

**The Washington State Department of Ecology
and Anchor Environmental, LLC:
Perceptions Among Water Rights Holders
About Water Rights Transactions**

September 10, 2008

*Synopsis of Results, Graphic Summary,
and Text of Responses to Open-Ended Questions*
(with text of questionnaire)

Prepared by:

Strategic Research Associates

Contact: Steven Dean
25 West Cataldo, Suite D
Spokane, WA 99201
(888) 554-6960



Strategic Research
ASSOCIATES

Contents of this Report

Synopsis:

| | |
|--|---------------|
| Research Objectives | Page 1 |
| Executive Review of Primary Findings | Page 2 |
| How the Survey was Conducted | Pages 3 to 5 |
| Synopsis of Results | Pages 6 to 14 |

Graphic Results:

| | |
|---|------------------|
| Summary of Respondent Background Characteristics (<i>Graphic Summary Preface</i>) | Figures 1 to 3 |
| Perceptions about Entities Involved in Water Rights Transactions (<i>Graphic Summary Section One</i>) | Figures 4 to 18 |
| Perceptions about Procedures for the Sale or Lease of Water Rights (<i>Graphic Summary Section Two</i>) | Figures 19 to 28 |
| Respondent Background Characteristics (<i>Graphic Summary Addendum</i>) | Figures 29 to 31 |

Appendices:

| |
|--|
| Verbatim Responses to Unaided Questions (Q4, Q6, Q8, Q9, Q10, and Q13) |
| The Questionnaire (annotated to show base survey results) |

Research Objectives

In June 2008, the Anchor Environmental, LLC, representing the Washington State Department of Ecology, commissioned Strategic Research Associates to conduct a telephone survey among those holding exclusive water rights to properties located in the Columbia Basin and nearby areas. The survey's primary objectives were to explore perceptions and preferences among water rights holders about (1) organizations and other entities involved in negotiation of the sale, lease, or purchase of water rights and (2) the various format options that could be used in a sale or lease of water rights.

These measurement objectives are addressed in this report:

! Perceptions about entities involved in water rights transactions

- " Prior engagement in water rights transactions
- " Specific organizations involved in these transactions
- " Likelihood of future participation
- " Degrees of comfort in negotiating with various entities
- " Perceptions about the Department of Ecology's involvement in water rights transactions

! Perceptions about procedures for the sale or lease of water rights

- " Perceptions about degrees of comfort in negotiating formats
- " The most preferred water rights transaction format
- " Likelihood of conducting a transaction within the next twelve months

! Differences related to respondent background characteristics

All reports in this volume are sub-divided by the first two objectives. The third was a general objective applicable within all sections.

Executive Review of Primary Findings

This single page *Executive Review* provides a quick summary of selected survey findings. The *Synopsis of Results* (pages 6 to 14) provides a more thorough summary, while a detailed and comprehensive analysis is given in this volume's *Graphic Summary* sections.

! Perceptions about entities involved in water rights transactions

Among 172 respondents, one in five (20%) acknowledged having previously participated in any type of water rights transaction. Those representing organizations or irrigating 40 acres or more (more likely to be organizational respondents) were three times more likely than others to report prior transactions. Among those reporting them, eight respondents had used the Department of Ecology, and all but one said they would use the department again for future negotiations. One-third (33%) rated themselves “very” or “moderately” likely to participate in future water rights transactions; these respondents were more likely than others to have conducted prior transactions, to represent organizations, or to have more irrigated land. Respondents in the Upper Yakima inventory area were most likely to anticipate a future transaction. (Those not anticipating one planned to continue to use their water rights or did not feel the need for future transactions.) Asked to rate their comfort in negotiating water rights with each of six entities, respondents gave the Department of Ecology a relatively mediocre score (ranking it fifth among the six). However, 18% of those with at least some chance of a future transaction said they would be most comfortable working with the department, a relatively good performance. Overall, respondents were drawn to negotiating entities that were knowledgeable about water rights, with whom they had past experience, and with no seeming hidden agenda. Half (52%) were aware of the department’s Water Acquisition Program.

! Perceptions about procedures for the sale or lease of water rights

The comfort rating score for direct negotiations was significantly higher than those for four other tested formats. Four in ten (41%) said they would be “very” comfortable with direct negotiations, and 29% “moderately” so. An open format – for which 26% rated themselves “very” comfortable and 31% “moderately” so – produced an average score significantly higher than those for an auction, a reverse auction, and a broker. An auction and a reverse auction produced similar, relatively mediocre scores, while the score for the option of using a broker was significantly below all others. Asked to name, unaided, their preferred format, 40% cited direct negotiations; 12%, an open format; and 6%, an auction. (One percent [1%] cited a reverse auction.) Finally, most (84%) reported their likelihood of conducting a water rights transaction within the next twelve months was “about 0%.” Fifteen percent (15%) rated their chances at “25%” or better and 10%, “50%” or better. Those with more irrigated land and with prior experience in water rights transactions were much more likely than others to anticipate a near-future transaction.

How the Survey was Conducted

! A telephone survey with 172 completed interviews

- " The population of interest was defined to be those – individual property owners or organizational landholders – holding exclusive water rights to property within any of eight Water Resource Inventory Areas. (These eight areas included Lower Yakima, Methow, Middle Snake, Naches, Okanogan, Upper Yakima, Walla Walla, and Wenatchee.)
- " Interviewing was conducted between August 8 and August 26, 2008.
- " Identification of respondents was conducted by using a list provided by the Department of Ecology. This list included 1,116 records, 1,031 with contact information of water rights holders with properties currently lying within the boundaries of any of the eight targeted resource areas. List members received a pre-survey notification letter from the department prior to the survey. During the survey, at least four attempts (up to a maximum of seven) were made to reach each list member. In total, 172 water rights holders (116 representing themselves and 56 representing organizations) agreed to participate.
- " Interviews with water rights holders representing themselves were usually conducted Monday to Friday evenings between 4PM and 9PM, while interviews with those representing organizations were conducted during weekday daytime business hours. Some interviews with individual water rights holders were also conducted between 10AM and 5PM on weekends. Interviewing was conducted by Strategic Research Associates, from its Spokane facility, and by Mountain West Research Center, a professional field research organization located in Pocatello, Idaho. The computer-aided workstations used by interviewers for this survey allowed randomization and rotation of question order, reducing potential biases. A significant proportion of interviews were monitored on-line to verify for courtesy and completeness of interviewing. All interviewers working on this project were professionally trained and supervised.

! The questionnaire

The questionnaire included 38 questions, seven of which were unaided (requiring respondents to answer in their own words rather than choose among a list of options). Because of skip patterns, most respondents did not answer every question. The average interview took slightly less than 10 minutes to complete.

How the Survey was Conducted (cont.)

! Theoretical precision of estimates (with a sample of 172 from a population of 1,116)

- " At 95% confidence: $\pm 6.9\%$
- " At 90% confidence: $\pm 5.8\%$
- " Margins of error for sub-groups (for example, those aged 65 and older, are less precise).

! Presentation of results

- " This volume is divided into sections. The presentation includes, in order, *Contents of this Report*, *Executive Review of Primary Findings*, *Research Objectives*, *How the Survey was Conducted*, *Synopsis of Results*, and *Graphic Summary*. Appendices include a *Verbatim Responses* section listing word-for-word responses to unaided survey questions (Q4, Q6, Q8, Q9, Q10, and Q13) and a *Questionnaire* section displaying an annotated copy of the questionnaire with baseline results.

The *Synopsis* provides an moderate-length overview of results, while the *Graphic Summary* offers a more detailed and comprehensive review using a chart-based format. A companion volume of extensive crosstabulated results augments the presentation in this volume.

- " Regarding the charts displayed in this volume:
 - Responses to unaided questions were categorized and coded, with the coded results included in quantitative summaries.
 - Percentages are shown rounded to integer digits to enhance ease of review and interpretation. Because of this rounding, totals may not always sum to 100%, but displayed values are nevertheless correct. Chart bar lengths reflect exact (unrounded) values, which is why two bars marked with the same value may sometimes vary slightly in length. Chart labels shown in uppercase identify a list of response options to a single question (or a list of background category measurements). Labels shown in lowercase identify a list of survey questions, the results for which are to be compared.
 - Appropriate statistical tests were sometimes conducted to determine if a rating outcome was unusual, given all possible outcomes that could have been observed from the sample. (Because sampling was not strictly random, as attempts were made to reach everyone on the population list, “permutation test” hypotheses were the ones being evaluated.) For these tests, a probability level of 0.05 was used as the criterion to determine a statistically significant result. (The term “marginally significant” was sometimes applied to a result significant at the 0.10 level.) Statistically significant results are noted in the summaries and chart annotations.

How the Survey was Conducted (cont.)

Respondent background category sub-sample information is summarized in Figures 1 to 3 in the *Graphic Summary Preface* (“*Summary of Respondent Background Characteristics*”). Additional respondent background information is shown in Figures 29 to 31 in the *Graphic Summary Addendum* (“*Respondent Background Characteristics*”). A condensed summary, showing categories for Water Resource Inventory Areas, respondent type, number of acres irrigated, and respondent age, is given in Table 1.

Table 1
Condensed Summary of Respondent Background Characteristics

| Background Category | Count of Respondents | Percent of Total Sample |
|--|----------------------|-------------------------|
| Lower Yakima | 36 | 21% |
| Methow | 30 | 17% |
| Middle Snake | 4 | 2% |
| Naches | 5 | 3% |
| Okanogan | 29 | 17% |
| Upper Yakima | 23 | 13% |
| Walla Walla | 32 | 19% |
| Wenatchee | 13 | 8% |
| Respondents representing themselves | 116 | 67% |
| Respondents representing organizations | 56 | 33% |
| Irrigate less than 5 acres | 37 | 22% |
| Irrigate 5 to 39 acres | 54 | 31% |
| Irrigate 40 acres or more | 78 | 45% |
| Aged 54 or younger | 53 | 31% |
| Aged 55 to 64 | 53 | 31% |
| Aged 65 or older | 65 | 38% |

Sample base: 172 respondents; Figure 1 in the *Graphic Summary* provides more detail.

Synopsis of Results

! **Perceptions about entities involved in water rights transactions** (Figures 4 through 18 in *Graphic Summary Section One*)

" **Previous engagement in water rights transactions:** Among the 172 respondents, one in five (20%) reported having previously participated in any type of water rights transaction.

The likelihood of prior engagement in a transaction varied significantly by resource area, respondent type, number of irrigated acres, and type of crop using the most irrigated acreage:

- **Resource area:** Upper Yakima produced the highest “yes” percentage – with 35% reporting prior transactions – while Okanogan produced the lowest (7%). (As shown in Figure 2, respondents from Upper Yakima were twice as likely as those from Okanogan to be representing organizations; see the following bullet point.)
- **Respondent type:** Respondents representing organizations were almost three times more likely than those representing themselves to say they had previously engaged in water rights transactions. (Even after controlling for number of irrigated acres, the respondent type variation was still statistically significant.)
- **Number of irrigated acres:** Those irrigating 40 acres or more were over three times more likely than others to report prior transactions.
- **Type of crop using the most irrigated acreage:** Those reporting irrigation of fruits and orchards, or water use with lawns or landscaping, were much more likely to report prior transactions than those irrigating forage crops.

" **Organizations of entities used in previous water rights negotiations:** The 35 respondents reporting a prior water rights transaction were asked to name the organizations or entities with whom they had negotiated. Table 2 lists the organizations or entities that received one or more citations. As shown, fourteen respondents named “individual(s)” and eight, the Department of Ecology. In total, 19 other entities were cited by either one or two respondents. (Thirty-five respondents produced 45 citations because some reported negotiations with two or more entities.)

Respondents were also asked if they would consider using the entity again for future transactions. Among the 45 citations, respondents in 39 cases (87%) said they would. (These results are shown in column three of Table 2.) As Table 2 shows, seven of the eight mentioning the Department of Ecology said they would negotiate with the department again, while one replied “no” (giving the reason that the department seemingly did not fulfill its obligations).

Synopsis of Results (cont.)

Table 2
Organizations or Entities Used in Previous Water Rights Transactions

| Organization / Entity | Number Citing this Entity | Number that Would Use Again |
|---|---------------------------|-----------------------------|
| Individual(s) | 14 | 12 |
| The Department of Ecology | 8 | 7 |
| Wenas District | 2 | 1 |
| Hauser & Son | 2 | 1 |
| Attorney(s) | 2 | 2 |
| Washington Water Trust | 2 | 1 |
| Peshastin Irrigation | 1 | 1 |
| Icicle Irrigation District | 1 | 1 |
| Kittitas County Water Conservancy Board | 1 | 1 |
| Wautoma Springs Vineyard | 1 | 1 |
| Kittitas Reclamation District | 1 | 1 |
| Department of Hydraulics | 1 | 1 |
| Quad City Irrigation | 1 | 1 |
| Washington Rivers Conservancy | 1 | 1 |
| Power Company of Safire Skies | 1 | 1 |
| Waterbank Properties, LLC | 1 | 1 |
| Natural Resources Conservation Service | 1 | 1 |
| Okanagan Conservation District | 1 | 0 |
| A water bank | 1 | 1 |
| Sunnyside Valley Irrigation | 1 | 1 |
| Irrigation district | 1 | 1 |

Sample base for each entity: Those having participated in past transactions (n=35)

- " **Likelihood of participating in any type of future water rights transactions:** One-third (33%) rated themselves “very” or “moderately” likely to participate sometime in the future in the sale, lease, or purchase of water rights, while 65% said they were “not very” or “not at all” likely to do so.

Synopsis of Results (cont.)

These statistically significant background measurement variations were found:

- **Inventory area:** Upper Yakima's respondents generated a much higher likelihood-of-participation percentage (57%) than any other area. The difference between Upper Yakima and the combined result for other areas was significant even after controlling for respondent type, irrigated acreage, and past engagement in water rights transactions.
- **Respondent type:** Respondents representing organizations were twice as likely as others to say they would be at least “moderately” likely to participate in a future transaction.
- **Number of irrigated acres:** Those irrigating 40 acres or more were twice as likely as others to report at least a “moderate” chance of a future transaction.
- **Status of past participation in water rights negotiations:** Past participation was strongly predictive of future involvement. Those having already engaged in water rights negotiations were 2.4 times more likely than others to report at least “moderate” future likelihood. The variation remained significant even after controlling for area, respondent type, and number of irrigated acres.
- **Respondent age:** Those aged 65 or older were less likely than their opposites to say they would participate in future transactions.

The 113 respondents who said they were “not very” or “not at all” likely to participate in a future water rights transaction were asked to explain, unaided, why this was so. The most frequently cited (categorized) answers were that respondents plan to continue to use their existing water rights (28% of the 113), that water rights belong to the land (26%), that an adjustment in water rights is not needed (20%), and that no interest exists in the sale of such rights (12%).

“ **Perceptions about degrees of comfort in negotiating with various entities:** The 101 respondents with at least some chance of engaging in future water rights transactions were asked to rate (using a four-point scale) their degree of comfort in negotiating water rights transactions with each of six organizations. Average comfort ratings for the six are shown at Figure 1-S. Bars are color-coded to indicate degrees of distance above or below the average length (the dashed line). This was observed:

- **Well above-average relative score** (turquoise): The overall comfort score for negotiation with individuals wanting to purchase or lease water rights was higher than for any other test entity. Over one-third (35%) rated themselves “very” comfortable with this option, and 38% “moderately” so.
- **Slightly above-average relative scores** (green): Three negotiation options – with a local conservation district or commission, a local water conservancy board, and a private non-profit group – produced similar, relatively favorable results. (There were no significant rating differences among the three.)

Synopsis of Results (cont.)

- **Slightly below-average relative score** (lighter blue): The Department of Ecology produced a comfort score significantly below the top four options listed at Figure 1-S. Eighteen percent (18%) said they would be “very” comfortable, and 32% “moderately” so, negotiating with the department. (Another 28% said “not very” comfortable and 21%, “not at all.” Two percent [2%] had no answer.)
- **Well below-average relative score** (darker blue): The option of a brokerage or law firm received a score significantly below all others.

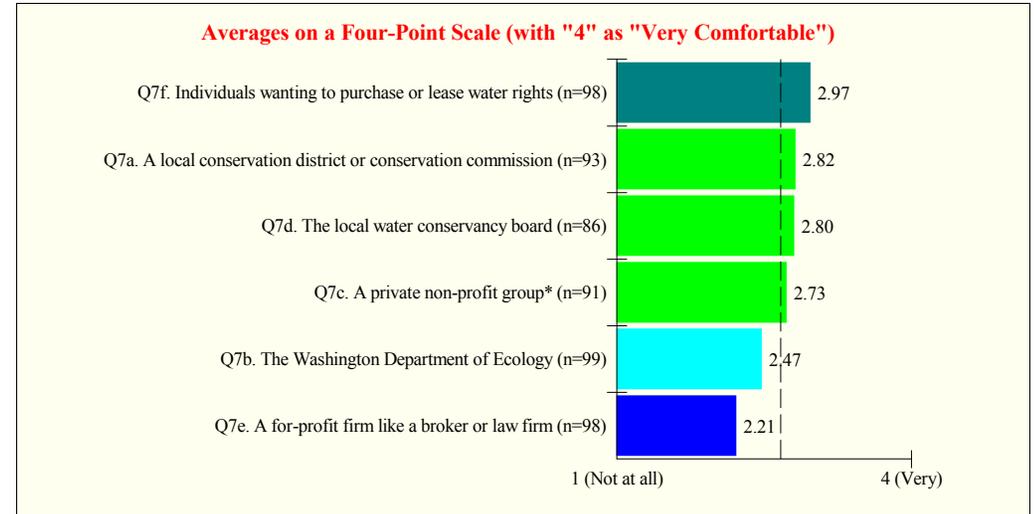
“ **Variations in the comfort rating of the Department of Ecology:** No significant differences were found for categories representing inventory area, respondent type, number of acres irrigated, and status of past participation in water rights negotiation. However, this was also observed:

- **Type of crop using the most irrigated acreage:** Respondents devoting their water to lawn and landscaping produced a much higher comfort score for the department than those using irrigation for other uses.
- **Respondent age:** The oldest respondents (aged 65 and older) were marginally less likely than others to favorably grade their comfort level with the department.

“ **Motivation for the comfort rating given to the Department of Ecology:** Respondents were asked to justify, unaided, their comfort rating of the Department of Ecology. These were the most frequently cited responses:

- **Positively-worded responses** (justifying a favorable rating): Eleven percent (11%) of the 99 respondents assigning a rating to the department cited a positive past experience with the department; 8%, that the department is easy to work with; and 6%, that department personnel are knowledgeable about water rights.

Figure 1-S: Average Comfort Ratings for Negotiating with Various Entities (Base: All except those “not at all likely” to participate in future transactions, n=101, excluding “don’t know’s for each question; each sample size is listed)



Synopsis of Results (cont.)

- **Negatively-worded responses** (justifying a less-than-favorable rating): Fifteen percent (15%) of the 99 expressed a lack of trust that the department will return leased water rights; 14%, that the department seems too slow or too bureaucratic; 8%, that there had been a previous negative experience with the department; 7%, that the department has a hidden agenda; and 6%, that it is not cooperative.

" **The single preferred entity for negotiations of water rights:** The 101 respondents with a chance of engaging in future water rights transactions were asked to name, unaided, the organization or entity they would be most comfortable in negotiating with about their water rights. These were the most frequently cited responses:

- Individual(s): 24% (of the 101)
- The Department of Ecology: 18%
- None: 16%
- Water Conservancy Board: 14%
- Conservation District: 6%
- Local water board: 6%
- Washington Water Trust: 5%

The Department of Ecology produced a better result here than in its fifth place comfort rating finish (as shown in Figure 1-S). However, more respondents were familiar with the department than with other tested organizations. Some favoring the department described – as noted below – a positive past experience with the department, the fact that it is a government organization, the knowledge of its staff about water rights, or its regional presence – factors not necessarily considered in the rating exercise.

Among those rating themselves “very” or “moderately” comfortable in negotiating with the Department of Ecology, 32% cited the department as the most preferred organization. (The citation for individuals ranked second with 15%.) Conversely, among respondents who said they would be “not very” or “not at all” comfortable negotiating with the department, only 2% cited it as their preferred organization, while 29% named individuals.

" **Reasons for the preferred entity being the one most favored:** Respondents were asked to identify, unaided, their reasons for having a preferred organization or entity with which to negotiate water rights. These (categorized) responses were the most frequently cited:

- Knowledgeable about water rights: 18% (of the 79 naming a preferred entity)
- Positive past experience: 16%
- No hidden agenda: 10%
- Prefer one-on-one interactions: 9%
- More familiar with organization or entity: 8%
- Prefer a local organization: 6%
- See eye-to-eye on water rights issues: 6%

Synopsis of Results (cont.)

- Good or helpful staff: 5%
- Less bureaucracy: 4%
- Prefer a government-controlled organization: 4%
- More profitable or receive highest price: 4%
- Not a government agency: 4%

Among 18 respondents preferring to negotiate with the Department of Ecology, these reasons were given:

- A positive past experience: 5 respondents (of the 18)
- Familiar with the department: 3
- Prefer a government-controlled organization: 3
- Knowledgeable about water rights: 2
- Use the department out of necessity: 2
- See eye-to-eye on water rights issues: 1
- Prefer a regional organization: 1
- A good or helpful staff: 1
- The department has no hidden agenda: 1

" **Awareness of the Department of Ecology's Water Acquisition Program:** Half (52%) the sample knew of the Department of Ecology's Water Acquisition Program, but awareness varied significantly within these background measurement areas:

- **Inventory area:** Respondents in the Methow, Okanogan, Upper Yakima, and Walla Walla areas were more likely to be aware of the Department of Ecology's Water Acquisition Program than those in the Lower Yakima and Wenatchee areas. The variation remained significant even after adjusting for the effects of respondent type, number of irrigated acres, and type of crop irrigated.
- **Number of irrigated acres:** Those irrigating 40 acres or more were 1.4 times more likely than other respondents to claim awareness of the department's program.
- **Type of crop using the most irrigated acreage:** Variations in this measurement area were marginally significant, with those irrigating forage crops most likely to report awareness. This result was associated with that for inventory area; respondents in Lower Yakima and Wenatchee, least likely to be aware of the department's program, were also least likely to be irrigating forage crops.

Detailed findings and additional results can be found in *Graphic Summary Section One* ("Perceptions About Entities Involved in Water Rights Transactions"). Verbatim responses to unaided question Q4 (reasons for not wanting to use an organization for water rights negotiation again), Q6 (reasons for not being likely to participate in future water rights transactions), Q8 (preferred negotiating entity), Q9 (reasons for choosing an entity as the preferred one), and Q10 (explanation of the comfort rating of the Department of Ecology) are listed in this volume's appendix.

Synopsis of Results (cont.)

! Perceptions about procedures for the sale or lease of water rights (Figures 19 through 23 in *Graphic Summary Section Two*)

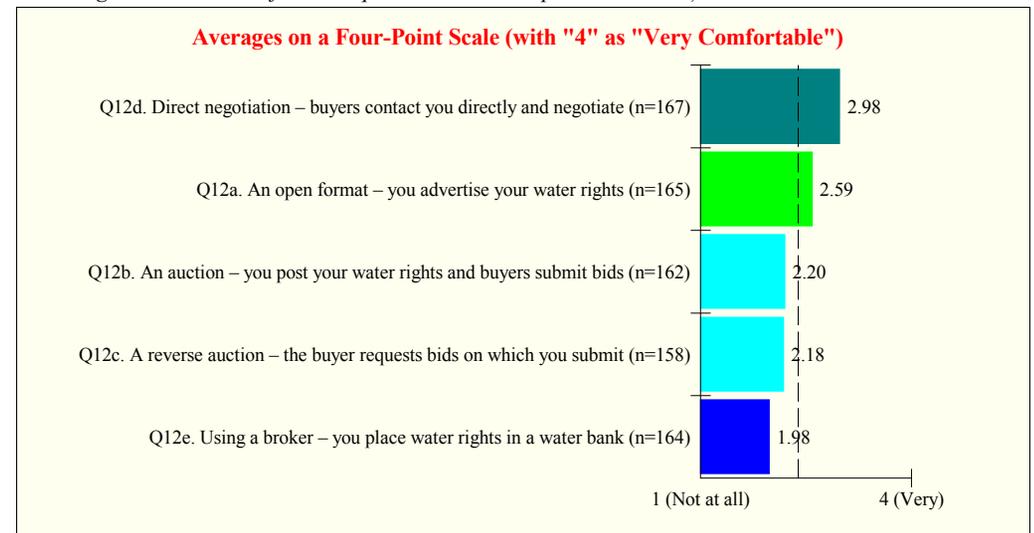
" **Perceptions about degrees of comfort with negotiating formats:** Respondents were asked to rate (using a four-point scale) their degree of comfort with each of five negotiating formats, described as follows:

- *An open format – you advertise your water rights on the Internet and negotiate directly with buyers.*
- *An auction – you post your water rights and buyers submit either open or sealed bids.*
- *A reverse auction – the buyer requests bids which you submit on. Bids can be open or sealed.*
- *Direct negotiation – buyers contact you directly and negotiate.*
- *Using a broker – you place water rights in a water bank and a broker manages transactions.*

Figure 2-S displays the average rating for each format. Bars are color-coded (as in Figure 1-S) to indicate degrees of distance above or below the average length (the dashed line). This was observed:

- **Well above-average relative score** (turquoise): The comfort rating average for direct negotiations was significantly higher than those for the other four formats. Four in ten (41%) said they would be “very” comfortable with direct negotiations, and 29% “moderately” so.
- **Slightly above-average relative scores** (green): An open format – for which 26% rated themselves “very” comfortable and 31% “moderately” so – produced an average score significantly higher than those for an auction, a reverse auction, and a broker.
- **Slightly below-average relative scores** (lighter blue): An auction and a reverse auction – which only 10% and 9%, respectively, said they would be “very” comfortable using – produced similar, relatively mediocre scores.
- **Well below-average relative score** (darker blue): The option of using a broker produced a score significantly below all others. Only 4% said they would be “very” comfortable with it.

Figure 2-S: Average Comfort Ratings for Negotiating Formats (Base: Total sample, n=172, excluding “don’t know’s” for each question; each sample size is listed)



Synopsis of Results (cont.)

- " **The most preferred water rights transaction format:** Asked to name, unaided, their most preferred negotiating format, 40% cited direct negotiations, a dominant response. Twelve percent (12%) said they favored an open format; 6%, an auction; and 5%, a reverse auction.

These answers received mention from 2% or more of the total sample:

- Direct negotiation: 40% (of the total sample of 172)
- Open format: 12%
- Not interested in selling: 6%
- Auction: 6%
- Using a broker: 5%
- Dislike transaction formats that were considered: 5%
- Have no preference: 3%
- Use a water trust or water bank: 3%
- Rights should be sold with land: 2%

The most enthusiastic proponents of direct negotiations were respondents representing organizations (57% of whom cited this option, versus 32% among those representing themselves), those irrigating 40 or more acres (51%), those holding properties in Lower Yakima (56%), Wenatchee (54%), or Upper Yakima (52%), and those having previously conducted water rights transactions (51%). Variations for other negotiating options were not large enough to be meaningful.

- " **Likelihood of conducting a transaction within the next twelve months:** Most (84%) reported their likelihood of conducting a water rights transaction within the next twelve months was “about 0%.” Fifteen percent (15%) rated their chances at “25%” or better and 10%, “50%” or better.

These significant background measurement variations were found:

- **Inventory area:** In Upper Yakima, an unusually high percentage (26%) said they had at least some chance of a near-future transaction, while Wenatchee's rate (0%) was unusually low. Other area-related variations were minor.
- **Number of irrigated acres:** Those irrigating 40 acres or more were over four times more likely than others to report at least some chance of a transaction within the next 12 months.
- **Status of past participation in water rights negotiations:** Those having prior experience in water rights transactions were almost three times more likely than others to assign a probability of 25% or more to a near-future transaction.

Detailed findings and additional results can be found in *Graphic Summary Section Two* (“Perceptions about Procedures for the Sale or Lease of Water

Synopsis of Results (cont.)

Rights”). Section Addendum Figures 24 to 28 explore background measurement variations in comfort ratings of negotiating formats. Verbatim responses to unaided question Q13 (the preferred negotiating format) are listed in this volume’s appendix.