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Fact Sheet 05-37

Walker River Basin Research Study: Attitudes toward Walker Lake

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This is the third in a series of fact sheets describing a study of water right owners in the Walker River Basin. The first fact sheet describes the objectives of the study and methodology. The second fact sheet describes the farming and ranching operations and demographic characteristics of a sample of water right holders in selected areas of the Walker River Basin. This fact sheet presents the perceptions and attitudes of selected Walker River Basin water right owners concerning the importance of Walker Lake.

Introduction

The Walker River Basin, running from the eastern slopes of the Sierra 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, in all its glory, faces the same fate as other rivers just like it in the West. The demand for water is never-ending, and conflict arises based on the allocation of water and its right of use. The obstacle for those involved

is to understand the lifestyle, custom and culture of every community, individual and species affected by water use in the Walker River Basin.

Research Methodology

A semantic differential was used to examine how water right holders in the Walker River Basin viewed Walker Lake. A semantic differential is a type of survey instrument in which respondents are asked to rate their opinion on a linear scale between two opposite pairs of words. The semantic differential in this study was made up of 12 pairs of words, each with a seven point Likert scale. There were three different categories of words that included evaluative, situational and understandability. The semantic differential was calculated plotting the mean value of respondents to show the visual responses reported. Mean responses were 1 to 7 with 1 being positive and 7 being negative. The three different areas of the basin were the Walker River Indian Reservation (WRIR) Walker River Irrigation District (MV/SV) and Headwaters (Multiple), which combines

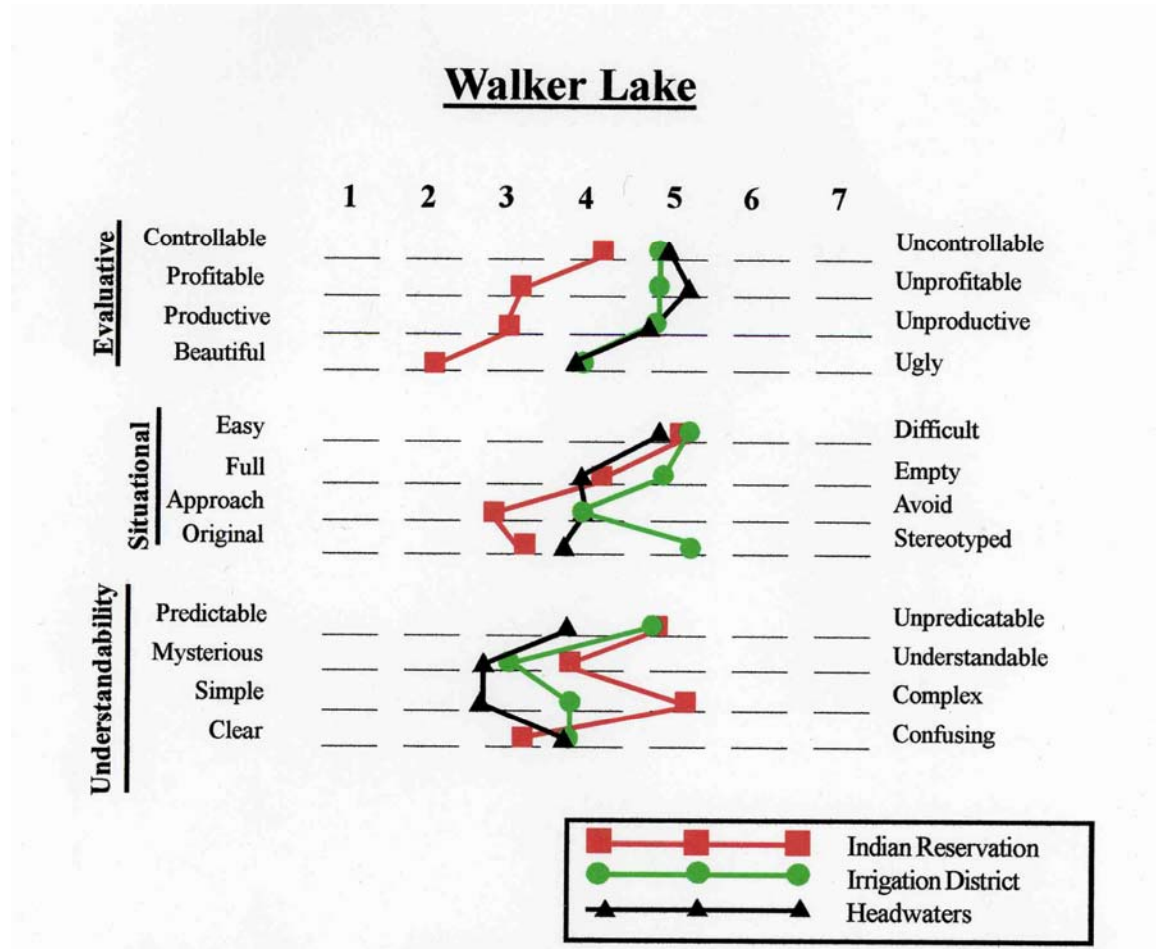
Antelope Valley, Bridgeport Valley and those that own water rights in more than one area within the boundaries of the Walker River Basin.

Study Results

Figure 1 illustrates the semantic differential results in the evaluative, situational and understandability analysis. It was evident that all

three areas viewed Walker Lake as more neutral than positive or negative. The majority of responses were in the 3 to 5 neutral range. It was noticeable, however, in the evaluative analysis; the Walker River Indian Reservation viewed Walker Lake more positive than the other two areas. The results of statistical analysis indicated that in all four word pairs the Walker River Indian Reservation was significantly different from the other two geographic areas.

Figure 1. The group mean of respondents in the three different areas on how they view Walker Lake using the word descriptors below.



Looking at the results of the situational analysis, all three areas again viewed Walker Lake as more neutral than positive or negative. There were two pairs of words of which responses from the three areas were significantly different, which were “Approach/Avoid” and “Original/Stereotyped”. The most noticeable difference is that the Walker River Indian Reservation responses viewed Walker Lake more in a positive light than in the other two areas regarding two pairs of words. The other two pairs of words “Empty/Full” and “Easy/Difficult” had responses that indicated no significant differences among the three geographical areas.

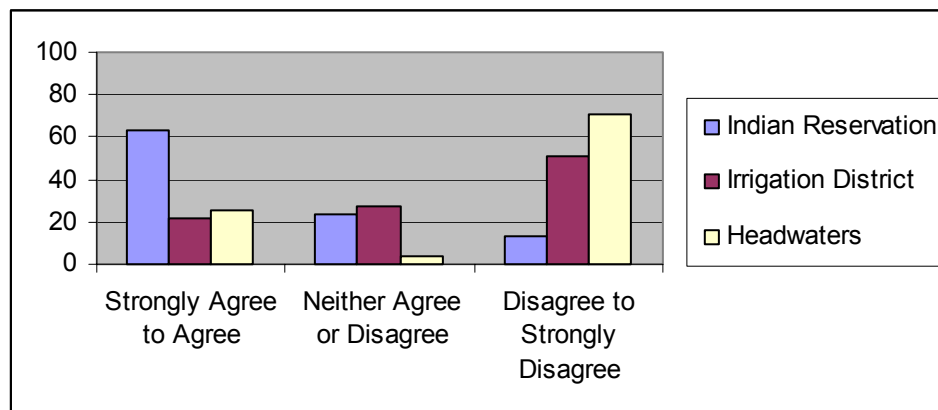
In terms of the understandability analysis, all three areas viewed Walker Lake as more neutral than positive or negative. Out of the four pairs of words in this category, only one word pair showed a significant difference. A noticeable difference was found when analyzing the responses from the Walker River Indian Reservation concerning the complexity of Walker Lake. In the opinion of the Walker River Indian Reservation respondents, Walker Lake was a more complex issue than reported by the other two geographical areas.

Walker Lake – Existing Ecological State?

In addition to the semantic differential, one of the questions in the survey instrument asked about the level of Walker Lake and whether or not efforts should take place to keep the lake at an existing ecological state. For this question, there were three possible responses, which included 1) strongly agree to agree, 2) neither agree or disagree, or 3) disagree to strongly disagree. It must also be stated that this survey was conducted in 2003 and the question concerns the ecological state of Walker Lake at that time.

All three area responses showed significant differences. Approximately 43 percent of group respondents disagreed and strongly disagreed that efforts should take place to keep the lake at an existing ecological state. Approximately 37 percent of group respondents agreed and strongly agreed that there should be efforts to keep the lake at an existing ecological state. A noticeable difference was that the Walker River Indian Reservation believed efforts should take place to keep the lake at an existing level while the third area, Headwaters (Multiple), did not think efforts should be made to preserve the lake. Figure 1 illustrates analysis by area of respondents concern whether or not efforts should take place to keep the lake at an existing ecological state.

Figure 2. Percentage response by area regarding efforts to keep the lake at an existing ecological state.



Conclusion

A Semantic Differential offers another method of analyzing how water right holders in the Walker River Basin view Walker Lake. While the majority of responses were in the 3 to 5 neutral range, it was noticeable that there were some different responses from the Walker River Indian Reservation. It should be noted that while there were differences in responses, there were also similarities found in the Situational and Understandability categories. For example, in the Understandability Analysis, there was only one pair of words that showed a significant difference (Simple/Complex).

The Semantic Differential provides one method to gain a visual understanding of perceptions and attitudes. Additional information should be gathered before conclusions are drawn. It is important that the differences and similarities among stakeholders in the Walker River Basin be recognized to provide a foundation for productive relationships and collaboration. The study results reported here are to help stakeholders identify similarities and differences that can aid in the development of productive relationships throughout the basin.

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