

## Appendix G. Water Market Summary

### Section Overview

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Aaron Thompson, a member of the Stakeholder Advisory Committee, introduced the idea of establishing a water market in the Nebraska portion of the Republican River Basin (Basin) at the August 15, 2017, Stakeholder Advisory Committee meeting to explore the potential of such a market. Stakeholders commented that the market should be set up such that it would incentivize and encourage conservation with the intended outcome to reduce overall consumptive use.

At the September 19, 2017, coordination meeting with the natural resources districts (NRDs) and the Nebraska Department of Natural Resources (NeDNR), Aaron Thompson presented a draft proposal to the group. Proposal discussion followed on two “tracks”.

- How the idea should be addressed in the Republican River Basin-Wide Plan (Plan)
- Determining the best way to move the idea forward

The remainder of this appendix is a summary of the discussion following the proposal. The ideas from this appendix informed Objective 2.6 and Action Items 2.6.1 and 2.6.2. Action Items 2.6.1 and 2.6.2 will be carried out according to the text in the Goals and Objectives section of the Plan and not necessarily as described in the details below.

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### Moving Forward

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There is general agreement to approach the issue as a short term (within the first five years) action item. Given the schedule, there was concern that implementing a pilot and understanding the results would delay Plan completion considerably. It was agreed that including related action items in the plan would give them traction and support as it relates to possible funding applications (i.e., WaterSmart).

Further, the approach outlined here should not preclude a group of interested stakeholders in moving the idea forward as quickly as possible.

It is suggested that an independent group (a subset of the current stakeholder group possibly) begin work on development of a more detailed proposal.

There are some items that the coordination meeting attendees believe are essential to any program:

- The water market must be a truly cooperative, voluntary effort among groundwater users, surface water users, and state and federal partners
- The program supports water conservation.
- Assumptions should be tested with a pilot program.

The goal of the feasibility work and pilot program implementation is to provide information to users about the risks and costs associated with the program. Users need to determine from the results of the pilot if the concept is good for them personally and for the basin as a whole. There is likely money available to support this effort. A joint application for WaterSmart funds between an irrigation district and an NRD with state and federal support is likely the best idea.

In terms of where to start, there are a number of questions to be answered. An understanding of current practices of buying/selling/trading water in the Basin will help guide or contribute ideas to water market feasibility efforts.

*The idea Aaron Thompson initially proposed during a stakeholder meeting can be summarized as: Establish a pilot water market within the Basin. To simulate the entire Basin, it is suggested that the pilot have a 10:1 ratio of groundwater and surface water users. The pilot area will receive the same allocation. The pilot area will be allocating the supply not the shortage. To enter the "water exchange" or "water pool" a transaction cost will be paid by everyone in the exchange. Those in the exchange that do not have access to the entire allocation will be paid a stipend by the exchange. For example, if the allocation is 10" and someone only has an 8" supply the exchange will compensate the 2" difference with dollars or wet water. The exchange will then ask for willing buyers and sellers. Limits will be established on the amounts that can be bought and sold.*

## **Questions to Guide Initial Discussion**

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The questions below are intended to be a starting point for continuing discussion on program feasibility and program design:

1. Who holds the money and administers the program?
2. Who does the accounting?
3. How would the value of water be determined?
4. How would allocations be determined?
5. Can surface water allocation move to a groundwater user? Vice versa?

6. How does the water market system work with already established compact accounting procedures?
7. What is the appeal of the water market to a groundwater user?
8. Can it work as a surface water only market?
9. Is this really an opportunity to purchase offsets for a depletion? The offset of depletion appears to be the most marketable item. Should this be a market where people are basically buying offsets for depletion? It is simpler and may be a market some users would have an incentive to participate in.

## **The Prospect of a Pilot Program**

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A pilot program may be beneficial in testing the results of the feasibility study. The pilot could be either virtual or physical. In any case, the pilot should mirror the groundwater to surface water ratio of the Basin as a whole. A ratio of 10:1 groundwater to surface water users might be reasonably appropriate. Should the decision be to implement a pilot program, it would be helpful to have the pilot area within a single NRD.

The Red Willow Basin might be good pilot area candidate.

## **Other Resources**

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1. The Murray-Darling Basin in Australia is an example of a market of this kind, although it isn't clear that it covers both ground water and surface water. It may be a helpful template for developing the idea of a Water Market for the Republican Basin.
2. The Palo Verde, California groundwater/surface water system may also be a valuable example.
3. The Tucson/Phoenix, Arizona municipal water supply exchange might also have some relevant features.