5.0 - Plan Implementation Strategy

Priority Actions

Of the nine strategies, the top five are considered priority (shown in bold).

1) **Built Storage - Aboveground Storage and Underground Storage**
2) **Land Management - Agricultural Land**
3) **Data Collection, Monitoring, and Research**
4) **Non-structural Water Storage and Habitat Management**
5) **Land Management - Public Land**
6) Infrastructure/Land Modification
7) Administrative Actions
8) Land Management - Municipal Land
9) Outreach and Education

Strategy descriptions are found below, and summaries of these strategies can be found in the Upper Grande Ronde River Watershed (UGRRW) 2020, Step 4 report. The majority of the UGRRW Partnership's effort will be on the top five strategies; other strategies are currently being pursued opportunistically. Each strategy has a work group that has started meeting to advance the strategies.

Timeline

An action plan table is included in Appendix A, Implementation Schedule. Timelines are quarterly for the first five years, then yearly after that out to 2031 (10 years from this draft). They will be modified and extended, as this is a working document. Appendix A, Implementation Schedule, will be revised annually to update progress and will be located on the Union County website. This entire Plan may be updated every five years, if needed.

The final plan adoption will take place as follows:

- The Partnership will approve this plan through a normal consensus-based decision-making process (after revision is complete).
- Agencies will review and comment, and changes will be incorporated.
- The Partnership will review, modify, and approve the Agency-revised plan (two-week period).
- The Partnership will present the revised plan to the Water Resources Commission for approval.

Once the plan is approved by the Water Resources Commission, the Partnership will begin the implementation phase, which will consist of quarterly meetings and work designed to meet the

milestones below. The UGRRW Partnership intends to make progress on all strategies and is committed to advancing instream and out-of-stream needs.

The **overall implementation** milestones are as follows:

Years 1 through 2

- Receive state approval for this plan by December 31, 2021.
- Complete Oregon Watershed Enhancement Board (OWEB) Strategic Action Plan by December 2023.
- Begin studies, outreach, and funding applications as described in Appendix A.
- Begin quarterly implementation meetings, update schedule with notes and progress quarterly.
- Each implementation team will report to the group on progress.
- Individual organizations can report on lead action items.
- Each implementation team will update the Appendix A spreadsheet and provide group documentation to Anderson Perry & Associates, Inc., to retain on project server.
- The fourth quarter implementation meeting of each year will include updates on progress toward achieving objectives.

Years 2 through 5

- Initial project construction and design (as determined by study results)

By 2040

Complete approved objectives:

- Issue/Goal 1 - Eliminate surface water deficit
  - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040)
  - Objective 1.2 - Fill data gaps (instream flow now; complete by 2040)
- Issue/Goal 2 - Improve water quality
  - Objective 2.1 - Reduce each water quality issue (by 2040)
  - Objective 2.2 - Fill data gaps (by 2040)
- Issue/Goal 3 - Reduce groundwater declines and supply uncertainty
  - Objective 3.1 - Complete a groundwater study (by 2035)
  - Objective 3.2 - Implement plan based on study results
- Issue/Goal 4 - Natural hazards/climate change
  - Objective 4.1 - Develop natural hazards mitigation plan (by 2030)
  - Objective 4.2 - Implement mitigation measures identified in plan (by 2040)
  - Objective 4.3 - Create an adaptive management protocol to apply new climate change data to goals (by 2030)

The **individual strategy milestones** were developed by work groups to implement Step 4 Recommended Actions and approved by the UGRRW Partnership as follows. These will be updated annually in this Step 5 Plan, and quarterly as needed in Appendix A - Implementation Schedule.

1) **Built Storage - Aboveground Storage and Underground Storage** - This strategy seeks to study the feasibility of developing off-channel, on-channel, or underground multi-purpose storage projects with a favorable cost-to-benefit ratio.

   Purpose: Address specific water supply deficits in each subwatershed through advancing possible built storage projects

   Step 4 Recommended Action: Study the feasibility of developing off-channel, on-channel, or underground multi-purpose storage projects with a favorable cost-to-benefit ratio.

   Narrative: This strategy was the highest ranked strategy by the Partnership. Organizations in the UGRRW are not actively pursuing a high-level evaluation of storage options. This strategy has had more work started than other strategies and is anticipated to be generally led by the Partnership (as opposed to other entities). This strategy will include a literature review on previously conducted feasibility studies and will also examine natural storage opportunity areas.

   Progress Summary:

   - Meetings January 21, 2021, and February 17, 2021
   - Oregon Water Resources Department (OWRD) Feasibility Study Grant recommended for funding

   Milestone Summary:

   - Years 1 through 2
     - Apply for Oregon Watershed Enhancement Board (OWEB) Technical Assistance (TA) grant for Aboveground Feasibility Study (with instream flow study focus).
     - Apply for OWEB TA grant for Aquifer Capacity Study (Bonneville Power Administration).
     - Begin feasibility study to look into aboveground storage (both built and non-structural) and conduct Physical Habitat Simulation System instream flow studies to both support storage efforts and assist with filling data gaps for instream demands. The Study will evaluate new storage locations as well as evaluating increasing capacity of existing reservoirs (such as Beaver Creek).
     - Initiate Catherine Creek underground storage consultation with agencies (via Kaizen process) to determine the permitting pathway for storage of 10 cubic feet per second of water in Catherine Creek area to benefit instream flow.
   - Years 2 through 5
     - Depending on results of aboveground feasibility study: design and construction.
     - Depending on results of underground storage meetings: design and construction.

- By 2040
    - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040).
    - Develop storage for each subwatershed to reduce each deficit.

2) **Land Management - Agricultural Land** - This strategy seeks to improve the management of agricultural land with the purpose of maintaining water quality and improving water supply availability.

   Purpose: Conduct research when needed and provide subsequent educational outreach to support water management actions that maintain water quality and expand capacity.

   Step 4 Recommended Action: Determine methods of improving management of agricultural land to improve water quality and quantity. Much of this work is already being done, so it is anticipated the role of the UGRRW Partnership would be to see where potential bottlenecks are occurring and if the UGRRW Partnership can assist in progress.

   Narrative: This strategy was the second ranked strategy by the Partnership. Organizations in the UGRRW are actively working to improve agricultural land management, particularly the Natural Resources Conservation Service (NRCS) and the Oregon State University Extension office. The Oregon Department of Agriculture (ODA) is the designated management agency responsible for regulating agricultural activities that affect water quality through the Agricultural Water Quality Management Act (Senate Bill 1010) and Senate Bill 502. In the temperature TMDL, ODA is the agency responsible for implementation of this TMDL on agricultural lands.

   NRCS has significant resources and access to grants to support growers transitioning to beneficial systems. The UGRRW Partnership identified a concern that many NRCS-promoted techniques have not been tested or proved in the UGRRW and information about them is not available. This strategy will be led by the NRCS that will apply for funding to convene a pilot group of growers to provide case studies for techniques to reduce water consumption and improve soil health, such as cover crops, to increase adaptation of these practices in the UGRRW. This strategy will also seek to support and fund new on-farm Integrated Water Management (IWM) projects as well as share resources of existing programs to increase their adoption in the UGRRW.

   Progress Summary:

   - Meetings January 20, 2021, January 26, 2021, and February 17, 2021

   Milestone Summary:

   - Years 1 through 2
       - Provide input as needed to built storage group from agricultural perspective (water management and project funding).
       - Identify grant (NRCS) to provide case studies for on-farm conservation/efficiency projects.
       - Develop list of programs and share.

- Funding strategy for IWM projects.
- ODA funding, technical assistance, and enforcement of state water quality laws

- Years 2 through 5
  - Implement pilot project grant.
- By 2040
  - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040).
  - Attain Step 3 assumed efficiency improvements:
    - 90 percent of flood irrigation can be converted to a sprinkler of some kind.
    - 33 percent of wheel lines can be converted to pivots.
    - 75 percent of unconverted wheel lines will be upgraded to new nozzles, drains, etc.
    - 75 percent of pivots that are not new (90 percent of total) can be upgraded with new sprinkler packages.
    - Intensive IWM is used on all converted/upgraded systems.

3) **Data Collection, Monitoring, and Research** - This strategy seeks to fill data gaps identified in the Step 2 and Step 3 reports through monitoring (i.e., groundwater and stream gauges), data collection (i.e., updated instream flow analyses and studies), and research (i.e., historical flooding interviews).

   Purpose: Coordinate data collection to fill data gaps, support working groups, and inform water management in the UGRRW.

   Step 4 Recommended Action 1: Develop and fund a plan (or set of plans) for monitoring and collecting data to fill data gaps identified in the Steps 2 and 3 reports, as well as through Step 4 strategy development. Collect additional data to expand existing data sets, inform solution actions and designs, evaluate effectiveness of strategies, and improve long-term forecasting.

   Step 4 Recommended Action 2: Complete research (identified as non-data collection activities) on identified data gaps from Steps 2 and 3 reports, as well as outstanding questions identified during Step 4 strategy development. When possible, research topics will be linked to other strategies to improve results/support feasibility analysis.

   Narrative: This strategy encompasses many data gaps identified by the Partnership that need to be filled through data collection, monitoring, or research. This work will be prioritized based on the needs of other working groups. Initially, stream gauges (supporting retention of existing gauges), groundwater (initiate steps for a groundwater study), surface water quality (support ongoing Grande Ronde Model Watershed [GRMW] water quality study), and instream flow needs in the basin) will be the focus of this working group.

Progress Summary:

- Meetings January 20, 2021, and February 17, 2021
- OWRD Feasibility Study Grant (instream flow study) recommended for funding.

Milestone Summary:

- Years 1 through 2
    - Prioritize data gaps.
    - Update instream flow assessment using guidance provided by the Oregon Department of Fish and Wildlife (ODFW). The proposed approach will use existing data (Basin Investigation Report [BIR]-based recommendations for reaches with existing instream water rights and modeled flow data for important tributaries that currently lack flow targets). Results of the updated analyses will provide a starting point for better understanding basin-wide needs and will guide the development of a more focused suite of tools to refine instream flow needs at high-priority locations. The UGRRW Partnership is committed to continuing to work with ODFW to update instream demand estimates utilizing an agreed-upon method (to be finalized during implementation of this Step 5 Plan).
    - Support maintenance of the operation of the current stream gauges (write letters to support gauges in basin).
    - Meet with OWRD hydrogeologist to determine next steps to prepare for future groundwater study.
    - GRMW water quality study begins; report outcomes.
    - Develop progress tracking and adaptive management system.
- Years 2 through 5
    - Support groundwater study.
    - Support instream flow study.
- By 2040
    - Objective 1.2 - Fill surface water data gaps (instream flow now; complete by 2040).
    - Objective 2.2 - Fill water quality data gaps (by 2040).
    - Objective 3.1 - Complete a groundwater study (by 2035).
    - Objective 3.2 - Implement plan based on study results.

4) **Non-structural Water Storage and Habitat Management** - This strategy seeks to educate stakeholders about the efficacy of non-structural water storage and habitat management and prioritize areas for implementation on non-structural water storage projects based on the GRMW's Ecological Atlas geomorphic potential rankings (GRMW, 2021).

   Purpose: Raise awareness of work being done and how this work addresses goals of the UGRRW Partnership; prioritize and pursue non-structural storage projects in strategic locations.

Step 4 Recommended Action: Determine the best way to assist partners with increasing water storage capacity through natural processes using non-structural means.

Narrative: This strategy builds upon work being done by other organizations and seeks to utilize GRMW's Ecological Atlas to identify areas of high geomorphic potential and pursue non-structural storage projects. This strategy will also utilize existing projects to educate Stakeholders about the efficacy of non-structural storage.

Progress Summary:

- Meetings January 19, 2021, January 26, 2021, and February 17, 2021
- OWRD Feasibility Study Grant (storage and instream flow study) recommended for funding.

Milestone Summary:

- Years 1 through 2
    - Update Stakeholders on ongoing work (present findings/data from floodplain projects and field tours).
    - Develop list of projects that have high geomorphic potential (GRMW's Ecological Atlas) and those that are high priority (water deficit/storage need) for Partnership (current projects and future opportunities).
    - Project development strategy.
- Years 2 through 5
    - Continue project development strategy (adaptive management).
- By 2040
    - Implement projects with the potential to improve water quality and quantity. Understand the baseline is moving. Adaptive management needed.
    - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040).
    - Objective 2.1 - Reduce each water quality issue (by 2040).

5) **Land Management - Public Land** - This strategy seeks to educate stakeholders about work being conducted on public lands and find opportunities to work on projects/policies together that support mutual interests (including non-structural water storage).

Purpose: Information sharing and communication between public land management agencies and Stakeholders to identify potential areas of mutual support.

Step 4 Recommended Action: Determine best methods to assist in public lands management to improve water quality and quantity.

Narrative: This strategy was determined to be important to the Partnership because of the large amount of land area in the UGRRW that is publicly owned (mostly by the U.S. Forest Service [USFS]). This strategy relies on working directly with the USFS to support and advocate for actions on USFS land that would benefit Partnership objectives and USFS objectives (particularly

those related to non-structural storage of water and water quality). This work will be led by the USFS, with the Partnership in a supporting role. Educating Stakeholders about work done on public lands is an integral part of this strategy.

Progress Summary:

- Meeting January 20, 2021

Milestone Summary:

- Years 1 through 2
    - Update Stakeholders.
    - Field trip for interested group members (show hydrologic benefits of restoration projects).
- Years 2 through 5
    - Depending on group needs, develop projects for implementation.
- By 2040
    - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040).
    - Objective 2.1 - Reduce each water quality issue (by 2040).

6) **Infrastructure/Land Modification** - This strategy seeks to identify flow characteristics of the UGRRW (initially through a sediment study and a Bureau of Reclamation [Reclamation] hydraulic modeling project) to identify potential actions to reduce negative flooding impacts in the Grande Ronde Valley.

Purpose: Reduce the frequency and severity of damage due to flooding now and in the future.

Step 4 Recommended Action: Study potential actions to reduce negative impacts of flooding in the Grande Ronde Valley while increasing retention and recharge potential in a way that will benefit water quantity, quality, habitat, agricultural, and municipal lands.

Narrative: This strategy is focused on understanding and mitigating negative effects of flooding in the UGRRW. First, the Union Soil and Water Conservation District (SWCD) will prepare a scope of work (and the Partnership will develop a funding mechanism, if required) to expand an existing Reclamation hydraulic model to cover areas of flooding concerns (generally in the Rhinehart Gap area). The work group will also seek to expand a sedimentation study being conducted by the GRMW to determine effects of sedimentation in areas of high flooding risk. These two analyses will enable identification of pinch points and other areas to focus project work to alleviate flooding. These recommended projects are anticipated to be identified in a natural hazards mitigation plan. This group will also convene a meeting with OWRD and irrigation ditch users to investigate the potential to use ditches to alleviate flooding (this practice is currently not allowed within existing laws and could require advocating for a change in water law). The feasibility study conducted to assess built storage as a strategy for meeting instream and out-of-stream needs might also consider the beneficial aspects of storage on flood control and management.

Progress Summary:

- Meetings January 20, 2021, February 17, 2021, and March 18, 2021

Milestone Summary:

- Years 1 through 2
    - Reclamation Hydraulic Study - develop scope/fund work/complete work (Union SWCD to develop scope).
    - Sediment Study - develop scope/fund work/complete work.
    - Irrigation ditch opening meeting.
- Years 2 through 5
    - Natural Hazards Mitigation Plan Development/project list.
- By 2040
    - Objective 4.1 - Develop natural hazards mitigation plan (by 2030).
    - Objective 4.2 - Implement mitigation measures identified in plan (by 2040).
    - Objective 4.3 - Create an adaptive management protocol to apply new climate change data to goals (by 2030).

7) **Administrative Actions** - This strategy seeks to educate stakeholders about how administrative actions can improve water quality and quantity. Administrative actions are defined as publicly available actions to utilize existing laws to use water for different purposes in different times of the year (water market/management framework). Administrative actions would be voluntary and non-regulatory.

   Purpose: Increase awareness of how administrative actions can improve water quality and quantity. Administrative actions are defined publicly available actions to utilize existing laws to use water for different purposes in different times of the year (water market/management framework). Administrative actions would be voluntary and non-regulatory.

   Step 4 Recommended Action: Study the feasibility of developing a coordinated suite of publicly available actions to utilize existing laws to use water for different purposes in different times of the year (water market/management framework).

   Narrative: This strategy includes numerous ideas generated by the Partnership for using existing water laws to allocate water for different purposes and address deficits. Because of the complexity of these regulations, and lack of awareness of them, this work group intends to focus on educating both Stakeholders and legislators on these methods, with the ultimate goal of increasing adoption of voluntary practices that would benefit instream and out-of-stream needs.

   Progress Summary:

   - Meetings January 21, 2021, and February 17, 2021

Milestone Summary:

- Years 1 through 2
    - Prepare outreach material (and outreach strategy) for landowners (gather existing resources).
    - Prepare outreach material for legislators (split season leases, bills/advocacy, etc.) and Partnership name and approval.
    - Determine how best to support Trout Unlimited in new environmental water transaction role in the basin.
- Years 2 through 5
    - Survey of interest and potentially adoption of programs.
    - Fund and implement improvements or projects.
- By 2040
    - Understand the baseline is moving; Partnership will focus on "secured water" put into stream (quantify as a result of transactions). Adaptive management needed.
    - Objective 1.1 - Reduce current deficit (begin studies immediately; complete by 2040).

8) **Land Management - Municipal Land** - This strategy seeks to increase coordination among Union County and the seven cities in the planning area initially through improved resources sharing and emergency management (via Natural Hazards Mitigation Plan Update coordination).

Purpose: Improve city-to-city coordination to respond to natural hazards, increase water conservation, and support water infrastructure efficiency improvements.

Step 4 Recommended Action: Coordinate with municipalities to determine how the UGRRW Partnership could best assist with providing support to multiple municipal systems and land to improve water quality and quantity. The UGRRW Partnership would first determine if such a plan would be supported by municipalities. The plan could evaluate the potential to implement the following practices in municipalities. Ideally, actions will be taken in the seven cities, by self-supplied industrial users, and unincorporated users, to increase efficiency of water use and distribution.

Narrative: This strategy focuses on increasing coordination among Union County and cities for water system improvements, conservation, and emergency response. Initially, it will focus on assisting cities with a strategy for sharing water conservation resources and helping cities participate in the Union County Natural Hazards Mitigation Plan Update.

Progress Summary:

- Meetings January 20, 2021, and February 18, 2021
- Information presented at mayors meeting January 20, 2021
- Union County Natural Hazards Mitigation Plan Update meeting (with cities) held March 23, 2021

Milestone Summary:

- Years 1 through 2
    - Determine if mayors of cities want to work on a plan for shared resources for water conservation.
    - Update Partnership on cities' water/stormwater/flood activities.
- Years 2 through 5
    - Federal Emergency Management Agency-approved Union County Natural Hazards Mitigation Plan Update to cover all cities.
- By 2040
    - Objective 4.1 - Develop place-based planning specific Natural Hazards Mitigation Plan (by 2030).
    - Objective 4.2 - Implement mitigation measures identified in plan (by 2040).
    - Objective 4.3 - Create an adaptive management protocol to apply new climate change data to goals (by 2030).

9) **Outreach and Education** - This strategy seeks to keep the Partnership's outreach plan up to date, support actions to improve water quality, and conduct outreach for other strategies as needed.

Purpose: Inform the public about water quality issues and UGRRW Partnership activities.

Step 4 Recommended Action: Update the UGRRW Partnership's outreach plan to include support or action on water quality issues.

Narrative: This strategy group will be responsible for updating the Partnership's outreach plan and assisting with outreach needed by the other strategy groups. Initially, water quality issues will be highlighted through outreach, and a digital story project will be produced.

Progress Summary:

- Meetings January 22, 2021, and February 18, 2021
- Contacted the Oregon Department of Environmental Quality (DEQ) for input on January 22, 2021.

Milestone Summary:

- Years 1 through 2
    - Prepare and distribute outreach material on lawncare issue to cities/county.
    - Digital water quality outreach to county residents (reassess after first year).
    - Digital storytelling project to be completed.

- Years 2 through 5
    - Update outreach document.
    - Field tour/workshop.
- By 2040
    - Objective 2.1 - Reduce each water quality issue (by 2040).

Resource Needs

At this phase, resource needs are described in individual strategy implementation plans. Generally, funding is a need for each task.

Implementation Team

Each strategy has a separate implementation team, as identified in Appendix A - Implementation Schedule. The Implementation Team Lead is listed below in parentheses:

1) **Built Storage - Aboveground Storage and Underground Storage (Union County)**
2) **Land Management - Agricultural Land (NRCS)**
3) **Data Collection, Monitoring, and Research (GRMW)**
4) **Non-structural Water Storage and Habitat Management (Union SWCD)**
5) **Land Management - Public Land (USFS)**
6) Infrastructure/Land Modification (Union County)
7) Administrative Actions (Confederated Tribes of the Umatilla Indian Reservation)
8) Land Management - Municipal Land (City of La Grande)
9) Outreach and Education (DEQ)

Team leads are responsible for coordinating strategy team meetings and providing updates at quarterly Stakeholder Meetings. Union County will continue to coordinate these quarterly update meetings.

Teams will be responsible to work together an ensure strategy integration occurs. Quarterly meetings of the Partnership will allow for information sharing and also allow for the different strategy teams to offer support to or request support from other strategy teams. Examples of strategy integration that are anticipated to occur, or are already occurring, include:

- Land Management - Agricultural Land team is providing input to the built storage team.
- The Built Storage team is starting a feasibility study that will require support for instream flow studies from the Data Collection, Monitoring, and Research team, as well as assistance with evaluating non-structural storage opportunities from the Non-structural Water Storage and Habitat Management Group.
- The Data Collection, Monitoring, and Research team is anticipated to support all other strategy teams.

- The Infrastructure/Land Modification team is scoping a Reclamation study of UGRRW hydrology that will be shared with the Data Collection, Monitoring, and Research team.
- The Outreach and Education team will support other teams in distributing relevant information (such as water quality reports) and ensuring the outreach plan is updated.

Keeping the Public Engaged

The outreach and communication plan will continue to be used and updated. Generally, it is assumed that the quarterly Stakeholder Meetings will be the place for new people to get involved in the implementation work or for interested members of the public to hear updates. A new digital storytelling project is in progress. Newspaper articles, radio ads, presentations, social media, and the Union County website will continue to be methods to keep the public engaged.