

Highlights From a Public Opinion Survey

*“Attitudes and Opinions About Wildlife Resource
Conditions and Management in Utah: Results of a 1998
Statewide General Public and License Purchaser Survey”*

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March 10, 1999

Dear Wildlife Enthusiast,

I would like to share with you the results of a Utah State University (USU) study entitled: ***Attitudes and Opinions About Wildlife Resource Conditions and Management in Utah: Results of a 1998 Statewide General Public and License Purchaser Survey***, authored by Richard S. Krannich and Tara L. Teel.

The Division of Wildlife Resources (DWR) contracted with USU's Institute for Social Science Research on Natural Resources to conduct this relevant and critical study as a way of understanding the broad mandate of the DWR as seen through the eyes of our publics. This is a very interesting study -- the methods used were state-of-the-art and the reliability of the information is unquestionable. We commend the authors and those involved for an outstanding research effort.

As the designated steward of wildlife in the state, the DWR recognizes a responsibility to all Utah citizens, but particularly to those interested in wildlife. The issue of natural resources stewardship, particularly wildlife resources, is not just a government agency problem or responsibility. Wise, responsible stewardship is incumbent upon all of us.

It is now the responsibility of the DWR to accurately interpret the information contained in this report and apply it to our ongoing strategic planning process. I invite and encourage your input and active participation in this process as we take the Krannich Report to the people of Utah through the regional advisory council/Wildlife Board process. I hope you will review these findings critically and seriously consider their implications for the future of wildlife resource management and wildlife recreational opportunities in Utah.

Sincerely,

John Kimball
Director

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I.

Why a Public Opinion Survey?

Why A Public Opinion Survey?

The survey, entitled ***Attitudes and Opinions About Wildlife Resource Conditions and Management in Utah: Results of a 1998 Statewide General Public and License Purchaser Survey*** (the Krannich Report), is an important component of our ongoing process to set long term, publicly responsive, wildlife program direction into the 21st century. Public input and opinion play an increasingly important role in the process of wildlife management and wildlife recreation planning by state and federal resource management agencies. Participatory management, taking into account the opinions and attitudes of all citizens, is critical to successful, responsible management of publicly-owned resources. In the future, the DWR anticipates conducting such surveys on a regular basis to assess the effectiveness of outreach programs and trends in public attitudes.

The DWR Strategic Plan

The Utah Division of Wildlife Resources (DWR) is in the process of developing a strategic plan for wildlife conservation and recreation management through the year 2003. The plan identifies the DWR vision, values and responsibilities and outlines broad goals to be achieved through a series of measurable objectives. To garner public input, a draft version of the strategic plan was released in July, 1998. Public comments received were summarized and shared with DWR managers and staff. Based in part on this information, and results of the Krannich Report, longterm DWR goals and objectives will be reviewed and revised.

Preliminary DWR Analysis of the Krannich Report

As part of the strategic planning process, DWR section personnel were asked to review the Krannich Report and prepare analyses specific to their programs (e.g. wildlife, aquatics, habitat, etc.). Ultimately, section management plans will incorporate the findings and recommendations from the Report. By sharing this information with the public during the strategic planning process, DWR managers hope to provide citizens with a greater understanding of the formidable challenge of conserving wildlife resources while providing for the needs of wildlife recreationists.

What the Krannich Report Numbers Mean

Throughout this summary, references will be made to ratings given by respondents to a variety of management-specific issues and general questions regarding their level of agreement/disagreement, level of importance, level of effectiveness, level of approval/disapproval and quality (i.e., good versus poor). Respondents chose from sets of descriptors (e.g., extremely good through to extremely poor) to

assign relative rankings to issues or questions. The cumulative averages of individual scores were then used to assess the overall responses.

Scoring ranges from 0 to 10 (an 11 point span). Thus, a score of 5 is the true mid-point (see guide below). Although some people gave 0s (extremely negative), no one issue or question received an average overall rating of 0 or even 1, although half-a-dozen overall scores dipped below 3. Similarly, no one management issue or general question received an average score of 10 (extremely positive). There were five cases where average scores were 9 or higher (all general questions). The lowest average scores were received on the specific hunting and game management issues (a total of 16 issue questions). The lowest average score for the 41 general questions was 4.5.

Scores from 0-2 (extremely to strongly negative) and from 8-10 (strongly to extremely positive) were combined for purposes of analysis.

Guide to Interpreting Responses

RANK

CATEGORIES OF RESPONSES

(0-4 are on the **negative** end of the scale)

0 Extremely ...

1 Very Strongly

2 Strongly ...

3-4 Moderately ...

5 MIDPOINT. Neutral or Neither ... Neither Negative nor Positive

(6-10 are on the **positive** end of the scale)

6-7 Moderately ...

8 Strongly ...

9 Very strongly ...

10 Extremely ...

Agreement (agree/disagree)

Priority (high/low)

Quality (good/poor)

Approval (approve/disapprove)

Effectiveness (effective/ineff...)

II.

Highlights From the Krannich Report

Highlights From The Krannich Report

Introduction

This report summarizes key findings from a 1998 survey of both Utah residents and resident hunting and fishing license buyers regarding their attitudes and opinions about the quality and importance of Utah's wildlife resources, and about the management of those resources. The study, commonly called the Krannich Report, was conducted for the Utah Division of Wildlife Resources (DWR) by the Institute for Social Science Research on Natural Resources at Utah State University (USU), under the direction of Dr. Richard S. Krannich, Professor of Sociology and Forest Resources at USU.

The findings presented in the Krannich Report are based on data obtained through telephone interviews conducted between March and June 1998, with 1,401 Utah residents from throughout the state. Random samples were drawn to represent the state's adult (individuals age 18 or older) population as a whole, and also to represent individuals who had purchased resident hunting or fishing licenses in the prior year. Both the general public and license buyer samples were drawn using a sampling procedure designed to insure reliable, statistically significant representation of residents and license buyers in both metropolitan (metro) and nonmetropolitan (nonmetro) areas of the state. This approach provides a basis for profiling the perspectives of Utahns at large. It is also useful in evaluating differences in the attitudes and preferences of residents who live in various parts of the state and who exhibit differing patterns of participation in wildlife-related recreational activities. For the general public sample, 1,332 eligible respondents were contacted and 901 interviews completed, representing a 68% response rate. For the license buyers sample, 623 eligible license buyers were contacted and 500 interviews were completed, representing an 80% response rate.

Because the range of issues addressed in the survey is vast, any attempt to summarize the results in only a few pages will be incomplete. However, several key findings derived from the survey are highlighted below; more complete details on these and other findings appear in the body of the final project report.

Results

Utahns expressed high interest in the state's wildlife resources. Interest levels were fairly high among the residents of both metro and nonmetro areas, and especially high among hunting and fishing license buyers. The mean response

value for the statewide general public sample was 6.4, indicating a moderately high level of interest. Among hunting and fishing license buyers the overall mean response value was 7.6, indicating a high overall interest in Utah's wildlife resources.

A supplemental report to the Krannich Report divided respondents into five categories, called **stakeholders**. This cross-tabulated data indicates that more than 78% of Utahns fall into one of three categories of stakeholders who actively participate in some form of wildlife-related recreational activity: about 22% of adult Utahns participate in hunting, and may also participate in fishing and nonconsumptive activities; 21% are anglers who do not hunt, but may participate in watchable wildlife activities; 36% are participants in nonconsumptive activities but neither hunt nor fish. About 8% of Utahns do not participate in wildlife-related recreation but still express high interest in wildlife, while 13% are nonparticipants.

Key Findings

- Overall, Utah hunters were more likely than those in other stakeholder categories to express high interest in wildlife. Hunters were most likely to be aware of the wildlife regional advisory council (RAC) process; most likely to consider the DWR to be effective in protecting populations of non-game wildlife species; most supportive of DWR efforts to acquire lands that could provide for increased public hunting access; most likely to approve of predator management in order to increase populations of game species; and most likely to approve of recreational hunting for bear and cougar.
- Although the DWR has actively pursued public input through the RAC process, relatively few Utahns are aware of the process and even fewer report that they have participated in it. Results from the statewide general public sample indicate that only 18% of adult Utahns have ever heard of the RAC process. Approximately 14% of those who said they were aware of the program had actually attended a RAC meeting. About 27% of resident hunting and fishing license buyers have heard of the RAC process, with 31% of those who were familiar with it indicating that they had attended at least one RAC meeting. These results suggest that public input obtained through the RAC process is unlikely to fully represent the perspectives of most Utahns with interest in the state's wildlife.
- Many Utahns engage in nonconsumptive activities related to wildlife. About 40% of public respondents said they feed wildlife; about 30% said they plant trees and shrubs to provide backyard wildlife habitat. About 40% of all Utahns participation in wildlife observation outings, with hunting and

fishing license buyers substantially more likely than members of the general public to participate. Satisfaction levels with wildlife observation experiences were moderately high among both the public at large (mean response 6.9) and license buyers (mean response 7.1).

- Most Utahns believe that the DWR should place a moderate to very high priority on efforts to enhance wildlife observation opportunities. For example, when asked to indicate how much priority should be placed on development of watchable wildlife sites or trails in urban areas, the mean responses were 7.0 for the statewide general public sample and 6.7 among license buyers. Similarly, when asked about the extent to which the DWR should prioritize the presentation of radio and television programs to educate the public about Utah's fish and wildlife resources, the mean response was 7.1 among members of the general public and 7.4 among license buyers. There is substantial support among all stakeholder categories for more programs and facilities to inform and educate the public about wildlife.
- Most Utahns believe the costs of supporting wildlife management activities in the state should be borne by a relatively broad cross-section of the state's residents. When asked to consider who should assume responsibility for providing funding to support efforts to protect and enhance populations of both game species and non-game species, respondents overwhelmingly indicated that funding should be provided by either "all Utahns with an interest in wildlife" or "all Utah residents." While slightly more than 50% of the public at large and about two-thirds of license buyers are aware that hunting and fishing license buyers provide most of the funding for wildlife management in the state, a substantial proportion of Utahns apparently remain unaware that the costs of wildlife management are not more broadly distributed across the state population as a whole.
- Overall, Utahns are somewhat satisfied with the way wildlife and fish resources are currently being managed by the DWR. The mean response for both the statewide general public and license buyers sample was 5.4, slightly above the scale midpoint.

A series of eight questions asked respondents to evaluate the DWR in terms of the agency's effectiveness in providing various wildlife-related programs and opportunities. The individual questions focused on provision of wildlife observation opportunities, fishing opportunities, hunting opportunities, enforcement of laws to protect wildlife, provision of public information and education programs, protection and improvement of wildlife habitat, protection of

non-game species, and protection of game species. For all of these items, responses were measured on a scale with values ranging from 0 (“not at all effective”) to 10 (“extremely effective”).

Both the general public and license buyers evaluated the DWR as at least moderately effective in addressing these program areas. For example, the mean responses to a question addressing the effectiveness of the DWR in protecting and improving wildlife habitat were 6.1 for the statewide public at large and 6.3 for all license buyers.

The item that received the lowest effectiveness rating focused on efforts to provide information and education programs to help Utahns understand and support wildlife conservation efforts; mean scores were 5.5 for the general public sample and 5.9 for license buyers. The item that received the highest effectiveness rating involved provision of opportunities for people to fish and catch fish, with mean responses of 7.0 and 7.1 for the general public and license buyers, respectively.

Highlights

- Consistent with their interest in wildlife, Utahns exhibit very high levels of support overall for actions and programs that help to protect and enhance wildlife and wildlife habitat. For example, general public respondents and license buyers expressed strong agreement that access to some public land areas should be restricted during certain periods in order to protect wildlife. Utahns also expressed strong agreement that energy resource extraction and the development of housing and roads should be limited in areas where such activities may threaten wildlife or destroy important wildlife habitat. In addition, Utahns strongly favor restrictions on certain types of recreational activity such as the use of off-road vehicles and jet skis in areas where such activities may negatively affect wildlife or fish populations. For example, one of the questions in this series asked whether the respondents agreed or disagreed that the use of off-road vehicles should not be allowed where such activities would threaten wildlife or damage wildlife habitat. On a response scale ranging from 0 (“disagree very strongly”) to 10 (“agree very strongly”), the mean response value was 7.8 among the general public and 7.5 among hunting and fishing license buyers.
- Two stakeholder groups (anglers who did not hunt and nonconsumptive users who did not hunt or fish) were highly supportive of efforts to acquire open space areas for wildlife habitat within residential areas, acquisition of

lands to protect non-game species, and acquisition of lands that could be managed as protected areas or wildlife preserves. Hunters were highly supportive of having the DWR acquire lands that would provide public hunting access.

Anglers who did not hunt and nonconsumptive users who did not hunt or fish responded similarly to many other survey questions as well. Both groups were more likely than other stakeholders to rate the DWR as effective in protection of game species, and to place high priority on wildlife education programs, educational workshops, and wildlife nature centers.

- Overall, Utahns are highly supportive of DWR programs to protect and enhance a wildlife and fish habitat and to increase public access for recreational uses. Respondents expressed some ambivalence about efforts to acquire lands within urban areas or in areas immediately surrounding urban centers. However, they were very enthusiastic about acquisition of key deer and elk habitat, water rights to protect fish populations during dry periods, riparian habitat areas and public hunting access. For example, respondents were asked to indicate what priority the DWR should place on acquiring land areas needed to maintain or increase deer and elk populations. The mean response was moderately high among the general public and license buyers (7.4 and 7.9 respectively). Similarly, when asked how much priority should be placed on acquisition of water rights to protect fish populations during dry periods, the mean responses were 7.9 among the general public and 8.3 among license buyers.
- Strong support for wildlife protection and for regulation of wildlife-related recreational activities is evident in responses to a series of questions pertaining to DWR law enforcement programs. Members of the public at large and hunting and fishing license buyers were particularly adamant in their beliefs that the DWR should prioritize the enforcement of laws that: require the purchase of hunting or fishing licenses; impose restrictions and limits on the taking of fish and game; prohibit loaded firearms in vehicles; prohibit driving under the influence of alcohol; restrict trespassing on private property; and prohibit littering and pollution of the environment. For all of these questions, the mean response values ranged from 7.4 to 9.0, indicating high to very high priority ratings. Lower priority ratings were assigned to the enforcement of laws protecting endangered species and non-game bird species, with the mean response values for these items falling between 5.6 and 6.7.

- Utah hunters are only somewhat satisfied with their big game hunting experiences, according to responses to questions pertaining to the management of big game populations. The mean response among big game hunters was 5.7, only slightly above the scale midpoint.

At the same time, Utah's big game hunters tend to be somewhat supportive of possible management changes, including some that could potentially enhance hunting quality. For example, approximately one-third of respondents indicated they would favor the implementation of a drawing-based approach to the allocation of general bull elk tags, and fewer than 30% were supportive of having a drawing for spike bull tags.

Hunters expressed little support for some alternative approaches to the management of deer hunting opportunities. For example, roughly equal numbers of hunters expressed strong approval and strong disapproval of a concept for the sale of deer tags which would assure that members of traditional family hunting groups all get licenses to hunt in the same area. Survey respondents were also ambivalent about the concept of offering a one-day, youth-only deer hunt, with nearly one-half of respondents indicating they would disapprove of such a program.

- Upland game hunters expressed, at best, only moderate levels of satisfaction with the quality of their recent hunting experiences in Utah. The mean satisfaction rating among upland game hunters was 5.3, barely exceeding the scale midpoint. Waterfowl hunters expressed substantially higher satisfaction, as reflected by a mean response score of 7.3. Upland game hunters were highly supportive of the concept of releasing pen-raised birds to increase the number of birds available during hunting seasons. Among both upland game and waterfowl hunters, there was only limited support for the provision of a youth-only hunting day, but high support for access restrictions to reduce crowding in high-use hunting areas.
- More than 50% of Utah adults indicated they had purchased a fishing license at some time during the past three years. Among those who have never purchased a license or have done so only in the more distant past, lack of time to fish emerged as the dominant reason for choosing not to participate in fishing. However, responses also indicated that access to information about fishing areas and techniques, concerns about the quality of fishing and crowding, and concerns about public access to fishing areas are also important factors that limit fishing participation and recruitment.

- There are substantial differences, and in some cases deep divisions, in wildlife value orientations and management preferences across different segments of the Utah population. Recreational cougar and bear hunting and management efforts to control predator species that prey on game populations emerged as perhaps the most contentious issues addressed in the survey. With regard to predator control as a means of protecting populations of game species, responses indicated a substantial split in opinion among Utahns at large; survey participants expressed both strong opposition and strong support for such management actions. Among the statewide general public the mean response value (on the approval scale) for this type of management approach was just under midpoint at 4.9. License buyers expressed somewhat higher support, as indicated by a mean response value of approximately 6.0.

Support for cougar and bear hunting was limited among most hunting and fishing license buyers, and extremely low among the general public. The mean approval rating for recreational hunting of cougar was moderately low (4.4) among the general public and moderately high (6.4) among license buyers. More substantial opposition was evident regarding the use of hounds to hunt cougar, with mean scores of just 3.5 among the general public and 5.6 among license buyers. With respect to recreational hunting of black bear, mean approval ratings were 4.0 and 5.7 among the general public and license buyers, respectively. Use of hounds to hunt bear received substantially lower approval ratings, with mean response values of 2.9 among the public at large and 4.6 among license buyers. Even less support was expressed for allowing bear hunters to use baits, with mean response values falling to 2.3 among the general public and 3.7 among license buyers.

- Compared to other stakeholder categories, nonconsumptive users who didn't hunt or fish were the least supportive of recreational cougar hunting and the use of hounds to hunt cougars. Nonconsumptive users and anglers who didn't hunt scored about equally in their disapproval of recreational bear hunting (3.23 and 3.24, respectively) and the use of hounds or baits to hunt bears (2.08 and 2.56, respectively). In fact, levels of support for these activities and management approaches, as well as for predator management to enhance game populations, were generally quite low among all stakeholder categories except hunters. However, even hunters showed very little support for the use of hounds (4.71) and baits (3.43) to hunt bears.

In summary, results of the survey indicate that Utahns are highly interested in the state's fish and wildlife resources and highly supportive of: efforts to protect and enhance wildlife populations through law enforcement; habitat acquisition; limitation of land and resource development; restrictions on access to and use of key habitat areas; and funding derived from a broad cross-section of the population. Clearly, Utahns place substantial value on the state's wildlife resources and view the protection and enhancement of those resources as important to the quality of life enjoyed by residents of the state.

The results also show that most Utahns are at least moderately satisfied with their wildlife-related recreational experiences, and with the ways the DWR is managing wildlife resources and providing for wildlife-related recreational opportunities. It is important to note that respondents generally did not indicate either substantial dissatisfaction with current conditions or substantial opposition to most management actions the DWR is now pursuing. In some ways, the gap between high levels of interest in wildlife and more moderate levels of satisfaction with wildlife management may be inevitable. Constraints imposed by limited fish and wildlife populations and limited agency resources make it difficult, if not impossible, to provide the range and quality of wildlife-related recreational opportunities that many Utahns want. Utah wildlife managers are confronted with a difficult task in their efforts to balance public demands for wildlife-related recreational opportunities with the need to protect and preserve the state's fish and wildlife resources.

Attitudes of Utah residents toward the state's wildlife resources are highly divergent. The presence of "multiple publics" with distinct and, at times, conflicting wildlife values and wildlife management preferences presents a substantial challenge to the DWR and others involved in efforts to manage and enhance wildlife and fish populations, as well as habitat. Knowledge about wildlife management issues that Utahns want prioritized, and about key areas where dialogue and public information are needed, is an important element in improving Utah wildlife and habitat management in the future.

III.

DWR Preliminary Analysis by Sections

Findings and implications from the Krannich Report will be analyzed and incorporated into the DWR's five-year strategic plan, scheduled for implementation in July 1999. The following are preliminary analyses of the Krannich Report from the perspective of specific programs within the DWR. These analyses will be refined and reviewed as the strategic planning process continues.

Habitat

Highlights

The DWR is generally perceived as moderately effective in protecting and improving wildlife habitat. About 30% of license buyers rated DWR as very- to extremely effective in protecting and improving important wildlife habitat.

All sample groups strongly agreed with limiting access to some public lands during certain periods to protect wildlife populations, and with continuing livestock grazing on public lands, so long as grazing use does not threaten wildlife or fish populations.

All groups were generally supportive of restricting oil, natural gas, and coal development in areas where it would cause reduced wildlife or fish populations. About 30% of the general public respondents strongly agreed that such activities should be limited. Metropolitan (metro) residents felt more strongly about this than did nonmetropolitan (nonmetro) residents; even among nonmetro residents, 51% of respondents strongly agreed with such restrictions.

Since the 1986 public opinion survey, support for limiting resource development to protect wildlife and fish has increased. For example, among the general public respondents, 65% showed strong support for prioritizing wildlife habitat protection over housing development.

All respondents indicated very high levels of agreement that wildlife should be prioritized over road construction in areas where new construction is likely to cause significant losses of fish and wildlife or their habitat. Over 60% of the general public and 62% of metro responses indicated "strong agreement" with this priority. Since 1986, Utahns have become slightly more supportive of these kinds of restrictions.

Approximately 65% of the general public respondents strongly agreed with restrictions on the use of off-road vehicles (ORVs) and all-terrain vehicles (ATVs) where those activities threatened wildlife or damaged wildlife habitat. Wasatch Front residents were slightly more supportive of these restrictions (67%). Metro hunters were substantially more supportive of ATV restrictions than nonmetro hunters. Nonetheless, among license buyers as a whole, 60% of respondents indicated "strong support" for such use restrictions.

General public respondents were moderately supportive of banning personal watercraft use on high-use fishing areas. Metro anglers were slightly more likely to agree with these restrictions than nonmetro anglers.

About 49% of the general public respondents ranked the acquisition of land to maintain or increase deer and elk population as a "very high priority." License buyers were especially enthusiastic in their support for this option. The general public showed moderately high support for acquiring lands for public hunting access. Wildlife license buyers showed substantially higher support for this option, with especially high levels of support evident among hunters.

Program Areas Needing Focus

Acquiring water rights (e.g., in-stream flows and conservation pools in reservoirs) to protect fish populations during dry periods was rated as a “very high priority” among both the general public and license buyers (**see Table 1**). Around 33% of the general public rated this an “extremely high priority.” Roughly 65% of responses fell into the “high priority” range. License buyers revealed overwhelming support for this type of program.

Both the general public and license buyers indicated that acquiring land for riparian and wetland habitat values was a high priority, second only to water rights. Metro respondents expressed slightly more support for this than did their nonmetro counterparts (**see Table 2**).

The general public placed a fairly high priority on acquiring land areas which would be closed to hunting or fishing. License buyers placed a slightly lower priority on this issue.

Wildlife

Highlights

Generally, Utahns are highly interested in the state's wildlife resources and highly supportive of efforts to protect and enhance wildlife populations. However, they are concerned about the quality of their experiences and strongly divided over some DWR management strategies. Among respondents from the general public, about 26% were neutral (neither satisfied nor dissatisfied) regarding overall DWR wildlife management. Metro and nonmetro responses were similar. Hunter responses were primarily neutral, while anglers were slightly satisfied. About 18% of public respondents were very satisfied with overall DWR wildlife management, while 11% were very dissatisfied. When asked what the DWR could do to improve its current management program, 41% of the general public indicated nothing should be changed; 10% "did not know."

When asked what should be changed about fish and wildlife management, approximately 20% of respondents suggested changes in management of big game. Most responses focused on general concerns that deer herd numbers should be increased and that big game hunts should be restricted to help herds recover. This seems to indicate that, although the public only mildly approves of DWR wildlife management, about half of the population would not recommend any kind of change.

Overall big game hunter satisfaction was slightly positive and has not changed since a similar survey was conducted in 1986. Nearly 30% of license buyers rated their experience "very good" while 17% fell in the "very poor" range. Most respondents were clustered in the middle.

Quality of the upland game hunting experience was rated slightly lower in 1997 than 1986. Upland game bird hunters strongly favor releasing pen-raised birds, particularly pheasants, to improve hunting.

The waterfowl program received good reviews from license buyers, with the exception of urban anglers. About 64% of license buyers rated overall quality of waterfowl hunting in the state as very good. Waterfowl hunters, with long seasons and high waterfowl populations, rated their hunting experience over the past few years as moderately to very high, the best of any group surveyed. This is a dramatic improvement over the 19% that rated the waterfowl hunt as very good in 1986, probably due primarily to improvements in hunter access and bird numbers in the last few years. About 50% of license buyers indicated strong approval for the concept of limiting the number of hunters who could use waterfowl management areas on a given day.

License buyers support current DWR programs for youth waterfowl and upland game hunting; 42% are very supportive of youth waterfowl days and want the program continued. Initial support for a youth pheasant hunt was low. However, when youth were allowed to hunt pen-reared and released pheasants, 70% of license buyers strongly supported it. The concept of a youth deer hunt one week prior to the general season opener received little support among license buyers (40% strongly disapproved).

Frequently, people assume that hunters and wildlife watchers are different groups of outdoor recreationists. In fact, over 65% of hunting license buyers reported taking a trip to observe, photograph, sketch or paint wildlife, whereas only 44% of general public respondents reported taking a wildlife observation trip. Hunting and fishing license buyers also spent more days on wildlife-watching trips. Finally, in response to how satisfied they were with the wildlife observation trips, both the public and license buyers were generally positive about their experiences.

Predator management and control are highly controversial areas of wildlife management (see **Table 3**). Support for cougar and bear hunting was limited, even among some hunting and fishing license buyers, and extremely low for the general public. The mean approval rating for recreational hunting of cougars was moderately negative among the general public, but moderately positive among license buyers. Nearly one-third of the general public strongly disapproved of cougar hunting, while nearly half of hunters strongly approved. Nonmetro hunters very strongly favored cougar hunting.

The survey revealed more opposition to cougar hunting using dogs (hounds). The general public moderately disapproved, while license buyers were neutral to slightly positive. Approval among nonmetro hunters remained very high.

Support for recreational hunting of black bears showed the same split between the general public and license buyers, but at a slightly lower approval level than for cougars. Using hounds and hunting bears over bait drew very low to moderately low approval ratings among the general public and moderately low to neutral ratings among license buyers. Specifically, most license buyers expressed very strong disapproval of bear baiting. The only subgroup to rate these methods on the positive side of the scale was nonmetro hunters (slightly to moderately high).

License buyers were somewhat to moderately in favor of controlling predator numbers to protect populations of game animals; overall, general public respondents were neutral on the issue (see **Table 4**). At the extremes, 17.5% of the general public extremely disapproved, while 22% of license buyers very strongly approved of this management strategy. Metro residents held a slightly negative to neutral opinion of predator management, while nonmetro hunting license buyers moderately to strongly favored this management action.

Program Areas Needing Focus

Several implications for the wildlife program are evident from the survey. Clearly, attention must be given to highly controversial practices in order to avoid divisive debates that may polarize wildlife interest groups in the state.

Some management practices are highly controversial and opposed by all but a small special interest group. A process should be developed to resolve or at least defuse these differences, or management of some species may become even more difficult.

Wildlife users seem to be more critical of what the DWR does in their particular area of interest than in other areas. For example, hunters think things are better for nongame species than game species, while the general public thinks just the opposite. The challenge is to develop a unified approach to target critical audiences with information depicting the broad diversity of wildlife present in the state and the amount of DWR management effort accorded to both hunted and nonhunted species. By taking advantage of existing programs (e.g., Dedicated Hunter and Wildlife Heritage), exploring new, self-funded programs and using innovative media approaches, the DWR may be able to enhance awareness of, and interest in, all wildlife species.

Wildlife user experiences are difficult, but not impossible, to improve; yet perceptions of the quality of those experiences are perhaps somewhat easier to affect. Deer hunting success, size of bucks and deer numbers have improved somewhat. At the same time, hunter numbers have decreased, although apparently not enough to improve the quality of the experience as perceived by deer hunters. Enhanced efforts to educate hunters in ethical, yet effective hunting strategies are necessary. Perhaps by educating and encouraging deer hunters to understand and adapt to their quarry's behavioral patterns in response to hunting pressure (e.g. getting hunters out of vehicles and further afield), they may encounter less crowding and experience higher quality hunting.

Aquatics

Highlights

Statewide public assessment of DWR effectiveness in creating fishing opportunities was very positive. About 50% of general public respondents saw DWR sport fishing programs as extremely effective, although nonmetro residents were not as highly supportive (45%) as metro residents (52%). About 45% of metro and 33% of nonmetro anglers agreed that the DWR was very effective in creating fishing opportunities. Hunters (who may also be anglers) tended to be even more impressed with DWR effectiveness in this regard, as 54% of metro hunters and 61% of rural hunters thought the DWR was extremely effective in creating fishing opportunities (See Table 5).

About 24% of respondents who purchased licenses were under 25 years of age while 6% were 65 or older. About 18% of the general population is composed of seniors age 65 or older, who presumably have more leisure time. Nevertheless, a reduced license fee does not seem to be a motivator for seniors to take up fishing. This implies that sport fishing is primarily an activity of younger people, but that there is a clientele of older people that might be enticed to fish more if we can determine the inhibiting factors.

Licensed, married people were more interested in fishing and/or hunting and had more children in the home than non-license holders. Developing a family licensing package could be effective in enticing more families to fish. **Figure 1** shows other desired improvements to increase fishing participation among the public as well as metro and nonmetro residents.

About 27% of the metro fishing public and 16% of rural anglers are very- to highly satisfied with the DWR management program. Only 9% were unsatisfied in the metro areas, while 13% of nonmetro residents were very unsatisfied.

Program Areas Needing Focus

Rural attitudes toward the aquatics program were less positive than urban attitudes. This may demonstrate the need to develop outreach programs directed at the rural populace. Attitudes about the cost of fishing licenses (15% said the fees were too high) might be mitigated with an aggressive publicity campaign showing that licenses are really inexpensive compared to other forms of recreation.

The most frequently expressed reason for not fishing by those respondents who have never bought a Utah fishing license is "not enough time" (52%). This points up the need for more activities and marketing strategies promoting angling as an attractive option to other activities and forms of recreation. The 16% of respondents who had never bought a Utah fishing license, and who said fishing waters were too far to go, represent a group that might find urban fishing programs attractive. Urban ponds, canyon streams and mid-elevation lakes and reservoirs along the Wasatch Front could be more effectively managed to provide increased angling opportunities. Angling seminars and other activities (such as "Pathways to Fishing") could also increase angler participation.

Information & Education

Highlights

Most respondents expressed the opinion that the DWR is doing an adequate job of disseminating information to the public. When asked generally what management changes DWR should make, only about 1% of Utahns want to see changes in management programs dealing with information and education or public awareness concerns. About 45% of public respondents rated the DWR information and education programs to help Utahns understand conservation issues as moderately to strongly effective.

Most of those surveyed indicated that the DWR was doing a good job of taking public opinion into account. According to the report, Utahns have a moderately high interest in the state's fish and wildlife resources. The survey reported considerable concern among the public about the need for more information and education programs. There was little difference between hunters and anglers, or those living in metro areas versus nonmetro areas (see **Figure 3**). In general, Utahns want more information about every facet of Utah's fish and wildlife resources. They expressed a desire for more information and a deeper understanding of the sociological, political and economic constraints that confront wildlife managers who make management decisions in view of an array of resource trade-offs.

Program Areas Needing Focus

Just over 40% of Utahns are involved in nonconsumptive wildlife-related activities, such as feeding wildlife, enhancing wildlife habitat, or taking outings simply to observe wildlife. Almost one-third of respondents maintain natural yard habitat areas to benefit wildlife.

Most survey participants believe the DWR should place a moderately high priority on information programs designed to enhance wildlife observation opportunities. Generally, Utahns expressed a moderately high level of expectation that the DWR should develop nature centers, more watchable wildlife sites and trails in and around urban areas.

A similarly high level of expectation exists for DWR specialists to present educational workshops or organize special events, such as Bald Eagle Day, where Utahns can learn about wildlife and their habitats.

Respondents also expressed a high level of expectation that the DWR should develop radio and television programs to further understanding and appreciation of Utah's fish and wildlife resources (see **Table 7**).

Only 18% of general public respondents were aware of the existence of wildlife regional advisory councils (RACs), the primary avenue for public input into the Wildlife Board's decision making process and DWR management. This would indicate the need for a more intensive media effort concerning the RACs.

Law Enforcement

Highlights

The Krannich Report shows that virtually all Utahns have a high regard for professional wildlife law enforcement. Almost all respondents indicated moderate to strong support for DWR law enforcement efforts. This overwhelmingly positive response is noteworthy since law enforcement, by its very nature, contains elements of confrontation and legal implications that might negatively affect attitudes among the public and, especially, offenders.

DWR law enforcement programs that protect wildlife scored moderately high among the general public and license buyers.

With a population of approximately two million people and a total of just 78 wildlife law enforcement officers statewide, it is apparent that Utah officers are active and recognized. Within the past five years, 23% of the general public and 53% of license buyers were contacted by a DWR law enforcement officer.

DWR law enforcement officer professionalism and courteousness scored high to very high among 60% of the general public and high to very high among 60% of license buyers. Concerning the overall quality of contacts with DWR officers, 7% of license buyers and 16% of general public respondents rated them in the 0-2 range of very poor to poor.

All respondents ranked the importance of protecting wildlife and public safety and welfare as high (**see Table 6**), with the majority ranking both responsibilities as high to extremely high priorities. Nonmetro resident support for DWR enforcement of wildlife laws was appreciably higher (82%) than metro residents (70%). Among license buyers, this was seen as a very high priority as well (87%). Hunters rated the enforcement of wildlife laws as a very high priority (metro hunters 93%; nonmetro hunters 92%). Anglers also rated enforcement highly (metro anglers 83%; nonmetro anglers 81%). License buyers, although supportive of enforcing laws to protect endangered species, did not rate this as quite as high a priority (**see Figure 2**). The scores indicate a very high priority and acceptance of these broad mandates for the DWR law enforcement program.

Program Areas Needing Focus

In general, respondents ranked the importance of enforcing laws that protect endangered species and nongame bird species as only moderately important, much lower than the responses for other law enforcement categories. This may indicate the public does not fully understand or appreciate the importance of laws protecting federally listed wildlife species and nongame birds. The DWR should determine the reasons for these rankings and adopt strategies to inform and educate the public about endangered and nongame species.

Funding For Wildlife Management

Highlights

There is often confusion among both consumptive and non-consumptive users, related to the sources of revenue for the operation of wildlife agencies. While the public at large (including wildlife viewers, photographers, etc.) generally accepts that hunters and anglers purchase licenses, and that the income flows to the wildlife agency, there is typically little consideration related to other sources and amounts of funding. When asked who should be responsible for funding wildlife game populations related to consumptive uses (i.e. hunting, trapping and fishing) 35% of the general public and 40% of license buyers agreed that either "all Utahns" or "all with an interest" should support the cost of management. The percentages are much higher (49% and 48% respectively) for all Utahns to provide funding support for non-game species.

About 16% of the public believes only consumptive users should pay the entire cost for managing game populations. In 1998, about 86% of wildlife funding for the DWR came directly (or indirectly through federal funds) from the sale of state wildlife licenses and from federal excise taxes, primarily on hunting and fishing equipment. About 11% of the funds came from general state tax dollars in 1998. In considering this issue, it is important to note that about 13% of all wildlife species in the state are game species (hunted or fished for).

Among the general public, most people believe the cost of supporting wildlife in Utah should be everyone's responsibility. One possibility for realizing the expectations of the public is to enhance the state general fund contributions to the operation of the agency.

Program Areas Needing Focus

With the tremendous population growth in Utah, there are increasing demands to manage all wildlife species in a manner that will allow them to survive within existing or diminishing habitat. According to the study, respondents indicated that funding necessary for the conservation and management of wildlife and their habitat should come from a broader base rather than just from hunters and anglers. Alternative, broad-based funding sources should be actively pursued.

Regional Advisory Councils

Highlights

Public involvement is critical to successful decision-making in wildlife management. Wildlife regional advisory councils (RACs) are comprised of public representatives from a diversity of backgrounds. The five RACS throughout the state conduct open public meetings to gather public input and make recommendations (in an advisory capacity) to the Wildlife Board regarding rules and regulations for wildlife conservation and management.

According to the Krannich Report, only about 18% of adult Utahns have heard of the RACs (see **Figure 4**). Among the nonmetro general public, 25% of respondents were aware of the RACs, as opposed to 16% of metro respondents. On the other hand, RAC awareness levels were fairly high among both metro hunting license buyers (34%) and nonmetro hunting license buyers (43%). Awareness levels among fishing license buyers were much lower -- 13% among metro anglers and 18% among nonmetro anglers (see **Figure 5**).

Among those aware of the RAC process, only 12% of metro and 19% of nonmetro respondents had ever attended a RAC meeting. By contrast, metro and nonmetro hunting license buyers who had heard of the RACs indicated meeting attendance at 35% and 38% respectively. Only 6% of fishing license buyers in the metro area had attended a meeting, while 33% of nonmetro anglers had attended one or more meetings.

These results indicate little familiarity with the RACs and low attendance at RAC meetings, even among those who know about them. Fishing license buyers, in particular, are surprisingly unaware of the RAC process and generally have not participated. The most common explanation given by both the general public and license buyers (40% of each group) for not attending RAC meetings was not knowing where or when meetings were held. About 10% of the general public and 14% of license buyers indicated they did not attend RAC meetings because they weren't convinced that their input would have any impact on management decisions.

Program Areas Needing Focus

While the RACs could potentially serve as an important forum to secure broad-based public input, at present they are not doing so. The RAC process should be strengthened by implementing a broad-based public information campaign to increase awareness of the RACs, including broadly distributed information about times and locations of meetings. Efforts should also focus on scheduling RAC meetings at times and places that will encourage broader public participation.

Relatively high RAC awareness and participation among hunting license purchasers suggests that nonconsumptive users and anglers may view the process as directed primarily to hunting issues and interests. More effort should be directed at involving a broader cross-section of constituencies to make them more aware of what is being done regarding wildlife management in Utah. It may also be useful to schedule more meetings focused on issues that are more pertinent to them.

IV.

Tables and Figures

Habitat

Table 1. Response distributions to question measuring attitudes about the priority of acquiring water rights to protect fish during dry periods, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Very low priority	2.3	3.3	2.5	3.0	3.2	0.0	6.9	2.2
3-4 Moderately low priority	3.2	5.6	3.8	0.0	1.6	0.0	3.4	0.7
5 Neutral	9.2	8.9	9.1	3.0	8.2	6.7	8.6	6.0
6-7 Moderately high priority	17.4	24.8	19.1	13.5	13.1	13.3	17.2	13.8
8-10 Very high priority	67.8	56.4	65.6	80.6	73.7	80.0	63.9	77.0
Average/ Mean	7.96	7.60	7.88	8.52	8.16	8.45	7.62	8.31

Habitat

Table 2. Response distributions to question measuring attitudes about the priority of acquiring land areas to maintain shoreline conditions, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Very low priority	3.7	2.4	3.4	5.8	3.2	1.7	8.8	4.2
3-4 Moderately low priority	3.6	5.7	4.1	0.0	3.2	5.0	3.6	2.8
5 Neutral	7.8	12.7	8.9	5.8	16.4	3.3	12.3	7.8
6-7 Moderately high priority	21.5	25.0	22.3	15.9	11.5	16.7	22.8	16.1
8-10 Very high priority	63.4	54.2	61.4	72.4	65.6	73.0	52.6	69.0
Average/ Mean	7.80	7.44	7.72	8.16	7.79	8.15	7.18	7.96

Wildlife

Table 3. General Public Response Regarding Predator Management Issues

	Public Response	
Predator Management Issue	Very Strong Approval by Percent (%)	Very Strong Disapproval by Percent (%)
Limiting predator populations to benefit game populations	24	27
Use recreational hunting to control predators to benefit game	20	32
Use hounds to hunt cougars	17	46
Use hounds to hunt bears	10	55
Use bait to hunt bears	6	62

Wildlife

Table 4. Response distributions to question measuring attitudes about the approval of limiting or reducing predators to protect game, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Strongly disapprove	27.5	22.9	26.4	13.7	10.8	28.8	15.8	18.5
3-4 Moderately disapprove	15.7	10.4	14.5	6.4	5.9	13.5	7.5	8.9
5 Neutral	16.6	17.5	16.8	21.0	8.3	14.4	19.2	15.9
6-7 Moderately approve	18.6	17.5	18.4	18.6	9.2	21.6	26.7	18.7
8-10 Strongly approve	21.6	31.5	23.9	40.3	65.8	21.6	30.8	38.0
Average/ Mean	4.72	5.46	4.89	6.21	7.56	4.74	5.94	5.95

Aquatics

Table 5. Response distributions to question measuring attitudes about DWR effectiveness in creating fishing opportunities, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Not at all effective	4.4	5.3	3.8	1.8	3.3	5.0	4.7	3.7
3-4 Moderately ineffective	4.0	6.4	4.5	7.0	4.9	3.3	9.4	5.6
5 Neutral	10.3	10.2	10.3	8.8	6.6	11.7	17.2	10.5
6-7 Moderately effective	29.9	33.2	30.6	28.1	24.6	35.0	35.9	31.0
8-10 Extremely effective	51.5	44.9	50.1	54.3	60.7	45.1	32.9	49.3
Average/ Mean	7.05	6.87	7.01	6.30	7.53	6.97	6.45	7.12

Law Enforcement

Table 6. Response distributions to question measuring attitudes about the priority of enforcing laws to protect fish and game from being taken illegally, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Very high priority	5.1	2.7	4.5	0.0	0.0	3.4	0.0	1.4
3-4 Moderately low priority	3.8	0.8	3.2	0.0	0.0	0.0	1.5	0.2
5 Neutral	2.1	3.1	2.3	0.0	3.3	1.7	1.5	1.5
6-7 Moderately high priority	18.3	11.1	16.7	6.9	4.9	13.6	13.3	9.8
8-10 Very high priority	70.6	82.2	73.3	93.1	91.8	81.3	83.7	87.0
Average/ Mean	8.11	8.63	8.22	9.41	9.10	8.63	8.69	8.96

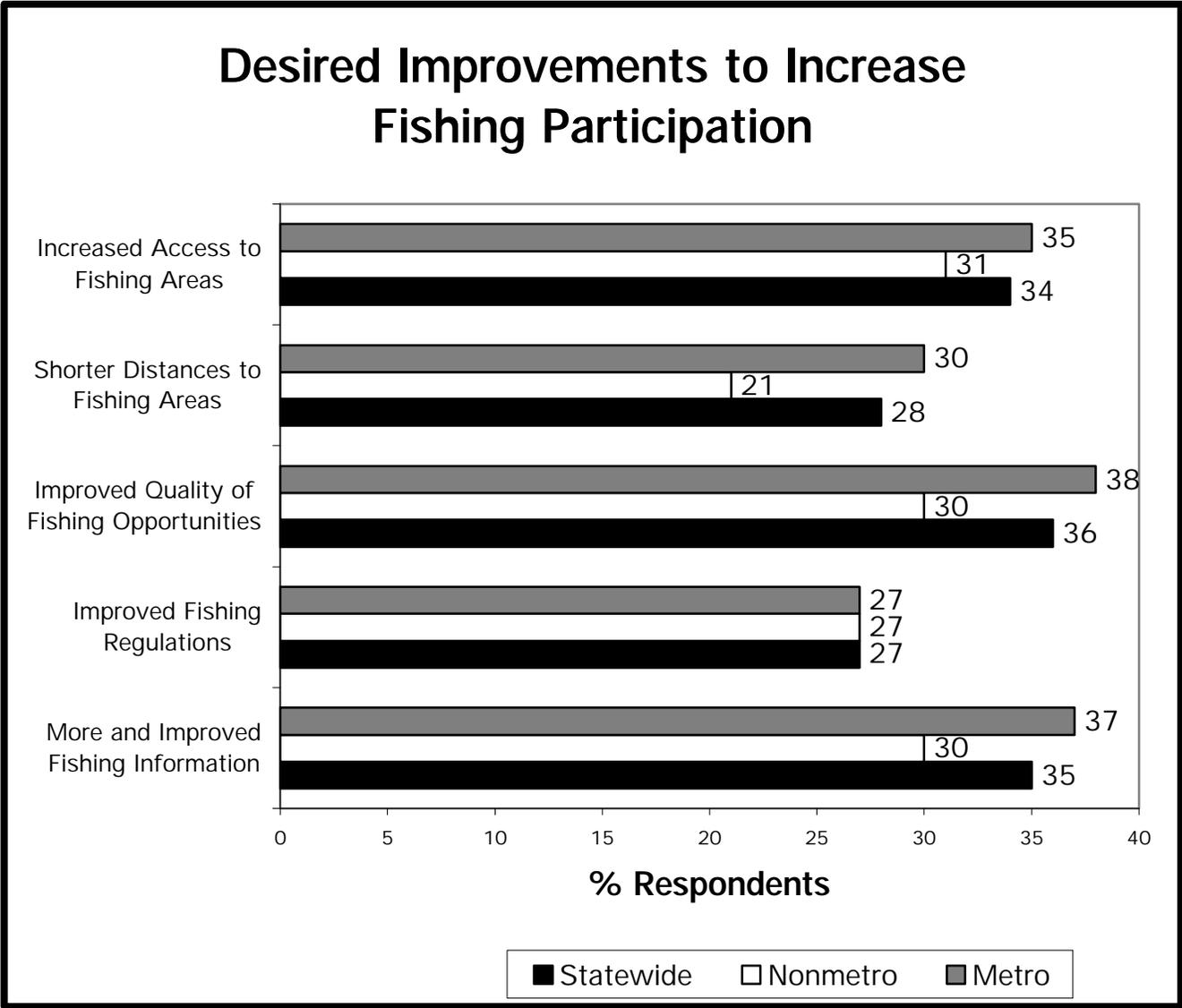
Information & Education

Table 7. Response distributions to question measuring attitudes about the priority of developing new radio & television programs, general public and hunting/fishing license purchaser samples (percentages).

Response Value	General Public			License Purchasers				
	Metro-area Residents	Nonmetro Residents	Statewide Sample (weighted)	Metro Hunting	Nonmetro Hunting	Metro Fishing	Nonmetro Fishing	All License Purchasers (weighted)
0-2 Very low priority	5.5	5.0	5.3	4.7	9.8	4.9	4.8	5.8
3-4 Moderately low priority	5.9	10.0	6.8	3.2	8.2	3.4	6.3	4.7
5 Neutral	12.7	12.9	12.8	7.1	15.4	10.7	18.1	11.6
6-7 Moderately high priority	26.2	23.1	25.3	19.7	18.7	23.2	24.2	21.4
8-10 Very high priority	49.9	49.0	49.7	65.4	47.9	57.8	46.4	56.6
Average/ Mean	7.13	7.08	7.12	7.82	6.71	7.46	7.06	7.37

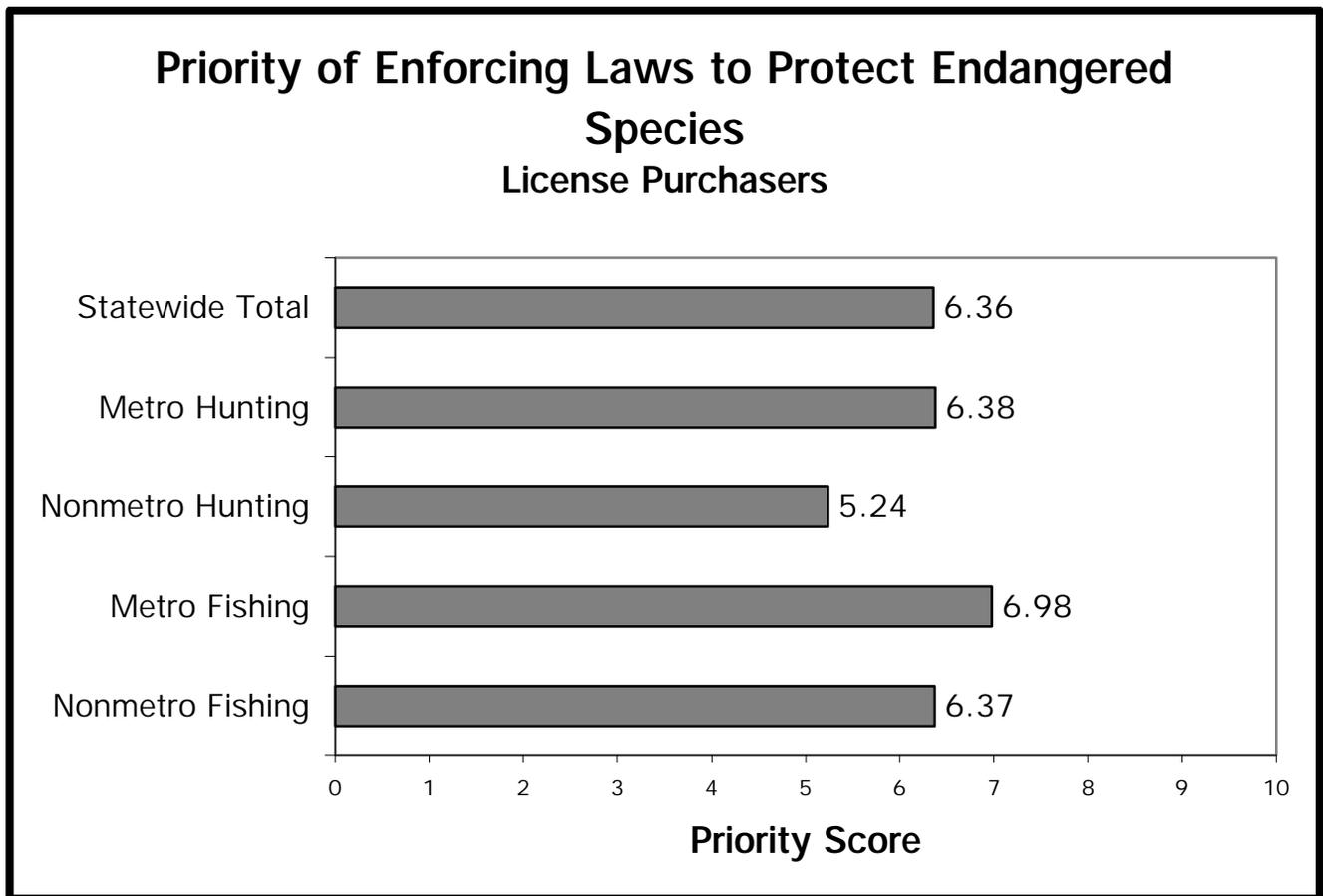
Aquatics

Figure 1.



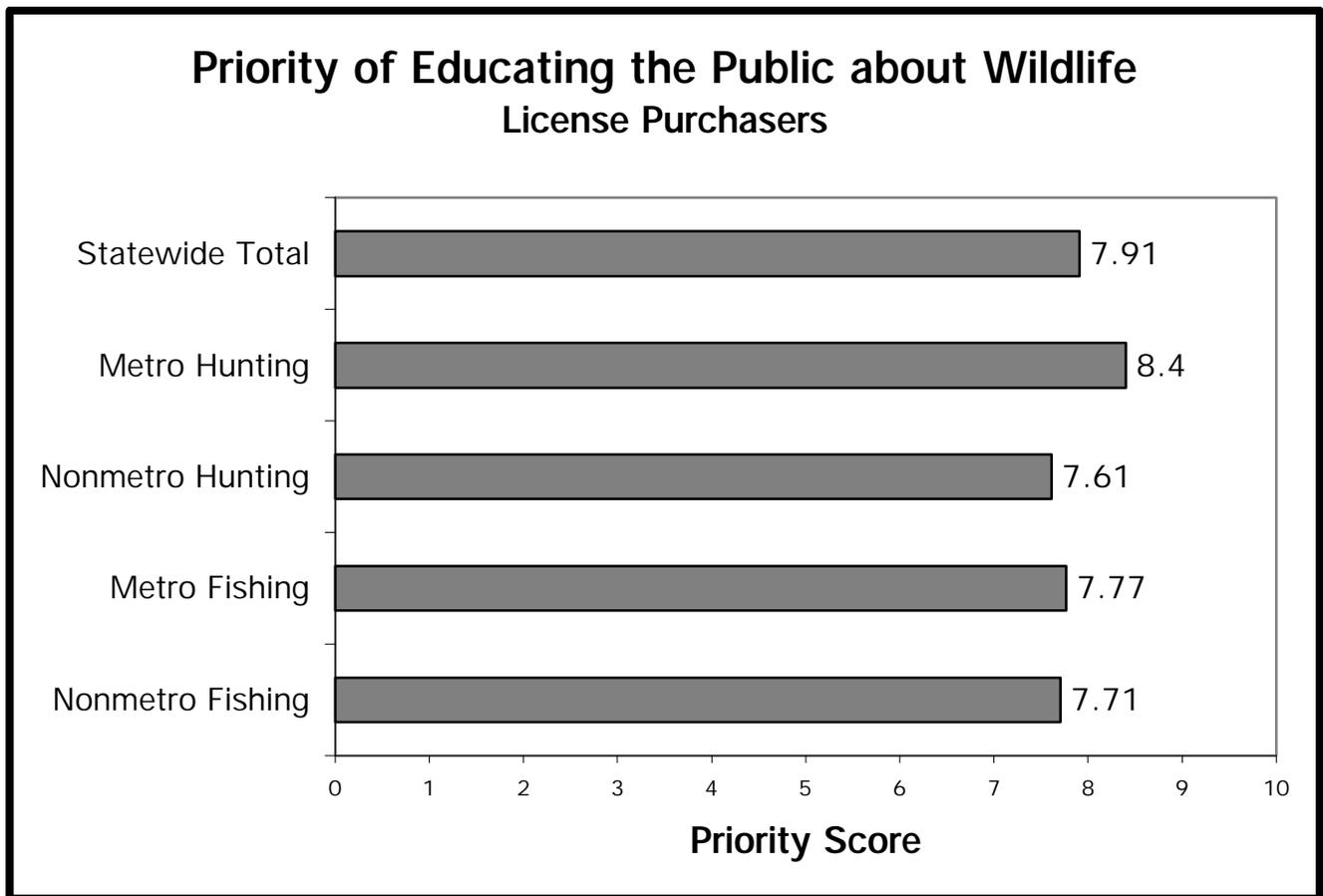
Law Enforcement

Figure 2.



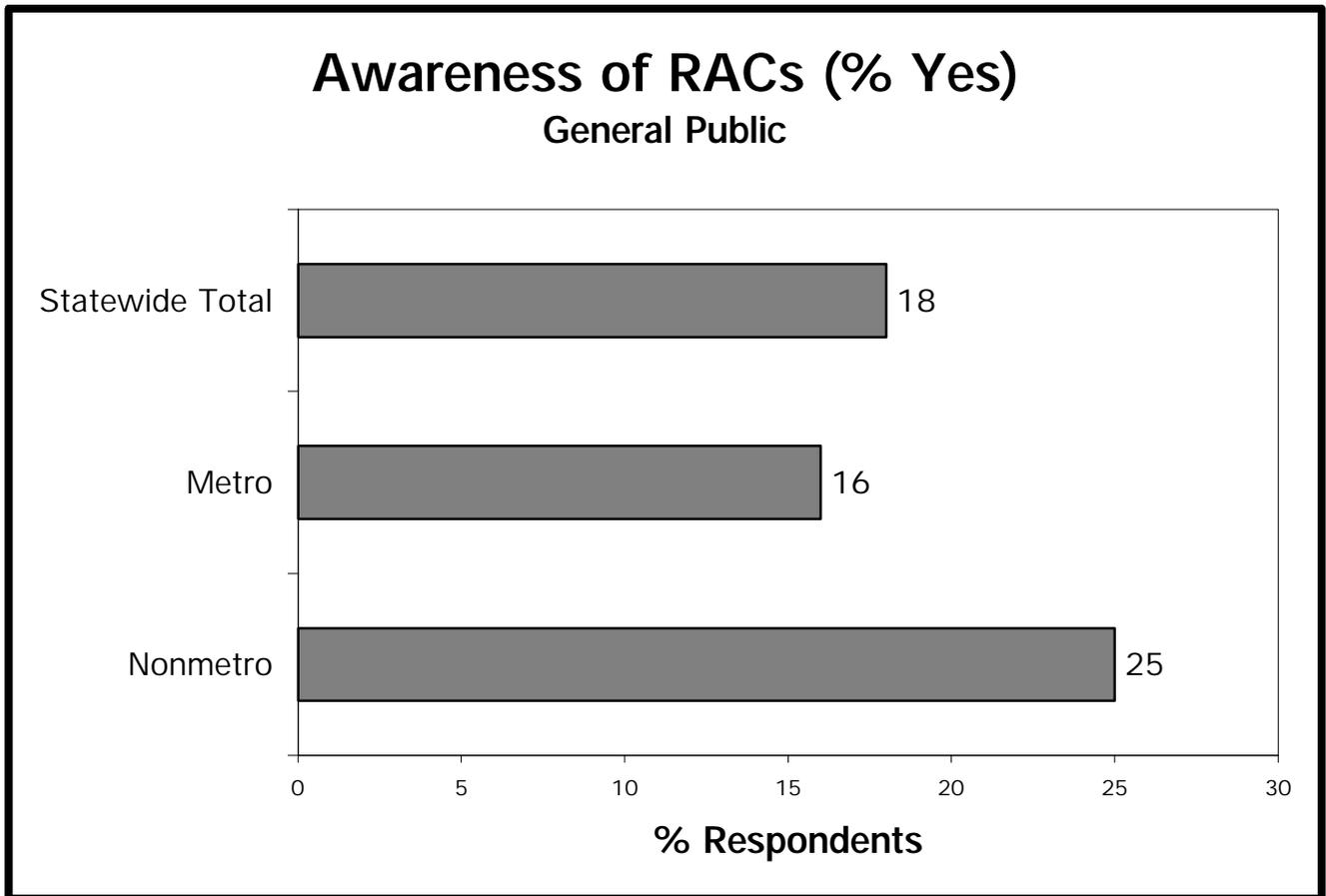
Information and Education

Figure 3.



Regional Advisory Councils

Figure 4.



Regional Advisory Councils

Figure 5.

