS, DEQ, and Universities to raise interest in a more detailed study of the distribution of drinking water contaminants

7.2 Search for funding for a groundwater drinking water contaminant study.

7.3 Identify funding sources and implement drinking water treatment options

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### **Build understanding of voluntary agreements**

**Objective 8:** Identify (to the best of our abilities) the legal requirements and limits of what a Voluntary Agreement (VAs) might bring to the community.

**Strategy 8:** Analyze the provisions for VAs (in Oregon Groundwater Law (ORS 537.745)) to explore whether using VAs could be useful in the Harney Basin. (*Organizational/Infrastructure; Near-Term; Ongoing*)

**Recommended Actions:**

8.1 Conduct legal review of the statute (e.g. Culp & Kelly and EDF Report)

8.2 Review how VAs from other locations reduce water use (e.g. Culp & Kelly and EDF Report)

8.3 Explore whether any of these approaches could be useful to address groundwater use reduction in the Harney Basin