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## Fact Sheet-04-60

### **Walker River Basin Research Study: Characteristics of Water Right Owners**

Staci Emm, Extension Educator  
Don Breazeale, Extension Educator  
Marilyn Smith, Area Specialist

This is the second in a series of fact sheets describing a research study of water right owners in the Walker River Basin. This fact sheet compares the farming and ranching operations and demographic characteristics of a sample of water right holders in areas of the Walker River Basin. The first fact sheet describes the objectives of the study and methodology.

#### **Introduction**

The Walker River Basin, running from the eastern slopes of the Sierras in California to a desert lake in Nevada, has been the source of major controversy for farmers, ranchers, environmentalists, Indian Tribes and federal/state agencies for decades. The Walker River faces the same fate of other rivers just like it in the West. The demand for water is never-ending, and conflict arises based upon whom and what should have the

right of use. The obstacle for those involved is to understand the lifestyle, customs and culture of every community, individual and species affected by water use in the Walker River Basin.

The data for this fact sheet was obtained from questionnaires in a research study completed in the fall of 2003, "Perceptions and Attitudes of Randomly Chosen Agriculture Water Right Owners in Selected Areas of the Walker River Basin toward Walker Lake." Contact of Walker River Basin agriculture water right owners was random. In order to more easily interpret the data, the Walker River Basin was divided into three geographical areas. These three areas included the following: the Walker River Indian Reservation (WRIR); Mason and Smith Valleys (MV/SV); and Antelope Valley, Bridgeport Valley and those individuals who owned water rights in more than one of the areas originally surveyed (Multiple).

## Characteristics of Farmers and Ranchers

Seven demographic characteristics were measured. The first characteristic was the age of Walker River Basin water right owners and the second characteristic was the level of education. Overall, 89% of agriculture water right owners were 40 years old or older. The largest group at 31% included those between 50-60 years of age. Overall, 69% of agriculture water right owners attended college. Refer to Figure 1 for education demographics of the three different areas.

The third and fourth characteristics measured were the number of years Walker River Basin water right owners lived within the boundaries in the basin and how long participants had been involved in agriculture production in the basin. Almost 41% of the participants had lived and been involved in agricultural production in the Walker River Basin for generations. Only 10% have lived in the basin under 5 years and 9% had been involved in agriculture production less than 5 years. Refer to Figure 2 and Graph 3 for a breakdown by area.

The fifth characteristic examined was the number of acres participants had in agriculture production. More than a third of the respondents (37.4%) had 20 acres or less in production and just over 10% (10.4%) had 1,000 acres or more in production. Differences in the number of acres in production in the basin were particularly noticeable between the Walker River Indian Reservation area and the Multiple area located in the headwaters of the basin. Walker River Indian Reservation had the highest percentage of operators with 20 acres or less in production, and the Multiple area and the Mason Valley/Smith Valley areas had the most operators with 1,000 acres or more in production. Refer to Figure 4 for a production breakdown by area.

The sixth characteristic measured, by area, what type of water rights were owned for agriculture purposes. There were significant differences found regarding the different types of water rights owned by area. Several responses were possible on the question that included decree, storage, supplemental, and primary water rights. There were 12%, who owned only storage rights and 3%, who owned only primary rights. Approximately 40% of respondents owned a combination of water rights that included decree, storage, and supplemental water rights.

An additional characteristic researched concerned which water rights were the most important to each area. The three possible responses on the questionnaire included decree, storage, and underground. Participants could select more than one answer depending upon how many different types of water rights were important.

Slightly more than half of the respondents (52%) reported decree rights were the most important. Another 17% of respondents reported storage rights were important and 10% reported underground water rights were important. Respondents also reported the following combinations of water rights: 3% for decree and storage rights; 14% with decree, storage and underground; 1% with decree and underground; and 3% reported storage and underground.

The seventh and last characteristic measured the type of agriculture production activity in the Walker River Basin. There were 47% of water right owners that selected crops as their main agriculture activity, while 39% selected both crops and livestock. Livestock alone was 13%

## Conclusion

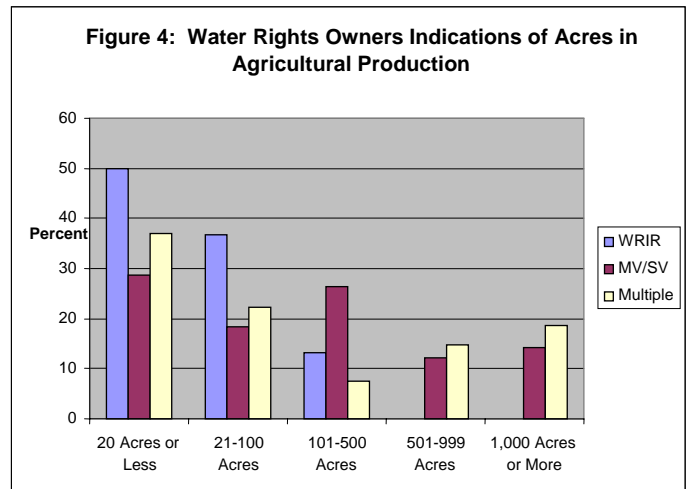
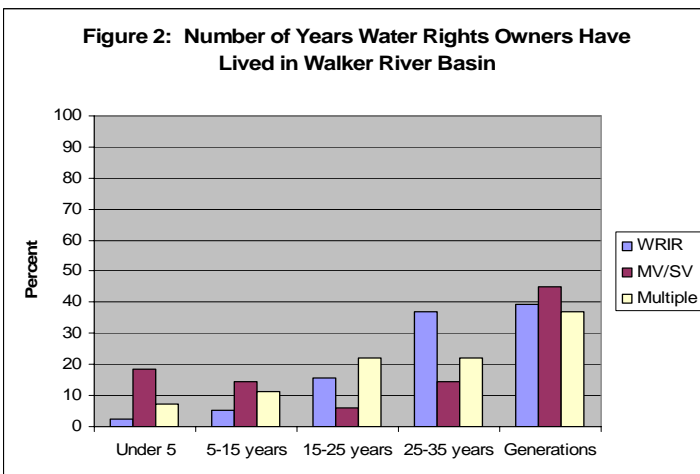
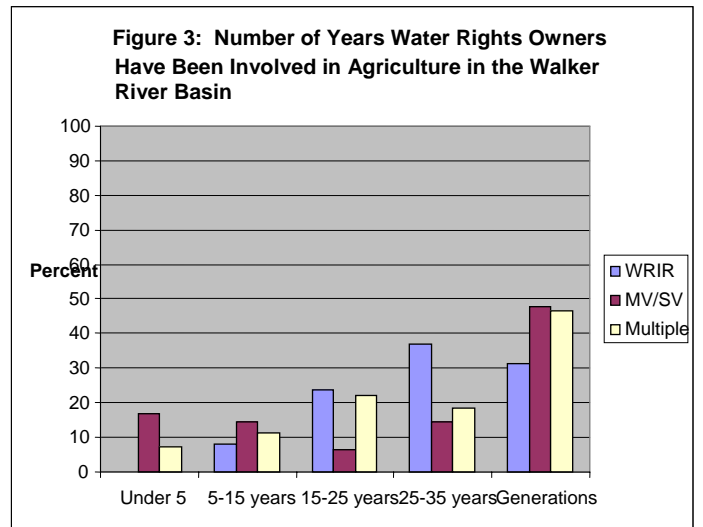
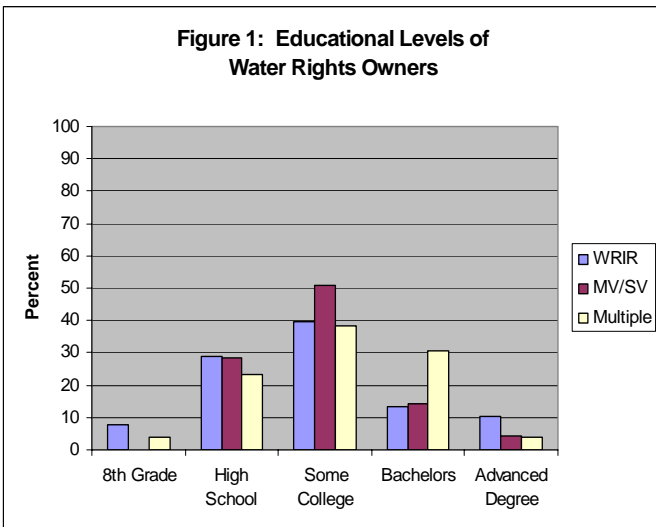
The characteristics of Walker River Basin water right owners are similar throughout the basin regarding age, level of education, number of years living within the boundaries of the basin, and the number of years involved in agriculture production. The majority of water right owners are over 40 years old, have attended college and have lived within the boundaries of the Walker River Basin for generations and been involved in agriculture production for generations.

Differences exist regarding the number of irrigated acres in production by area, the types of water rights used for irrigation by area and the major agriculture production activities by area. The Walker River Indian Reservation area uses decree and storage water rights, the Mason Valley/Smith Valley area uses decree, storage, primary and supplemental. The Multiple area uses mostly decree with some storage and supplemental water rights.

It is important that similarities and differences among stakeholders be recognized to provide a foundation for productive relationships and collaboration. "Collaboration is a process through which parties

who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (Gray, 1989, Singletary and others, 2000). The study results reported here may help stakeholders identify similarities and

differences that can aid in the development of productive relationships. The following are Figures 1-4 that assist in illustrating the characteristics of water right owners in the Walker River Basin.



## References

- Adams, D.A. 1993. *Renewable Resource Policy, The Legal-Institutional Foundations*. Washington, D.C.: Island Press.
- California Department of Water Resources. 1992. *Walker River Atlas*. Sacramento, CA: State of California, Department of Water Resources.
- Emm, S. 2003. *Perceptions and Attitudes of Randomly Chosen Agriculture Water Right Owners in Selected Areas of the Walker River Basin Toward Walker Lake*. Published Thesis, Colorado State University.
- Gray, Barbara. 1989 *Collaboration: Finding Common Ground for Multiparty Problems*. Jossey-Bass Inc: San Francisco, CA.
- Salant, P. and Dillman D.A., 1994. *How to Conduct Your Own Survey*. New York: John Wiley & Sons, Inc.
- Singletary, L., Ball, A. and M. Rebori. 2000. *Managing Natural Resource Disputes*. University of Nevada Cooperative Extension. SP-00-04
- California Department of Water Resources. 1992. *Walker River Atlas*. Sacramento, CA: State of California, Department of Water Resources.

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