

Responsive Management™



AN ASSESSMENT OF PUBLIC OPINION ON FISHING AND HUNTING LICENSE STRUCTURES AND PRICING IN MINNESOTA

Conducted for the Minnesota Department of Natural Resources

**by Responsive Management
and Dr. Tony Fedler**

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EXECUTIVE SUMMARY

This study was conducted for the Minnesota Department of Natural Resources (hereinafter referred to as the MN DNR or simply “the Department”) to assist the Department in developing legislative recommendations for modifying the Department’s license structure and fee schedule. This study was designed to determine public support for or opposition to possible license structures, to explore customers’ threshold for license fees (i.e., the maximum price at which the consumer will still view the license as a good value), and to identify the elements of a license structure and accompanying fee schedule that is most marketable to consumers while still providing the MN DNR with adequate revenue. Ultimately, this project was designed to provide data to allow the DNR to determine the best license structure to achieve the following goals:

- Increase revenue and ensure economic sustainability
- Offer affordable and comparable pricing
- Encourage constituent support
- Offer flexibility to accommodate future growth and changes
- Better meet the needs of the public and those of the agency

This study involved a two-phase, multi-modal approach, which coupled an internal assessment with an external assessment. This approach accounts for the opinions and attitudes of both internal and external constituents, thereby providing the MN DNR an overview of the opinions of key MN DNR personnel as well as input from current and potential markets regarding the Department’s license restructuring goals and long-term objectives.

Phase I of the study entailed an initial focused discussion with key MN DNR personnel to set the parameters for the study and develop a survey outline. Following the initial discussion, Responsive Management conducted a review of data pertaining to Minnesota’s license structure, fee schedule, sales trends, and sales revenue. Additionally, Phase I included a review of license structure changes and fee schedules in other states, with data obtained from a web-based and telephone survey of fish and wildlife professionals in other states.

Phase II entailed a multi-modal survey of anglers and hunters to test license structures and fee schedules and to obtain opinion data on related issues. The survey was administered by mail and on the Internet, with telephone assistance as necessary. The survey was designed by Responsive Management, Dr. Tony Fedler, and the MN DNR. A conjoint analysis of the survey data was conducted and then used in the development of final report.

The resident fishing and resident hunting licenses discussed in the survey were categorized as being either existing or potential (i.e., proposed, although the survey did not use the word “proposed”) licenses. These are listed below:

Existing Resident Fishing Licenses Asked About in the Survey

24-Hour (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)

Annual Individual Fishing (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)

Annual Combination (husband/wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)

Individual Sports (for a resident age 18 and older for angling and small game hunting)

Sports Combination (husband/wife) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)

Individual Conservation (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)

Conservation Combination (husband/wife) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)

Potential Resident Fishing Licenses Asked About in the Survey

3-Day (for a resident to fish for 72 continuous hours)

7-Day (for a resident to fish for 7 consecutive days)

90-Day (for a resident to fish 90 consecutive days)

6-Month (for a resident to fish April 1-September 30 or October 1-March 31)

3-Year Annual (for a resident to fish 3 consecutive years from date of purchase)

5-Year Annual (for a resident to fish 5 consecutive years from date of purchase)

Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

Existing Resident Hunting Licenses Asked About in the Survey

Small Game (for a resident to hunt small game; stamps are required to take pheasant and migratory waterfowl)

Individual Sports (for a resident to fish and hunt small game)

Sports Combination (husband/wife) (for legally married residents age 18 and older, providing fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)

Potential Resident Hunting Licenses Asked About in the Survey

Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)

24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)

3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)

3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)

5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)

5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)

Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

FISHING AND HUNTING PARTICIPATION AND LICENSE SALES NATIONALLY AND IN MINNESOTA

Nationally, both fishing and hunting participation have declined recently. However, in Minnesota, fishing participation declined only slightly, far less than the national decline, and hunting participation actually increased. Both of these positive results are fueled by increases in resident anglers and hunters. The numbers of out-of-state anglers and hunters have declined in Minnesota, particularly anglers.

The *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* indicated that 22% of Minnesota anglers were non-residents and 5% of Minnesota hunters were non-residents. These proportions have remained fairly constant since 1991.

In looking at sales of various types of Minnesota fishing and hunting licenses and stamps, there have been substantial increases in the past decades in the number of licenses sold for three license types: the 24-Hour Angling license, the Resident Individual Angling license, and the Resident Individual Sports license.

COMPARISON OF FISHING AND HUNTING LICENSE FEES ACROSS STATES

Minnesota's Resident Annual Freshwater Fishing license is on the low end of the range of fees charged throughout the United States. Otherwise, Minnesota's fishing license fees for residents are commensurate with the rest of the nation, being neither relatively high or low. Compared to nearby states, Minnesota's resident fishing license fees are in the middle.

The fee that Minnesota charges for the Non-Resident Annual Freshwater Fishing license is at the low end of the range of fees of the 50 states. Otherwise, Minnesota is in the middle of the fees charged for non-resident fishing licenses. Compared to the fees of nearby states, Minnesota's non-resident fishing license fees are in the middle.

Regarding hunting license fees, Minnesota's fee for a license to hunt deer is at the low end of the range among all 50 states. Otherwise, its license fees to hunt various game are a little lower than the national means, but not extremely lower. In comparison to nearby states, Minnesota charges hunting fees that are in line with those of nearby states.

CHANGES IN LICENSE FEES AND THEIR EFFECTS ON FISHING AND HUNTING PARTICIPATION

Most license fee increases have two simultaneous outcomes: an increase in agency revenues, but a decrease in the number of actual licenses sold or license holders (some agencies refer to this as a "protest rate," with casual or non-avid anglers and hunters being the most likely to forgo the license purchase). Substantial or particularly sudden fee increases will result in larger protest or dropout rates; modest or incremental increases will yield smaller declines in overall licenses sold/participation rates. The evidence suggests that agencies should expect a 2- to 5-year sales decline before sales may be expected to rebound to pre-increase levels. As a general rule, the higher the fee increase, the longer it is likely to take for license sales to rebound to pre-increase levels.

The data suggest that agencies benefit by communicating to the public, as best as possible, how the increased funds from license sales will be spent or appropriated, particularly when they are allocated toward wildlife management and improved fishing and hunting opportunities (or other outdoor recreation improvements). Recent qualitative research with hunters and anglers conducted by Responsive Management suggests that public outreach and communication regarding the reasons for and intended benefits of increased license fees may substantially lessen the "protest rate" following fee increases and reinforce good will between the agency and its constituents.

SURVEY RESULTS REGARDING FISHING AND HUNTING IN MINNESOTA

DESIRABILITY OF LICENSES

Among residents, the existing fishing licenses rated the most desirable include the Annual Combination (husband and wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp) Fishing license, the Annual Individual Fishing license, and

the Individual Sports license (for a resident age 18 and older for angling and small game hunting). Among regular anglers (note that the study broke down the sample into regular and casual participants: regular are those who participated more than 3 of the past 5 years, and casual are those who participated 3 or fewer years of the past 5), add the Sports Combination license (husband and wife, for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp) to the those three most desirable licenses.

When asked about potential licenses, residents expressed much desire for the 3-Year Annual Fishing license, the 5-Year Annual Fishing license, and the Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) license. In the crosstabulation by regular (participated more than 3 of the past 5 years) versus casual (participated 3 or fewer years of the past 5) angler, regular anglers expressed the most desire for the licenses with longer terms; casual anglers expressed the most desire for the licenses with shorter terms.

Among non-residents, the most desire was expressed for the Annual Individual Non-Resident Fishing license and the 7-Day Non-Resident Fishing license. Again, casual anglers showed a preference for the licenses with shorter terms, relative to regular anglers.

Regarding existing hunting licenses, the most desire was expressed for the Individual Sports (for a resident to fish and hunt small game) license. Regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters are about the same regarding desire for the existing licenses. When residents were asked about potential hunting licenses, they expressed the most desire for the Annual Hunting license and the Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) license. Casual hunters tended to express *more* desire for the licenses with longer terms (which runs counter to the findings regarding fishing licenses).

RATINGS OF FISHING AND HUNTING IN MINNESOTA

By a 4:1 ratio, residents more often rate Minnesota's fishing as *better* than rate it as *worse* relative to other states' fishing. Regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) anglers are not greatly different in ratings—casual anglers are just slightly more likely to give a neutral rating of “5” and just slightly less likely to rate it as better, compared to regular anglers.

By a ratio of about 3:1, non-residents more often rate fishing in Minnesota as *better* than rate it as *worse* compared to fishing in other states. Among non-residents, regular anglers give slightly better ratings than do casual anglers.

Residents' ratings of hunting are more even, compared to fishing: 24% of resident hunters rate hunting in Minnesota as *better* than in other states, while 17% rate it *worse*. Regular (participated more than 3 of the past 5 years) hunters and casual (participated 3 or fewer years of

the past 5) hunters are about the same in their ratings. Note that non-residents were not asked to rate hunting in Minnesota.

FISHING AND HUNTING COMPANIONS

The examination of fishing companions found that, among residents, friends, spouses/significant others, and children are the most common fishing companions, and the “alone” response also is not insubstantial in importance. Regular (participated more than 3 of the past 5 years) anglers are more likely to have fished with any of the companions asked about in the survey. For casual (participated 3 or fewer years of the past 5) anglers, fishing with children is more important than it is for regular anglers.

Among non-residents, friends, other family members (other than spouses, children, siblings, or parents), children, and spouses are common fishing companions (and fishing alone is also important). Fishing with friends and alone are the most important to non-residents, when days fished with the various companions is added to the analysis (which goes somewhat against the conventional wisdom that says family vacations are important). Regular and casual non-resident anglers are not greatly different.

Regarding hunting, friends and other family members are important companions (as is hunting alone). Note that spouses/significant others play much less of a role in hunting than they do in fishing. Regular hunters are more likely than are casual hunters to have hunted with any of the companions asked about in the survey with the exception of spouses/significant others.

CONJOINT ANALYSIS OF LICENSE STRUCTURE

RESIDENT ANNUAL AND SHORT-TERM FISHING LICENSES

The Resident Annual Individual license anchored the evaluation of other annual and short-term and long-term fishing licenses. This license was the most sensitive to price changes of all licenses in this group.

The current Annual Individual, Annual Combination, and 24-Hour licenses do not allow for the addition of other intermediate short-term licenses. The \$9 difference between the two could support one additional short-term license, either a 7-Day or 90-Day license. These licenses would fit better into the mix, if the price of the Annual Individual license is increased.

Given the low popularity of the 24-Hour license to Minnesota residents, a 3-Day license could be a good substitute for the 24-Hour license and possibly attract casual or lapsed anglers. The pricing for this license could be from \$10 to \$12. This option would then allow for the inclusion of another short-term license.

A 7-Day or 6-Month license is not as important to anglers as other licenses and would be difficult to fit into the current license structure and pricing. The 3-Day or 90-Day licenses would be more favorable additions. A 90-Day license priced from \$17 to \$21 is viewed as desirable by anglers and could be fit into the mix, if the Annual Individual license is priced from \$23 to \$25.

Pricing of the Annual Individual license could be increased to \$21 and up to \$25 without a substantial decrease in sales. The addition of one or two short-term licenses, such as 3-Day and/or 90-Day licenses, could help offset Annual Individual license sales losses to marginal anglers who may be more price sensitive or only fish occasionally. Beyond \$25, preference scores declined substantially, and it is assumed that angler demand for the Annual Individual license would follow suit.

The Annual Individual Sports and Annual Combination licenses are both specialized licenses targeting unique segments of the angling market (angler/hunters and married couples, respectively). Demand for these licenses has remained steady in recent years. The potential Super Individual Sports license may affect Individual Sports license sales, but in a positive manner. Nearly two-thirds (64%) of Individual Sports license buyers rated the Super Individual Sports license as *very* desirable. The Annual Combination license is a good value for couples. The pricing on this license could increase to \$30 up to \$35 (or slightly more) and would still provide good incentive for couples to purchase it, particularly if the Annual Individual license price is increased.

Pricing of any of the licenses is dependent to some degree upon price increases of the Annual Individual license. Thus, proportional increases in other annual and short-term licenses should be considered.

RESIDENT ANNUAL AND LONG-TERM FISHING LICENSES

Analysis of annual and long-term license options showed similar results for the Annual Individual and Annual Combination licenses similar to the section above. The Annual Individual preference scores declined modestly up to \$25 and then saw a steeper decline at increasing price points.

The Super Individual Sports license also had value to many anglers who also hunted. The survey shows that this license could be priced from \$80 to \$90 and still be attractive to sportspersons, particularly if annual hunting and fishing license prices are increased. Further, this license may generate a greater net revenue benefit because buyers may exceed the actual dollars spent on them individually in previous years.

The 3-Year and 5-Year fishing licenses are attractive to many anglers, including some casual anglers as well. Overall, a rating of *very* desirable was given to the 3-Year license by 50% of anglers, and the same percentage gave a rating of *very* desirable to the 5-Year license. Also, 48% of the casual anglers rated the 3-Year license as *very* desirable, and 45% rated the 5-Year license as *very* desirable. However, the pricing for the 3-Year license was less of a concern and thus could be offered at par value (3 times the Annual Individual price) or at a slight discount to provide an incentive to buyers. The slight discount may attract casual anglers and, thus, be a net revenue generator, as some revenue from normally “skipped” years of buying would occur. This is also true for the 5-Year license.

NON-RESIDENT FISHING LICENSES

Each of the non-resident fishing licenses currently offered by the MN DNR appears to have its own constituency. However, the Annual Individual, Family, and 7-Day licenses are the more

preferred licenses and are most sensitive to price changes. Small increases of up to \$7 in these licenses would likely have only a small impact on sales.

There was much less sensitivity to price on the short-term non-resident licenses, including the 14-Day Couple license. Each of these could be increased by up to 10% without a major reduction in overall preference scores. This would likely hold for purchases as well.

RESIDENT ANNUAL AND SHORT-TERM HUNTING LICENSES

There appears to be strong support for an Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately) license that includes small game, waterfowl, and pheasant stamps. The initial estimated value for this license was \$34 but could be increased, based on any change in the price of the Small Game license (stamps purchased separately).

The Small Game license could be replaced with the Annual Hunting license. This may also be a net revenue generator, as some hunters who typically do not buy waterfowl and pheasant stamps would be paying for the privilege without using it. The \$34 initial price could go up as high as \$40 or slightly more because of the overall value of the license.

The potential Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) license also has a constituency in avid sportspersons. The desirability of this license was very high among regular (participated more than 3 of the past 5 years) anglers/hunters and represents a good value to avid sportspersons. Pricing for this alternative could range from \$80 to \$90 and still be perceived as a value. This license is a no-cost license to the agency, as hunters would still have the Annual Hunting or Small Game licenses plus individual species privileges available.

The 3-Year and 5-Year Small Game hunting licenses are not very desirable alternatives, compared to the corresponding 3-Year and 5-Year Individual Sports alternatives. While a pricing analysis was not conducted, these latter two licenses are generally a no-cost license to the agency that would not displace hunters or anglers and may attract those who purchase fishing and/or hunting licenses irregularly, for a net gain in revenue.

There was very little interest in the 24-Hour Small Game, Waterfowl, and Pheasant licenses. This is likely due to the low price of the Small Game license and choice of buying either waterfowl or pheasant stamps separately.

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CHAPTER 1. INTRODUCTION AND METHODOLOGY

PURPOSE AND SCOPE

This study was conducted for the Minnesota Department of Natural Resources (hereinafter referred to as the MN DNR or simply “the Department”) to assist the Department in developing legislative recommendations for modifying the Department’s license structure and fee schedule. This study was designed to determine public support for or opposition to possible license structures, to explore customers’ threshold for license fees (i.e., the maximum price at which the consumer will still view the license as a good value), and to identify the elements of a license structure and accompanying fee schedule that is most marketable to consumers while still providing the MN DNR with adequate revenue. Ultimately, this project was designed to provide data to allow the DNR to determine the best license structure to achieve the following goals:

- Increase revenue and ensure economic sustainability
- Offer affordable and comparable pricing
- Encourage constituent support
- Offer flexibility to accommodate future growth and changes
- Better meet the needs of the public and those of the agency

This study involved a two-phase approach, which coupled an internal assessment with an external assessment. This approach accounts for the opinions and attitudes of both internal and external constituents, thereby providing the MN DNR an overview of the opinions of key MN DNR personnel as well as input from current and potential markets regarding the Department’s license restructuring goals and long-term objectives.

Phase I of the study entailed an initial focused discussion with key MN DNR personnel to set the parameters for the study and develop a survey outline. Following the initial discussion, Responsive Management conducted a review of data pertaining to Minnesota’s license structure, fee schedule, sales trends, and sales revenue. Additionally, Phase I included a review of license structure changes and fee schedules in other states, with data obtained from a web-based and telephone survey of fish and wildlife professionals in other states.

Phase II entailed a multi-modal (i.e., using several different survey formats, including mail and Internet) survey of anglers and hunters to test license structures and fee schedules and to obtain opinion data on related issues. The survey was administered by mail and on the Internet, with telephone assistance as necessary. The survey was designed by Responsive Management, Dr. Tony Fedler, and the MN DNR. A conjoint analysis of the survey data was conducted and then used in the development of final report.

PHASE I: FOCUSED DISCUSSION WITH AGENCY PERSONNEL, REVIEW OF DATA, AND SURVEY OF OTHER STATE AGENCY PERSONNEL

FOCUSED DISCUSSION WITH KEY MN DNR PERSONNEL

This study began with the aforementioned focused discussion with key MN DNR personnel on the project team, via telephone, to determine challenges to and problems encountered with the current license structure and to assess their opinions on and suggestions for improving the license structure. This initial discussion allowed the project team to set the parameters for survey design. Issues, concerns, and challenges to survey design and implementation were discussed, as well as the timeline for data collection and analysis. Following this initial meeting with MN DNR personnel, Responsive Management worked closely with Dr. Fedler to develop a draft survey questionnaire.

DATA REVIEW

In the data review, Responsive Management examined other research, including the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* and the *National Survey of Recreation and the Environment*. The researchers also examined factors influencing license sales in the State of Minnesota. Researchers conducted an in-depth analysis of the MN DNR's current license structure, current pricing, and sales trends, as well as other factors related to license sales, including various socio-economic characteristics and buying behaviors. As a starting point in the research, analysts consulted work previously completed by the MN DNR and Southwick Associates, *Sales and Revenue Forecasts of Fishing and Hunting Licenses in Minnesota*, which was conducted to predict the impact of fee changes on license buying behaviors and revenue based on both historical purchasing data and current preferences among anglers and hunters (Southwick Associates, 2010). That study explored sportsmen's responses (not directly, but through modeled responses based on historical data) to four license scenarios: no price change, total revenue maximizing, total direct license sales maximizing, and a one dollar increase in the current price. That study, as well as others, served as a foundation for the MN DNR's recommended license and pricing changes and was used to determine the packages and structures that were tested by survey researchers in this study. Those other studies that were consulted were human dimensions studies conducted by the Minnesota Cooperative Fish and Wildlife Unit, which included license holder survey responses on the number of days fishing in a season broken down by open or ice fishing.

RESEARCH REGARDING LICENSE STRUCTURES AND FEE SCHEDULES IN OTHER STATES

Researchers explored license structures, fee schedules, and regulations in other states to identify successes and failures. This included a research review on the impacts of license structure and fee schedule changes, including the impact on recruitment and retention, the impact on license sales and sportsmen's buying behaviors, and the overall impact on state revenue. The purpose of this research component was to identify how changes to license structures and fee schedules have affected participation, license sales, and revenue.

For this part of the study, the researchers collected qualitative data from fish and wildlife agency representatives nationwide. Responsive Management conducted a web-based survey and personal interviews with key personnel from other state fish and wildlife agencies. The survey was designed to determine which states had made changes to their fishing and/or hunting license structures or fee schedules since 2000 and to assess the effect that these changes had on participation and revenue. Licensing representatives and fish and wildlife directors were also contacted, as necessary, for personal interviews via telephone to obtain additional information or clarification regarding license structure and fee schedule changes and the effect of these changes on participation and revenue.

Finally, as part of this phase of the research, Responsive Management compared Minnesota's license offerings with those offered in surrounding states and compared Minnesota's fees with national and regional averages. The research regarding the impact of license structure and fee schedule changes in other states and the analysis of fees were used to evaluate Minnesota's licenses in relation to other states' offerings.

PHASE II: SURVEY RESEARCH AND CONJOINT ANALYSIS

Phase II of the study entailed the aforementioned survey of anglers and hunters to test license structures and fee schedules (the surveys are shown in Appendix A). The data obtained was then analyzed in several ways to assess the opinion of current and potential consumer markets.

SAMPLING PLAN

For the study, the researchers chose to examine participants in both fishing and hunting broken down by avidity: regular participants (those who participated more than 3 of the past 5 years) and casual participants (those who participated 3 or fewer years of the past 5). Therefore, to ensure that both types of participants (regular and casual) for both activities (fishing and hunting) would be included in the survey, the sampling plan entailed interviewing respondents from four distinct sub-samples: regular anglers, casual anglers, regular hunters, and casual hunters.

In addition, the study included both residents and non-residents. For the non-residents, however, hunting licenses were not germane to the study goals, so the non-residents surveyed included only regular anglers and casual anglers. The researchers developed separate questionnaires for residents and non-residents.

In total, therefore, the sampling plan accounted for six groups: four resident groups and two non-resident groups. Table 1.1 shows those groups with the target number of completed interviews specified by the sampling plan, as well as the number of completed interviews that were obtained from each group.

Table 1.1. Sample Groups and the Targeted Number of Completed Interviews

Sample Group	Target Number of Completed Interviews	Actual Number of Completed Interviews
Resident Regular Anglers	400	409
Resident Casual Anglers	400	406
Resident Regular Hunters	400	416
Resident Casual Hunters	400	426
Non-Resident Regular Anglers	200	268
Non-Resident Casual Anglers	200	198
TOTAL INTERVIEWS	2,000	2,123

The sample of licensed anglers and hunters was obtained from the MN DNR. It included any person who had purchased one of the licenses listed in Table 1.2 within the previous 5 years.

Table 1.2. License Holders Included in the Sample

License Type
Resident Survey
24-Hour Fishing
Individual Fishing
Individual Sports
Combination Fishing
Combination Sports
Conservation Individual Fishing
Conservation Combination Fishing
Deer Firearms
Small Game
Senior Citizen Small Game
Trout Validation
Waterfowl Stamp
Pheasant Stamp
Non-Resident Survey
24-Hour Fishing
Non-Resident Individual Fishing
Non-Resident Family Fishing
Non-Resident 14-Day Couple Fishing
Non-Resident 7-Day Fishing
Non-Resident 72-Hour Fishing

The database provided to the researchers contained approximately 5 million records. The research team first de-duplicated the database, meaning that the same person with multiple records was reduced to a single record with all the different licenses bought contained within that single data record. The de-duplicated database contained approximately 300,000 records (i.e., 300,000 individuals). In this de-duplicated sample, each potential respondent could be identified as being either a regular or casual participant (a regular participant was defined as a respondent who participated more than 3 of the past 5 years, while a casual participant was defined as a respondent who participated 3 or fewer years of the past 5), and it is from this de-duplicated sample that the stratified sample shown in Table 1.1 was selected. Note that the sample was randomly selected within each strata so that each person within a given strata had an equal chance of being selected for the survey.

CONTACT AND INTERVIEWING PROCEDURES

Respondents were initially contacted via telephone and given the option to complete a web-based survey or a mail survey. According to their preference, respondents were then provided (via email) a link to the web-based survey or (via mail) a hard-copy survey. As necessary, respondents were contacted multiple times to confirm that they had received either the link or hard copy survey and to assist (and prompt) them to complete the survey. In some cases, a telephone interviewer assisted the respondent in completing the web-based survey (i.e., assisted them via telephone through the entire survey). Respondents were offered an incentive to complete the survey: each person who completed the survey was entered into a drawing to win a lifetime fishing or hunting license in the State of Minnesota.

Table 1.3 shows the number of completed interviews and the number of valid potential respondents that were attempted to be reached in each survey strata, as well as the response rate for that strata. The completed interviews are broken down in this table into web surveys completed with telephone assistance (TA) throughout the entire survey, web surveys completed via an email (E) link without needed assistance, and mail surveys (M). Non-residents were surveyed in November 2010. Residents were surveyed in November and December 2010.

Table 1.3. Response Rate for Each Survey Strata

Strata	Completed Interviews	Attempted Interviews	Response Rate
Regular resident anglers	409	796	51.3%
	84 (TA), 198 (E), 127 (M) = 409		
Casual resident anglers	406	998	40.6%
	101 (TA), 237 (E), 68 (M) = 406		
Regular resident hunters	416	744	55.9%
	101 (TA), 211 (E), 104 (M) = 416		
Casual resident hunters	426	1322	32.2%
	144 (TA), 247 (E), 35 (M) = 426		
Regular Non-resident anglers	268	407	65.8%
	110 (TA), 84 (E), 74 (M) = 268		
Casual Non-resident anglers	198	377	52.5%
	71 (TA), 109 (E), 18 (M) = 198		

POST-SURVEY SAMPLE WEIGHTING

At the completion of the survey, the data were weighted to be representative of the entire license database that was provided to the research team by the MN DNR. This was necessary because the sample obtained by the sampling plan was not proportional to the actual population (the sample was not intended to be proportional but was chosen to ensure sufficient numbers of each type of participant for analyses to be conducted). Because the survey concerned itself with both anglers and hunters, as well as regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) participants, a matrix of all possible combinations of regular and casual anglers and regular and casual hunters was created. As shown in Table 1.4, there are nine categories that cover all possibilities of categories, eight of which are meaningful for this study (the ninth category, shaded gray, is not of interest in this study but is shown to simply to complete the matrix; people in that category were not surveyed).

Table 1.4. Matrix of All Possible Categories of Regular and Casual Anglers and Hunters

Regular angler Regular hunter	Regular angler Casual hunter	Regular angler Non-hunter
Casual angler Regular hunter	Casual angler Casual hunter	Casual angler Non-hunter
Non angler Regular hunter	Non angler Casual hunter	Non angler Non-hunter

The researchers analyzed the database and categorized each person in the database into one of these eight categories, based on the number of years of the past 5 in which they had bought a license. Once all people in the database were categorized (this categorization of respondents is further discussed below), the researchers determined the proportion that each cell of the matrix represented in the database, as shown in Table 1.5. These are the proportions that the sample of respondents was made to match in the weighting formulas.

Table 1.5. Proportional Breakdown of the Database Into Matrix Categories

Regular angler Regular hunter	10.7%	Regular angler Casual hunter	7.1%	Regular angler Non-hunter	18.9%
Casual angler Regular hunter	11.6%	Casual angler Casual hunter	9.1%	Casual angler Non-hunter	24.1%
Non angler Regular hunter	11.6%	Non angler Casual hunter	6.8%	Non angler Non-hunter	NA

As discussed above, respondents were sampled from the strata shown in Table 1.1; however, the survey answers revealed that some anglers' and hunters' reported participation did not exactly match their participation levels as determined in the database. These respondents were categorized in the final weighting according to their reported participation levels rather than according to their participation level identified from the sample database.

TESTING PACKAGES AND PRICING

One part of the survey was designed to test specific license configurations and packages being considered by the MN DNR. Mail and web-based surveys were chosen for this survey because of the visual component that was necessary for the subsequent analysis: respondents had to be able to view each license scenario. Responsive Management designed paper and online versions of the survey; provided services for layout and printing of the paper survey; provided services for online viewing and posting of the web-based survey; and distributed the survey itself or a link to the survey, as previously discussed.

The survey offered numerous license profiles, which were rated by respondents to determine license type preferences and optimal price points. Respondents were asked to rate attributes (license types) at different levels (price points), and these ratings were used in a conjoint analysis designed to determine license type and pricing preferences. The survey design, by having resident anglers and hunters and non-resident anglers rate a series of licenses and pricing levels, gave researchers the opportunity to examine the trade-offs made between types of licenses available and different prices.

The researchers developed 57 resident fishing license scenarios for testing in the resident survey. To reduce respondent burden and increase response rates, the researchers developed three versions of the resident survey (referred to as Surveys A, B, and C in the report) to test all 57 configurations so that no single respondent had to rate all 57 scenarios. It was determined that this would be the best way to test all the scenarios with a representative sample, while also ensuring a high response rate. It should be noted that all three of these resident survey questionnaires were the same, with the exception of the questions used in the conjoint analysis of fishing licenses. Residents were also asked to rate 16 hunting license configurations; this part of the survey was short enough for each respondent to rate all 16 hunting license configurations. The non-resident survey had only 18 fishing configurations and, therefore, was short enough for each respondent to rate all the configurations.

Researchers completed a detailed review of the survey for content and format. Additionally, professional interviewers conducted an internal audit, in which each interviewer completed the survey several times using many different answer sets to ensure the accuracy of phrasing, flow, and skip patterns. Final approval of the methodology and survey instrument was obtained from the MN DNR prior to survey implementation.

Note that Responsive Management maintains its own in-house survey center and data management facility and maximizes response rates by allowing for multiple methods of completing a survey. This central data management facility at Responsive Management allowed for rigorous quality control in obtaining data, inputting data, and managing data. Completed and returned mail surveys were entered by Responsive Management's professional data entry personnel; the online survey data was entered into Responsive Management's database using standard interfacing software. The Survey Center Managers maintained quality control and accuracy during the data collection and data entry process.

CONJOINT ANALYSIS

As part of the overall analysis, the researchers conducted a conjoint analysis of license types priced at several levels to determine anglers' and hunters' preferences for license types and price points. Conjoint analyses are used in marketing research to determine consumer preferences for features and attributes for individual products or services. They are typically used to test customer acceptance of and/or support for new products or, as in this case, to determine consumer preferences for repositioning a product. Conjoint analyses are invaluable in predicting the market share and profitability of new or modified products or services. In this case, a conjoint analysis was very useful for predicting sportsmen's price sensitivity and receptivity of various license packages. Additionally, this analysis helped estimate expected revenue from new and modified license structures.

For the conjoint analysis, respondents were presented a set of product profiles and configurations and asked to rate their preferences for the products shown. Based on these responses, utility values were assigned for each level of each attribute, and these values were then used to determine preference scores for specific profiles and configurations.

The researchers determined part-worth utility values for license types by price points. Part-worth utility assigns a value to each level for each attribute, resulting in a calculation of relative importance for each attribute. Using part-worth utility values, the researchers calculated preference scores for different attributes (license types) at different levels (price points). This model helped to determine the highest preferences scores for the product profiles and configurations that were presented to respondents. Simulations were then run on specific attributes (license type) at specific levels (price point), resulting in a broader understanding of the impact of price changes on consumer preferences.

CHAPTER 2. FISHING AND HUNTING PARTICIPATION AND LICENSE SALES NATIONALLY AND IN MINNESOTA

PARTICIPATION IN FISHING AND HUNTING NATIONALLY

The researchers examined several studies that are regularly conducted to track participation in fishing and hunting both nationally and statewide and that can be used to assess participation trends. The longest and most continuous study on recreational fishing and hunting in the United States is the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (National Survey)* administered by the U.S. Fish and Wildlife Service (FWS) and the U.S. Census Bureau. Conducted at 5-year intervals (with one 6-year interval) since 1955, the study provides estimates of the number of anglers and hunters as well as data on their activities and demographic characteristics. Although it is not possible to directly compare results between some years because of different survey methodologies, general trends in participation can still be observed. In particular, comparisons are possible among the *National Surveys* conducted in 1991, 1996, 2001, and 2006 because similar methodologies were used.

License sales provide another source of data on fishing participation. Data from fishing and hunting license sales are collected by each state and submitted to the FWS, as required by the Federal Assistance in Sport Fish and Wildlife Restoration Programs (Federal Assistance). License sales are collected each year and are used to allocate Federal Assistance funding. The numbers provided represent anglers and hunters who bought a license in that state, whether they are residents of that state or are out-of-state sportsmen who come into the state (and regardless of whether they actually participated). Other data sources include the National Sporting Goods Association, Sporting Goods Manufacturers Association, and the *National Survey on Recreation and the Environment*.

National overall fishing (freshwater and saltwater combined) and hunting participation numbers from several different sources are shown in Table 2.1. It is important to note, however, that these sources apply differing definitional criteria to calculate the number of anglers and hunters; please see Appendix B for a detailed discussion of these differences.

Table 2.1 provides a static snapshot of participation in the year of each survey. However, of interest are the trends in participation, and the sections of the report that follow show a comparison of trends in fishing and hunting participation and license sales nationally and in Minnesota, including an in-depth look at *National Survey* participation data and Federal Assistance license sales data. Additionally, the sections that follow also provide an analysis of license sales trends data for individual fishing and hunting licenses offered by the MN DNR.

Table 2.1. Number of Anglers and Hunters in the United States

Source of Data	Number of Anglers	Number of Hunters	Survey Date	Comments
2006 <i>National Survey</i>	38.3 million	14.1 million	2006	1-year time frame; any participation at all; fresh or saltwater; age 6 and older (12.5 million hunters age 16 and older and 1.6 million hunters ages 6-15; 30.0 million anglers age 16 and older and 8.3 million anglers ages 6-15)
Federal Assistance data	28.4 million	14.5 million	2008	1-year time frame; paid license holders
NSGA	32.9 million	28.8 million	2009	1-year time frame; participated more than once in previous year; age 7 and older; hunting totals include participation in bowhunting, muzzleloading, and hunting with firearms and there may be some overlap
SGMA	58.8 million	26.1 million	2010	1-year time frame; any participation at all; age 6 and older; note that the total number of anglers was calculated by taking the sum of fly fishing, freshwater fishing, and saltwater fishing participation, and there may be some overlap; note that the total number of hunters was calculated by taking the sum of hunting with a bow, handgun, rifle, and shotgun, and there may be some overlap
NSRE	73.1 million	23.9 million	2010	1-year time frame; any participation at all; age 16 and older; any fishing, fresh or saltwater

Sources: U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007; U.S. Fish and Wildlife, Restoration Program; National Sporting Goods Association, 2009; Sporting Goods Manufacturers Association, 2010; Cordell, 2010.

TRENDS IN PARTICIPATION

TRENDS IN PARTICIPATION NATIONALLY

National Survey data show that nationwide fishing participation declined from 35.6 million participants in 1991 to 30.0 million in 2006; overall hunting participation declined from 14.0 million participants in 1991 to 12.5 million in 2006 (Table 2.2). In 1991, *National Survey* data indicated that 7.4% of the population ages 16 years and older hunted in the previous year, but that percentage was down to 5.5% by 2006. There was an even greater decline in the fishing participation rate between 1991 and 2006. In 1991, 18.7% of the population ages 16 years and older fished in the previous year, but by 2006 that percentage was down to 13.1% (U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007).

Table 2.2. Total Number of Anglers (Freshwater and Saltwater) and Hunters 16 Years Old and Older in the United States: 1991-2006

	1991 (in thousands)	1996 (in thousands)	2001 (in thousands)	2006 (in thousands)	Change: 1991 to 2006
Total number of anglers nationwide (and rate)	35,578	35,246	34,071	29,952	-15.8
	19%	17%	16%	13%	NA
Total number of hunters nationwide (and rate)	14,063	13,975	13,034	12,510	-11.0
	7%	7%	6%	5%	NA

Source: U.S. Fish and Wildlife Service/U.S. Census Bureau, 1992, 1997, 2002, 2007.

TRENDS IN PARTICIPATION IN MINNESOTA

National Survey data indicate that the decline in overall fishing participation in Minnesota (-1.6%) is substantially less than that of the United States from 1991 to 2006 (-15.8%) (Table 2.3). When compared to surrounding states, the decline in overall fishing participation in Minnesota (-1.6%) is substantially less than that of other midwestern states, many of which experienced more than a 10% decrease in fishing participation between 1991 and 2006.

Minnesota experienced an overall *increase* in hunting participation (+16.8%) between 1991 and 2006, whereas the United States experienced a *decrease* in overall hunting participation from 1991 to 2006 (-11.0%). In comparing states, half of the midwestern states examined, Minnesota included, experienced an increase in hunting participation between 1991 and 2006, while the other half of the midwestern states examined experienced a decrease (Table 2.3).

Table 2.3. Total Number of Anglers (Freshwater and Saltwater) and Hunters 16 Years Old and Older in States Surrounding Minnesota: 1991-2006

	Anglers (in thousands)					Hunters (in thousands)				
	1991	1996	2001	2006	% Change	1991	1996	2001	2006	% Change
United States	35,578	35,246	34,071	29,952	-15.8%	14,063	13,975	13,034	12,510	-11.0%
<i>Surrounding States</i>										
Illinois	1,359	1,351	1,237	873	-35.8%	449	432	310	316	-29.6%
Iowa	556	497	542	438	-21.2%	328	368	243	251	-23.5%
Kansas	453	364	404	404	-10.8%	241	275	291	271	+12.4%
Michigan	1,762	1,824	1,354	1,394	-20.9%	826	934	754	753	-8.8%
Minnesota	1,450	1,538	1,624	1,427	-1.6%	458	588	597	535	+16.8%
Missouri	1,329	1,209	1,215	1,076	-19.0%	520	552	489	608	+16.9%
Nebraska	252	269	296	198	-21.4%	168	176	173	118	-29.8%
North Dakota	99	97	179	106	+7.1%	98	88	139	128	+30.6%
South Dakota	158	227	214	135	-14.6%	147	186	209	171	+16.3%
Wisconsin	1,470	1,474	1,412	1,394	-5.2%	747	665	660	697	-6.7%

Source: U.S. Fish and Wildlife Service/U.S. Census Bureau, 1992, 1997, 2002, 2007.

Because nearly 1 in 4 fishing participants in Minnesota are non-residents and about 1 in 20 hunters in Minnesota are non-residents, it is instructive to examine the numbers and proportions of resident and non-resident anglers and hunters in Minnesota. *National Survey* data show that, while the total number of anglers in the state decreased 1.6% between 1991 and 2006, the number of *resident* anglers increased 2.3% (Table 2.4). It is the decrease in non-resident anglers (-13.1%) in Minnesota that fueled the overall decrease. Regarding hunting, an 18.1% increase in resident hunters between 1991 and 2006 contributed to the overall increase in hunting participation, offsetting the *decrease* in non-resident hunters (-3.7%). Note that three of the estimates of numbers of non-resident hunters are based on small sample sizes.

Table 2.4. Total Number of Anglers (Freshwater and Saltwater) and Hunters 16 Years Old and Older in Minnesota: 1991-2006

	1991	1996	2001	2006	Change between 1991 and 2006 (%)
Anglers (in thousands)	1,450	1,538	1,624	1,427	-1.6
Residents	1,083	1,022	1,293	1,108	+2.3
Non-Residents	367	516	331	319	-13.1
Hunters (in thousands)	458	588	597	535	+16.8
Residents	431	544	568	509	+18.1
Non-Residents	27	45*	29*	26*	-3.7

*Estimate based on a small sample size.

Source: U.S. Fish and Wildlife Service/U.S. Census Bureau, 1992, 1997, 2002, 2007.

Figures 2.1 and 2.2 show trends in the ratio of resident and non-resident anglers and hunters. The distribution remained fairly consistent between 1991 and 2006, with the exception of a slight increase in the proportion consisting of out-of-state anglers and hunters in 1996 (U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007).

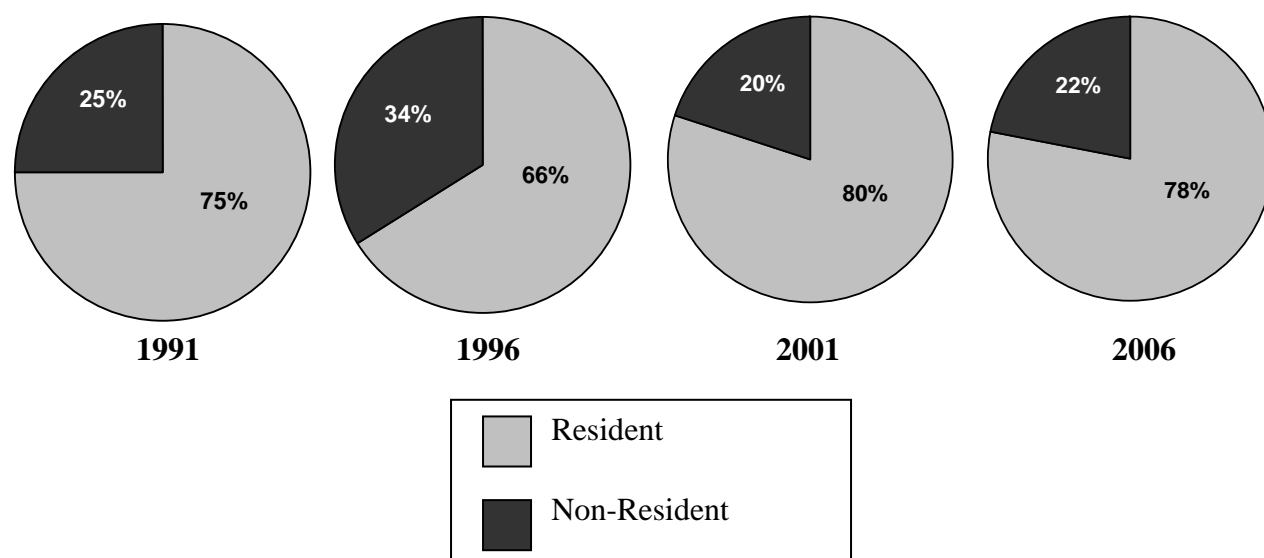


Figure 2.1. Proportion of Minnesota Anglers 16 Years Old and Older Who Were Residents or Non-Residents: 1991, 1996, 2001, and 2006

Source: U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007.

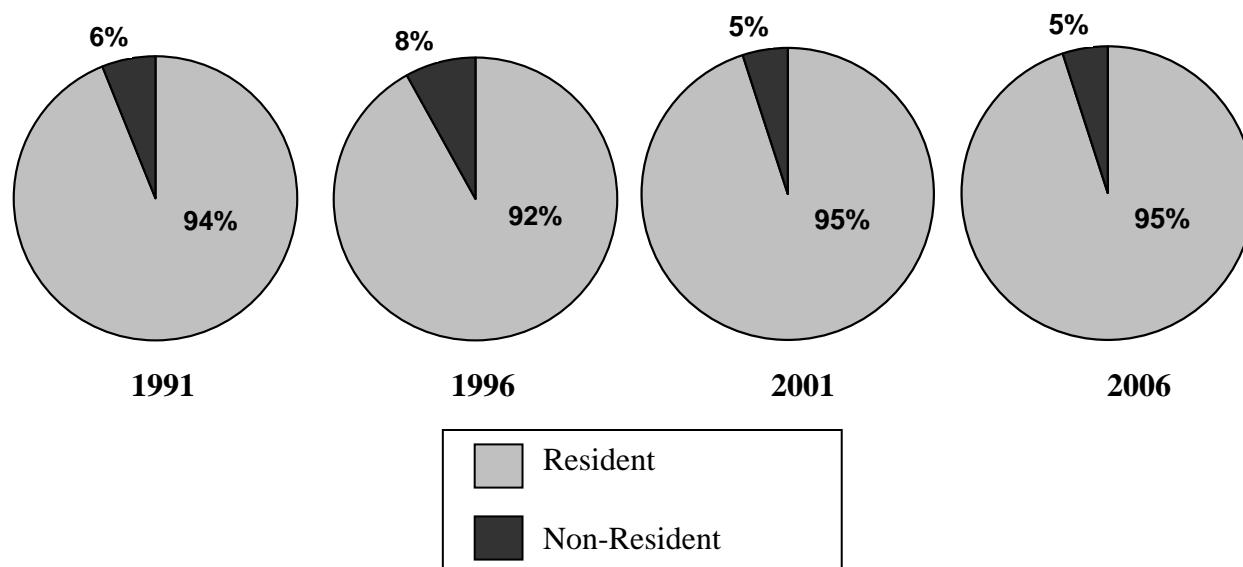


Figure 2.2. Proportion of Minnesota Hunters 16 Years Old and Older Who Were Residents or Non-Residents: 1991, 1996, 2001, and 2006

Source: U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007.

TRENDS IN LICENSE SALES

TRENDS IN LICENSE SALES NATIONALLY

Also shown as a measure of participation are fishing and hunting license sales data collected by each state and submitted to the FWS. Table 2.5 shows *license holders*, not licenses sold, from both 1990 and 2008, as well as the percentage change during that time frame (U.S. Fish and Wildlife Service, 2010). Although there was a decrease in the number of fishing license holders in Minnesota (-3.9%) from 1990 to 2008, the decline is substantially less than that of the United States as a whole during the same time period (-7.6%). Additionally, although the total number of hunting license holders nationwide decreased (-8.5%), the total number of hunting license holders in Minnesota *increased* (+7.2%).

Table 2.5. State-by-State Fishing and Hunting License Holders

State	Fishing			Hunting		
	License Holders in 1990 (in thousands)	License Holders in 2008 (in thousands)	Change Between 1990 and 2008 (%)	License Holders in 1990 (in thousands)	License Holders in 2008 (in thousands)	Change Between 1990 and 2008 (%)
AL	531	483	-9.0	265	265	0.0
AK	339	475	+40.1	84	98	+16.7
AZ	430	413	-4.0	165	202	+22.4
AR	739	633	-14.3	349	382	+9.5
CA	1,971	1,884	-4.4	391	297	-24.0
CO	694	655	-5.6	328	294	-10.4
CT	228	150	-34.2	91	49	-46.2
DE	23	22	-4.3	25	19	-24.0
FL	928	1,406	+51.5	222	171	-23.0

Note: Table continues on next page. Source: U.S. Fish and Wildlife Service, Restoration Program.

Table 2.5 (continued). State-by-State Fishing and Hunting License Holders

State	Fishing			Hunting		
	License Holders in 1990 (in thousands)	License Holders in 2008 (in thousands)	Change Between 1990 and 2008 (%)	License Holders in 1990 (in thousands)	License Holders in 2008 (in thousands)	Change Between 1990 and 2008 (%)
GA	678	593	-12.5	362	302	-16.6
HI	10	6	-40.0	13	7	-46.2
ID	418	431	+3.1	241	257	+6.6
IL	820	721	-12.1	330	302	-8.5
IN	655	478	-27.0	317	264	-16.7
IA	425	414	-2.6	272	271	-0.4
KS	292	252	-13.7	188	214	+13.8
KY	635	579	-8.8	327	339	+3.7
LA	557	675	+21.2	272	305	+12.1
ME	296	279	-5.7	215	196	-8.8
MD	657	258	-60.7	142	121	-14.8
MA	264	171	-35.2	116	57	-50.9
MI	1,578	1,161	-26.4	1,148	791	-31.1
MN	1,552	1,492	-3.9	540	579	+7.2
MS	424	378	-10.8	292	238	-18.5
MO	1,047	839	-19.9	558	481	-13.8
MT	375	396	+5.6	255	244	-4.3
NE	245	202	-17.6	170	178	+4.7
NV	143	113	-21.0	54	65	+20.4
NH	156	147	-5.8	90	60	-33.3
NJ	266	169	-36.5	126	76	-39.7
NM	246	209	-15.0	139	100	-28.1
NY	1,182	976	-17.4	737	597	-19.0
NC	491	1,100	+124.0	331	475	+43.5
ND	146	167	+14.4	91	163	+79.1
OH	1,359	819	-39.7	491	396	-19.3
OK	576	625	+8.5	247	356	+44.1
OR	752	664	-11.7	348	280	-19.5
PA	1,186	963	-18.8	1,168	926	-20.7
RI	40	26	-35.0	13	9	-30.8
SC	443	497	+12.2	191	204	+6.8
SD	198	182	-8.1	146	259	+77.4
TN	845	901	+6.6	600	671	+11.8
TX	1,877	1,628	-13.3	1,138	1,021	-10.3
UT	401	430	+7.2	230	165	-28.3
VT	157	128	-18.5	110	84	-23.6
VA	536	591	+10.3	440	308	-30.0
WA	966	698	-27.7	269	209	-22.3
WV	243	263	+8.2	273	229	-16.1
WI	1,471	1,397	-5.0	741	721	-2.7
WY	242	244	+0.8	146	150	+2.7
Nation	30,732	28,383	-7.6	15,797	14,447	-8.5

Source: U.S. Fish and Wildlife Service, Restoration Program.

Fishing and hunting license sales are used as an indicator for fishing and hunting participation in the state, but perhaps more importantly, these calculations are used to determine Federal Assistance apportionments and funding allocations. For this reason, it is important to understand which licenses are most desirable to Minnesota's anglers and hunters and to determine which licenses are contributing to sales and overall revenue in the state. The following section examines the sales trends for individual licenses in Minnesota.

TRENDS IN LICENSE SALES IN MINNESOTA

In addition to tracking total license holders and license sales data, which are submitted to the FWS as part of the Federal Assistance program, the MN DNR has also been tracking sales of individual licenses since 1957. Table 2.6 shows the number of licenses sold in 2009 for several key fishing and hunting licenses offered by the MN DNR, as well as the percentage change in sales of that license since 1990. As shown, nine licenses have experienced a decline in sales between 1990 and 2009, and six have experienced an increase.

Table 2.6. Summary of Minnesota Fishing and Hunting Licenses Sold

License Description (unless otherwise indicated, all licenses are resident licenses)	Number Sold in 2009	% Change in Sales 1990-2009
Resident Conservation Individual Fishing	14,293	New
Conservation Combination (Husband and Wife) Fishing	4,220	New
24-Hour Fishing (Residents and Non-Residents)	65,831	+108.7%
Individual Fishing	487,851	+38.1%
Combination (Husband and Wife) Fishing	204,555	-23.3%
Non-Resident Individual Fishing	56,616	-14.0%
Non-Resident Family Fishing	29,110	-33.3%
Non-Resident 14-Day Couple Fishing	22,876	-34.0%
Non-Resident 7-Day Fishing	71,911	+15.3%
Non-Resident 72-Hour Fishing	41,691	-4.1%
Trout Stamp	90,106	-3.2%
Small Game Hunting	79,939	-46.7%
Deer Firearm Hunting	371,418	-10.2%
Individual Sports	96,682	+32.6%
Combination (Husband and Wife) Sports	82,920	+11.4%

Source: MN DNR Budget Oversight Commission, 2010. Available at files.dnr.state.mn.us/rlp/licenses/historical_licenses.xls.

The overall number of anglers and hunters in Minnesota, according to the Department's Electronic Licensing System, has remained fairly stable from 2000 to 2009 (Figure 2.3). The graph shows that, in Minnesota over the past 10 years, the number of anglers and hunters has stabilized, with little variation either upwards or downwards. Given that the Minnesota population grew during the decade, the percent of the population engaged in these activities necessarily fell.

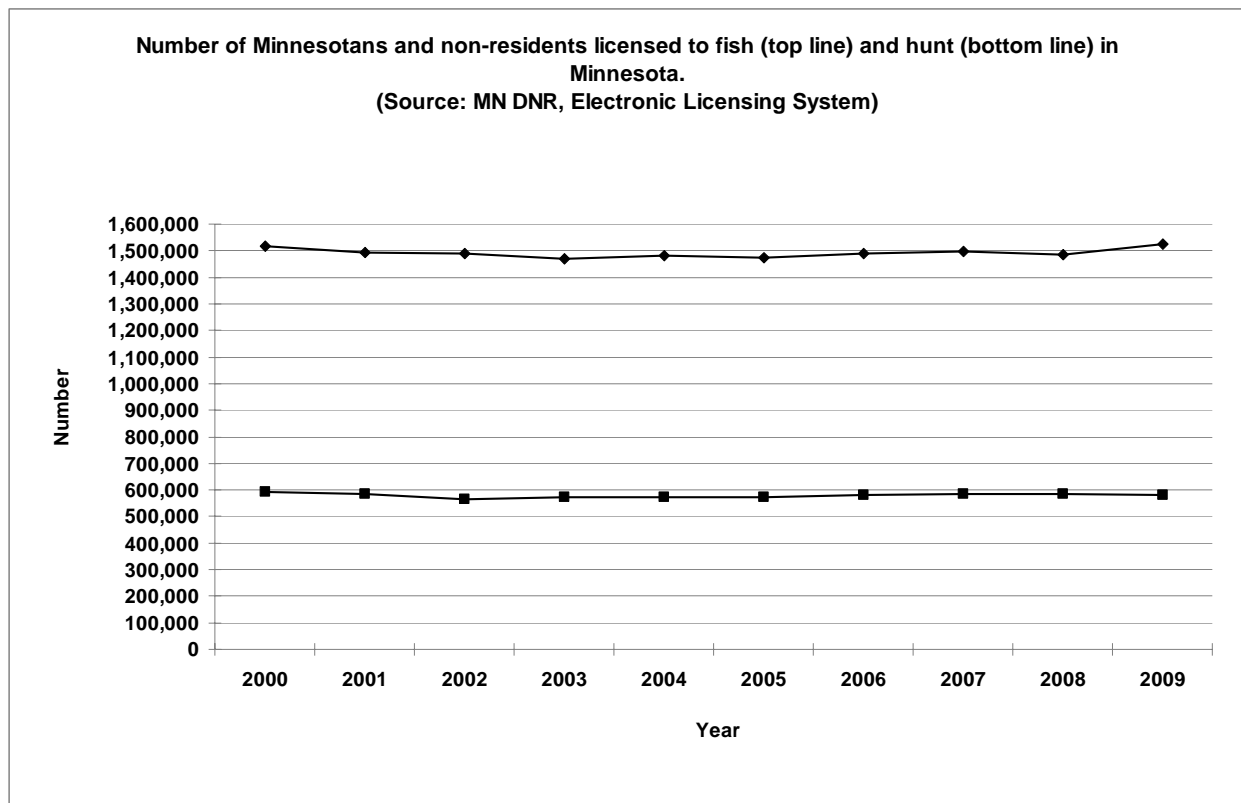


Figure 2.3. Number of Anglers and Hunters in Minnesota 2000 to 2009

A discussion follows of each license described previously as well as trends in license sales. These trends analyses are based on the aforementioned database maintained by the MN DNR that has been used to track license sales in the state since 1957 as part of the Federal Assistance program. Arrows on the graphs in Figures 2.4 to 2.16 show the years in which price increases went into effect. Contrary to what might be expected, not all price increases were associated with immediate sales declines. Note that the scale of the Y-axis (the axis that shows the number of licenses sold) changes from graph to graph. While using the same scale for all the graphs would make comparisons of all the graphs easier, doing so flattened some of the lines out on the graphs of licenses with smaller relative sales, thus making the data difficult to interpret. For this reason, each graph in Figures 2.4 to 2.16 has a Y-axis scale that best shows the differences in sales from year to year.

Each price increase is noted as being associated with an increase or a decrease in sales. This is determined by comparing sales in the year that the price increase went into effect with the year *previous* to that. For example, if a price increase went into effect in 1990, the comparison would be between sales in 1990 and sales in 1989. This comparison sheds light on an angler's decision-making process: anglers who bought a license at a certain cost in 1989 would have had to make a decision whether to purchase a license at the new costing 1990. Therefore, the comparison is between the year of the sales increase and the year previous to it. This comparison does not look

at any possible delayed protest dropout (i.e., an increase after the year the price increase went into effect) or other factors such as weather that may affect sales.

Resident Conservation Individual Fishing

This license allows a resident 16 years old and older to fish. The bag limit is half of a regular license, and a separate trout stamp is required. This license is a new type that became available to Minnesota residents in 2009. Because this is a new license, there are no trends to report.

Resident Conservation Combination (Husband and Wife) Fishing

This license allows legally married residents age 16 years old and older to fish. The bag limit is half of a regular license, and a separate trout stamp is required for each angler. This license is a new type that became available to Minnesota residents in 2009. Because this is a new license, there are no trends to report.

24-Hour Fishing (Resident and Non-Resident)

This license allows a resident or non-resident ages 16 years old and older to fish for a 24-hour period, including fishing for trout (i.e., trout stamp is *not* required with this license). The license fees over the years are listed below (MN DNR License Center, 2009), and note that the fees shown *include* the administrative fee of \$1.00:

- 1988 \$8.00
- 1991 \$8.50 (sales increased)
- 1998 \$9.00 (sales increased)
- 2001 \$9.50 (sales increased)

Figure 2.4 shows the trend in 24-Hour Fishing license sales. In general, sales for this license type have been steadily increasing (with the exception of three downward blips) since it was first offered in 1988 to more than 60,000 licenses sold in 2009. As the license trends data show, there has been a 164% increase in 24-Hour Fishing license sales since 1988. Further, the MN DNR reports that the sale of the 24-Hour Fishing licenses made up 6.7% of total resident and non-resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010).

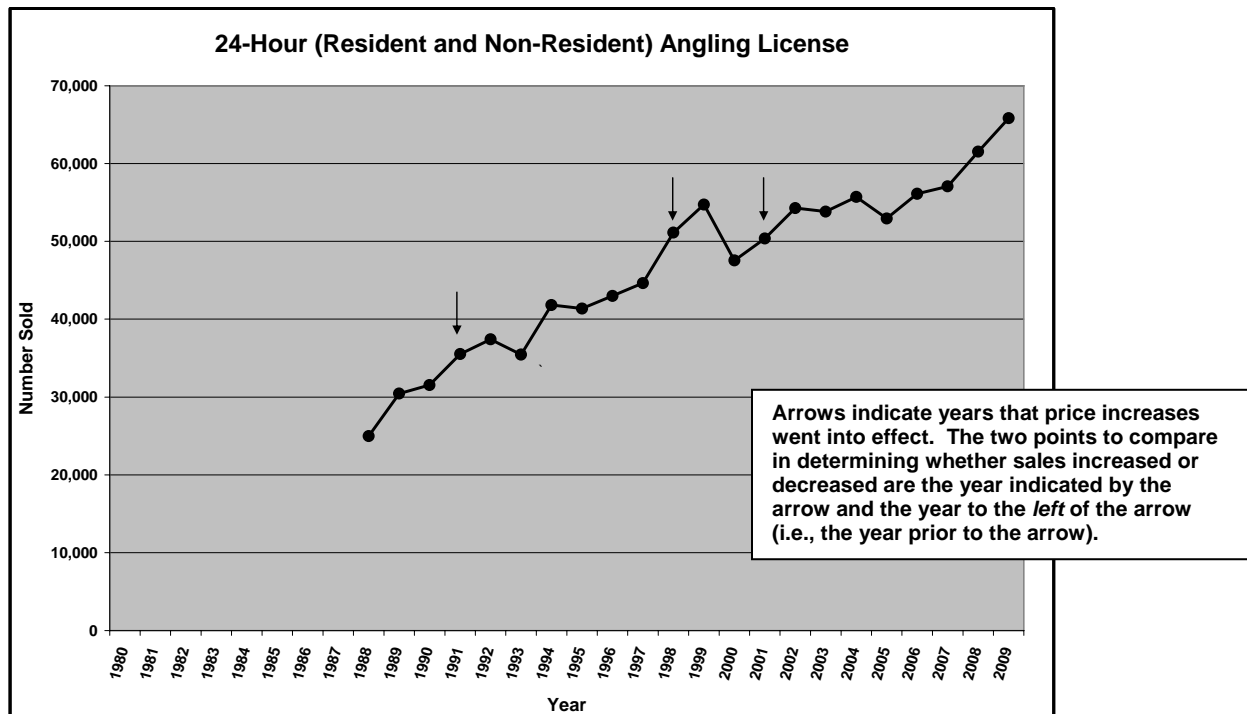


Figure 2.4. 24-Hour Fishing License Sales Trend

Source: MN DNR.

Resident Individual Fishing

This license allows a resident age 16 years old and older to fish for the license year. A separate trout stamp is required. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$5.50
- 1982 \$7.25 (sales increased)
- 1984 \$9.75 (sales remained stable)
- 1988 \$13.00 (sales decreased)
- 1991 \$14.00 (sales increased)
- 1998 \$16.00 (sales increased)
- 2001 \$18.00 (sales increased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

This license is Minnesota's most popular resident license, averaging 50.0% of the total sales in resident fishing licenses (MN DNR Budget Oversight Committee, 2010). Figure 2.5 shows the trend in Resident Individual Fishing license sales; there has been a 37% increase from 1980 to 2009.

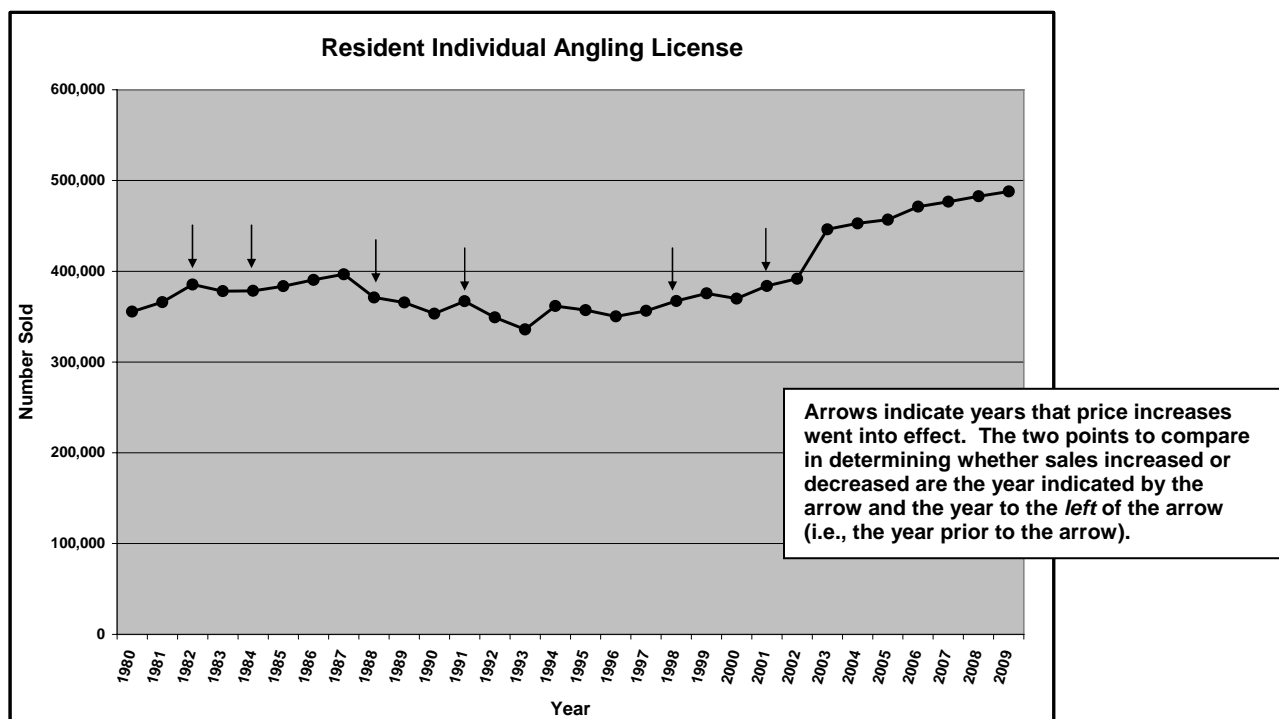


Figure 2.5. Resident Individual Fishing License Sales Trend

Source: MN DNR.

Resident Combination (Husband and Wife) Fishing

This license allows legally married residents age 16 years old and older to fish for the license year. A separate trout stamp is required for each angler. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$8.50
- 1982 \$11.25 (sales decreased)
- 1984 \$13.75 (sales remained stable)
- 1988 \$17.00 (sales decreased)
- 1991 \$18.50 (sales increased)
- 1998 \$21.50 (sales decreased)
- 2001 \$26.00 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

The sale of the Resident Combination Fishing license made up 20.8% of total resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.6 shows the trend in Resident Combination Fishing license sales; there has been a 36% decrease between 1980 and 2009.

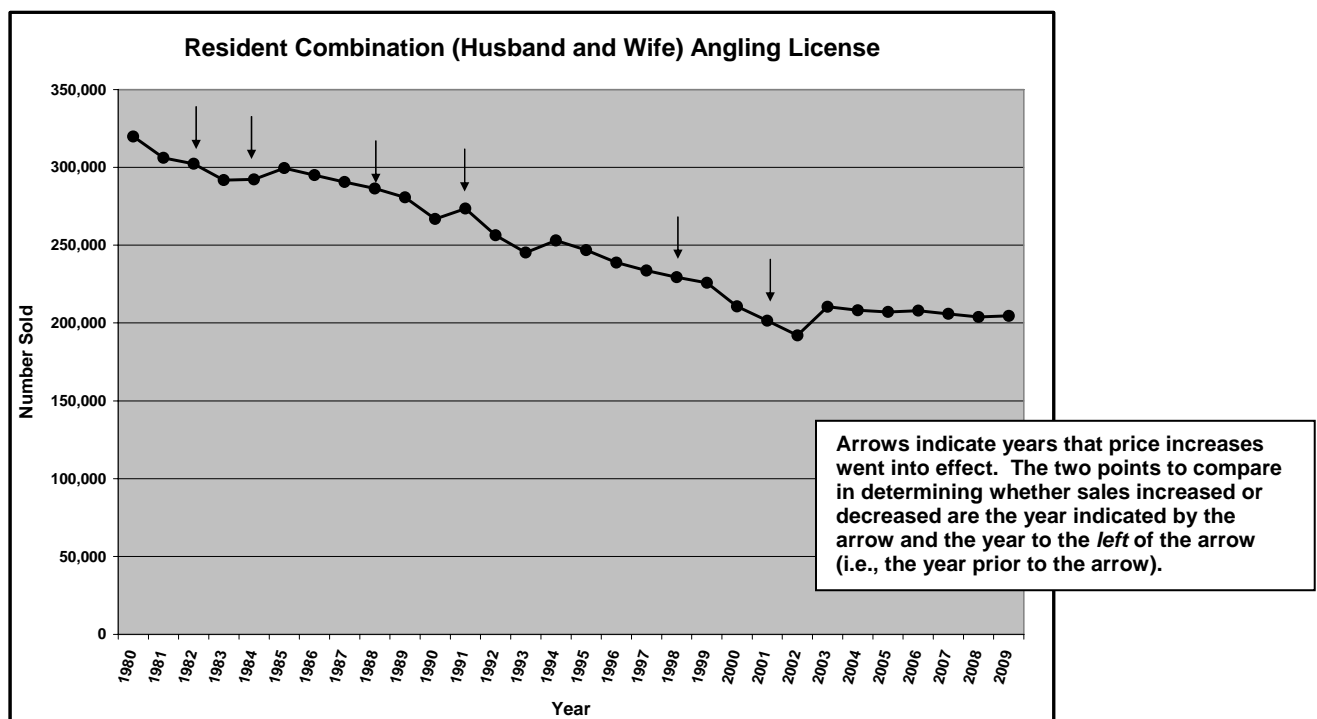


Figure 2.6. Resident Combination (Husband and Wife) Fishing License Sales Trend

Source: MN DNR.

Non-Resident Individual Fishing

This license allows a non-resident to fish for the license year. As shown in Figure 2.7, there was a substantial decline in Non-Resident Individual Fishing license sales between 1981 and 1982, which may have been caused by an increase in the cost of the license: the license fee changed from \$10.50 to \$15.75. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$10.50
- 1982 \$15.75 (sales decreased)
- 1984 \$18.25 (sales decreased)
- 1986 \$19.25 (sales increased)
- 1988 \$21.50 (sales decreased)
- 1991 \$23.50 (sales increased)
- 1992 \$28.50 (sales decreased)
- 1998 \$32.00 (sales remained stable)
- 2001 \$35.00 (sales remained stable)
- 2008 \$40.50 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

According to the MN DNR, the sale of the Non-Resident Individual Fishing license made up 25.5% of total non-resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.7 shows the trend in Non-Resident Individual Fishing license sales; there has been a 50% decrease between 1980 and 2009. In 1982, the 7-Day Non-Resident Fishing license became available, which appears to have affected sales of this license. When looking at the sales difference between 1982 and 2009, there was a more modest drop of 14%.

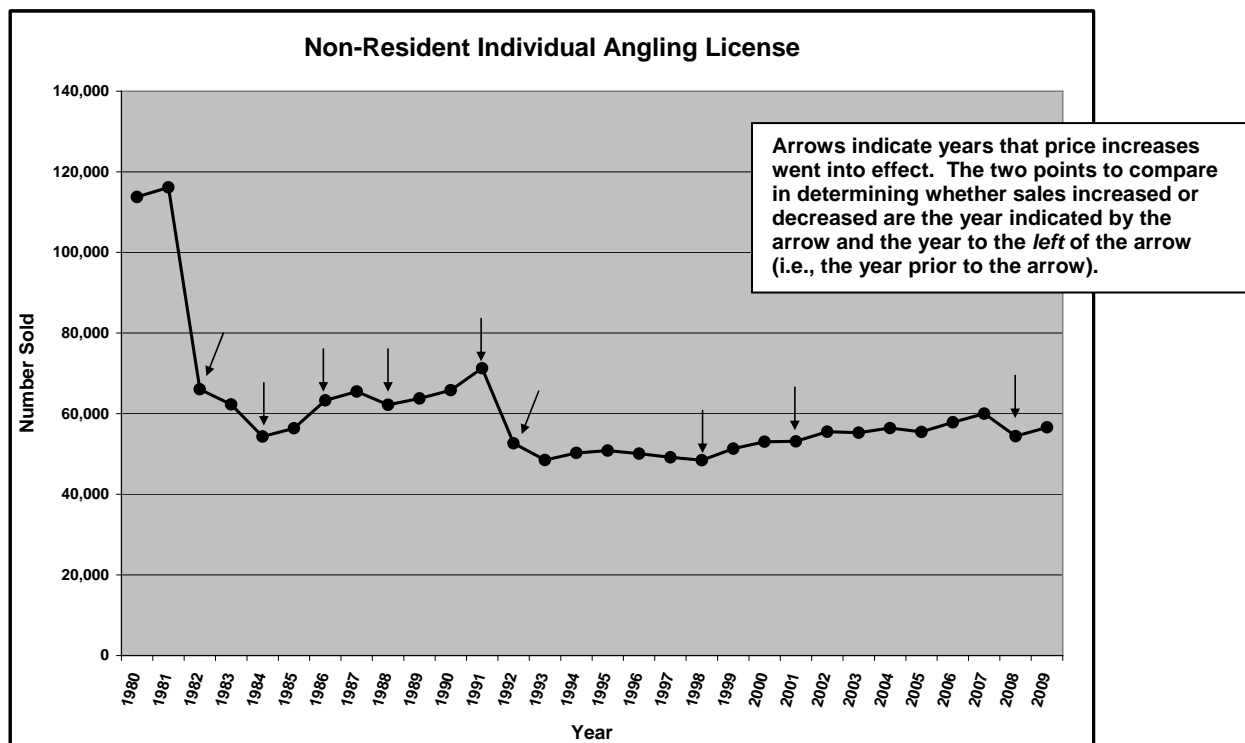


Figure 2.7. Non-Resident Individual Fishing License Sales Trend

Source: MN DNR.

Non-Resident Family Fishing

This license allows a legally married non-resident couple and their children under age 16 to fish and for each family member to possess a limit of fish. A separate trout stamp may be required.

The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$15.50
- 1982 \$20.75 (sales decreased)
- 1984 \$23.25 (sales decreased)
- 1986 \$30.75 (sales decreased)
- 1988 \$34.00 (sales decreased)
- 1991 \$37.00 (sales remained stable)
- 1992 \$38.50 (sales decreased)
- 1998 \$42.50 (sales remained stable)
- 2001 \$47.00 (sales decreased)
- 2008 \$53.50 (sales remained stable)

(Note that the fees shown *include* the administrative fee of \$1.00.)

The sale of the Non-Resident Family Fishing license made up 13.1% of total non-resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.8 shows the trend in Non-Resident Family Fishing license sales; there has been a 68% decrease from 1980 to 2009. These sales numbers were likely affected by the introduction of the Non-Resident 72-Hour Fishing license in 1986 and by the introduction of the Non-Resident 14-Day Couple Fishing license in 1988. Between 1988 and 2009 there was a 37% decline in the Non-Resident Family Fishing license.

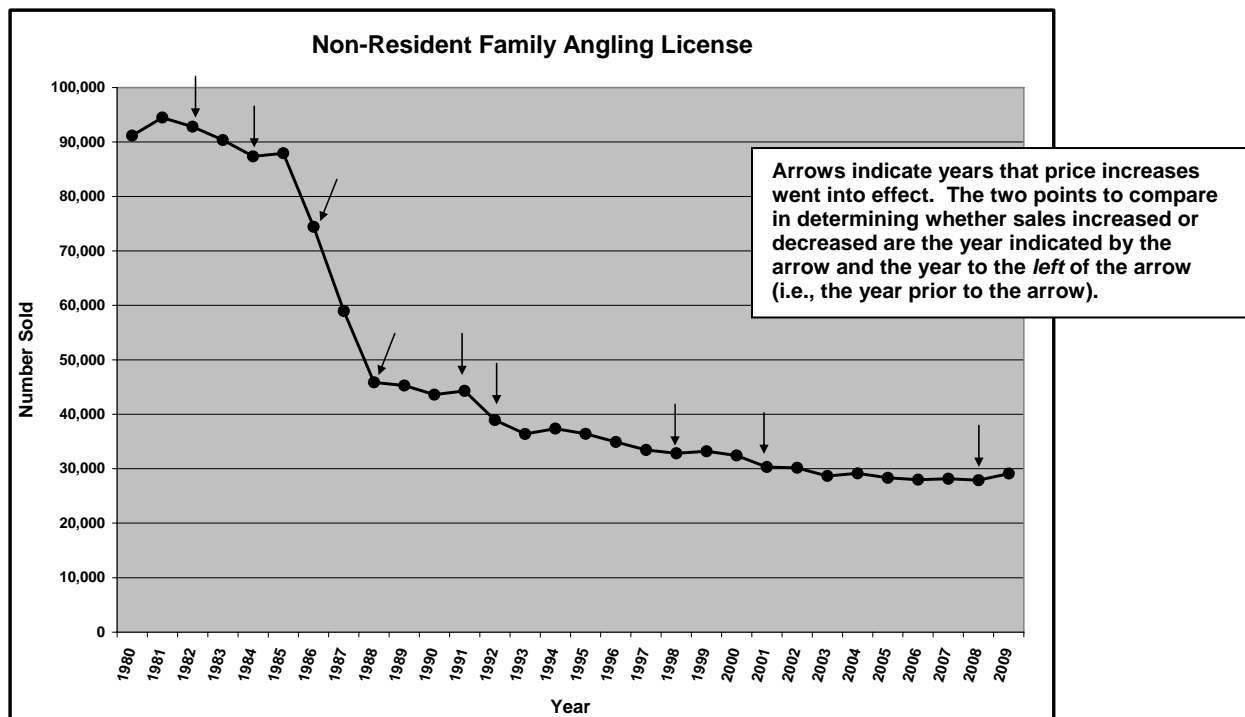


Figure 2.8. Non-Resident Family Fishing License Sales Trend

Source: MN DNR.

Non-Resident 14-Day Couple Fishing

This license allows a legally married non-resident couple to fish for 14 consecutive days. A separate trout stamp may be required. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1988 \$26.00
- 1991 \$28.50 (sales increased)
- 1998 \$33.00 (sales decreased)
- 2001 \$36.00 (sales decreased)
- 2008 \$41.50 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

The sale of the Non-Resident 14-Day Couple Fishing license made up 10.3% of total non-resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.9 shows the trend in Non-Resident 14-Day Couple Fishing license sales; there has been a 24% decrease since this license became available in 1988.

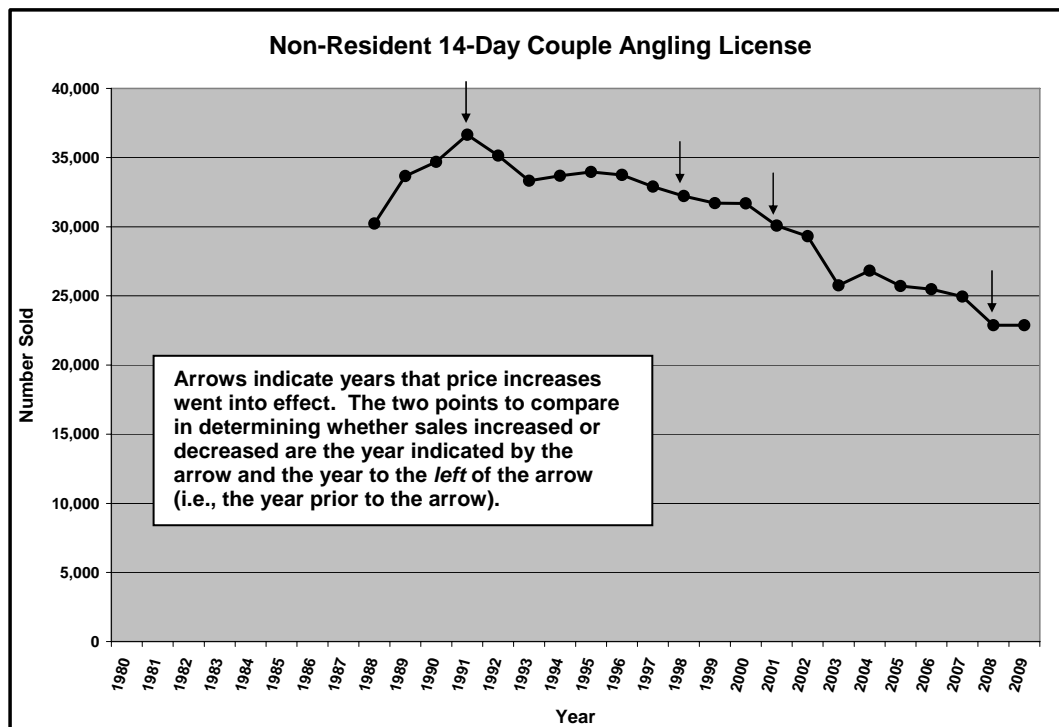


Figure 2.9. Non-Resident 14-Day Couple Fishing License Sales Trend

Source: MN DNR.

Non-Resident 7-Day Fishing

This license allows a non-resident to fish for 7 consecutive days. A separate trout stamp may be required. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1982 \$11.25
- 1984 \$13.75 (sales remained stable)
- 1986 \$16.25 (sales decreased)
- 1988 \$18.50 (sales decreased)
- 1991 \$20.00 (sales increased)
- 1998 \$22.50 (sales increased)
- 2001 \$25.00 (sales decreased)
- 2008 \$29.50 (sales remained stable)

(Note that the fees shown *include* the administrative fee of \$1.00.)

This license is Minnesota's most popular non-resident license, averaging 32.0% of the total sales in non-resident fishing licenses (MN DNR Budget Oversight Committee, 2010). Figure 2.10 shows the trend in Non-Resident 7-Day Fishing license sales; there has been a 24% decrease since this license became available in 1982. These sales numbers were likely affected by the introduction of the Non-Resident 72-Hour Fishing license in 1986. From 1986 to 2009, there has been an *increase* of 15% in sales of this license.

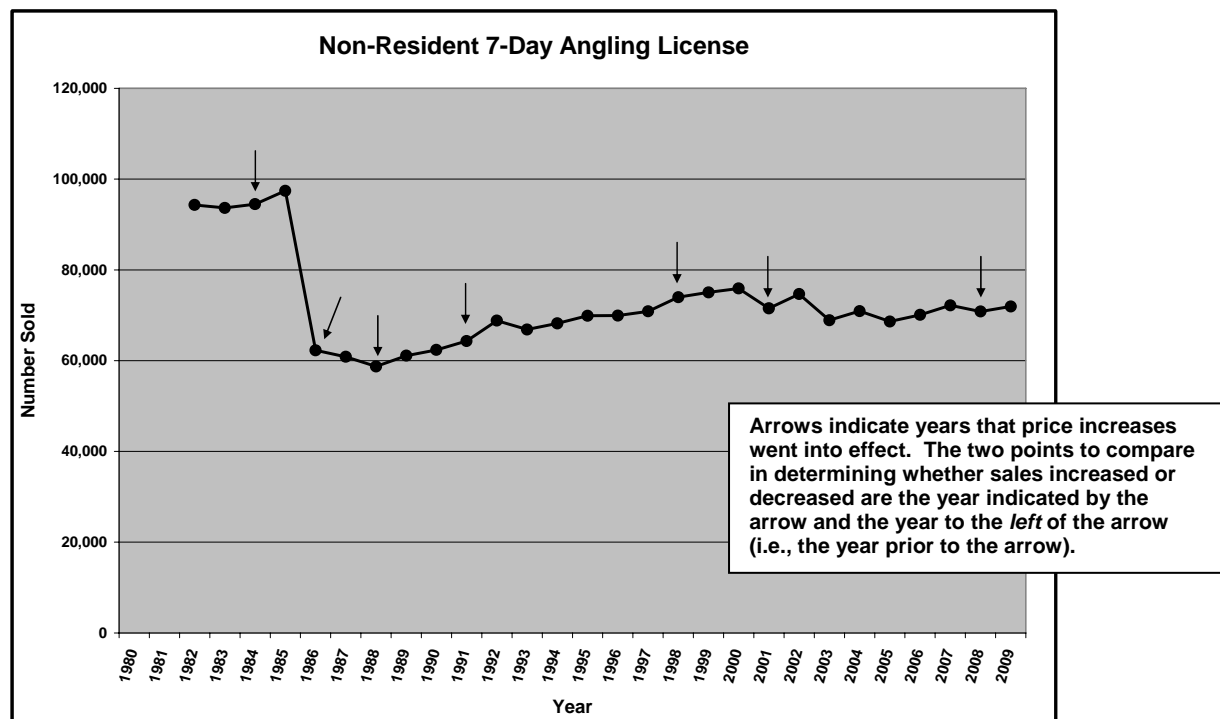


Figure 2.10. Non-Resident 7-Day Fishing License Sales Trend

Source: MN DNR.

Non-Resident 72-Hour Fishing

This license allows a non-resident to fish for 72 consecutive hours. A separate trout stamp may be required. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1986 \$13.75
- 1988 \$15.50 (sales decreased)
- 1991 \$17.00 (sales remained stable)
- 2000 \$19.00 (sales decreased)
- 2001 \$21.00 (sales decreased)
- 2008 \$25.00 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

According to the MN DNR, the sale of the Non-Resident 72-Hour Fishing license made up 18.8% of total non-resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.11 shows the trend in Non-Resident 72-Hour Fishing license sales; there has been a 28% decrease since 1986. Note that the Non-Resident 14-Day Couple Fishing license was introduced in 1988, which may have affected sales. In 1988 and 2009, sales are almost the same (only a 1% difference), but there has been up-and-down movement between those years.

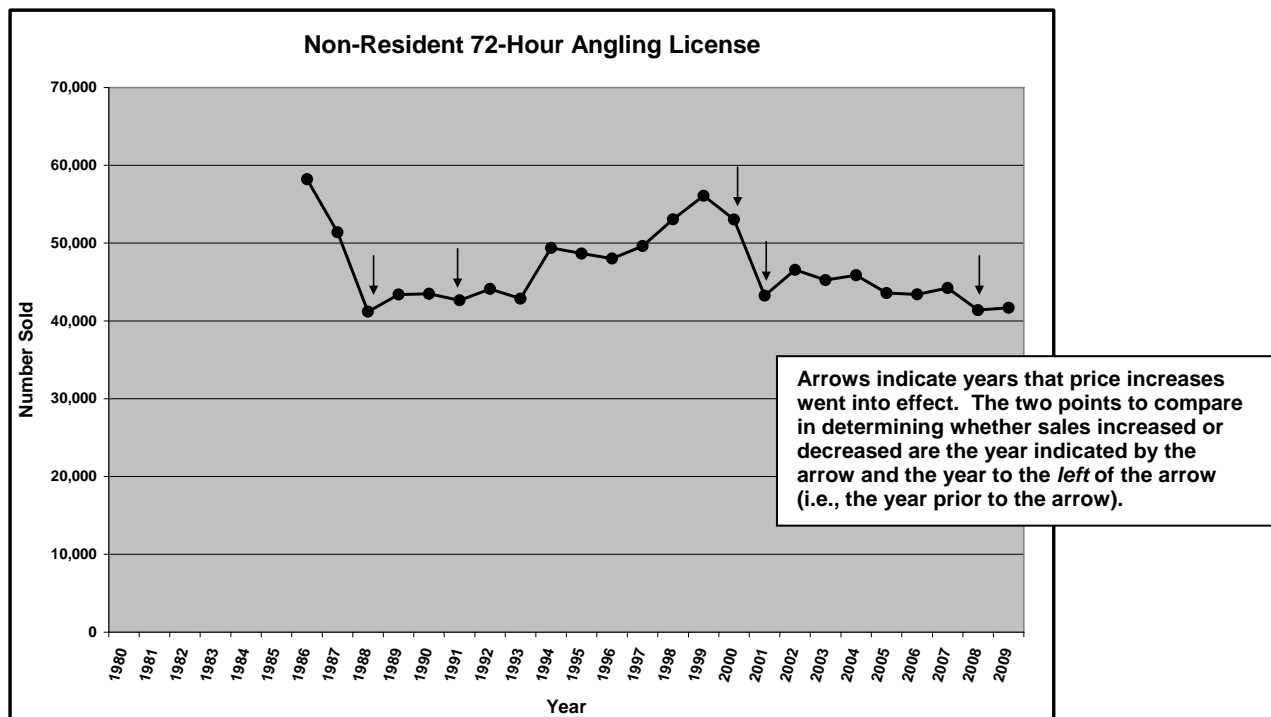


Figure 2.11. Non-Resident 72-Hour Fishing License Sales Trend

Source: MN DNR.

Trout Stamp

This stamp is valid for residents and non-residents ages 16 to 64 years to fish designated trout streams, trout lakes, and Lake Superior and to possess trout or salmon. Trout stamps can be purchased only by residents and non-residents who possess a fishing license. The stamp fees over the years are listed below (MN DNR License Center, 2009):

- 1982 \$3.00
- 1986 \$5.00 (sales increased)
- 1998 \$8.50 (sales decreased)
- 2004 \$10.00 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

Figure 2.12 shows the trend in trout stamp sales; there has been a 112% increase in Trout Stamp sales since it became available in 1982. In 1985, Lake Superior was added to the locations in which a trout stamp was needed, which may be the reason for the increase in sales at that time.

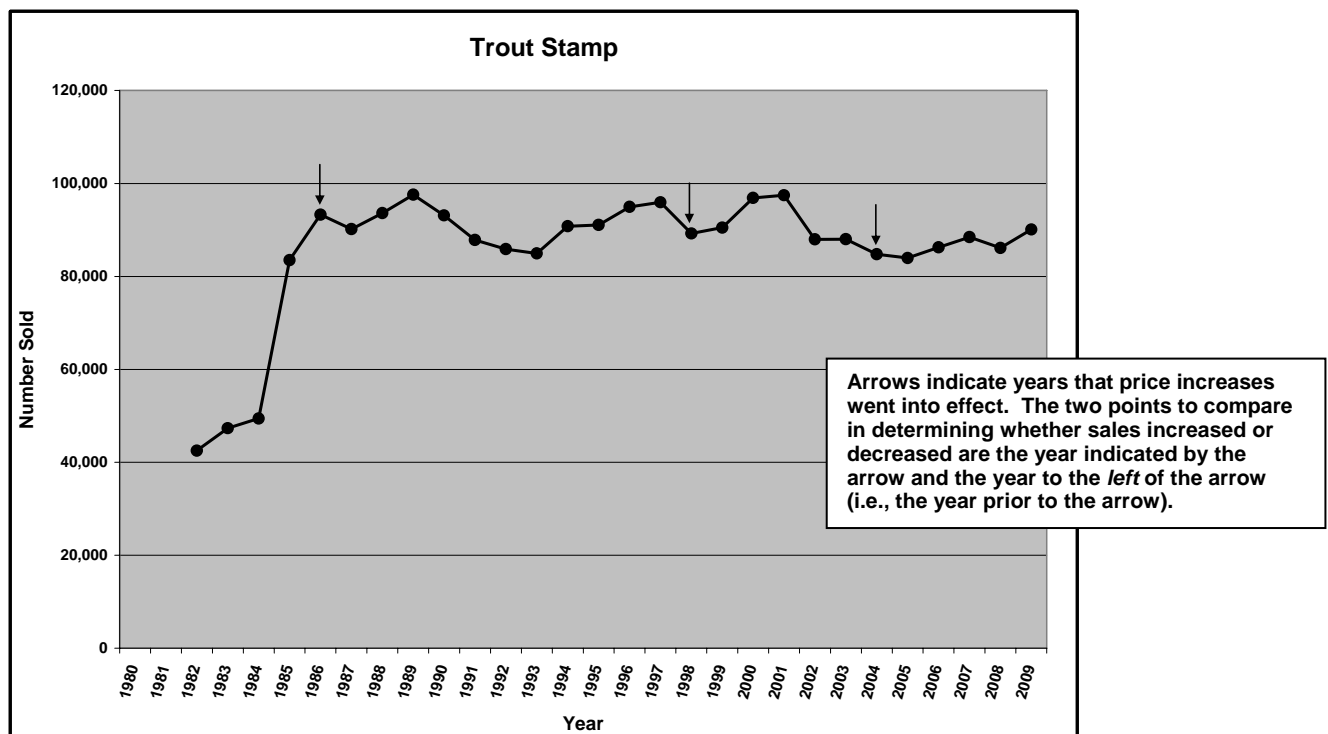


Figure 2.12. Trout Stamp Sales Trend

Source: MN DNR.

Resident Small Game Hunting

This license allows a resident age 18 years old and older to hunt small game. Stamps may be required to take pheasant and migratory waterfowl. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$11.75
- 1988 \$14.00 (sales decreased)
- 1991 \$15.00 (sales decreased)
- 2001 \$17.00 (sales decreased)
- 2004 \$20.00 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

Figure 2.13 shows the trend in Resident Small Game Hunting license sales; there has been a 68% decrease between 1980 and 2009.

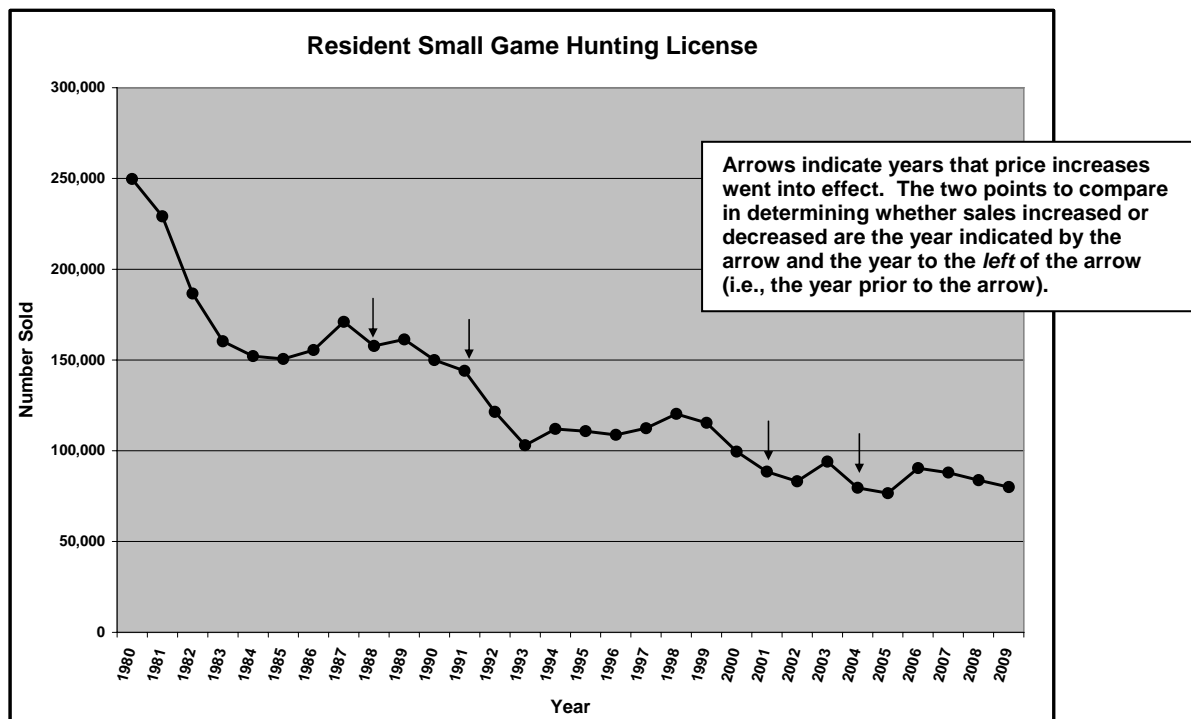


Figure 2.13. Resident Small Game Hunting License Sales Trend

Source: MN DNR.

Resident Deer Firearm Hunting

This license allows a resident age 18 years old and older to hunt deer. The license is valid for buck only, except with antlerless permit if in lottery areas or either sex if in managed or intensive area. Antlerless permit drawing application can be made as part of license purchase prior to drawing deadline. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$10.75
- 1982 \$15.75 (sales remained stable)
- 1983 \$16.00 (sales increased)
- 1988 \$21.00 (sales remained stable)
- 1991 \$23.00 (sales increased)
- 2001 \$26.00 (sales remained stable)
- 2003 \$27.00 (sales decreased)

(Note that the fees shown *include* the administrative fee of \$1.00.)

Figure 2.14 shows the trend in Resident Deer Firearm Hunting license sales; there has been an 8% increase between 1980 and 2009. The decline in Resident Deer Firearm Hunting license sales between 2001 and 2007 was directly offset by increased sales of the all-season license (that was discontinued in 2008) and a change in the eligible age for the youth license in 2004 (an increase from age 15 to age 17). The absolute number of firearm deer hunters (estimated by the Department to be approximately 450,000) is largely unchanged since the mid-1990s.

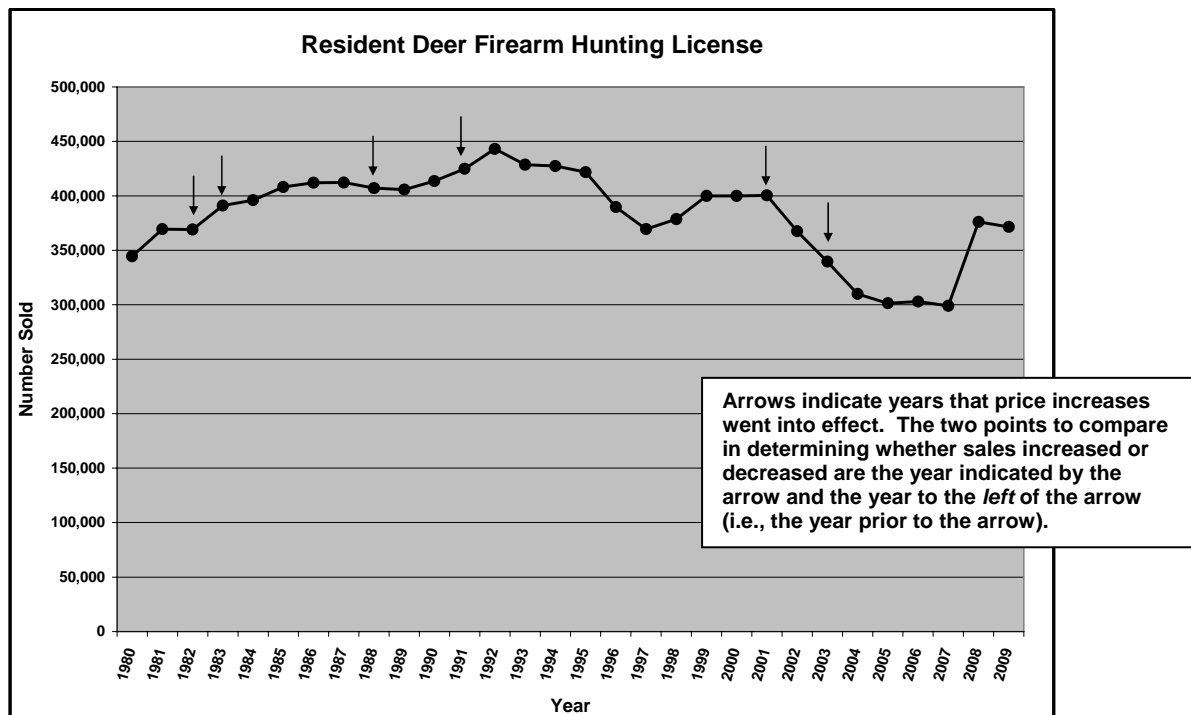


Figure 2.14. Resident Deer Firearm Hunting License Sales Trend

Source: MN DNR.

Resident Individual Sports

This license allows a resident age 18 years old to fish and hunt small game. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$11.75
- 1982 \$17.00 (sales decreased)
- 1984 \$19.50 (sales decreased)
- 1988 \$21.00 (sales increased)
- 1991 \$22.50 (sales increased)
- 1998 \$25.00 (sales increased)
- 2001 \$28.00 (sales decreased)
- 2004 \$30.50 (sales remained stable)

(Note that the fees shown *include* the administrative fee of \$1.00.)

The sale of the Resident Individual Sports License made up 10% of total resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010). Figure 2.15 shows the trend in Resident Individual Sports license sales; there has been a 112% increase between 1980 and 2009.

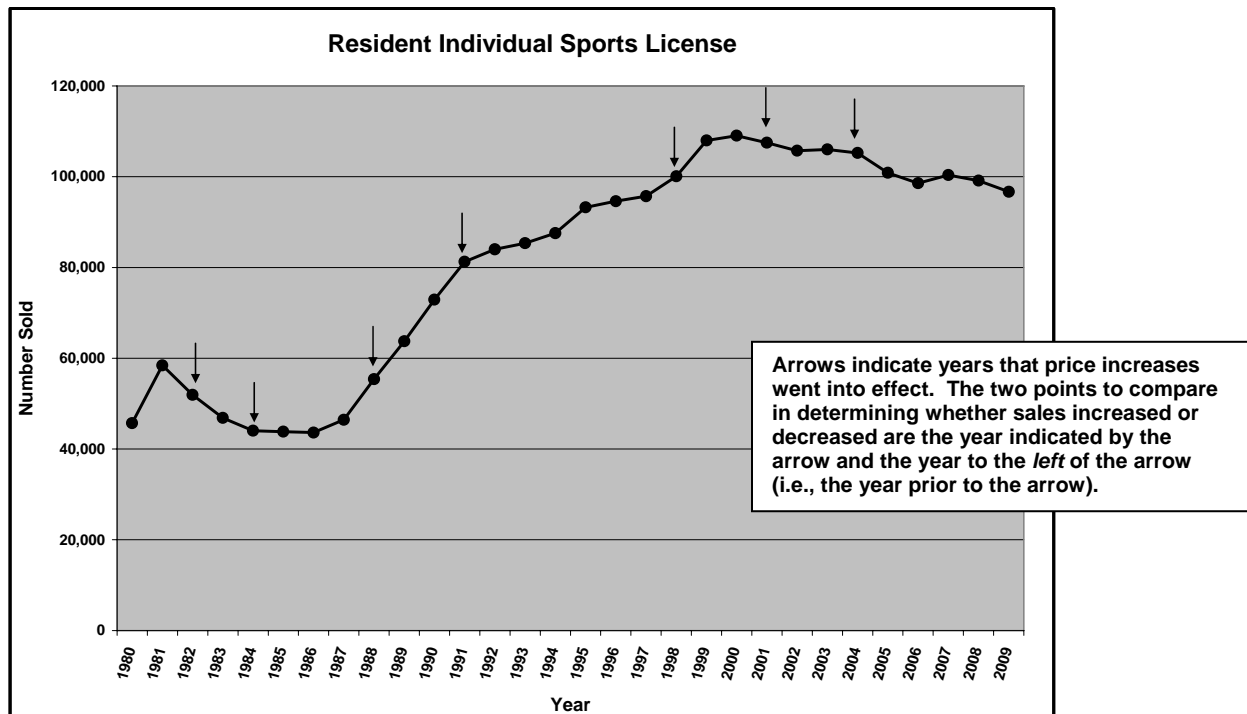


Figure 2.15. Resident Individual Sports License Sales Trend

Source: MN DNR.

Resident Combination (Husband and Wife) Sports

This license allows legally married residents age 18 years old and older to fish, and it includes a small game hunting license for the primary customer. A separate trout stamp is required for each angler. The license fees over the years are listed below (MN DNR License Center, 2009):

- 1980 \$14.75
- 1982 \$21.00 (sales decreased)
- 1984 \$23.50 (sales decreased)
- 1988 \$27.00 (sales increased)
- 1991 \$29.00 (sales increased)
- 1998 \$32.50 (sales increased)
- 2001 \$37.00 (sales decreased)
- 2004 \$39.50 (sales remained stable)

(Note that the fees shown *include* the administrative fee of \$1.00.)

MN DNR data indicate that the sale of the Resident Combination Sports license made up 8% of total resident fishing license sales in 2009 (MN DNR Budget Oversight Committee, 2010).

Figure 2.16 shows the trend in Resident Combination Sports license sales; there has been a 43% increase since 1980.

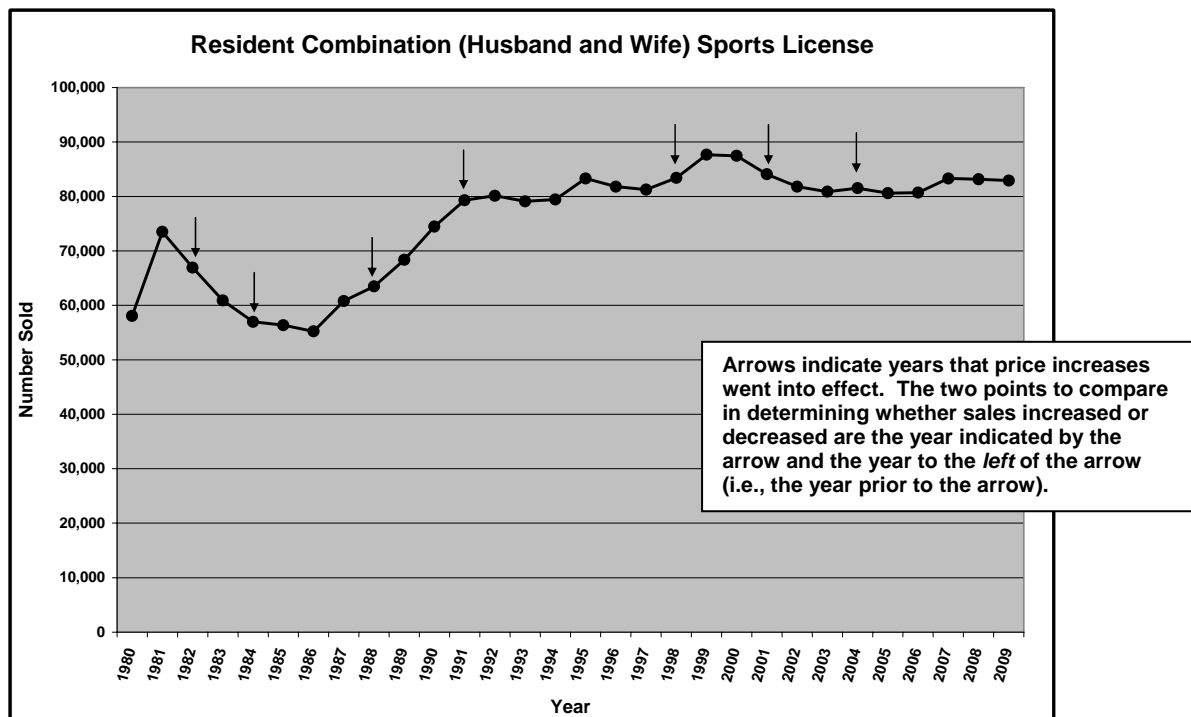


Figure 2.16. Resident Combination (Husband and Wife) Sports License Sales Trend

Source: MN DNR.

SUMMARY OF FINDINGS REGARDING FISHING AND HUNTING PARTICIPATION AND LICENSE SALES

According to *National Survey* data, both fishing and hunting participation have declined recently. However, in Minnesota, fishing participation declined only slightly, far less than the national decline, and hunting participation actually increased. Both of these positive results are fueled by increases in resident anglers and hunters. The numbers of out-of-state anglers and hunters have declined in Minnesota, particularly anglers.

According to the Department's Electronic Licensing System data, over the past 10 years, the numbers of anglers and hunters have stabilized. However, the rate of participation out of the total state population has fallen because the number of anglers and hunters have stayed about the same while the state population has grown.

The *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* indicated that 22% of Minnesota anglers were non-residents and 5% of Minnesota hunters were non-residents. These proportions have remained fairly constant since 1991.

In looking at sales of various types of Minnesota fishing and hunting licenses and stamps, there have been substantial increases in the past decades in the number of licenses sold for three license types: the 24-Hour Angling license, the Resident Individual Angling license, and the Resident Individual Sports license.

CHAPTER 3. COMPARISON OF FISHING AND HUNTING LICENSE FEES ACROSS STATES

This section compares the fees for fishing and hunting licenses sold by the MN DNR with the fees for similar licenses sold by other state fish and wildlife agencies. License fee data were obtained for 50 states, and national averages were calculated for comparison with pricing in Minnesota. Also included is a comparison of fee schedules in surrounding states with the fee schedule in Minnesota.

FRESHWATER FISHING LICENSES

The section that follows provides information for the most common types of annual and short-term freshwater fishing licenses and stamps offered in each state. The complexity and uniqueness of each license system has made a comprehensive listing of all license costs and additional fees challenging; the tables in this section are intended to provide a summary of license fees across the states for the more common licenses.

Some states include additional fees (e.g., agent fees, separate costs for method of application) in the cost of their licenses while others do not. Where it was possible to separate additional fees, these have been excluded from the analysis; in other words, the prices shown are the prices advertised by the agency on its website or in its regulations. There may be some unique license options that were not captured by this database, including exemptions for specific fishing techniques, for specialty fishing regulations, and/or for unique licenses for fishing certain species.

RESIDENT LICENSES

Comparison of All States

As shown in Table 3.1, Minnesota is ranked 36th in price (highest to lowest) for its resident annual fishing license. Figure 3.1 graphically shows this comparison of the cost of the basic resident annual fishing license among all 50 states. In comparison to other states, Minnesota's resident annual freshwater fishing license fee of \$17.00 is well below the mean cost nationally of \$20.97, an almost \$4.00 difference. Among the five states that offer a husband and wife combination fishing license, Minnesota's fee is almost \$10.00 less than the mean of \$34.25 (Table 3.2). Minnesota's 1-day resident fishing license and trout stamp are aligned with national averages. A summary of the data is shown in Table 3.3.

Table 3.1. 2010 Resident Annual Freshwater Fishing License Fees, by State

Rank	State	Resident Annual License Fee	Rank	State	Resident Annual License Fee
1	CALIFORNIA	\$42.69	26	KANSAS	\$20.50
2	NEW HAMPSHIRE	\$35.00	26	MARYLAND	\$20.50
3	OREGON	\$33.00	28	KENTUCKY	\$20.00
4	TEXAS	\$30.00	28	WISCONSIN	\$20.00
5	NEVADA	\$29.00	28	VERMONT	\$20.00
5	NEW YORK	\$29.00	31	WEST VIRGINIA	\$19.00
7	TENNESSEE	\$28.00	31	IOWA	\$19.00
7	MICHIGAN	\$28.00	31	OHIO	\$19.00
7	CONNECTICUT	\$28.00	34	VIRGINIA	\$18.00
10	NEBRASKA	\$27.50	34	RHODE ISLAND	\$18.00
10	MASSACHUSETTS	\$27.50	36	MINNESOTA	\$17.00
12	UTAH	\$26.00	36	INDIANA	\$17.00
12	COLORADO	\$26.00	36	FLORIDA	\$17.00
14	IDAHO	\$25.75	39	ILLINOIS	\$15.00
15	OKLAHOMA	\$25.00	39	NORTH CAROLINA	\$15.00
15	MAINE	\$25.00	41	MISSOURI	\$12.00
15	SOUTH DAKOTA	\$25.00	41	ALABAMA	\$12.00
15	NEW MEXICO	\$25.00	43	ARKANSAS	\$10.50
19	ALASKA	\$24.00	44	NORTH DAKOTA	\$10.00
19	WASHINGTON	\$24.00	44	SOUTH CAROLINA	\$10.00
19	WYOMING	\$24.00	46	LOUISIANA	\$9.50
22	ARIZONA	\$23.50	47	GEORGIA	\$9.00
23	MONTANA	\$23.00	48	DELAWARE	\$8.50
24	PENNSYLVANIA	\$22.70	49	MISSISSIPPI	\$8.00
25	NEW JERSEY	\$22.50	50	HAWAII	\$5.00
Mean Nationally: \$20.97					

Source: Nelson, 2010.

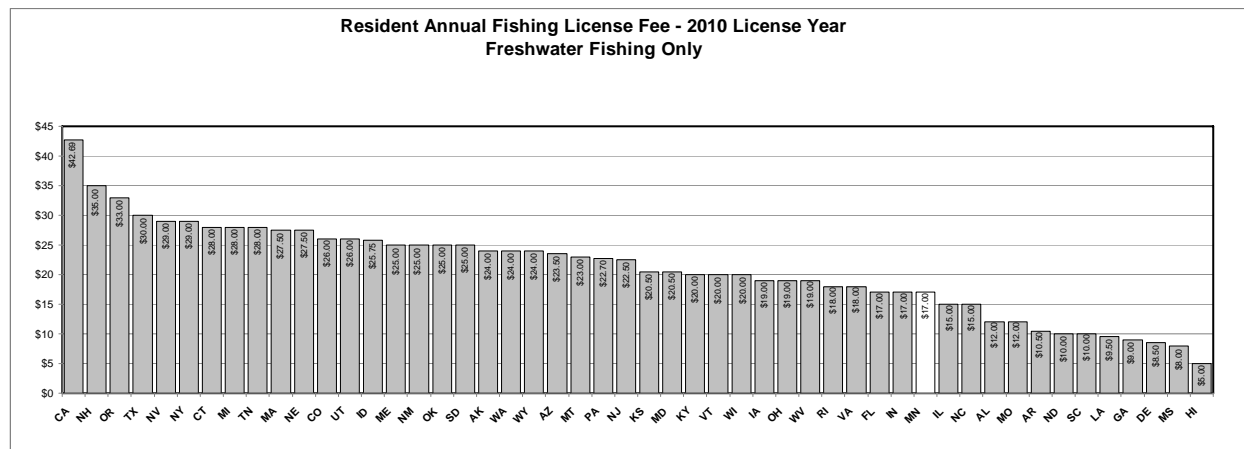
**Figure 3.1. Comparison of Basic Annual Fishing License Fees Among All 50 States**

Table 3.2. Comparison of Fees for Resident Freshwater Fishing Licenses

Resident Fishing License Type and Fee								
State	Resident Annual	Resident Husband/Wife/Family	Conservation Stamp Required	Resident 1-Day	Resident 3-Day	Resident 5-Day	Resident 7-Day	Resident Trout Stamp
AK	\$24.00							\$10.00
AL	\$12.00							
AR	\$10.50				\$6.50			\$5.00
AZ	\$23.50	\$65.25		\$16.25				\$15.75
CA	\$42.69			\$13.78				
CO	\$26.00		\$5.00	\$9.00				
CT	\$28.00							
DE	\$8.50							\$4.20
FL	\$17.00							
GA	\$9.00				\$3.50			\$5.00
HI	\$5.00							
IA	\$19.00			\$9.50			\$13.50	\$13.00
ID	\$25.75			\$11.50				\$12.75
IL	\$15.00			\$5.50				\$6.50
IN	\$17.00			\$9.00				\$11.00
KS	\$20.50			\$5.50				\$12.50
KY	\$20.00	\$36.00		\$7.00				\$10.00
LA	\$9.50							
MA	\$27.50		\$5.00		\$12.50			
MD	\$20.50					\$7.50		\$5.00
ME	\$25.00			\$11.00				
MI	\$28.00		\$1.00	\$7.00				
MN	\$17.00	\$25.00		\$8.50				\$10.00
MO	\$12.00		\$2.00	\$7.00				\$7.00
MS	\$8.00				\$3.00			
MT	\$23.00		\$8.00					
NC	\$15.00							
ND	\$10.00	\$14.00	\$1.00					
NE	\$27.50			\$6.50	\$21.50			
NH	\$35.00			\$10.00				
NJ	\$22.50							\$10.50
NM	\$25.00			\$12.00		\$24.00		
NV	\$29.00			\$9.00	\$15.00	\$21.00	\$27.00	\$10.00
NY	\$29.00			\$5.00			\$15.00	
OH	\$19.00			\$11.00				
OK	\$25.00							\$10.00
OR	\$33.00			\$16.75	\$46.25			\$16.50
PA	\$22.70			\$11.70				\$9.70
RI	\$18.00							\$5.50
SC	\$10.00							
SD	\$25.00			\$7.00				
TN	\$28.00			\$5.50				\$18.00
TX	\$30.00			\$11.00				
UT	\$26.00			\$8.00			\$16.00	
VA	\$18.00					\$11.00		\$18.00
VT	\$20.00				\$10.00			
WA	\$24.00			\$10.18	\$16.73	\$21.09		
WI	\$20.00	\$31.00						\$10.00
WV	\$19.00		\$5.00					\$10.00
WY	\$24.00		\$12.50	\$6.00				
<i>Means</i>	<i>\$20.97</i>	<i>\$34.25</i>	<i>\$4.94</i>	<i>\$9.27</i>	<i>\$15.00</i>	<i>\$16.92</i>	<i>\$17.88</i>	<i>\$10.25</i>

Source: Nelson, 2010.

Table 3.3. Fees for Resident Freshwater Fishing Licenses: Summary Table

Resident Fishing License Type and Fee								
	Resident Annual	Resident Husband/Wife/Family	Conservation Stamp Required	Resident 1-Day	Resident 3-Day	Resident 5-Day	Resident 7-Day	Resident Trout Stamp
Sample Size	50	5	8	27	9	5	4	24
Mean	\$20.97	\$34.25	\$4.94	\$9.27	\$15.00	\$16.92	\$17.88	\$10.25
Median	\$21.50	\$31.00	\$5.00	\$9.00	\$12.50	\$21.00	\$15.50	\$10.00
Minimum	\$5.00	\$14.00	\$1.00	\$5.00	\$3.00	\$7.50	\$13.50	\$4.20
Minimum State(s)	HI	ND	MI, ND	NY	MS	MD	IA	DE
Maximum	\$42.69	\$65.25	\$12.50	\$16.75	\$46.25	\$24.00	\$27.00	\$18.00
Maximum State(s)	CA	AZ	WY	OR	OR	NM	NV	TN, VA
Quartile - 1st	\$25.94	\$36.00	\$5.75	\$11.00	\$16.73	\$21.09	\$18.75	\$12.56
Quartile - 3rd	\$17.00	\$25.00	\$1.75	\$7.00	\$6.50	\$11.00	\$14.63	\$6.88
<i>Note: Quartiles based on a descending rank. For this analysis, additional fees were not included in total costs (e.g., agent fees, separate costs by purchase methods).</i>								

Source: Nelson, 2010.

Comparison With Surrounding States

While Minnesota's annual freshwater fishing license is almost \$4.00 below the national mean, its current fee is comparable to those charged by the nine surrounding and nearby states (Table 3.4). As shown, Minnesota's fee for the resident annual freshwater fishing license is only slightly lower than the mean price of surrounding and nearby states: Minnesota's price is \$2.67 below the mean of the surrounding states, with the border state of North Dakota offering the lowest price for a resident annual fishing license (\$10.00) of the nine states examined. Only two of the surrounding states offer the combination husband and wife fishing license, with North Dakota providing the lowest cost of \$14.00 for this license. Minnesota's license fee for this type of license is in the middle between those two other states. The costs of other licenses/stamps offered by Minnesota for which comparisons were made are commensurate with other states, being neither extremely high or extremely low relative to those other states.

Table 3.4. Fees for Resident Freshwater Fishing Licenses: Comparison of Surrounding and Nearby States

Resident Fishing License Type and Fee							
State	Resident Annual	Resident Husband/Wife/Family	Conservation Stamp Required	Resident 1-Day	Resident 3-Day	Resident 7-Day	Resident Trout Stamp
ILLINOIS	\$15.00			\$5.50			\$6.50
IOWA	\$19.00			\$9.50		\$13.50	\$13.00
KANSAS	\$20.50			\$5.50			\$12.50
MICHIGAN	\$28.00		\$1.00	\$7.00			
MINNESOTA	\$17.00	\$25.00		\$8.50			\$10.00
MISSOURI	\$12.00		\$2.00	\$7.00			\$7.00
NEBRASKA	\$27.50			\$6.50	\$21.50		
NORTH DAKOTA	\$10.00	\$14.00	\$1.00				
SOUTH DAKOTA	\$25.00			\$7.00			
WISCONSIN	\$20.00	\$31.00					\$10.00
Sample Size	9	2	3	7	1	1	5
Mean of Surrounding and Nearby States	\$19.67	\$22.50	\$1.33	\$6.86			\$9.80
Minimum	\$10.00	\$14.00	\$1.00	\$5.50			\$6.50
Maximum	\$28.00	\$31.00	\$2.00	\$9.50			\$13.00

Source: Nelson, 2010.

NON-RESIDENT LICENSES**Comparison of All States**

As shown in Table 3.5, Minnesota is ranked 37th in price for its non-resident annual fishing license. In comparison with other states, Minnesota's non-resident annual freshwater fishing license fee of \$39.50 is well below the national mean of \$53.01, a difference of \$13.51.

Among the 31 states that offer a 1-day non-resident fishing license, Minnesota's fee is approximately \$3.50 less than the national mean (Table 3.6). Minnesota charges substantially less than the national mean for a trout stamp, as well: Minnesota's fee is \$10.00, compared to the mean of \$18.77 for a non-resident trout stamp. Note that both Alaska and Arizona charge substantially more for a non-resident trout stamp than do other states. When these outliers (Alaska charges \$100.00, and Arizona charges \$57.75) are removed, the mean among the remaining states with a trout stamp is \$13.30; again, Minnesota is substantially below that mean. A summary of the data is shown in Table 3.7.

Table 3.5. 2010 Non-Resident Annual Freshwater Fishing License Fees, by State

Rank	State	Non-Resident Annual License Fee	Rank	State	Non-Resident Annual License Fee
1	ALASKA	\$145.00	26	ALABAMA	\$46.00
2	CALIFORNIA	\$115.05	27	GEORGIA	\$45.00
3	OREGON	\$106.25	28	KANSAS	\$42.50
4	IDAHO	\$98.25	29	OKLAHOMA	\$42.00
5	WYOMING	\$92.00	29	MISSOURI	\$42.00
6	ARIZONA	\$70.25	29	MICHIGAN	\$42.00
7	MONTANA	\$70.00	32	TENNESSEE	\$41.00
7	NEW YORK	\$70.00	32	IOWA	\$41.00
7	UTAH	\$70.00	32	VERMONT	\$41.00
10	NEVADA	\$69.00	35	ARKANSAS	\$40.00
11	MAINE	\$64.00	35	OHIO	\$40.00
12	SOUTH DAKOTA	\$60.00	37	MINNESOTA	\$39.50
12	LOUISIANA	\$60.00	38	MASSACHUSETTS	\$37.50
14	NEBRASKA	\$59.50	39	WEST VIRGINIA	\$37.00
15	TEXAS	\$58.00	40	VIRGINIA	\$36.00
16	NEW MEXICO	\$56.00	41	INDIANA	\$35.00
16	COLORADO	\$56.00	41	RHODE ISLAND	\$35.00
18	CONNECTICUT	\$55.00	41	NORTH DAKOTA	\$35.00
19	NEW HAMPSHIRE	\$53.00	41	SOUTH CAROLINA	\$35.00
20	PENNSYLVANIA	\$52.70	45	NEW JERSEY	\$34.00
21	KENTUCKY	\$50.00	46	ILLINOIS	\$31.50
21	WISCONSIN	\$50.00	47	MARYLAND	\$30.50
21	WASHINGTON	\$50.00	48	NORTH CAROLINA	\$30.00
21	MISSISSIPPI	\$50.00	49	HAWAII	\$25.00
25	FLORIDA	\$47.00	50	DELAWARE	\$20.00
Mean Nationally: \$53.01					

Source: Nelson, 2010.

Table 3.6. Comparison of Fees for Non-Resident Freshwater Fishing Licenses

Non-Resident Fishing License Type and Fee								
State	Non-Resident Annual	Non-Resident Husband/Wife	Non-Resident Conservation Stamp	Non-Resident 1-Day	Non-Resident 3-Day	Non-Resident 5-day	Non-Resident 7-Day	Non-Resident Trout Stamp
AL	\$46.00						\$26.00	
AK	\$145.00			\$20.00	\$35.00		\$55.00	\$100.00
AZ	\$70.25			\$17.25		\$32.00		\$57.75
AR	\$40.00				\$11.00		\$17.00	\$12.00
CA	\$115.05			\$13.78				
CO	\$56.00			\$9.00		\$21.00		
CT	\$55.00				\$22.00			
DE	\$20.00						\$12.50	\$6.20
FL	\$47.00				\$17.00		\$30.00	
GA	\$45.00				\$20.00			\$20.00
HI	\$25.00						\$10.00	
ID	\$98.25			\$12.75	\$37.50			\$25.75
IL	\$31.50			\$5.50				\$6.50
IN	\$35.00			\$9.00			\$20.00	\$11.00
IA	\$41.00			\$10.50	\$17.50		\$32.00	\$15.00

Note: Table continues on next page. Source: Nelson, 2010.

Table 3.6 (continued). Comparison of Fees for Non-Resident Freshwater Fishing Licenses

Non-Resident Fishing License Type and Fee								
State	Non-Resident Annual	Non-Resident Husband/Wife	Non-Resident Conservation Stamp	Non-Resident 1-Day	Non-Resident 3-Day	Non-Resident 5-day	Non-Resident 7-Day	Non-Resident Trout Stamp
KS	\$42.50			\$5.50		\$22.50		\$12.50
KY	\$50.00			\$10.00			\$30.00	\$10.00
LA	\$60.00			\$5.00				
ME	\$64.00			\$11.00	\$23.00		\$43.00	
MD	\$30.50				\$5.00	\$7.50		\$5.00
MA	\$37.50				\$23.50			
MI	\$42.00		\$1.00	\$7.00				
MN	\$39.50	\$52.50		\$8.50	\$24.00		\$28.50	\$10.00
MS	\$50.00			\$8.00	\$15.00			
MO	\$42.00			\$7.00				\$7.00
MT	\$70.00		\$10.00					
NE	\$59.50			\$8.50	\$26.50			
NV	\$69.00			\$18.00	\$32.00	\$46.00	\$60.00	\$10.00
NH	\$53.00			\$15.00	\$28.00		\$35.00	
NJ	\$34.00						\$19.50	\$20.00
NM	\$56.00			\$12.00		\$24.00		
NY	\$70.00			\$15.00			\$35.00	
NC	\$30.00							
ND	\$35.00	\$45.00			\$15.00			
OH	\$40.00			\$11.00	\$19.00			
OK	\$42.00					\$23.50		\$10.00
OR	\$106.25			\$16.75	\$46.25		\$59.75	\$16.50
PA	\$52.70			\$26.70	\$26.70		\$34.70	\$9.70
RI	\$35.00				\$16.00			\$5.50
SC	\$35.00						\$11.00	
SD	\$60.00	\$60.00		\$14.00	\$32.00			
TN	\$41.00				\$16.50			\$18.00
TX	\$58.00			\$16.00				
UT	\$70.00			\$12.00			\$32.00	
VT	\$41.00			\$15.00	\$20.00		\$30.00	
VA	\$36.00					\$16.00		\$36.00
WA	\$50.00			\$17.82	\$30.91	\$39.64		
WV	\$37.00		\$13.00	\$3.00				\$16.00
WI	\$50.00	\$65.00						\$10.00
WY	\$92.00		\$12.50	\$14.00				
<i>Means</i>	<i>\$53.01</i>	<i>\$55.63</i>	<i>\$9.13</i>	<i>\$12.08</i>	<i>\$23.31</i>	<i>\$25.79</i>	<i>\$31.05</i>	<i>\$18.77</i>

Source: Nelson, 2010.

Table 3.7. Fees for Non-Resident Freshwater Fishing Licenses: Summary Table

Non-Resident Fishing License Type and Fee								
	Non-Resident Annual	Non-Resident Husband/Wife	Non-Resident Conservation Stamp	Non-Resident 1-Day	Non-Resident 3-Day	Non-Resident 5-day	Non-Resident 7-Day	Non-Resident Trout Stamp
Sample Size	50	4	4	31	24	9	20	24
Mean	\$53.01	\$55.63	\$9.13	\$12.08	\$23.31	\$25.79	\$31.05	\$18.77
Median	\$46.50	\$56.25	\$11.25	\$12.00	\$22.50	\$23.50	\$30.00	\$11.50
Minimum	\$20.00	\$45.00	\$1.00	\$3.00	\$5.00	\$7.50	\$10.00	\$5.00
Minimum State	DE	ND	MI	WV	MD	MD	HI	MD
Maximum	\$145.00	\$65.00	\$13.00	\$26.70	\$46.25	\$46.00	\$60.00	\$100.00
Maximum State	AK	WI	WV	PA	OR	NV	NV	AK
Quartile - 1st	\$59.88	\$61.25	\$12.63	\$15.00	\$28.73	\$32.00	\$35.00	\$18.50
Quartile - 3rd	\$38.00	\$50.63	\$7.75	\$8.50	\$16.88	\$21.00	\$19.88	\$9.93

Note: Quartiles based on a descending rank. For this analysis, additional fees were not included in total costs (e.g., agent fees, separate costs by purchase methods).

Source: Nelson, 2010.

Comparison With Surrounding States

While Minnesota's annual non-resident freshwater fishing license is well below the national mean, its current fee is comparable to those charged by surrounding states (Table 3.8). In fact, its price is within \$5.00 of five of the nine states of interest and is well below three more of those nine states; only Illinois' fee is well *below* Minnesota's. For the other types of licenses that Minnesota offers, the fee charged is commensurate with the mean of nearby states.

Table 3.8. Fees for Non-Resident Freshwater Fishing Licenses: Comparison of Surrounding and Nearby States

Non-Resident Fishing License Type and Fee								
State	Non-Resident Annual	Non-Resident Husband/Wife	Non-Resident Conservation Stamp	Non-Resident 1-Day	Non-Resident 3-Day	Non-Resident 5-day	Non-Resident 7-Day	Non-Resident Trout Stamp
ILLINOIS	\$31.50			\$5.50				\$6.50
IOWA	\$41.00			\$10.50	\$17.50		\$32.00	\$15.00
KANSAS	\$42.50			\$5.50		\$22.50		\$12.50
MICHIGAN	\$42.00		\$1.00	\$7.00				
MINNESOTA	\$39.50	\$52.50		\$8.50	\$24.00		\$28.50	\$10.00
MISSOURI	\$42.00			\$7.00				\$7.00
NEBRASKA	\$59.50			\$8.50	\$26.50			
NORTH DAKOTA	\$35.00	\$45.00			\$15.00			
SOUTH DAKOTA	\$60.00	\$60.00		\$14.00	\$32.00			
WISCONSIN	\$50.00	\$65.00						\$10.00
Sample Size	9	3	1	7	4	1	1	5
Mean of Surrounding and Nearby States	\$44.83	\$56.67		\$8.29	\$22.75			\$10.20
Minimum	\$31.50	\$45.00		\$5.50	\$15.00		\$28.50	\$6.50
Maximum	\$60.00	\$65.00		\$14.00	\$32.00		\$32.00	\$15.00

Source: Nelson, 2010.

HUNTING LICENSES

COMPARISON OF ALL STATES

The examination of hunting license fees could not be conducted exactly like it was conducted for fishing license fees. The comparison of fishing licenses could be done by examining the fees for various types of licenses, because many states have licenses for fishing that are quite similar to licenses in other states. Types of hunting licenses, however, vary quite widely in different states, with various privileges attached to various types of licenses. For this reason, a comparison of types of *licenses* was not straightforward. Instead, the researchers examined the minimum cost to hunt various types of *game*.

The primary comparison is the cost to hunt deer, as this is certainly one of the most popular species to hunt. Because every state offers hunting of some type of deer, a comparison could be made of all 50 states. Table 3.9 shows that Minnesota's cost (\$26.00) ranks 30th in the U.S., about half the cost of the top ten states, and well below the national mean (\$34.42). Figure 3.2 graphically shows this comparison of the cost to hunt deer in all 50 states.

Table 3.9. 2010 Costs to Hunt Deer, by State

State	Cost to Hunt Deer	Rank	State	Cost to Hunt Deer	Rank
ARIZONA	\$74.50	1	LOUISIANA	\$29.00	27
CALIFORNIA	\$71.34	2	NEW YORK	\$29.00	27
NEVADA	\$63.00	3	MASSACHUSETTS	\$27.50	29
UTAH	\$61.00	4	MINNESOTA	\$26.00	30
KANSAS	\$58.00	5	ALASKA	\$25.00	31
TENNESSEE	\$56.00	6	ARKANSAS	\$25.00	31
NEW JERSEY	\$55.50	7	MAINE	\$25.00	31
OREGON	\$54.00	8	NORTH CAROLINA	\$25.00	31
KENTUCKY	\$50.00	9	TEXAS	\$25.00	31
IOWA	\$47.50	10	MARYLAND	\$24.50	36
OKLAHOMA	\$45.00	11	ALABAMA	\$24.00	37
WASHINGTON	\$43.20	12	MONTANA	\$24.00	37
NEW MEXICO	\$43.00	13	WISCONSIN	\$24.00	37
OHIO	\$43.00	13	FLORIDA	\$22.00	40
WYOMING	\$43.00	13	NEW HAMPSHIRE	\$22.00	40
INDIANA	\$41.00	16	PENNSYLVANIA	\$20.70	42
CONNECTICUT	\$38.00	17	VERMONT	\$20.00	43
ILLINOIS	\$37.50	18	GEORGIA	\$19.00	44
COLORADO	\$36.00	19	WEST VIRGINIA	\$19.00	44
VIRGINIA	\$36.00	19	SOUTH CAROLINA	\$18.00	46
SOUTH DAKOTA	\$35.00	21	MISSISSIPPI	\$17.00	47
NORTH DAKOTA	\$34.00	22	MISSOURI	\$17.00	47
IDAHO	\$32.50	23	MICHIGAN	\$15.00	49
RHODE ISLAND	\$30.50	24	HAWAII	\$10.00	50
DELAWARE	\$30.00	25			
NEBRASKA	\$30.00	25	Mean Nationally: \$34.42		

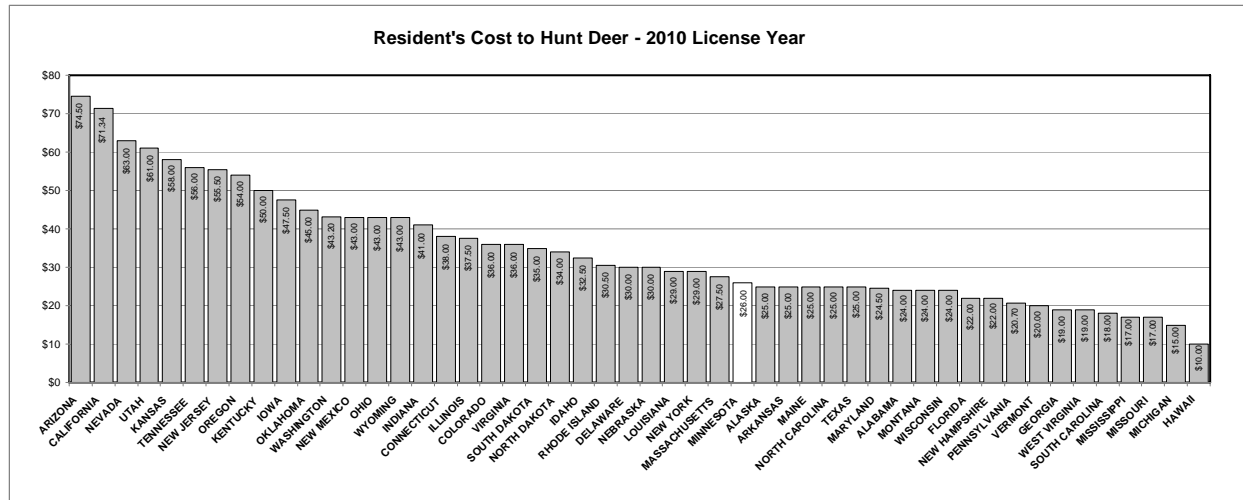


Figure 3.2. Comparison of Cost to Hunt Deer Among All 50 States

Table 3.10 shows a comparison of costs to hunt wild turkey, to hunt bear, to go trapping, to hunt small game, and to obtain a waterfowl stamp (as well as the previously shown data on the cost to hunt deer). Minnesota's fee for hunting turkey is well below the mean nationally (\$23.00, compared to the mean of \$32.15), as is its fee to hunt bear (\$38.00, compared to the mean of \$43.02). For the other items shown, Minnesota's fee was fairly close to the mean. A summary of the data is shown in Table 3.11.

Table 3.10. Comparison of Fees for Resident Hunting Licenses and Costs to Hunt Various Species

State	Annual Hunting License	*Cost to Hunt Deer	*Cost to Hunt Turkey	*Cost to Hunt Bear	Trapping	Small Game License	Waterfowl Stamp
AL	\$24.00	\$24.00	\$24.00	\$24.00	\$8.40	\$16.00	\$6.00
AK	\$25.00	\$25.00	NA	\$25.00	\$15.00	\$25.00	\$5.00
AZ	\$32.25	\$74.50	\$57.75	\$62.00	\$30.00	\$32.25	\$8.75
AR	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$10.50	\$7.00
CA	\$42.69	\$71.34	\$51.33	\$84.55	\$42.69	\$42.69	\$18.62
CO	NA	\$36.00	\$26.00	\$46.00	\$26.00	\$26.00	\$5.00
CT	\$19.00	\$38.00	\$38.00	NA	\$34.00	\$19.00	\$13.00
DE	\$25.00	\$30.00	\$25.00	NA	\$3.50	\$25.00	\$9.00
FL	\$17.00	\$22.00	\$27.00	NA	\$26.50	\$17.00	\$5.00
GA	\$10.00	\$19.00	\$19.00	\$19.00	\$30.00	\$10.00	\$5.50
HI	\$10.00	\$10.00	NA	NA	NA	NA	NA
ID	\$12.75	\$32.50	\$32.50	\$24.25	\$26.75	\$12.75	\$1.75
IL	\$12.50	\$37.50	\$27.50	NA	\$10.50	\$12.50	\$15.50
IN	\$17.00	\$41.00	\$42.00	NA	\$17.00	\$17.00	\$6.75
IA	\$19.00	\$47.50	\$43.50	NA	\$22.50	\$19.00	\$10.00
KS	\$20.50	\$58.00	\$43.00	NA	\$20.50	\$20.50	\$7.00
KY	\$20.00	\$50.00	\$50.00	\$50.00	\$20.00	\$20.00	\$15.00
LA	\$15.00	\$29.00	\$34.50	NA	\$25.00	\$15.00	\$5.50

Note: Table continues on next page.

Table 3.10 (continued). Comparison of Fees for Resident Hunting Licenses and Costs to Hunt Various Species

State	Annual Hunting License	*Cost to Hunt Deer	*Cost to Hunt Turkey	*Cost to Hunt Bear	Trapping	Small Game License	Waterfowl Stamp
ME	\$25.00	\$25.00	\$45.00	\$52.00	\$35.00	\$14.00	\$7.50
MD	\$24.50	\$24.50	\$24.50	\$39.50	\$5.00		\$9.00
MA	\$27.50	\$27.50	\$32.50	\$32.50	\$35.50	\$27.50	\$5.00
MI	NA	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$5.00
MN	NA	\$26.00	\$23.00	\$38.00	\$20.00	\$19.00	\$7.50
MS	\$17.00	\$17.00	\$22.00	NA		\$13.00	\$10.00
MO	NA	\$17.00	\$17.00	NA	\$10.00	\$10.00	\$6.00
MT	NA	\$24.00	\$14.50	\$27.00	\$20.00		\$6.50
NE	NA	\$30.00	\$24.00	NA	\$16.00	\$14.00	\$5.00
NV	\$33.00	\$63.00	\$53.00	NA	\$42.00	\$33.00	\$10.00
NH	\$22.00	\$22.00	\$38.00	\$38.00	\$28.50	\$22.00	\$5.00
NJ	\$27.50	\$55.50	\$48.50	\$29.50	\$32.50	\$27.50	\$5.00
NM	\$43.00	\$43.00	\$25.00	\$47.00	\$20.00	\$20.00	
NY	\$29.00	\$29.00	\$39.00	\$29.00	\$21.00	\$26.00	
NC	\$15.00	\$25.00	\$25.00	\$25.00	\$25.00	\$15.00	\$10.00
ND	\$14.00	\$34.00	\$20.00	NA	\$7.00	\$6.00	
OH	\$19.00	\$43.00	\$43.00	NA	\$15.00	\$19.00	\$15.00
OK	\$25.00	\$45.00	\$35.00	\$126.00	\$10.00	\$25.00	\$10.00
OR	\$29.50	\$54.00	\$52.00	\$44.00	\$47.00	\$47.00	\$11.50
PA	\$20.70	\$20.70	\$20.70	\$37.40	\$20.70	\$20.70	\$3.70
RI	\$18.00	\$30.50	\$25.50	NA	\$10.00	\$18.00	\$7.50
SC	\$12.00	\$18.00	\$18.00	\$43.00	\$5.00	\$12.00	\$5.50
SD	NA	\$35.00	\$25.00	NA	\$25.00	\$29.00	\$5.00
TN	\$28.00	\$56.00	\$56.00	\$56.00	\$28.00	\$28.00	\$2.00
TX	\$25.00	\$25.00	\$25.00	NA	\$19.00	\$25.00	\$7.00
UT	\$26.00	\$61.00	\$61.00	\$109.00	\$29.00	\$26.00	\$10.00
VT	\$20.00	\$20.00	\$37.00	\$20.00	\$20.00	\$20.00	\$8.00
VA	\$18.00	\$36.00	\$36.00	\$36.00	\$41.00	\$18.00	\$10.00
WA	NA	\$43.20	\$16.80	\$24.00	\$36.00	\$36.00	\$12.00
WV	\$19.00	\$19.00	\$29.00	\$29.00		\$19.00	
WI	NA	\$24.00	\$15.00	\$52.00	\$20.00	\$18.00	\$7.00
WY	NA	\$43.00	\$16.00	\$45.00			
<i>Means</i>	<i>\$22.11</i>	<i>\$34.42</i>	<i>\$32.15</i>	<i>\$43.02</i>	<i>\$22.13</i>	<i>\$20.93</i>	<i>\$7.96</i>

Table 3.11. Fees for Resident Hunting Licenses or Costs to Hunt Various Species: Summary Table

State	Annual Hunting License	*Cost to Hunt Deer	*Cost to Hunt Turkey	*Cost to Hunt Bear	Trapping	Small Game License	Waterfowl Stamp
Sample Size	40	50	48	31	44	18	44
Mean	\$22.11	\$34.42	\$32.15	\$43.02	\$22.13	\$20.93	\$7.96
Minimum	\$10.00	\$10.00	\$14.50	\$15.00	\$3.50	\$6.00	\$1.75
Minimum State(s)	GA, HI	HI	MT	MI	DE	ND	ID
Maximum	\$43.00	\$74.50	\$61.00	\$126.00	\$47.00	\$47.00	\$18.62
Maximum State	NM	AZ	UT	OK	OR	OR	CA

*Includes cost of annual license and cost of permit, lottery, or tag, if required.

COMPARISON WITH SURROUNDING STATES

Relative to nearby states, Minnesota's cost to hunt deer is lower than the mean by more than \$7.00. Otherwise, the costs in Minnesota are commensurate with surrounding and nearby states, being slightly above the mean in general, but not by much.

Table 3.12. Hunting License Fees and Costs to Hunt Various Species: Comparison of Surrounding and Nearby States

State	Annual Hunting License	*Cost to Hunt Deer	*Cost to Hunt Turkey	*Cost to Hunt Bear	Trapping	Small Game License	Waterfowl Stamp
IL	\$12.50	\$37.50	\$27.50	NA	\$10.50	\$12.50	\$15.50
IA	\$19.00	\$47.50	\$43.50	NA	\$22.50	\$19.00	\$10.00
KS	\$20.50	\$58.00	\$43.00	NA	\$20.50	\$20.50	\$7.00
MI	NA	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$5.00
MN	NA	\$26.00	\$23.00	\$38.00	\$20.00	\$19.00	\$7.50
MO	NA	\$17.00	\$17.00	NA	\$10.00	\$10.00	\$6.00
NE	NA	\$30.00	\$24.00	NA	\$16.00	\$14.00	\$5.00
ND	\$14.00	\$34.00	\$20.00	NA	\$7.00	\$6.00	NA
SD	NA	\$35.00	\$25.00	NA	\$25.00	\$29.00	\$5.00
WI	NA	\$24.00	\$15.00	\$52.00	\$20.00	\$18.00	\$7.00
Sample Size	4	9	9	2	9	9	8
Mean of Surrounding and Nearby States	\$16.50	\$33.11	\$25.56	\$33.50	\$16.28	\$16.00	\$7.56
Minimum	\$12.50	\$15.00	\$15.00	\$15.00	\$7.00	\$6.00	\$5.00
Maximum	\$20.50	\$58.00	\$43.50	\$52.00	\$25.00	\$29.00	\$15.50

SUMMARY OF FINDINGS REGARDING THE COMPARISON OF MINNESOTA'S FEE SCHEDULES WITH FEE SCHEDULES IN OTHER STATES

Minnesota's Resident Annual Freshwater Fishing license is on the low end of the range of fees charged throughout the United States. Otherwise, Minnesota's fishing license fees for residents are commensurate with the rest of the nation, being neither relatively high or low. Compared to nearby states, Minnesota's resident fishing license fees are in the middle.

The fee that Minnesota charges for the Non-Resident Annual Freshwater Fishing license is at the low end of the range of fees of the 50 states. Otherwise, Minnesota is in the middle of the fees charged for non-resident fishing licenses. Compared to the fees of nearby states, Minnesota's non-resident fishing license fees are in the middle.

Regarding hunting license fees, Minnesota's fee for a license to hunt deer is at the low end of the range among all 50 states. Otherwise, its license fees to hunt various game are a little lower than the national means, but not extremely lower. In comparison to nearby states, Minnesota charges hunting fees that are in line with those of nearby states.

CHAPTER 4. CHANGES IN LICENSE FEES AND THEIR EFFECTS ON FISHING AND HUNTING PARTICIPATION

DATA ON STATE FISHING AND HUNTING LICENSE FEE INCREASES AND SUBSEQUENT SALES

This section shows fishing and hunting license fee increases and structural changes enacted by fish and wildlife agencies throughout the United States within the past 10 years, as well as the reported reasons for and effects of the changes. The data in this section were collected via personal interviews as well as an online questionnaire distributed to agency licensing personnel. The responses discussed in the section below reflect only those agencies that volunteered to share information on their agency's license changes and trends; note that there may be agencies that were unable or chose not to respond to the survey/personal interview request but that, nonetheless, enacted relevant changes to their hunting/fishing license fees or structures.

In this section, license fee increases and structural changes determined from the interviews and survey are summarized in Tables 4.1 and 4.2 (resident and non-resident fee increases are specified as such when the agency provided that information; otherwise, general license fee increases are simply noted as "fee increases"). To provide the most comprehensive and updated list as possible, some agency licensing information from previous Responsive Management research has been added to the fishing license table, even though the agency did not participate in a personal interview or submit a survey response (these additions are identified with asterisks).

Table 4.1. Summary of State Fishing License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Primary reason(s) for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Alaska Department of Fish and Game	2006 (resident and non-resident fee increases)	Fund bond debt for new sport fish hatcheries	Legislation with approval of executive branch	Initial decrease in sales followed by rebound
Arkansas Game and Fish Commission	2000, 2006 (non-resident fee increases)	Increase agency revenues, create parity with surrounding states	Approval from seven-member Commission	Initial decrease in sales followed by rebound
California Department of Fish and Game	2004 (fee increase)	Increase agency revenues	Legislative action	Decrease in sales (follows overall state trend)
Delaware Department of Natural Resources and Environmental Control*	2008 (non-resident fee increase, structural changes)	Increase agency revenues (fee increase); add saltwater license requirement and meet angler demand for certain licenses (structural changes)	Legislative action	Slight increase in sales due to the addition of new licenses

Note: Table continues on next page. * Compiled from previous Responsive Management research with state agency

Table 4.1 (continued). Summary of State Fishing License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Primary reason(s) for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Florida Fish and Wildlife Conservation Commission*	2007 (resident and non-resident fee increases); 2010 (structural changes)	Increase agency revenues (fee increases); simplify saltwater license requirement (structural changes)	Legislative action	2007 fee increases led to initially decreased sales followed by eventual rebound; too early to determine effect of 2010 structural changes
Illinois Department of Natural Resources	2010 (resident and non-resident fee increases)	Increase agency revenues	Legislative action	Too early to determine effect
Indiana Division of Fish and Wildlife	2002, 2006 (fee increases); 2008 (structural change)	Increase agency revenues (fee increases); capture federal certification (structural change)	Approval from Commission (fee increases); legislative action (structural change)	Fee increases did not appear to substantially impact sales
Kentucky Department of Fish and Wildlife Resources	2001 (resident and non-resident fee increases, structural changes)	Increase agency revenues, create parity with surrounding states	Approval from nine-member Commission and two legislative review committees	Decrease in sales that never rebounded
Nevada Department of Wildlife	2004 (fee increase; structural change)	Increase agency revenues (fee increases); simplify non-resident structure (structural change)	Public meeting process involving Advisory Boards followed by legislative action	Net increase in overall fishing participation; decrease in hunting/fishing combination license sales following fee increase
New Hampshire Fish and Game Department	2002, 2003 (fee increases); 2007 (structural change)	Increase agency revenues (fee increases); maximize angler participation (structural change)	Legislative action	Fee increases led to initially decreased sales followed by eventual rebound; 2007 addition of 1-day resident license increased angler participation
New York State Department of Environmental Conservation	2001, 2009 (fee increases, structural changes)	Increase agency revenues	Legislative action	Decrease in sales
North Dakota Game and Fish Department	2004 (non-resident fee increase); 2006 (structural change)		Legislature subcommittee reviewed fees and structure before full legislature voted in favor	Fee increases did not appear to substantially impact sales

Note: Table continues on next page. * Compiled from previous Responsive Management research with state agency

Table 4.1 (continued). Summary of State Fishing License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Primary reason(s) for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Oklahoma Department of Wildlife Conservation <i>(survey response in hunting license section covers both hunting and fishing licenses)</i>	2002 (structural changes); 2003 (resident fee increases, structural changes); 2005 (resident fee increases); 2009 (structural changes)	Increase agency revenues (fee increases); consolidate license structure (structural changes)	Legislative action	Fee increases resulted in moderate decrease in sales but increase in overall revenues; too early to evaluate effect of recent structural changes
Oregon Department of Fish And Wildlife	2001, 2009 (structural changes); 2003, 2009 (resident and non-resident fee increases)	Increase agency revenues (fee increases); simplify license structure (structural changes)	Fee increases and structural changes passed as part of the agency budget, approved by Commission, State Legislature, and Governor	Initial decrease in sales followed by rebound
Pennsylvania Fish and Boat Commission	2005 (resident and non-resident fee increases; structural changes)	Increase agency revenues (fee increases); increase tourism (structural changes)	Act 159, approved by the Pennsylvania House of Representatives, Senate, and Governor	Initial decrease in sales followed by partial rebound
South Dakota Department of Game, Fish and Parks	2004 (resident and non-resident fee increases)	Increase fees in line with inflation	Commission sets license fees	Fee increases did not appear to substantially impact sales
Tennessee Wildlife Resources Agency	2005 (fee increase); 2010 (structural change)	Increase agency revenues (fee increases); accommodate visitors to the state (structural changes)	Agency has legislative approval to increase or make changes to license fees and structure (as approved by twelve-member Commission)	Initial decrease in sales followed by rebound
Virginia Department of Game and Inland Fisheries*	2006 (resident and non-resident fee increases)	Increase agency revenues	Legislative action	Initial decrease in sales followed by rebound
Wisconsin Department of Natural Resources	2004 (fee increase); 2009 (structural change approved)	Increase agency revenues (fee increase); angler demand for 1-day fishing license (structural change)		New 1-day license will go on sale in March 2011

* Compiled from previous Responsive Management research with state agency

Table 4.2. Summary of State Hunting License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Reason for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Alabama Department of Conservation and Natural Resources	Fee increases made in the last decade (last one approx. 2 years ago); structural change introduced new wildlife heritage license	Increase agency revenues	Approval from State Senate and Legislature	Initial decrease in sales; too early to determine rebound, if any
Colorado Division of Wildlife	2006 (resident fee increases); non-resident big game fees adjusted annually	License fees adjusted according to the Bureau of Labor Statistics consumer price index (CPI)	Previous legislation passed to allow the Division to use the CPI to adjust license fees	Initial decrease in sales that may or may not be attributable to the fee increase
Delaware Division of Fish and Wildlife	2008 (fee increase, structural change)	Increase agency revenues	Legislative action	Initial decrease in sales followed by rebound
Florida Fish and Wildlife Conservation Commission	2003 (non-resident fee increase, structural change); 2006 (structural change); 2007 (resident fee increase); 2010 (resident and non-resident fee increases, structural changes)	Increase agency revenues	Legislative action	Initial decrease in sales followed by rebound
Hawaii Department of Land and Natural Resources	2004-2005 (structural changes based on lawsuit invalidating Wildlife Conservation Stamp, Game Bird Stamp, application fees, and tag fees; these were reinstated in recent years)	Structural changes and reintroduction of fees based on lawsuit	Stamps and tag fees were approved by the Board of Land & Natural Resources but then challenged by a lawsuit	Fee increases and reintroduced stamps had little apparent effect on overall license sales
Idaho Department of Fish and Game	2000 (resident and non-resident fee increases); 2005 (resident and non-resident fee increases); 2009 (non-resident fee increase; structural changes)	Increase agency revenues (fee increases); meet customer suggestions and demand (structural changes)	Legislative action	Decreased sales following 2009 non-resident fee increases
Illinois Department of Natural Resources	2010 (resident and non-resident fee increases)	Increase agency revenues	Legislative action	Too early to determine effect
Iowa Department of Natural Resources	2001, 2003, 2010 (fee increases)	Increase agency revenues (avoid cuts in programs)	Legislative action	Fee increases did not appear to substantially impact sales

Note: Table continues on next page.

Table 4.2 (continued). Summary of State Hunting License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Reason for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Louisiana Department of Wildlife and Fisheries	2001 (fee increase)	Increase agency revenues	Legislative action	Fee increases did not appear to substantially impact sales
Massachusetts Division of Fisheries and Wildlife	2010 (structural changes)	Simplify license offerings and reduce cost for minor participants	Regulatory filing / public hearing process; approval from Fisheries and Wildlife Board	Too early to determine effect
Michigan Department of Natural Resources and Environment	2005, 2009 (fee increases)	Increase agency revenues	2005 fee increase based on past legislation (1996); statute allows agency director to adjust license fees for marketing or management	Fee increases did not appear to substantially impact sales
Missouri Department of Conservation	2001, 2004 (structural change); 2002, 2004, 2007, 2009 (resident and non-resident fee increases)	Increase agency revenues (fee increases); capture management data (structural changes)	Changes enacted by the Missouri Conservation Commission	For most years, initial decreases in sales were followed by rebounding sales numbers
Nebraska Game and Parks Commission	2002, 2006, 2008, 2009 (fee increases); 2010 (structural change)	Increase agency revenues (fee increases); recruit youth participants (structural changes)	Statutes allow Commission to increase permit fees by as much as 6% each year; legislation required otherwise	Initial decreases in small game hunting licenses sold, with some recovery in subsequent years
Nevada Department of Wildlife	2004 (non-resident fee increase)	Increase agency revenues	Public meeting process involving Advisory Boards followed by legislative bill	Initial decrease in hunting/fishing combination license sales following fee increase; no significant decreases in sales of other hunting licenses
North Dakota Game and Fish Department	2003 (resident, non-resident fee increases; structural change)	Increase funding for hunting access	Passage of legislation	Fee increases did not appear to substantially impact sales
Oklahoma Department of Wildlife Conservation <i>(survey response in hunting license section covers both hunting and fishing licenses)</i>	2002 (structural changes); 2003 (resident, non-resident fee increases; structural changes); 2005 (resident fee increases); 2009 (structural changes)	Increase agency revenues (fee increases); consolidate license structure (structural changes)	Legislative action	Fee increases resulted in moderate decrease in sales but increase in overall revenues; too early to evaluate effect of recent structural changes

Note: Table continues on next page.

Table 4.2 (continued). Summary of State Hunting License Fee Increases and Structural Changes

	Year(s) in which license fee increase or structural change took place	Reason for license fee increase / structural change	Process through which fee increase or structural change was enacted	Reported effect of fee increase or structural change on license sales
Oregon Department of Fish and Wildlife	2009 (resident and non-resident fee increases; structural changes)	Increase agency revenues	Legislative action	Too early to evaluate effect of recent fee increases and structural changes
South Dakota Game, Fish and Parks Commission	2005 (fee increase)	Increase agency revenues	Commission action	Fee increases did not appear to substantially impact sales
Utah Division of Wildlife Resources	2007 (resident, non-resident fee increases; structural change)	Increase agency revenues and spread the cost of wildlife management	Authorization from State Legislature following public process involving Regional Advisory Councils	Specific hunting license sales decreased while combination license sales increased
Vermont Department of Fish and Wildlife	2002, 2005, 2008 (resident, non-resident fee increases)	Increase agency revenues	Fee proposal submitted every 3 years to State Legislature for approval	Slight decrease in sales following 2002 fee increase; sales impacts from other increases were negligible
West Virginia Division of Natural Resources	2006, 2010 (fee increases)	Increase agency revenues	Passage of state legislation	Initial decrease in sales followed by rebound
Wisconsin Department of Natural Resources	2004 (fee increases)	Increase agency revenues	Passage of state legislation	Shift in types of licenses purchased
Wyoming Game and Fish Department <i>(survey response in hunting license section covers both hunting and fishing licenses)</i>	2000, 2004, 2005, 2008 (fee increases); 2004, 2010 (structural changes)	Inflationary adjustments, increase agency revenues (fee increases); constituent requests for new or changed licenses (structural changes)	Legislative action required for most fee increases, although some structural changes are made at the Commission level	Initial decrease in sales followed by rebound (2004 and 2008 fee increases)

SUMMARY OF FINDINGS REGARDING LICENSE FEE INCREASES AND SUBSEQUENT SALES

Most license fee increases have two simultaneous outcomes: an increase in agency revenues, but a decrease in the number of actual licenses sold or license holders (some agencies refer to this as a “protest rate,” with casual or non-avid anglers and hunters being the most likely to forgo the license purchase). Because of this, agencies indicated a need to define and clearly distinguish among goals and objectives related to fee increases: is the license fee increase being enacted to cover budget shortfalls and produce more financial support for the agency over a relatively short period of time? Will the increase in fees be enough to offset the decrease in the actual number of participants and the concomitant loss of federal aid funds? Will the decrease in participants be temporary or permanent? And what kind of effect will this reduction in participants have on future agency funding?

Substantial or particularly sudden fee increases will result in larger protest or dropout rates; modest or incremental increases will yield smaller declines in overall licenses sold/participation rates. The evidence suggests that agencies should expect a 2- to 5-year sales decline before sales may be expected to rebound to pre-increase levels. As a general rule, the higher the fee increase, the longer it is likely to take for license sales to rebound to pre-increase levels.

There is evidence that the use of statistical pricing models to determine optimal license fees, as opposed to more arbitrarily assigned prices, may provide benefits to the agency. The consumer price index (CPI) is used by many agencies as a reference for inflation-based license fee increases, which follow increases in the costs of day-to-day goods and services. For these states, the fishing or hunting license fee increase being based on the CPI (that is, an external factor determined outside of the agency's realm of influence) may have helped avoid some constituent opposition.

There is evidence to suggest that there are advantages to adding privileges to an existing license while retaining the original cost. For example, Delaware created a general license for fishing all waters in the state; the fee remained the same as what anglers were previously charged for freshwater fishing but included fishing privileges for all waters, as well as crabbing and clamming. The reported result was a slight increase in license sales.

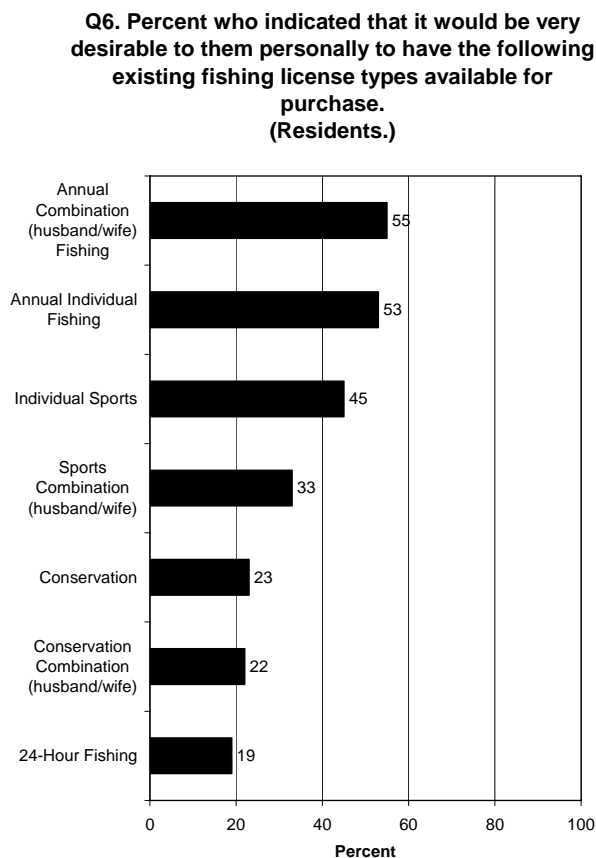
The data suggest that agencies benefit by communicating to the public, as best as possible, how the increased funds from license sales will be spent or appropriated, particularly when they are allocated toward wildlife management and improved fishing and hunting opportunities (or other outdoor recreation improvements). Recent qualitative research with hunters and anglers conducted by Responsive Management suggests that public outreach and communication regarding the reasons for and intended benefits of increased license fees may substantially lessen the "protest rate" following fee increases and reinforce good will between the agency and its constituents. (Following public outreach regarding agency budgetary needs, agencies such as the Nevada Department of Wildlife have successfully used testimony from sportsmen's groups and members of the general public to argue the case for license fee increases during state legislative sessions.)

CHAPTER 5. SURVEY RESULTS REGARDING FISHING AND HUNTING IN MINNESOTA

The survey served several purposes. One of its primary objectives was to provide data for the conjoint analysis discussed in Chapter 6. Nonetheless, several questions are of interest on their own and are presented in this section. These questions pertained to the types of licenses preferred, ratings of fishing and hunting in Minnesota, and typical fishing and hunting companions.

DESIRABILITY OF LICENSE TYPES

Residents were asked about the desirability of personally having any of seven existing fishing licenses. An examination of those who responded with *very* desirable suggests that there are three licenses markedly more desirable than the rest, each with close to half of respondents saying it is *very* desirable (Figure 5.1). The top tier consists of the Annual Combination Fishing license (55%), the Annual Individual Fishing license (53%), and the Individual Sports license (45%). These are followed by the Sports Combination (33%), and then the three remaining existing licenses, which are closely grouped, all with from 19% to 23% saying that the license is *very* desirable. The definitions for the various license types used in the survey are also shown.



24-Hour (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)

Annual Individual Fishing (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)

Annual Combination (husband/wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)

Individual Sports (for a resident age 18 and older for angling and small game hunting)

Sports Combination (husband/wife) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)

Individual Conservation (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)

Conservation Combination (husband/wife) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)

Note: multiple questions are shown on this single graph, so it sums to more than 100%.

Figure 5.1. Desirability of Existing Resident Fishing Licenses—Very Desirable

Figure 5.2, which shows those who rate the existing license types as being *very* or *somewhat* desirable, mirrors the results that were previously shown in Figure 5.1. The definitions for the various license types used in the survey are also shown.

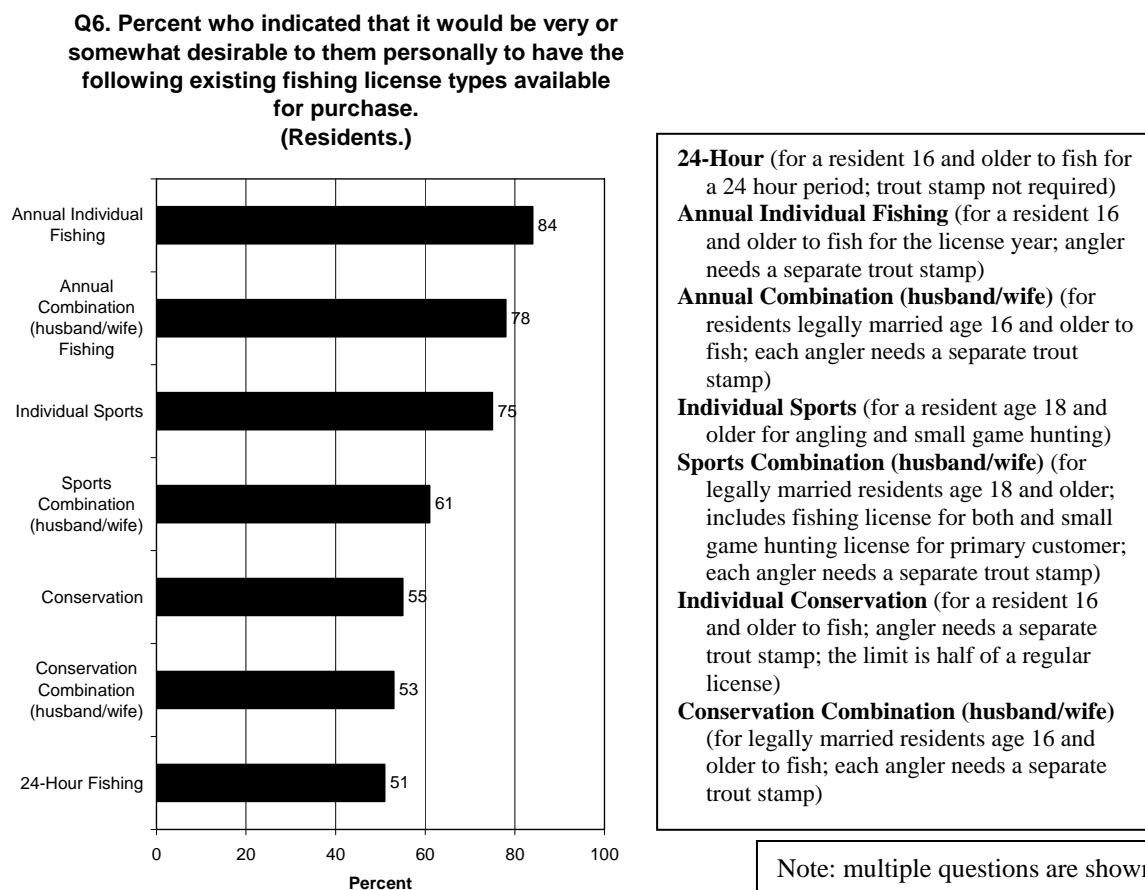


Figure 5.2. Desirability of Existing Resident Fishing Licenses—Very and Somewhat Desirable

These data were crosstabulated by regular (participated more than 3 of the past 5 years) angler versus casual (participated 3 or fewer years of the past 5) angler. The results are quite close between the two groups (Figure 5.3). Among regular anglers, the top three listed above as being most desirable overall in Figure 5.1 (the Annual Combination Fishing license, the Annual Individual Fishing license, and the Individual Sports license) are joined by the Sports Combination in the top tier, all with 39% or more of regular anglers saying the license would be *very* desirable. Among casual anglers, the Sports Combination license drops out of the top tier, leaving the top three previously mentioned in the top tier (the Annual Combination Fishing license, the Annual Individual Fishing license, and the Individual Sports license). The definitions for the various license types used in the survey are also shown.

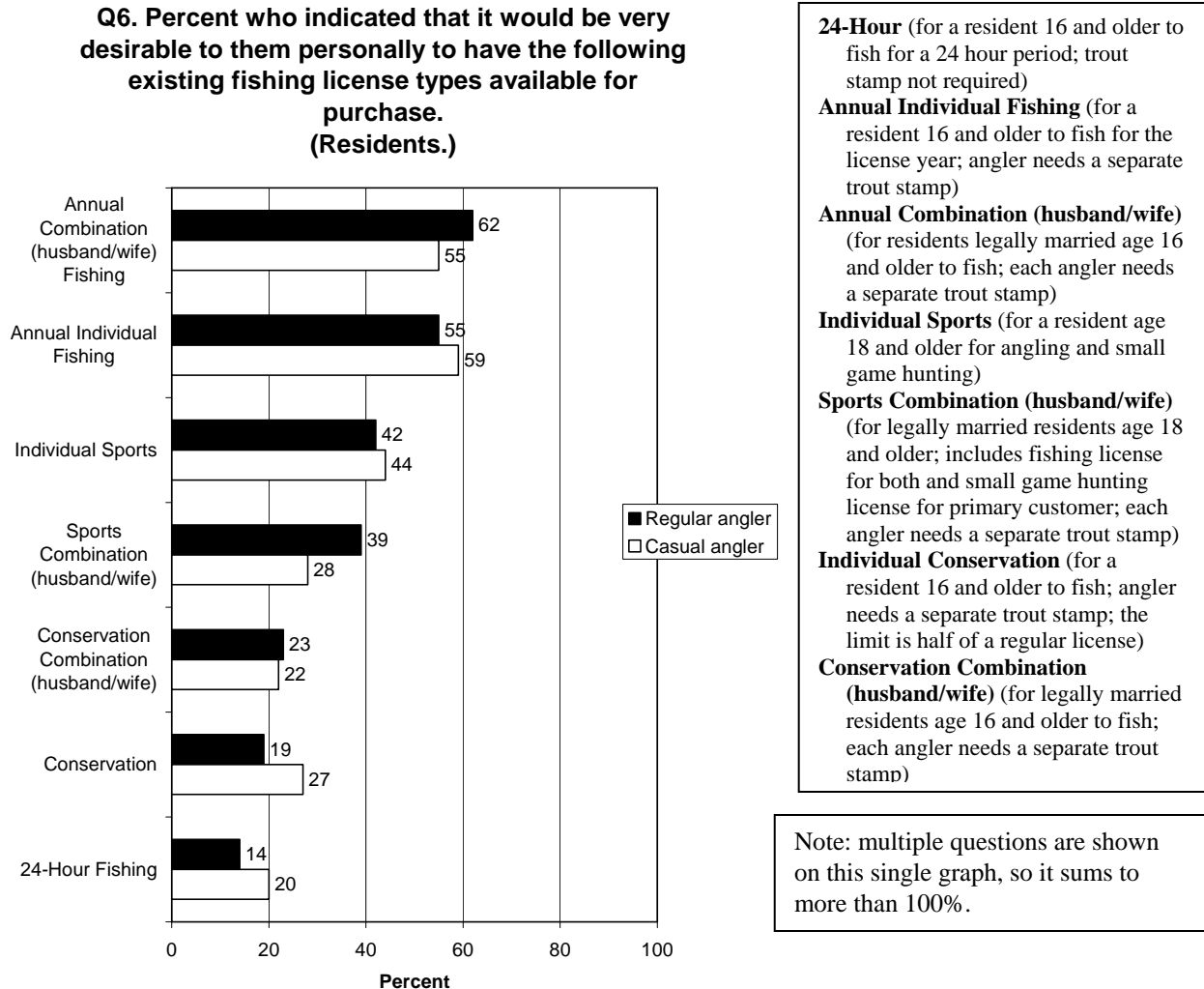
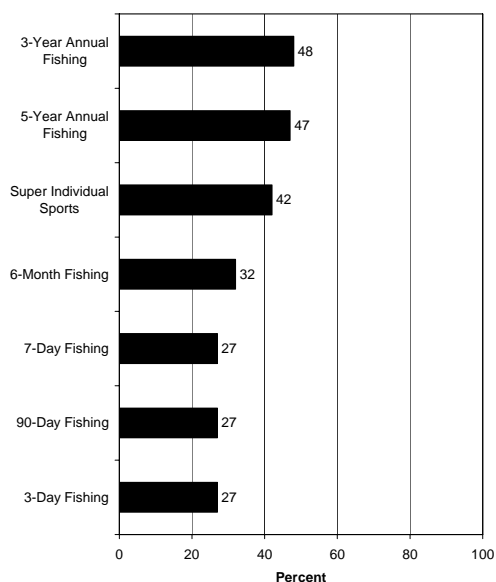


Figure 5.3. Desirability of Existing Resident Fishing Licenses Among Regular and Casual Anglers—Very Desirable

The survey also asked residents about the desirability of seven potential licenses. At the top are the 3-Year Annual Fishing license (48% rate it *very* desirable), the 5-Year Annual Fishing license (47%), and the Super Individual Sports license (42%) (Figure 5.4). This is followed by the 6-Month Fishing license (32%) and the remaining three licenses, each at 27%. Figure 5.5 shows *very* desirable and *somewhat* desirable combined; in this graph, the 6-Month Fishing license increases in relative importance. In these graphs, the shorter term licenses are at the bottom of the ranking in favor of the longer term licenses. The definitions for the various license types used in the survey are also shown.

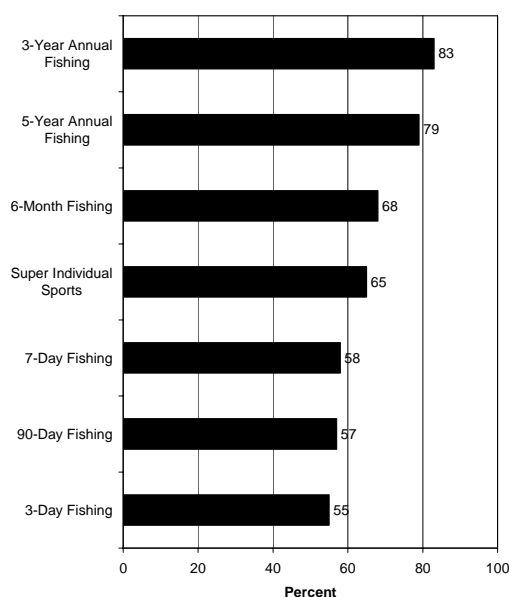
**Q7. Percent who indicated that it would be very desirable to them personally to have the following potential fishing license types available for purchase.
(Residents.)**



3-Day (for a resident to fish for 72 continuous hours)
7-Day (for a resident to fish for 7 consecutive days)
90-Day (for a resident to fish 90 consecutive days)
6-Month (for a resident to fish April 1-September 30 or October 1-March 31)
3-Year Annual (for a resident to fish 3 consecutive years from date of purchase)
5-Year Annual (for a resident to fish 5 consecutive years from date of purchase)
Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

Figure 5.4. Desirability of Potential Resident Fishing Licenses—Very Desirable

**Q7. Percent who indicated that it would be very or somewhat desirable to them personally to have the following potential fishing license types available for purchase.
(Residents.)**



Note: multiple questions are shown on these graphs, so each sums to more than 100%.

Figure 5.5. Desirability of Potential Resident Fishing Licenses—Very and Somewhat Desirable

In the graph showing the results among regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) anglers, the results among regular anglers are about the same as for anglers overall, with the top three licenses being the 5-Year Annual Fishing license (54% of regular anglers say it would be *very* desirable), the 3-Year Annual Fishing license (also 54% among regular anglers), and the Super Individual Sports license (40%) (Figure 5.6). The remaining four have 24% or less of regular anglers saying that they would be *very* desirable. The definitions for the various license types used in the survey are also shown.

**Q7. Percent who indicated that it would be very desirable to them personally to have the following potential fishing license types available for purchase.
(Residents.)**

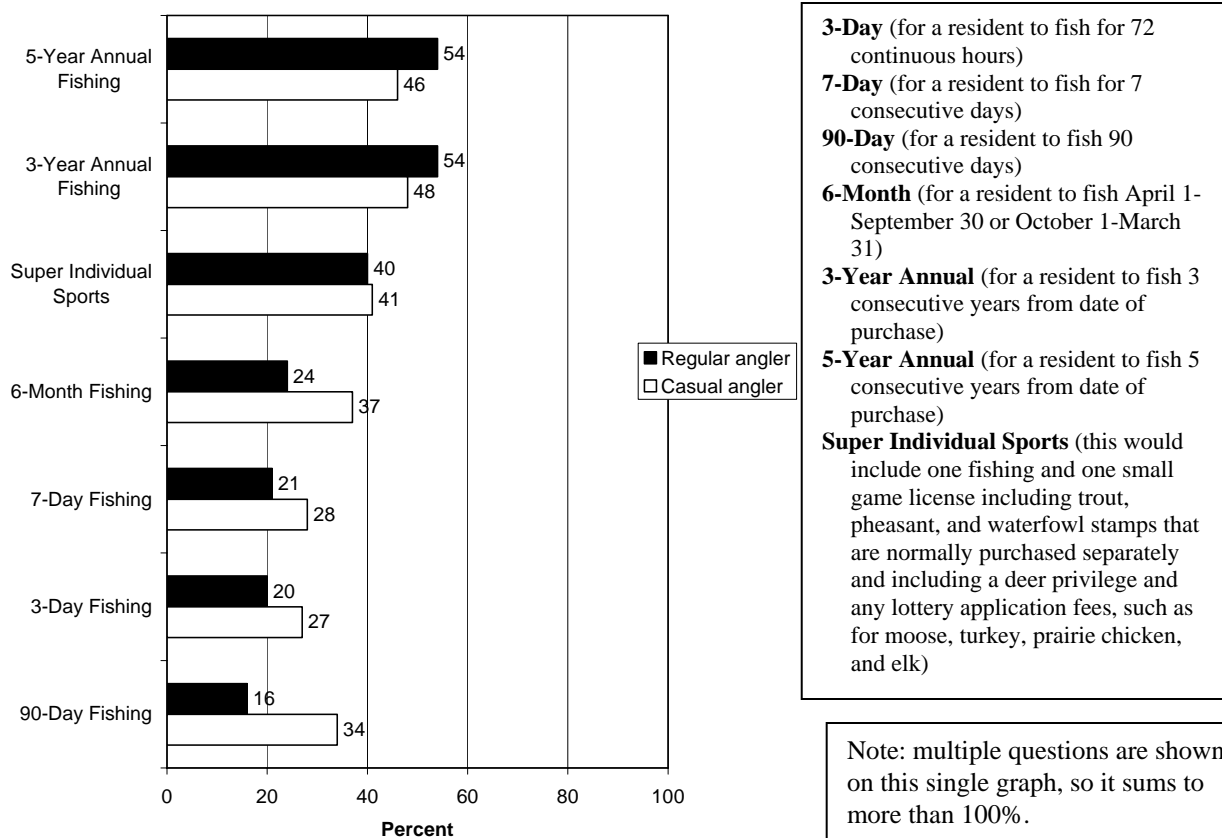


Figure 5.6. Desirability of Potential Resident Fishing Licenses Among Regular and Casual Anglers—Very Desirable

In Figure 5.6 above, casual (participated 3 or fewer years of the past 5) anglers show some marked differences compared to regular (participated more than 3 of the past 5 years) anglers regarding short-term fishing licenses. For casual anglers, the short-term licenses are relatively more important than they are for the regular anglers.

Non-residents were asked about the desirability of six types of non-resident fishing licenses. Two types had a majority of non-resident anglers saying that the type would be very desirable for them personally: the Annual Individual Non-Resident Fishing license (52%) and the 7-Day Non-Resident Fishing license (also 52%) (Figure 5.7). An examination of *very* and *somewhat* desirable combined shows that the 72-Hour Non-Resident Fishing license increases in importance, as does the 14-Day Couple Non-Resident Fishing license, approaching the importance of the top two licenses (Figure 5.8). In each of these graphs, the 24-Hour Non-Resident Fishing license is at the bottom, markedly lower than the rest. The definitions for the various license types used in the survey are also shown.

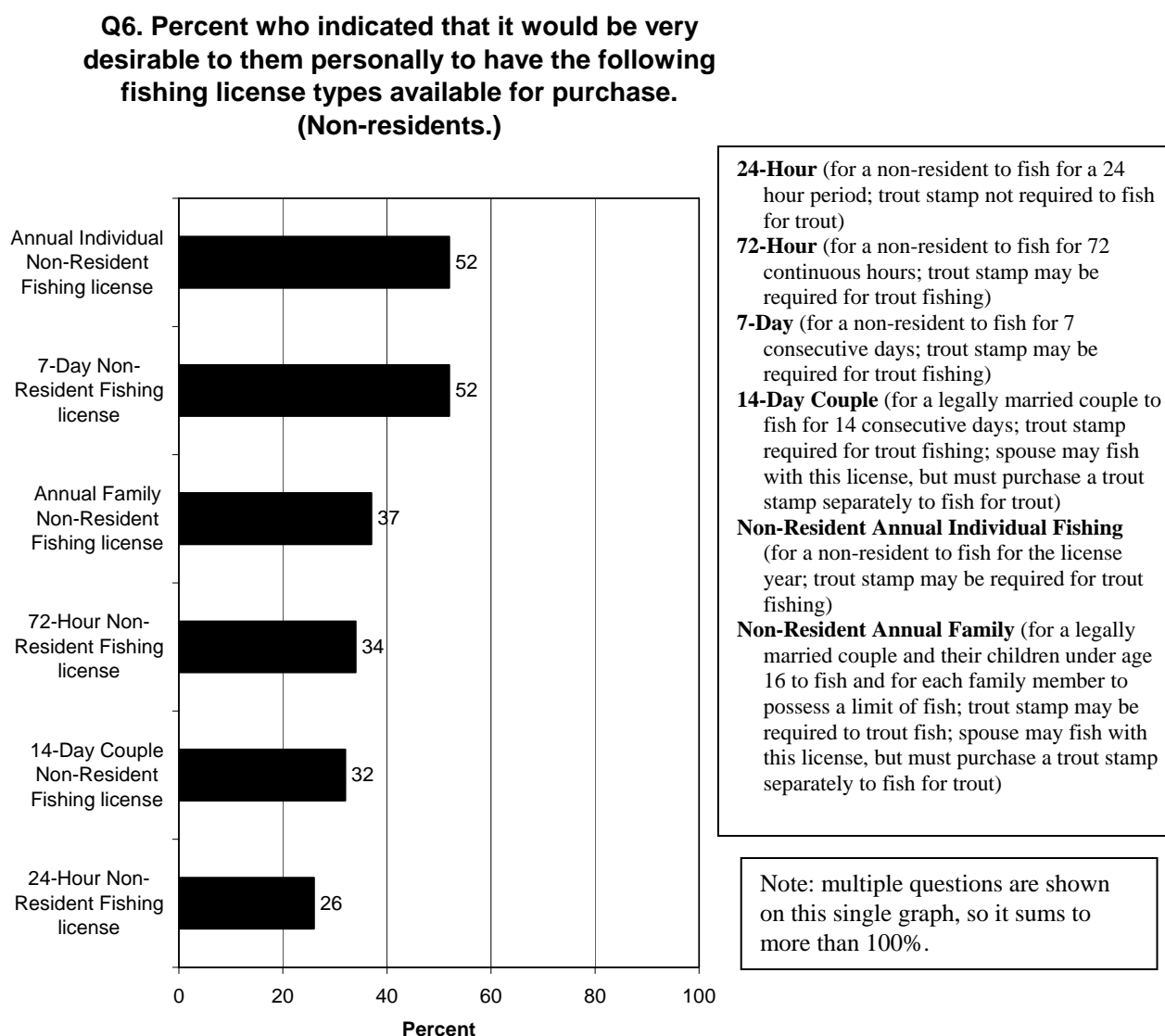


Figure 5.7. Desirability of Non-Resident Fishing Licenses—Very Desirable

**Q6. Percent who indicated that it would be very or somewhat desirable to them personally to have the following fishing license types available for purchase.
(Non-residents.)**

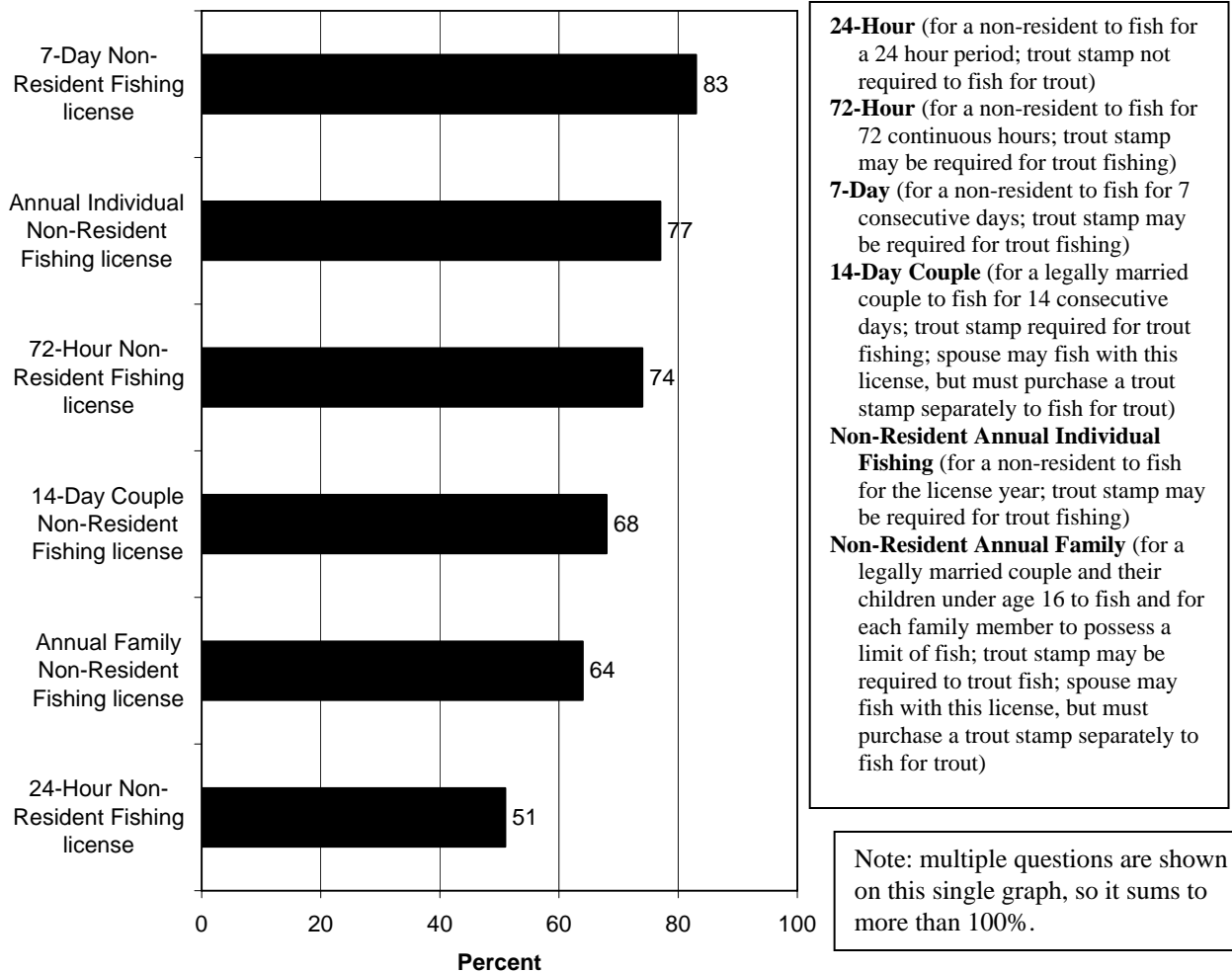


Figure 5.8. Desirability of Non-Resident Fishing Licenses—Very and Somewhat Desirable

The non-resident results are also broken down by regular (participated more than 3 of the past 5 years) versus casual (participated 3 or fewer years of the past 5) angler. Among regular anglers, the Annual Individual Non-Resident Fishing license, the Annual Family Non-Resident Fishing license, and the 7-Day Non-Resident Fishing license are markedly more desirable than the rest (Figure 5.9). However, among casual anglers, the short-term licenses are of relatively more importance than they are for regular anglers. Among casual anglers, the 7-Day Non-Resident Fishing license is at the top, followed by the Annual Individual Non-Resident Fishing license,

and then the remaining licenses, which are all closely grouped in the range of 31% to 38% saying that the license would be *very* desirable. These include the three short-term licenses (the 14-Day Couple Non-Resident Fishing license, the 72-Hour Non-Resident Fishing license, and the 24-Hour Non-Resident Fishing license) and the Annual Family Non-Resident Fishing license. The definitions for the various license types used in the survey are also shown.

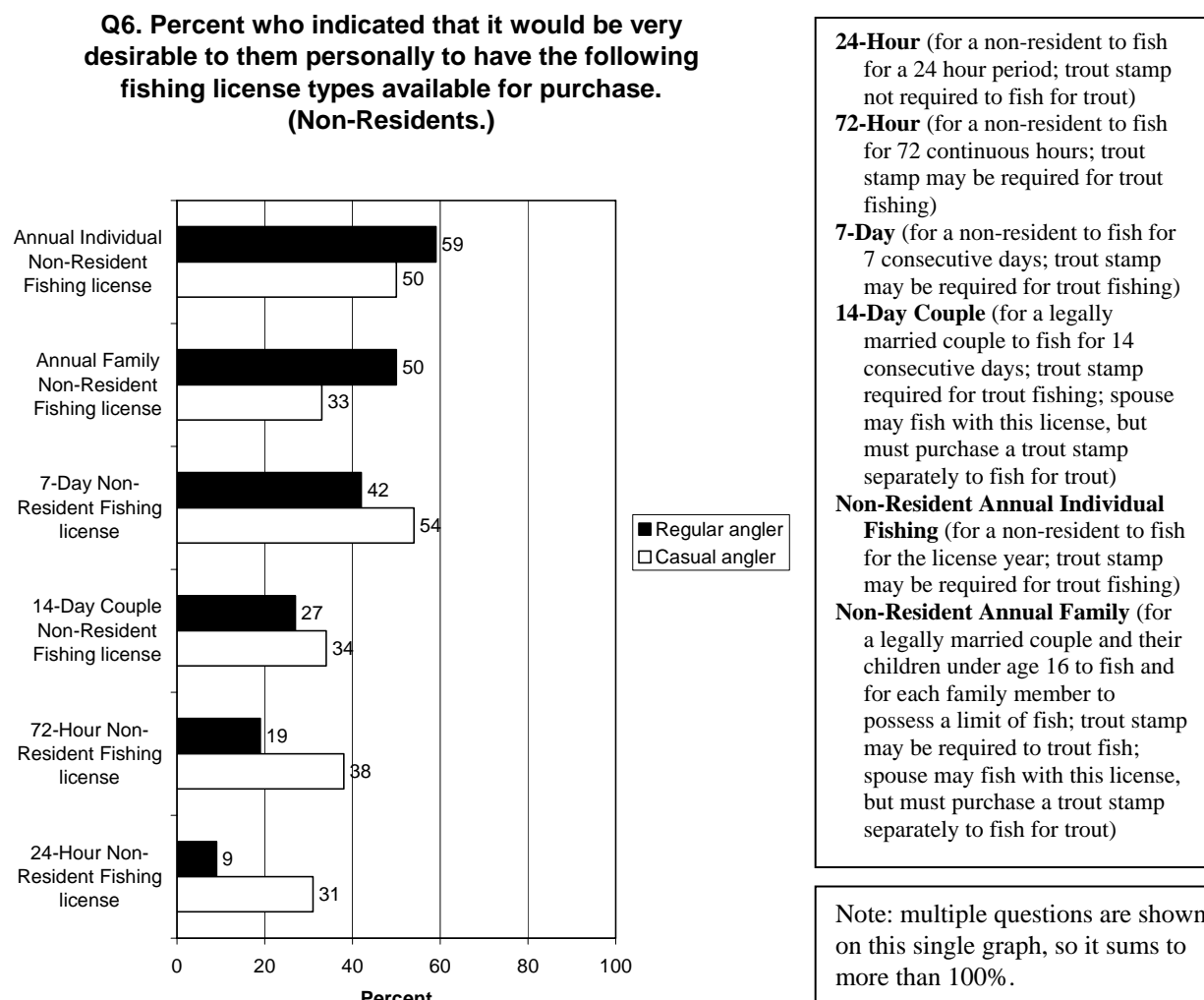


Figure 5.9. Desirability of Non-Resident Fishing Licenses Among Regular and Casual Anglers—Very Desirable

The survey of residents also included questions about the desirability of various existing and potential hunting licenses. First, residents were asked about the desirability of three existing licenses. At the top in Figure 5.10 is the Individual Sports license (53% say it is *very* desirable). Next is the Small Game Hunting license (44%), followed by the Sports Combination license (38%). Also shown is the graph for *very* and *somewhat* desirable combined, which has the same ranking, but with very little gap between the Individual Sports and Small Game Hunting licenses (Figure 5.11). The definitions for the various license types used in the survey are also shown.

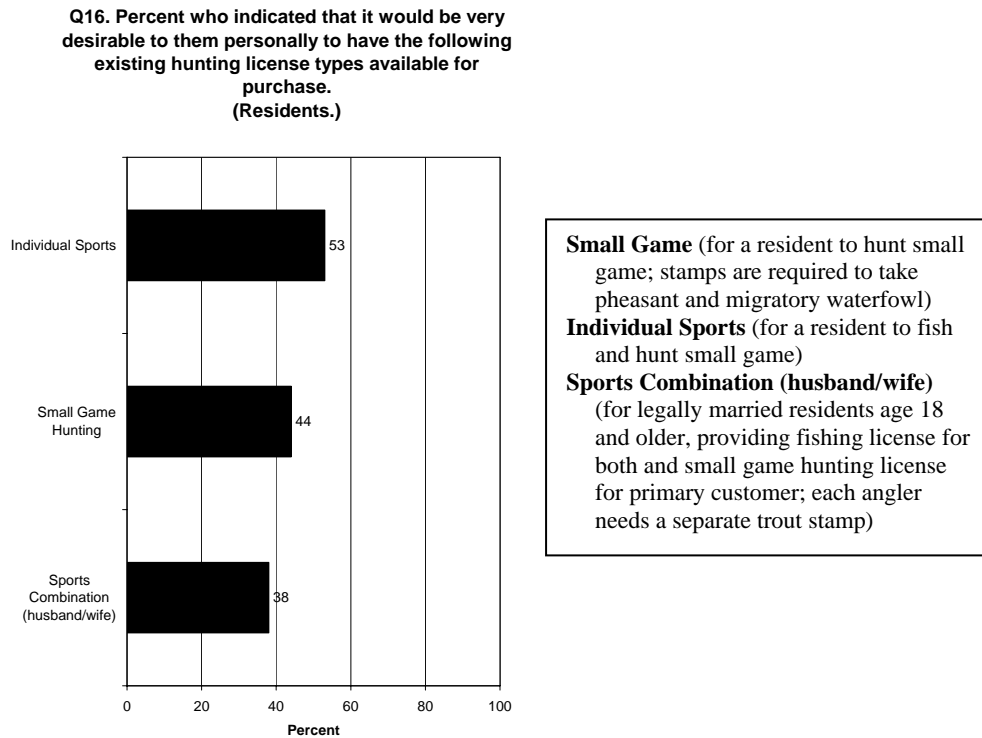


Figure 5.10. Desirability of Existing Resident Hunting Licenses—Very Desirable

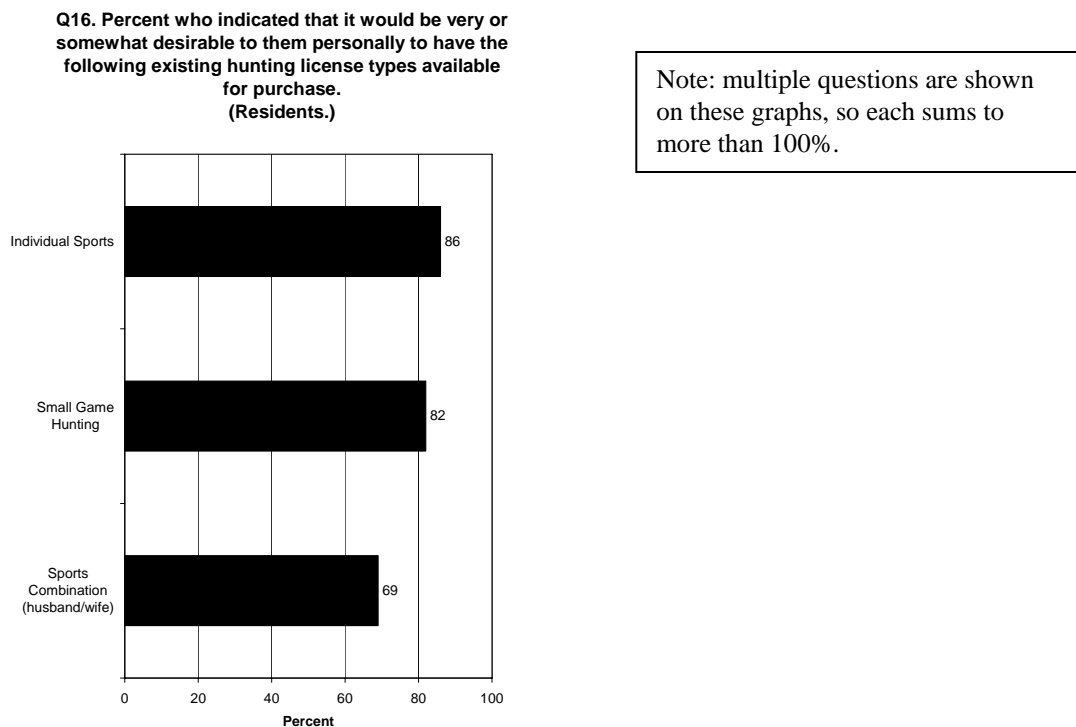


Figure 5.11. Desirability of Existing Resident Hunting Licenses—Very and Somewhat Desirable

As was done with the results regarding fishing licenses, the results for the hunting license questions were broken down into regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters. The differences between the two groups are slight, with the three license types having the same ranking in both groups, as demonstrated by Figure 5.12, which shows the percentages of regular and casual hunters who say that the various existing hunting licenses are *very* desirable. The definitions for the various license types used in the survey are also shown.

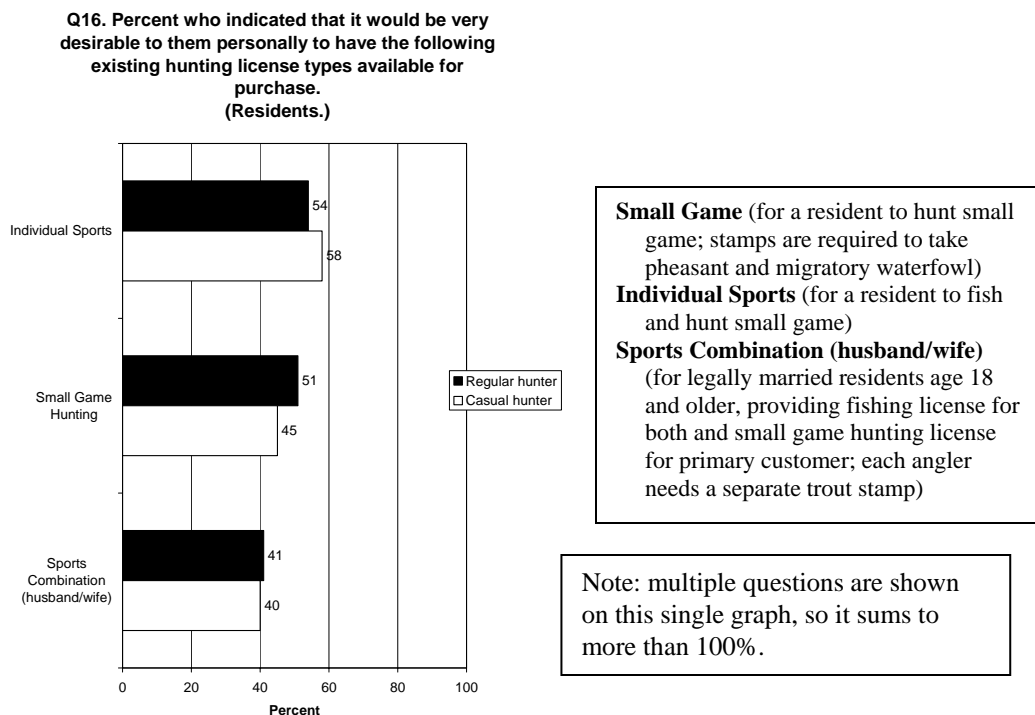
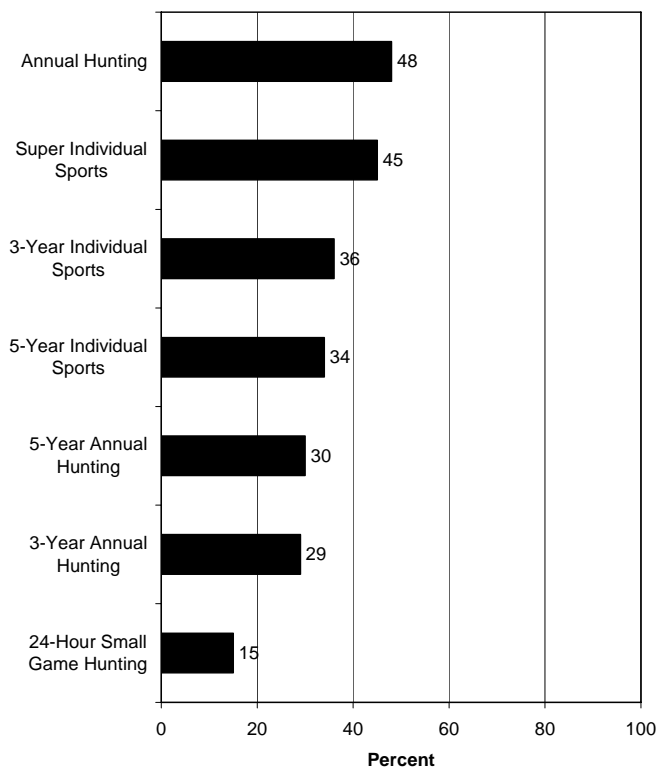


Figure 5.12. Desirability of Existing Resident Hunting Licenses Among Regular and Casual Hunters—Very Desirable

The survey of resident hunters then asked about the desirability of seven potential licenses. In this question, two licenses emerged on top, well above the others: the Annual Hunting license (48% say it is *very* desirable) and the Super Individual Sports license (45%) (Figure 5.13). The various 3-Year and 5-Year licenses are grouped at 29% to 36%, and the 24-Hour Small Game Hunting license is far below the others, at 15% saying it is *very* desirable. The definitions for the various license types used in the survey are also shown.

**Q17. Percent who indicated that it would be very desirable to them personally to have the following potential hunting license types available for purchase.
(Residents.)**



Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)

24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)

3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)

3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)

5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)

5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)

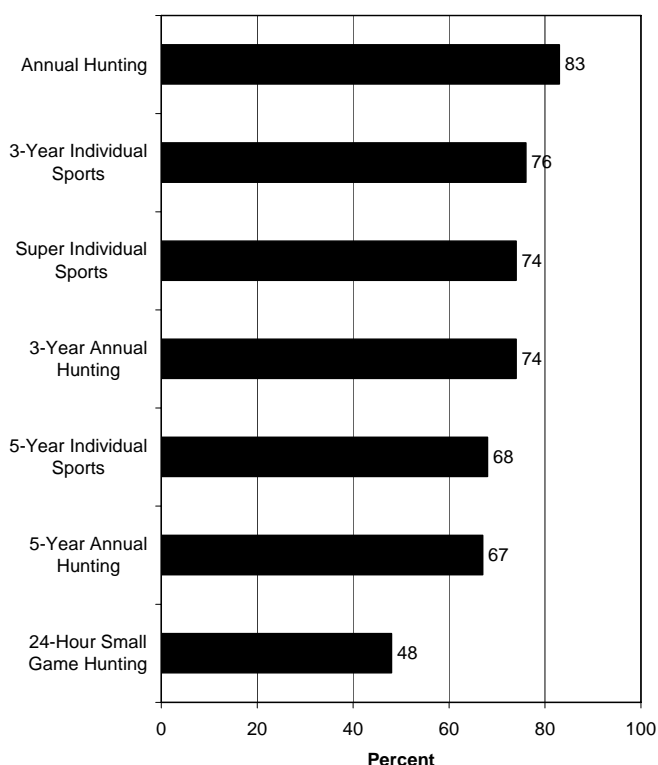
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

Figure 5.13. Desirability of Potential Resident Hunting Licenses—Very Desirable

Note: multiple questions are shown on this single graph, so it sums to more than 100%.

In looking at the combined responses of *very* desirable and *somewhat* desirable, both the 3-Year licenses move into the top tier (Figure 5.14). In this examination, the top license is the Annual Hunting (83%), followed by a group of three: the 3-Year Individual Sports (76%), the Super Individual Sports (74%), and the 3-Year Annual Hunting license (also 74%). The definitions for the various license types used in the survey are also shown.

**Q17. Percent who indicated that it would be very or somewhat desirable to them personally to have the following potential hunting license types available for purchase.
(Residents.)**



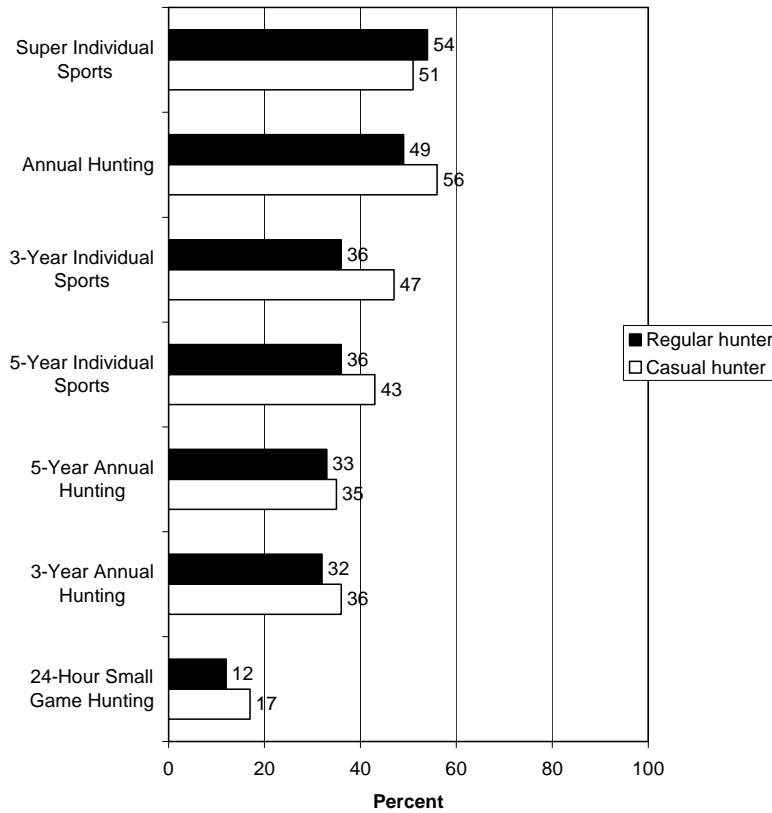
Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)
24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)
3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)
3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)
5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)
5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

Figure 5.14. Desirability of Potential Resident Hunting Licenses—Very and Somewhat Desirable

Note: multiple questions are shown on this single graph, so it sums to more than 100%.

The results pertaining to the potential resident hunting licenses were also crosstabulated by regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters. In these results, regular and casual hunters are markedly different regarding desire for three licenses: the Annual Hunting license, the 3-Year Individual Sports license, and the 5-Year Individual Sports license. For those licenses, a greater percentage of *casual* hunters than *regular* hunters said that the license is *very* desirable (Figure 5.15). The definitions for the various license types used in the survey are also shown.

**Q17. Percent who indicated that it would be very desirable to them personally to have the following potential hunting license types available for purchase.
(Residents.)**



Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)
24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)
3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)
3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)
5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)
5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)

Note: multiple questions are shown on this single graph, so it sums to more than 100%.

Figure 5.15. Desirability of Potential Resident Hunting Licenses Among Regular and Casual Hunters—Very Desirable

SUMMARY OF FINDINGS REGARDING DESIRABILITY OF LICENSE TYPES

Among residents, the existing fishing licenses rated the most desirable include the Annual Combination (husband and wife; for residents legally married, age 16 or older; separate trout stamps are required for trout) Fishing license, the Annual Individual (for a resident 16 years old or older; a separate trout stamp is required to fish for trout) Fishing license, and the Individual Sports (for a resident age 18 years old and older for fishing and small game hunting) license. Among regular (participated more than 3 of the past 5 years) anglers, add the Sports Combination license to the those three most desirable licenses.

When asked about potential licenses, residents expressed much desire for the 3-Year Annual (for a resident to fish 3 consecutive years from date of purchase) Fishing license, the 5-Year Annual (for a resident to fish 5 consecutive years from date of purchase) Fishing license, and the Super Individual Sports (would include one fishing and one small game license, which would include trout, pheasant, and waterfowl stamps that are normally purchased separately, and would include a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) license. In the crosstabulation by regular versus casual angler, regular anglers expressed the most desire for the licenses with longer terms; casual anglers expressed the most desire for the licenses with shorter terms.

Among non-residents, the most desire was expressed for the Annual Individual Non-Resident Fishing (for a non-resident to fish for the license year; a separate trout stamp is required to fish for trout) license and the 7-Day Non-Resident Fishing (for a non-resident to fish for 7 consecutive days; a trout stamp is required for trout fishing) license. Again, casual anglers showed a preference for the licenses with shorter terms, relative to regular (participated more than 3 of the past 5 years) anglers.

Regarding existing hunting licenses, the most desire was expressed among residents for the Individual Sports (for a resident to fish and to hunt small game) license. Regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters are about the same regarding desire for the existing licenses. When residents were asked about potential hunting licenses, they expressed the most desire for the Annual Hunting (for a resident to hunt small game for the license year; duck and pheasant stamps would be included) license and the Super Individual Sports (this would include one fishing and one small game license and any stamps that would normally be purchased separately, and it would include a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) license. Casual hunters tended to express *more* desire for the licenses with longer terms (which runs counter to the findings regarding fishing licenses).

RATING OF FISHING AND HUNTING IN MINNESOTA RELATIVE TO OTHER STATES

The survey asked residents who had fished to rate fishing in Minnesota, compared to fishing in other states, using a 0 to 10 scale, with 0 being much worse, 5 being the same, and 10 being much better. As Figure 5.16 shows, by a ratio of 4 to 1, more residents said fishing is *better* (29%) than said it is *worse* (7%). Note that 17% gave a rating of the *same*, and 47% had not fished outside of Minnesota or did not respond. That only a relatively low percentage gave a rating of “4” or less (in the *worse* zone) is positive news regarding Minnesota fishing.

The data from the graph in Figure 5.16 were re-run with the exclusion of those who only fished in Minnesota or who did not respond, leaving only those who gave a rating. In this analysis, shown in Figure 5.17, a majority (55%) of anglers who had fished both in and outside of Minnesota rated fishing in Minnesota as *better* than in other states, compared to 13% who rated it *worse* (a third gave a neutral rating).

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.

**(Of those who have fished in Minnesota.)
(Residents.)**

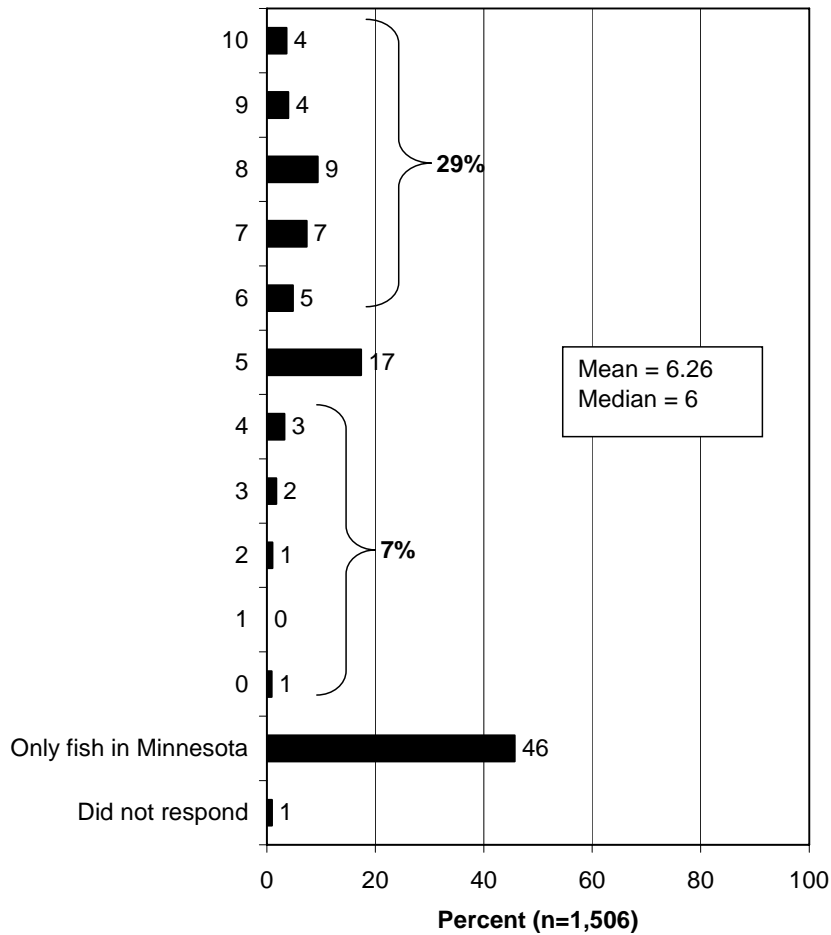


Figure 5.16. Residents' Ratings of Fishing in Minnesota Compared to Other States

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.

**(Of those who have fished in Minnesota and outside of Minnesota.)
(Residents.)**

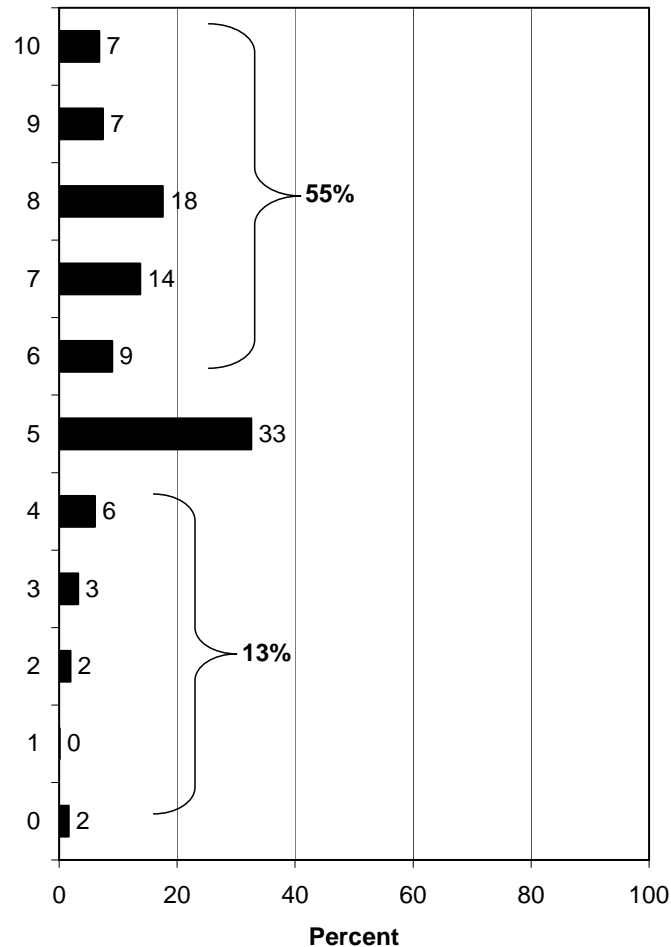


Figure 5.17. Residents' Ratings of Fishing in Minnesota Compared to Other States Among Those Who Had Fished In and Outside of Minnesota

The crosstabulation of this question into regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) anglers finds only slight differences between the groups in the *better* and *worse* ranges, with regular anglers being slightly more positive. As Figure 5.18 shows, 32% of regular anglers, compared to 27% of casual anglers, rated Minnesota fishing as *better* than in other states; meanwhile, 5% of regular anglers and 8% of casual anglers rated it as *worse*. Interestingly, the data suggest that casual anglers were more

likely to give a neutral rating of “5.” Additionally, regular anglers appear to be slightly more likely to have fished only in Minnesota (i.e., to have *not* gone out of state to fish).

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.

**(Of those who have fished in Minnesota.)
(Residents.)**

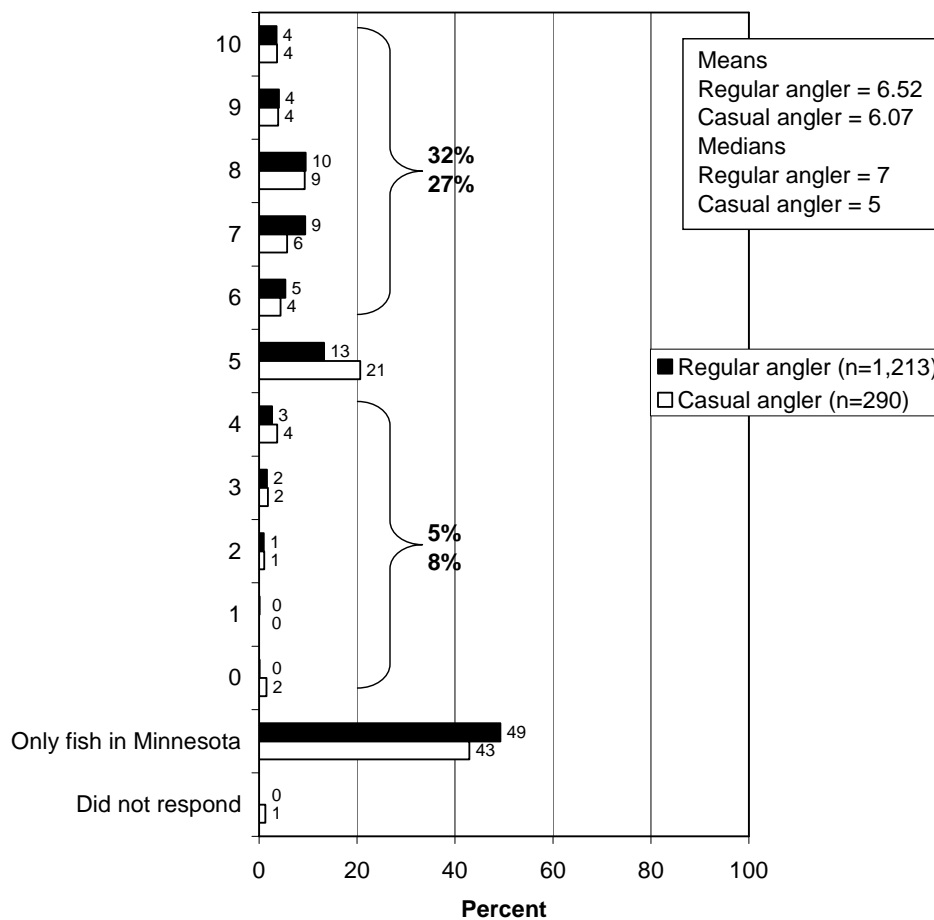


Figure 5.18. Regular and Casual Resident Anglers Ratings of Fishing in Minnesota Compared to Other States

Again, those who only fished in Minnesota or who did not respond were removed. In this analysis, regular (participated more than 3 of the past 5 years) anglers who gave a rating are more positive than their casual (participated 3 or fewer years of the past 5) counterparts. As Figure 5.19 shows, among those who gave a rating, regular anglers were much more likely to

give a rating in the *better* range, compared to casual anglers (63% to 48%). Fortunately, the lower percentage of casual anglers did not translate into a much greater percentage giving a rating of *worse* (11% of regular anglers; 15% of casual anglers); instead, casual anglers were much more likely to give the neutral rating of “5” (37% of casual anglers who gave a rating, compared to 26% of regular anglers who gave a rating).

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.

**(Of those who have fished in Minnesota and outside of Minnesota.)
(Residents.)**

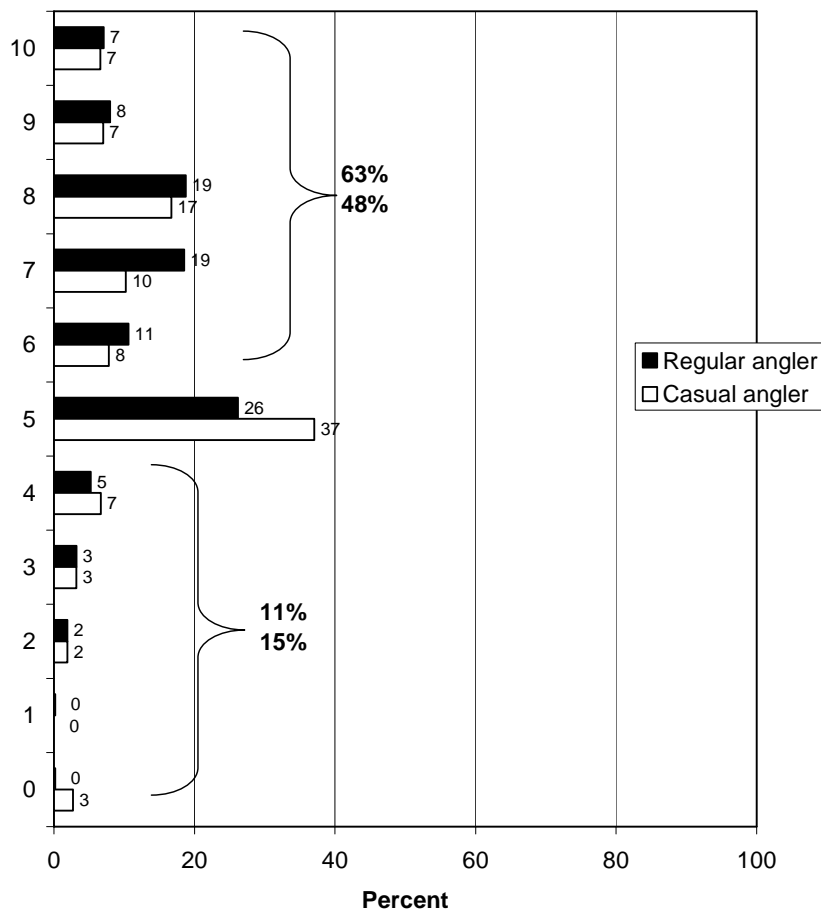


Figure 5.19. Regular and Casual Resident Anglers' Ratings of Fishing in Minnesota Compared to Other States Among Those Who Had Fished In and Outside of Minnesota

Non-residents also rated fishing in Minnesota compared to other states. The results again are positive. As Figure 5.20 shows, 68% of non-residents who hold a Minnesota fishing license rate fishing in Minnesota *better* than fishing in other states, while 20% rate it *worse* (the remainder are neutral). An important note about the group in the *worse* range is that almost all of that group gave a rating of “4” rather than lower down. Meanwhile, fully a third (33%) give a rating of “8” or higher.

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.

(Non-residents.)

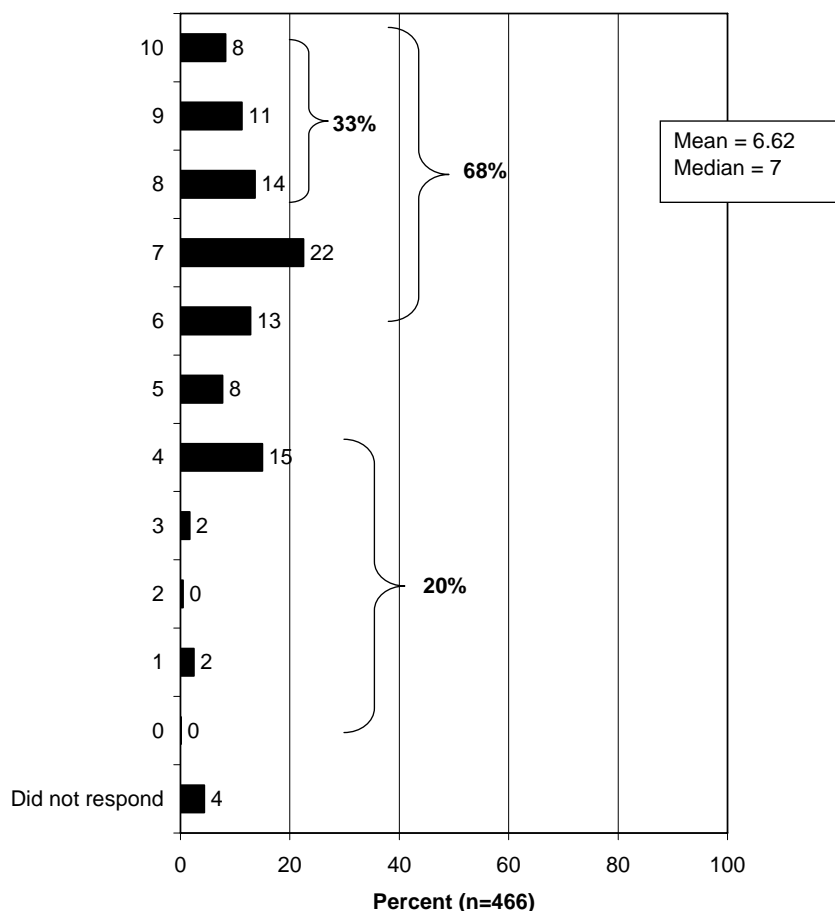


Figure 5.20. Non-Residents' Ratings of Fishing in Minnesota Compared to Other States

The regular-casual angler crosstabulation shows that regular (participated more than 3 of the past 5 years) anglers were just slightly more positive than were casual (participated 3 or fewer years of the past 5) anglers. In particular, Figure 5.21 shows that only 13% of regular anglers gave a rating in the *worse* range, compared to 21% of casual anglers (most of that concentrated in the “4” rating rather than lower down the scale).

Q4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished.
(Non-residents.)

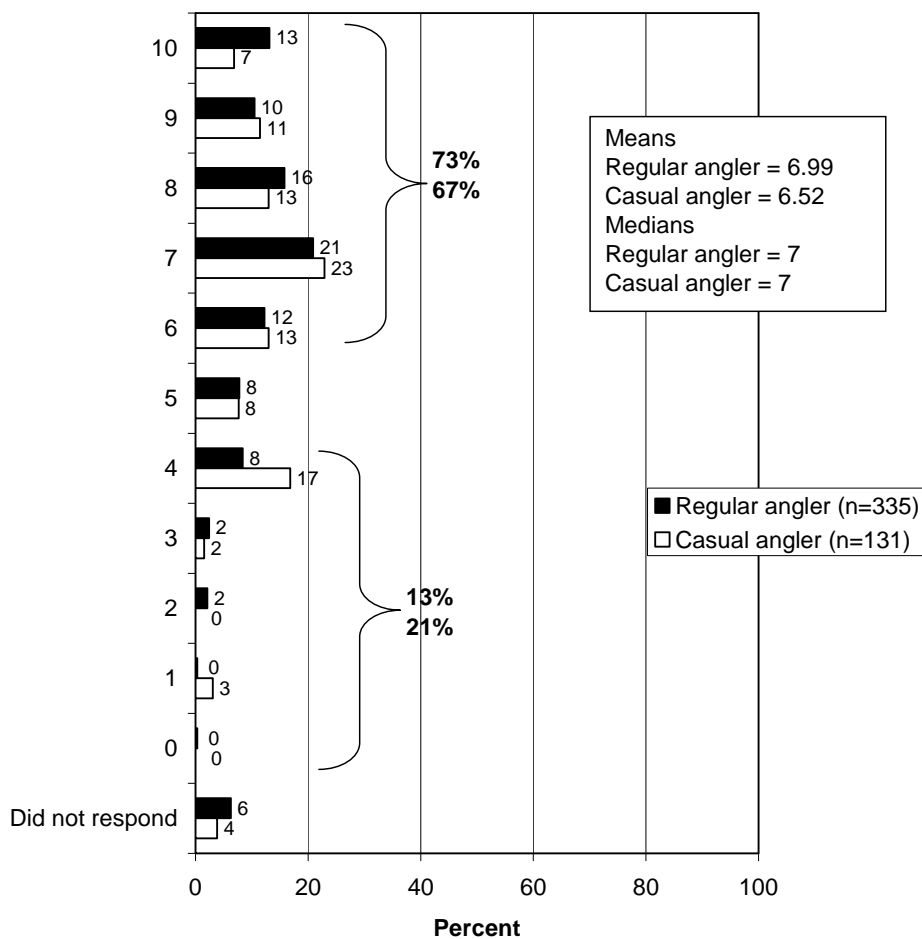


Figure 5.21. Regular and Casual Non-Resident Anglers' Ratings of Fishing in Minnesota Compared to Other States

Analogous to the fishing portion of the survey, the hunting portion of the survey included ratings of hunting in Minnesota compared to other states. However, only the resident survey included the rating of hunting, as hunting licenses were not germane to the non-resident portion of the study.

The resident survey question that asked respondents to rate hunting in Minnesota compared to hunting in other states used the same scale as was previously used in the fishing question. For

the hunting question, the question included only likely hunters. Figure 5.22 shows that there were slightly more hunters who gave a rating in the *better* range (24%) than in the *worse* range (17%). Meanwhile, 13% gave a rating of the *same*, and 47% did not hunt outside of Minnesota.

**Q13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare hunting in Minnesota to other states where you have hunted.
(Of those who have hunted in Minnesota and are very or somewhat likely to hunt in Minnesota again.)
(Residents.)**

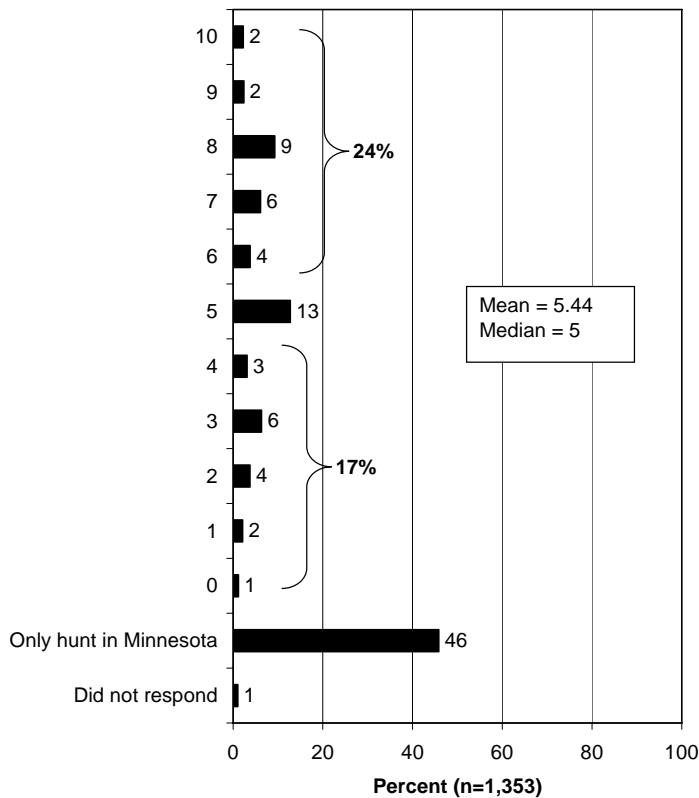


Figure 5.22. Residents' Ratings of Hunting in Minnesota Compared to Other States

As was previously done in the fishing section, the data were re-run to include only those who had hunted both in and outside of Minnesota and who could, therefore, give a rating. In this analysis, shown in Figure 5.23, 45% of those who gave a rating were in the *better* range, compared to 31% in the *worse* range.

Q13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare hunting in Minnesota to other states where you have hunted.
(Of those who have hunted in and outside of Minnesota and are very or somewhat likely to hunt in Minnesota again.)
(Residents.)

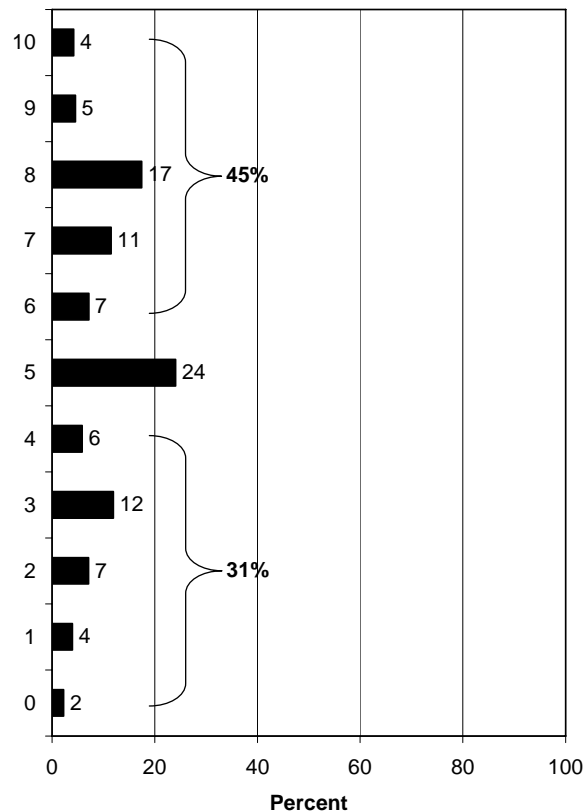


Figure 5.23. Residents' Ratings of Hunting in Minnesota Compared to Other States Among Those Who Had Hunted In and Outside of Minnesota

As demonstrated by Figure 5.24, there was little difference between regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters on this question, with 24% of both groups giving a rating in the *better* range. Also shown is the regular-casual hunter crosstabulation among those who had hunted both in and outside of Minnesota and could, therefore, compare hunting in and outside of the state (Figure 5.25). In that graph, the differences between groups is again slight: 46% of regular hunters and 43% of casual hunters gave a rating in the *better* range, and 30% and 33%, respectively, gave a rating in the *worse* range.

Q13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare hunting in Minnesota to other states where you have hunted.
(Of those who have hunted in Minnesota and are very or somewhat likely to hunt in Minnesota again.)
(Residents.)

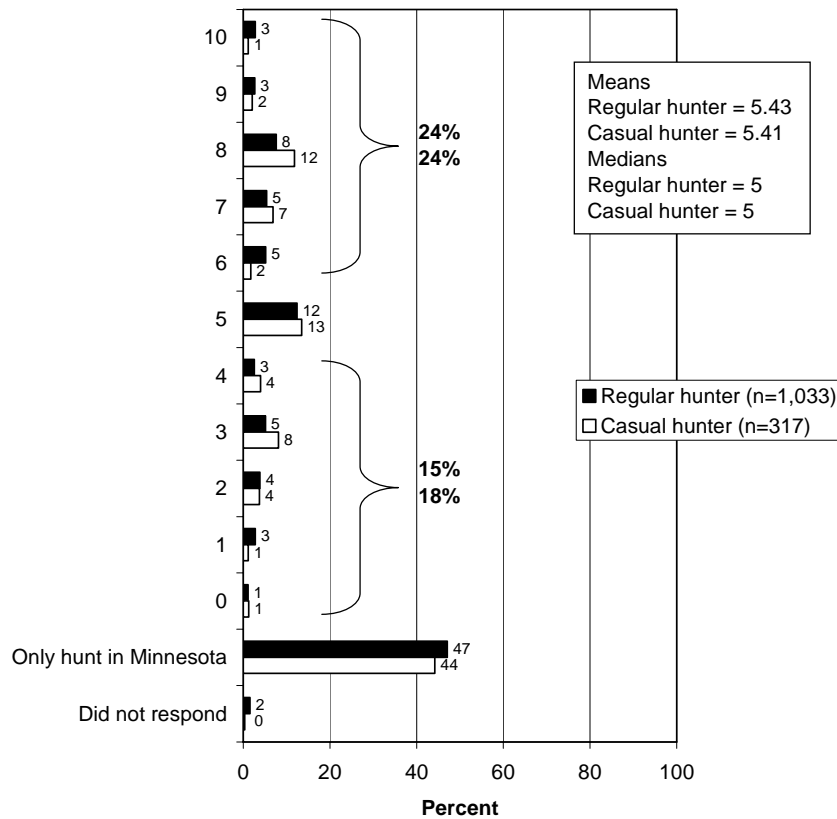


Figure 5.24. Regular and Casual Resident Hunters Ratings of Hunting in Minnesota Compared to Other States

Q13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare hunting in Minnesota to other states where you have hunted.
(Of those who have hunted in and outside of Minnesota and are very or somewhat likely to hunt in Minnesota again.)
(Residents.)

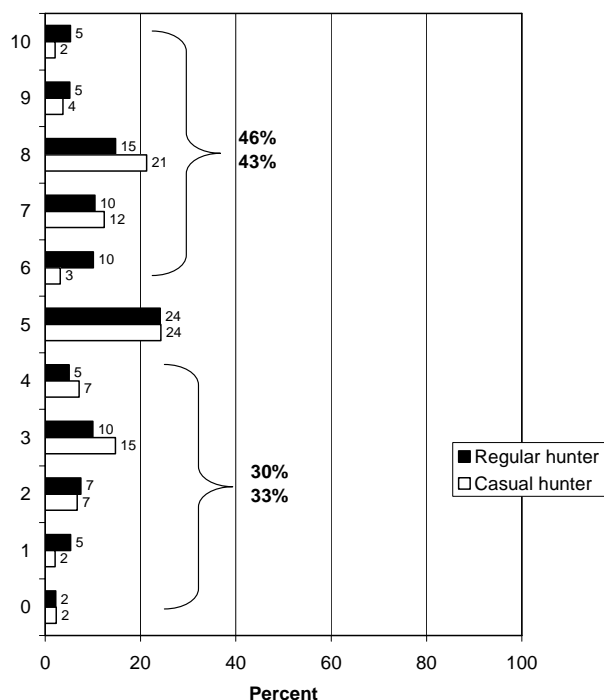


Figure 5.25. Regular and Casual Resident Hunters' Ratings of Hunting in Minnesota Compared to Other States Among Those Who Had Hunted In and Outside of Minnesota

SUMMARY OF FINDINGS REGARDING RATING OF FISHING AND HUNTING IN MINNESOTA

By a 4:1 ratio, residents more often rate Minnesota's fishing as *better* than rate it as *worse* relative to other states' fishing. Regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) anglers are not greatly different in ratings—casual anglers are just slightly more likely to give a neutral rating of “5” and just slightly less likely to rate it as better, compared to regular anglers.

By a ratio of about 3:1, non-residents more often rate fishing in Minnesota as *better* than rate it as *worse* compared to fishing in other states. Among non-residents, regular anglers give slightly better ratings than do casual anglers.

Residents' ratings of hunting are more even, compared to fishing: 24% of resident hunters rate hunting in Minnesota as *better* than in other states, while 17% rate it *worse* (45% to 31%, among those who gave a rating). Regular (participated more than 3 of the past 5 years) hunters and casual (participated 3 or fewer years of the past 5) hunters are about the same in their ratings. Note that non-residents were not asked to rate hunting in Minnesota.

FISHING AND HUNTING COMPANIONS

Residents were asked about their typical fishing and hunting companions. The fishing section of the survey found that a large majority of resident anglers fished with friends (68%). This answer was followed by spouse or significant other (59%), children (also 59%), and other family members (other than spouses, children, siblings, or parents) (50%) (Figure 5.26). Nearly half sometimes fish alone (48%). At the bottom are siblings and parents. (Note that multiple questions are shown on a single graph, so the results sum to greater than 100%.) Also shown in Figure 5.26 is the mean reported days of fishing with each type of companion. The most days are spent fishing either with friends (6.01 mean days) or alone (5.98 mean days).

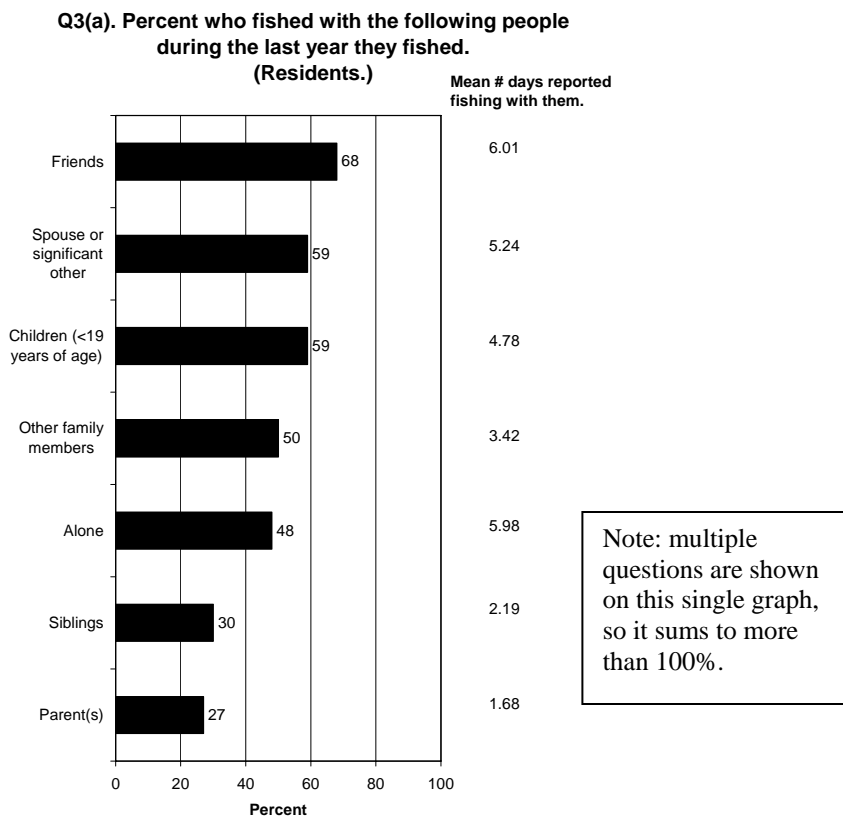


Figure 5.26. Residents' Fishing Companions

Combining data on the percentage who fished with various companions and the mean number of days spent fishing with them gives an indication of the *relative* importance of the companions in overall fishing participation. In this analysis, the percentage of anglers fishing with the type of companion is multiplied by the mean number of days to give a total of days per 100 typical anglers. While this is an inexact analysis (for instance, the days fishing with various companions are not de-duplicated, meaning that a single day with friends and spouse would count as two days in the total; also, the survey asked about the *last year they fished*, so not all respondents are referring to the same year), it is sufficient to give an idea of the *relative* importance of each type of companion in total fishing participation. In this analysis, fishing with friends is by far the most important, followed by fishing with spouses/significant others, fishing alone, and fishing with children (Table 5.1). Other family members, siblings, and parents are not of as much relative importance in fishing participation.

Table 5.1. Relative Measure of Number of Days of Fishing with Various Companions by Resident Anglers

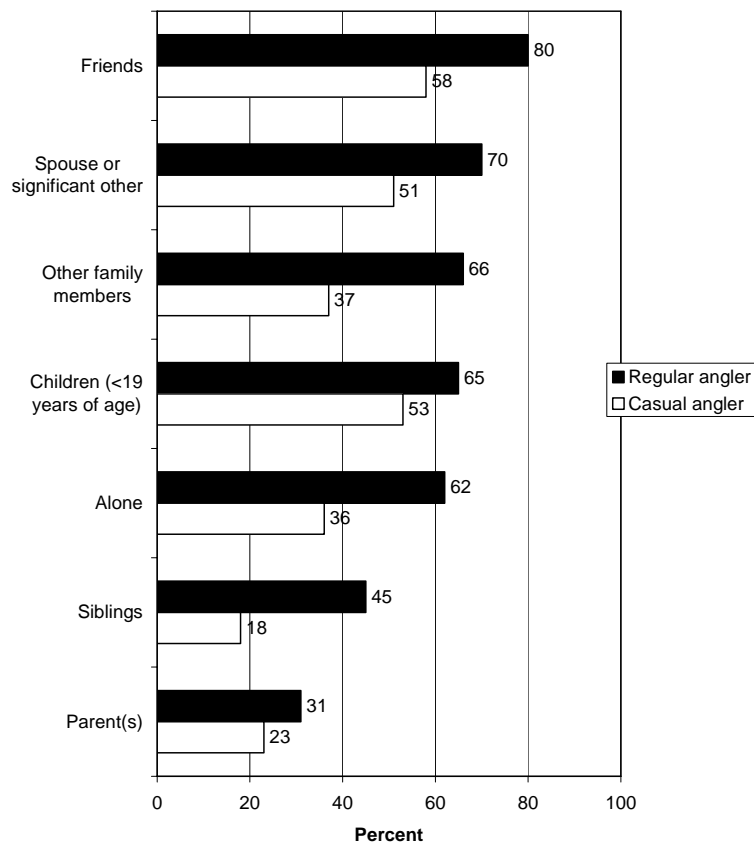
Type of Companion	Percent Who Fished With Them	Mean Number of Days Fished With Them	Total Fishing Days of 100 Typical Resident Anglers With the Given Companions
Friends	68	6.01	409
Spouse or significant other	59	5.24	309
Alone	48	5.98	287
Children	59	4.78	282
Other family members	50	3.42	171
Siblings	30	2.19	66
Parent(s)	27	1.68	45

These data were crosstabulated by regular (participated more than 3 of the past 5 years) versus casual (participated 3 or fewer years of the past 5) angler. This crosstabulation in Figure 5.27 shows that regular anglers are more likely to have fished with any of the given companions, as well as to have sometimes fished alone. The results suggest that regular anglers, being more avid, will simply have more fishing trips than casual anglers and will, therefore, have been fishing with various companions more often.

The crosstabulation data was also analyzed to determine the *relative* importance of various companions, using the same (albeit inexact) analysis procedure. Among regular anglers, the most important companions in fishing participation are friends, alone (no companions), and spouses/significant others (Table 5.2). For casual anglers, the most important companions are friends, children, and spouses/significant others.

Table 5.2. Relative Measure of Number of Days of Fishing with Various Companions by Regular and Casual Resident Anglers

	Type of Companion	Percent Who Fished With Them	Mean Number of Days Fished With Them	Total Fishing Days of 100 Typical Resident Anglers With the Given Companions
Regular Anglers	Friends	80	8.86	709
	Alone	62	8.76	543
	Spouse or significant other	70	7.70	539
	Children	65	6.17	401
	Other family members	66	5.37	354
	Siblings	45	3.28	148
	Parent(s)	31	2.48	77
Casual Anglers	Friends	58	3.45	200
	Children	53	3.60	191
	Spouse or significant other	51	3.17	162
	Alone	36	3.62	130
	Other family members	37	1.72	64
	Parent(s)	23	0.97	22
	Siblings	18	1.19	21

**Q3(a). Percent who fished with the following people during the last year they fished.
(Residents.)****Figure 5.27. Regular and Casual Resident Anglers' Fishing Companions**

Non-resident anglers were asked about their typical fishing companions (Figure 5.28). Just less than three quarters of non-resident anglers say that they fished with friends (71%) during the last year they fished in Minnesota. This is followed by other family members (56%), children (49%), spouses (46%), siblings (39%), and parents (25%). Just under half of non-resident anglers also fish alone at times (49%). Figure 5.28 also shows the mean number of days of fishing with the various companions.

Combining data, as was done above in the discussion of resident anglers, determines the *relative* importance of various companions in participation in fishing by non-residents in Minnesota. Below Figure 5.28 is Table 5.3, which shows the number of days of fishing in Minnesota attributable to various companions. Friends and alone (no companions) are the most important in the analysis.

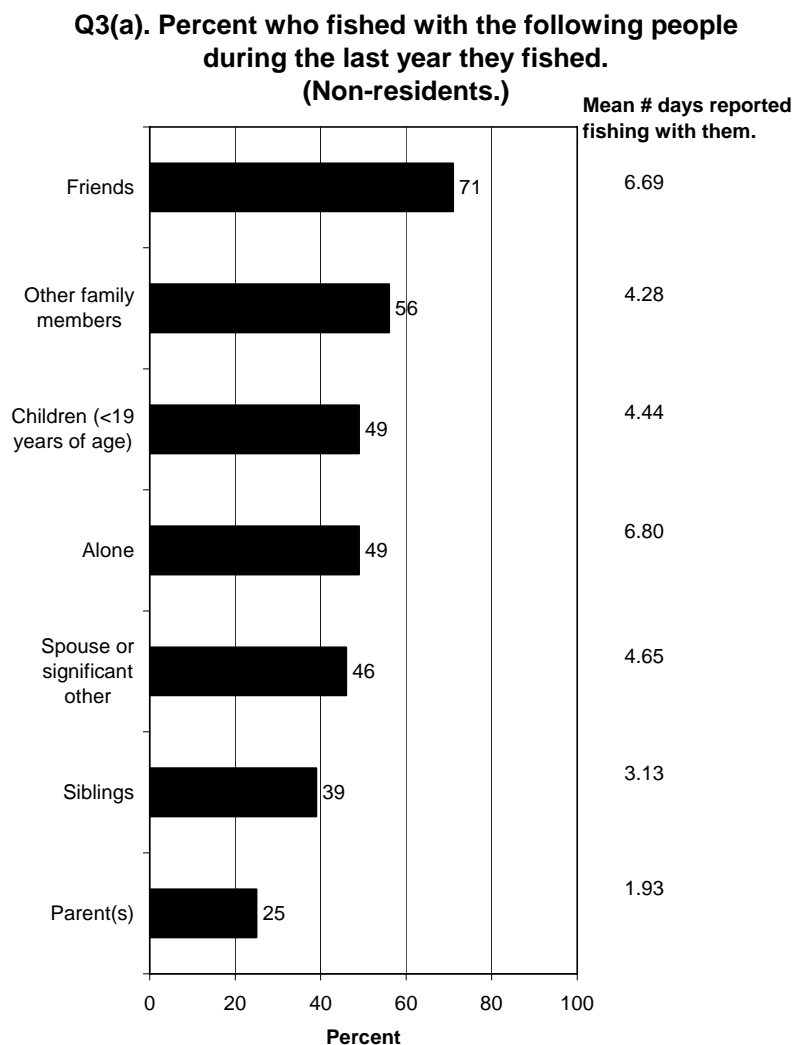


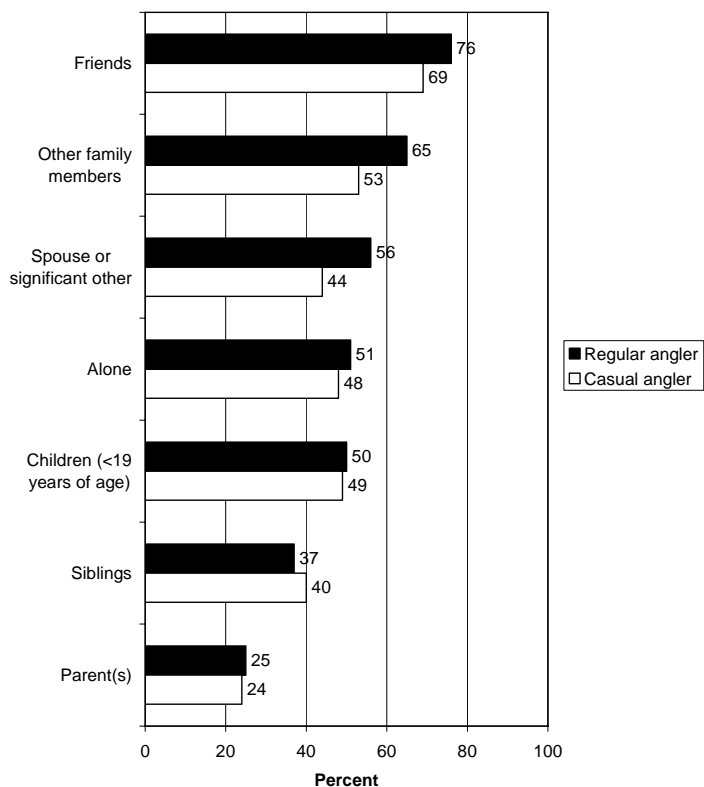
Figure 5.28. Non-Residents' Fishing Companions

Table 5.3. Relative Measure of Number of Days of Fishing with Various Companions by Non-Resident Anglers

Type of Companion	Percent Who Fished With Them	Mean Number of Days Fished With Them	Total Fishing Days of 100 Typical Resident Anglers With the Given Companions
Friends	71	6.69	475
Alone	49	6.80	333
Other family members	56	4.28	240
Children	49	4.44	218
Spouse or significant other	46	4.65	214
Siblings	39	3.13	122
Parent(s)	25	1.93	48

These non-resident angler data were crosstabulated by regular (participated more than 3 of the past 5 years) versus casual (participated 3 or fewer years of the past 5) angler. In this crosstabulation (Figure 5.29), regular anglers are just slightly more likely to have fished with any of the given companions (with the exception of siblings), as well as to have sometimes fished alone (although this difference is very slight).

Q3(a). Percent who fished with the following people during the last year they fished. (Non-Residents.)

**Figure 5.29. Regular and Casual Non-Resident Anglers' Fishing Companions**

The crosstabulated data was also analyzed to determine the relative importance of various companions, using the same analysis procedure as was used previously. Among regular (participated more than 3 of the past 5 years) non-resident anglers, the most important companions in fishing participation are friends, alone (no companions), spouses/significant others, and other family members (Table 5.4). For casual (participated 3 or fewer years of the past 5) non-resident anglers, the most important companions are friends, alone (no companions), children, and other family members.

Table 5.4. Relative Measure of Number of Days of Fishing with Various Companions by Regular and Casual Non-Resident Anglers

	Type of Companion	Percent Who Fished With Them	Mean Number of Days Fished With Them	Total Fishing Days of 100 Typical Resident Anglers With the Given Companions
Regular Anglers	Friends	76	7.75	589
	Alone	51	7.86	401
	Spouse or significant other	56	6.31	353
	Other family members	65	5.09	331
	Children	50	4.15	208
	Siblings	37	2.83	105
	Parent(s)	25	1.86	46
Casual Anglers	Friends	69	6.38	440
	Alone	48	6.50	312
	Children	49	4.52	221
	Other family members	53	4.06	215
	Spouse or significant other	44	4.18	184
	Siblings	40	3.22	129
	Parent(s)	24	1.95	47

The resident survey also explored hunters' hunting companions in the same way that anglers' fishing companions were explored. Figure 5.30 shows that friends lead the list among hunting companions: 72% of Minnesota hunters in the survey hunted with friends in the last year that they had hunted. Hunting alone (55%) and hunting with other family members (51%) follow in the ranking. While just more than a third hunted with children (37%), close family members are not otherwise of relative importance, compared to friends. Also shown in Figure 5.30 is the mean reported days of hunting with each type of companion. The most days are spent hunting alone (5.87 mean days) or hunting with friends (5.85 mean days).

It is interesting that spouses/significant others play much less of a role in hunting than they do in fishing. As Figure 5.26 previously showed, 59% of anglers indicated that they had fished with their spouse/significant other, compared to only 22% of hunters having hunted with their spouse/significant other (Figure 5.30). Children, too, play a less important role in hunting compared to fishing: 59% of anglers had fished with children (the same as for fishing with spouses), compared to 37% of hunters, in the last year that they had done the activity.

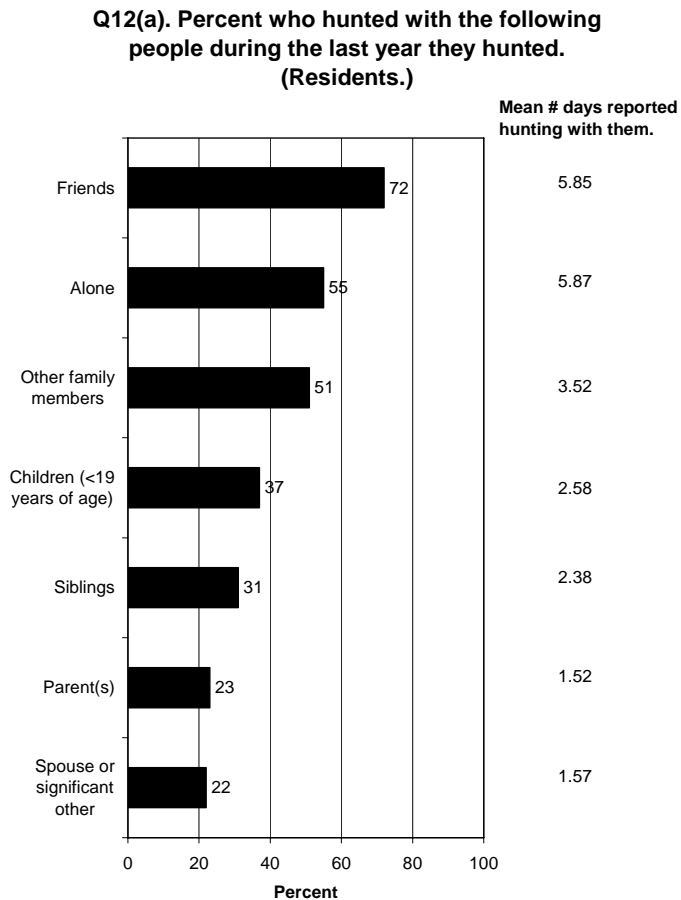


Figure 5.30. Residents' Hunting Companions

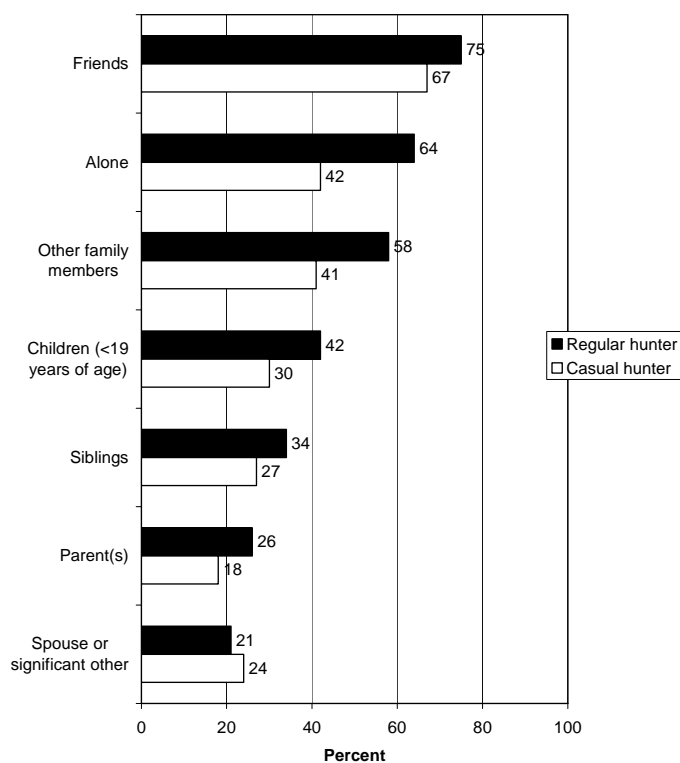
The analysis of the *relative* importance of various hunting companions follows the same procedures as the analysis of fishing companions. Table 5.5 shows the combined data of the percentage who hunted with various companions and the mean number of days spent hunting, which gives an indication of the *relative* importance of the hunting companions in overall hunting participation. (As previously discussed, it is important to remember that the data cannot be summed to arrive at an overall number of days of hunting, as this was not the purpose of the question. The analysis is simply meant to show *relative* importance.) In this analysis, hunting with friends is by far the most important, followed by hunting alone, and hunting with other family members.

Table 5.5. Relative Measure of Number of Days of Hunting with Various Companions by Resident Hunters

Type of Companion	Percent Who Hunted With Them	Mean Number of Days Hunted With Them	Total Hunting Days of 100 Typical Resident Hunters With the Given Companions
Friends	72	5.85	421
Alone	55	5.87	323
Other family members	51	3.52	180
Children	37	2.58	95
Siblings	31	2.38	74
Spouse or significant other	22	1.57	35
Parent(s)	23	1.52	35

The crosstabulation by regular (participated more than 3 of the past 5 years) versus casual (participated 3 or fewer years of the past 5) hunter is shown in Figure 5.31. Regular hunters are more likely to have gone hunting with any of the companions (with one exception), compared to casual hunters. Regular hunters are also more likely to have gone hunting alone at some time in the last year that they went hunting, compared to casual hunters. The exception referred to above is the spouse/significant other response: 21% of regular hunters had hunted with their spouse/significant other, but 24% of casual hunters had done so, in the last year that they had hunted.

Q12(a). Percent who hunted with the following people during the last year they hunted. (Residents.)

**Figure 5.31. Regular and Casual Resident Hunters' Hunting Companions**

The crosstabulation data was also analyzed to determine the relative importance of various hunting companions, as shown in Table 5.6. Among regular (participated more than 3 of the past 5 years) hunters, the most important companions in hunting participation are friends, alone (no companions), and other family members. For casual (participated 3 or fewer years of the past 5) hunters, the most important hunting companions are friends and alone.

Table 5.6. Relative Measure of Number of Days of Hunting with Various Companions by Regular and Casual Resident Hunters

	Type of Companion	Percent Who Hunted With Them	Mean Number of Days Hunted With Them	Total Hunting Days of 100 Typical Resident Hunters With the Given Companions
Regular Hunters	Friends	75	6.98	524
	Alone	64	7.59	486
	Other family members	58	4.43	257
	Children (<19 years of age)	42	3.30	139
	Siblings	34	3.03	103
	Parent(s)	26	1.89	49
	Spouse or significant other	21	1.72	36
Casual Hunters	Friends	67	4.19	281
	Alone	42	3.26	137
	Other family members	41	2.15	88
	Children (<19 years of age)	30	1.51	45
	Siblings	27	1.41	38
	Spouse or significant other	24	1.36	33
	Parent(s)	18	0.98	18

SUMMARY OF FINDINGS REGARDING FISHING AND HUNTING COMPANIONS

The examination of fishing companions found that, among residents, friends, spouses/significant others, and children are the most common fishing companions, and the “alone” response also is not insubstantial in importance. Regular (participated more than 3 of the past 5 years) anglers are more likely to have fished with any of the companions asked about in the survey. For casual (participated 3 or fewer years of the past 5) anglers, fishing with children is more important than it is for regular anglers.

Among non-residents, friends, other family members (other than spouses, children, siblings, or parents), children, and spouses are common fishing companions (and fishing alone is also important). Fishing with friends and alone are the most important to non-residents, when days fished with the various companions is added to the analysis. Regular and casual non-resident anglers are not greatly different.

Regarding hunting, friends and other family members are important companions (as is hunting alone). Note that spouses/significant others play much less of a role in hunting than they do in fishing. Regular hunters are more likely than are casual hunters to have hunted with any of the companions asked about in the survey with the exception of spouses/significant others.

CHAPTER 6. CONJOINT ANALYSIS OF LICENSE STRUCTURE

The primary purpose of the survey was to obtain data for the conjoint analysis; specifically, to obtain data about preferences for various license types and prices to determine which existing and potential licenses were most important to respondents and how price affected the preference for a given set of licenses. The conjoint analysis was complex because the MN DNR was interested in examining existing licenses as well as several potential licenses. License prices tested in the analysis began with the existing prices for current licenses or estimated initial prices for the potential licenses. Annual and short-term licenses and their respective price levels are shown in Table 6.1. Recall that the survey of resident anglers and hunters was divided into three separate surveys to reduce respondent burden while allowing the many different combinations of licenses and prices to be tested, labeled Surveys A, B, and C in Table 6.1.

Table 6.1. Fishing License Types and Pricing Levels Tested

Fishing License Type	Price			
	Level 1	Level 2	Level 3	Level 4
Survey A				
Annual Individual	\$17	\$25	\$35	-
Annual Combination	\$0	\$25	\$35	\$45
90-Day	\$0	\$10	\$20	\$30
7-Day	\$0	\$10	\$20	\$30
24-Hour	\$0	\$8	\$12	\$15
Survey B				
Annual Individual	\$17	\$25	\$35	-
Annual Combination	\$0	\$25	\$35	\$45
6-Month	\$0	\$10	\$20	\$30
90-Day	\$0	\$10	\$20	\$30
3-Day	\$0	\$8	\$15	\$20
Survey C				
Annual Individual	\$17	\$25	\$35	-
Annual Combination	\$0	\$25	\$35	\$45
Individual Sport	\$0	\$25	\$35	\$45
7-Day	\$0	\$10	\$20	\$30
24-Hour	\$0	\$8	\$12	\$15

The conjoint analysis had to account for the fact that the price of a fishing license does not always reflect its total value (i.e., the price of the license may contain discounts or entail special pricing). For example, in Table 6.2 the Annual Combination and Individual Sport licenses reflect a discount. In the case of the Annual Combination license, both husband and wife receive the equivalent of an Annual Individual license for \$25.00. This represents a \$9.00 discount on what would be the cost of the two licenses if bought separately (\$34.00). Similarly, individuals paying \$29.50 for the Individual Sport license that combines an Annual Individual Fishing license and a Small Game Hunting license would receive a discount of \$6.50 over the cost of buying those two licenses separately (\$36.00).

Table 6.2. Current and Estimated Prices for Annual/Short-Term Fishing License Types

License Type	Base Price			Value	
	Current	Estimated	Base	Total	Over Base
Annual Individual	\$17	-	\$17	\$17	\$0
Annual Combination	\$25	-	\$25	\$34	\$9
Individual Sport	\$29.50	-	\$29.50	\$36	\$6.50
6-Month	-	\$14	\$14	\$14	\$0
90-Day	-	\$14	\$14	\$14	\$0
7-Day	-	\$10	\$10	\$10	\$0
3-Day	-	\$10	\$10	\$10	\$0
24-Hour	\$8.50	-	\$8.50	\$8.50	\$0

RESIDENT ANNUAL AND SHORT-TERM FISHING LICENSES

Because the majority of Minnesota resident anglers purchase an Annual Individual Fishing license or an Annual Combination license, it is instructive to examine how they view other licenses in order to help assess their response to price increases or the addition of new licenses. The decision to purchase a specific type of resident fishing license is based on the types of licenses offered, their prices, the perceived value of each license, and the amount of fishing participation anticipated over the course of a year. In essence, anglers in Minnesota have four license choices if they are also hunters, three if they are married, and two if they do not hunt and have a spouse that does not fish. Thus, for many anglers there are only two realistic choices: the Annual Individual Fishing license and the 24-Hour Fishing license. Given the small difference in price between the two licenses, it appears that most anglers opt for the Annual Individual Fishing license. The lower number of 24-Hour Fishing licenses sold to Minnesota residents relative to Annual Individual Fishing licenses supports this conclusion.

One of the questions being posed in this project is, “What would anglers do if they were offered other short duration licenses to purchase?” The data in Table 6.3 sheds some light on this question by identifying other licenses desired by those who view the Annual Individual Fishing license as *very desirable*. Table 6.3 shows that over two-thirds of respondents rating the Annual Individual license as *very desirable* also rated the Annual Combination Fishing license as *very desirable*. This was evident in all four groups of anglers and hunters. As would be expected, a greater percentage of regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5) hunters rated the Individual Sports license as very desirable compared to either angler group.

Table 6.3. Percentage of Respondents Rating the Annual Individual License as *Very Desirable* Who Also Rated Other Licenses as *Very Desirable*

License Type	Percent Rating the License <i>Very Desirable</i>				
	Regular Angler	Casual Angler	Regular Hunter	Casual Hunter	Total
Annual Individual Fishing license (existing) (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)	100.0	100.0	100.0	100.0	100.0
Annual Combination Fishing license (husband and wife) (existing) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)	69.3	65.8	69.2	69.4	68.3
Individual Sports license (existing) (for a resident age 18 and older for angling and small game hunting)	58.0	59.3	76.2	73.5	66.3
Sports Combination license (husband and wife) (existing) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)	47.8	36.6	55.1	50.7	46.9
Individual Conservation Fishing license (existing) (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)	22.9	33.3	27.6	28.3	28.3
Conservation Combination Fishing license (husband and wife) (existing) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)	26.3	26.3	33.5	26.9	28.1
24-Hour Fishing license (existing) (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)	19.5	19.8	22.5	21.9	20.8
3-Day Fishing license (potential) (for a resident to fish for 72 continuous hours)	28.8	22.2	30.8	26.5	26.8
7-Day Fishing license (potential) (for a resident to fish for 7 consecutive days)	27.3	28.4	36.2	28.3	29.8
90-Day Fishing license (potential) (for a resident to fish 90 consecutive days)	18.0	25.9	24.9	26.0	23.8
6-Month Fishing license (potential) (for a resident to fish April 1-September 30 or October 1-March 31)	24.9	37.4	24.3	32.4	30.3
3-Year Fishing license (potential) (for a resident to fish 3 consecutive years from date of purchase)	49.8	57.2	47.6	58.9	53.8
5-Year Fishing license (potential) (for a resident to fish 5 consecutive years from date of purchase)	48.3	56.4	46.5	58.4	52.8
Super Individual Sports license (potential) (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)	42.0	47.3	62.2	60.7	52.7

Definitions: regular (participated more than 3 of the past 5 years) and casual (participated 3 or fewer years of the past 5)

Regarding short-term licenses (24-Hour, 3-Day, 7-Day, 90-Day, and 6-Month), around 25% of the respondents who indicated that an Annual Individual Fishing license is *very desirable* also indicated that one of the five short-term licenses is also *very desirable*. While there were some

slight variations across regular and casual angler and regular and casual hunter groups, the results were consistent. Of particular importance to this study was the finding that casual anglers were quite similar to regular (participated more than 3 of the past 5 years) anglers with regard to their preferences for short-term licenses. Casual (participated 3 or fewer years of the past 5) anglers did show a slightly greater tendency to prefer the 90-Day and 6-Month licenses.

The desirability of two long-term licenses was also examined in the study. As shown in Table 6.3, a majority of casual anglers and casual hunters who rated the Annual Individual Fishing license as *very desirable* also rated the 3-Year and 5-Year licenses as *very desirable*, whereas less than half of regular anglers and regular hunters rated these two licenses as *very desirable*.

The primary objective of the conjoint analysis was to identify angler preferences for the eight annual and short-term licenses of interest to the MN DNR, shown in Table 6.4. In an actual purchase situation, consumers do not make choices based on a *single* attribute of a product, like the price of the license. Instead, consumers examine a *range* of features or attributes and then make judgments, including making trade-offs, to determine their final purchase choice. The conjoint analysis examines these trade-offs to determine the combination of attributes that is most satisfying to the consumer. In other words, the conjoint analysis helps provide an understanding of the preferences of anglers for licenses and prices that meet agency objectives.

Table 6.4. Part-Worth Utilities by License Type and Price

	Value	Survey A	Survey B	Survey C
		Utility	Utility	Utility
Annual Individual	\$17	-1.5212	-1.3823	-0.9731
	\$25	-2.2371	-2.0328	-1.4310
	\$35	-3.1319	-2.8460	-2.0034
Annual Combination	NO		0.0000	0.0000
	\$25		2.3444	2.0359
	\$35		1.8725	1.7633
	\$45		0.5950	0.8631
Individual Sport	NO	0.0000		0.0000
	\$25	2.1140		1.3279
	\$35	1.7006		1.0827
	\$45	0.5678		0.3938
6-Month	NO		0.0000	
	\$10		-0.1574	
	\$20		-0.1301	
	\$30		0.0821	
90-Day	NO	0.0000	0.0000	
	\$10	0.4689	-0.0880	
	\$20	0.3736	-0.3930	
	\$30	-0.2859	-0.9149	
7-Day	NO	0.0000		0.0000
	\$10	0.0753		0.1334
	\$20	-0.0676		0.1221
	\$30	-0.4287		-0.0380
3-Day	\$0		0.0000	
	\$8		0.5181	
	\$15		0.3496	
	\$20		-0.1260	
24-Hour	NO	0.0000		0.0000
	\$8	-1.0813		0.2719
	\$12	-1.1370		-0.0966
	\$15	-0.9666		-0.5936
Constant		5.5062	4.5747	2.9277
R ²		0.970	0.983	0.942
tau		0.867	0.883	0.833
Notes: R ² and tau statistics are all significant at $p \leq 0.001$. NO = Not Offered				

The first step in the analysis entailed calculating the part-worth utilities for each license type and price level. The part-worth utility model reflects a utility function that defines a different utility (part-worth) value for each of the levels (prices) of a given attribute (license type). The part-worth utilities in Table 6.4 represent the extent to which each of the licenses drives the decision to choose a particular set of licenses. The Pearson's *R* and Kendall's *tau* statistics displayed at the bottom of the table indicate how well the model fits the data. Both statistics are highly significant, indicating an excellent fit. For six of the eight license types, the expected relationship between price and utility was found. That is, as price increased for a specific license, the utility attributed to that license decreased. In the remaining two licenses (6-Month and 24-Hour Fishing license) a reversal was found: as price increased, preference for the license

also increased. These reversals occur when either changes in the price of the license is not relevant in the decision-making process or the license is not important to the respondent.

The importance of a particular license can be calculated by examining the range of utilities for that license, that is, the difference between the lowest and highest utilities for a given license type. The range represents the maximum impact that the license can contribute to the overall set of licenses. Using the utilities in Table 6.4, the relative importance of each license type can be calculated to ascertain the importance of each license to all anglers. Relative importance of each license can be defined as the range for that license divided by the sum of the ranges. These calculations are shown in Table 6.5.

Table 6.5. Utility Range and Relative Importance of Each License Type for Surveys A, B, and C

	Utility Range	Relative Importance
Survey A		
Annual Individual	1.6107	26.3%
Individual Sport	2.1140	34.5%
90-Day	0.7548	12.3%
7-Day	0.5040	8.2%
24-Hour	1.1370	18.6%
Sum of Importance	6.1205	100.0%
Survey B		
Annual Individual	1.4637	26.1%
Annual Combination	2.3444	41.8%
6-Month	0.2395	4.3%
90-Day	0.9149	16.3%
3-Day	0.6441	11.5%
Sum of Importance	5.6066	100.0%
Survey C		
Annual Individual	1.0303	19.0%
Annual Combination	2.0359	37.5%
Individual Sport	1.3279	24.5%
7-Day	0.1714	3.2%
24-Hour	0.8655	15.9%
Sum of Importance	5.4310	100.0%

As seen in Table 6.5, the most important license type in Survey A was the Individual Sport license followed by the Annual Individual Fishing license. The three short-term licenses evaluated in Survey A were much less important than the two annual licenses. In Survey B, the Annual Combination license was of greatest importance followed by the Annual Individual Fishing license. The importance of the 6-Month Fishing license was very low compared to other licenses. Again, in Survey C, the Annual Combination license was the most important followed by the Individual Sport license and the Annual Individual Fishing license. The 7-Day Fishing license was very low in importance, and the 24-Hour Fishing license was moderately important.

The analysis in Table 6.5 essentially shows two things. First, it shows the importance of each of the resident fishing licenses being considered by the MN DNR. The importance of the three

annual licenses (Annual Individual, Annual Combination, and Individual Sport) is clearly shown, and these licenses should continue to be offered in the future. The short-term licenses are more problematic, as they are all rated much lower in importance than the annual licenses. The 6-Month and 7-Day Fishing licenses each were comparatively low in importance, whereas, the 3-Day and 24-Hour Fishing licenses were somewhat higher in importance but much lower than the Annual Individual Fishing license in importance.

The second aspect of the importance ratings that should be noted is that the utility ranges can be viewed as a reflection of price sensitivity for each license. Licenses with larger ranges show a greater sensitivity to price changes than do licenses with smaller ranges. This observation is clearly shown in the graphs for each license in Figures 6.1, 6.2, and 6.3.

Simulations can be run for any configuration of license types at virtually any price level. The effect of price on angler preference scores can be seen by varying license prices for a specific license and holding the types and prices of other licenses constant. By using both estimated and simulation prices, the graphs show a broader array of prices, which helps in understanding what happens when prices change for a single license. The graphs in Figures 6.1, 6.2, and 6.3 show the change in preference scores associated with increasing prices.

In Figure 6.1, the graphs for the Annual Individual and Annual Combination licenses begin to decline from the initial price point. The 90-Day license has a somewhat delayed decline, which begins at about the \$20.00 point. The 7-Day license has a very shallow slope and is not as sensitive to price changes as are the other three licenses.

As noted earlier, there was a price-preference reversal for the 24-Hour Fishing license. This occurred among Survey A respondents. The graph at the bottom of Figure 6.1 shows little change in preference from \$8.00 to \$12.00, but preference increases after \$12.00. This likely occurred as respondents viewed the 24-Hour Fishing license as irrelevant once the price approached the price of an Annual Individual Fishing license (\$17.00). The graph also indicates that the price of a 24-Hour Fishing license could be raised from \$8.00 to \$12.00 without a substantial decline in preference scores.

The graphs in Figure 6.2 are similar to those in the previous figure, as would be expected. There are sharp declines in preferences after the initial price points for the Annual Individual Fishing and Annual Combination licenses. In Figure 6.2, graphs for the 90-Day and 3-Day short-term licenses show a relatively modest decline in preference from the beginning price point and then a much steeper decline in preference after a \$5.00 increase.

The 6-Month license graph in Figure 6.2 shows the second reversal of price. The change in preference remains flat as the price changes from \$10.00 to \$20.00 but increases after that point. Here again, the effect of the short-term license price approaching that of the Annual Individual license price is seen.

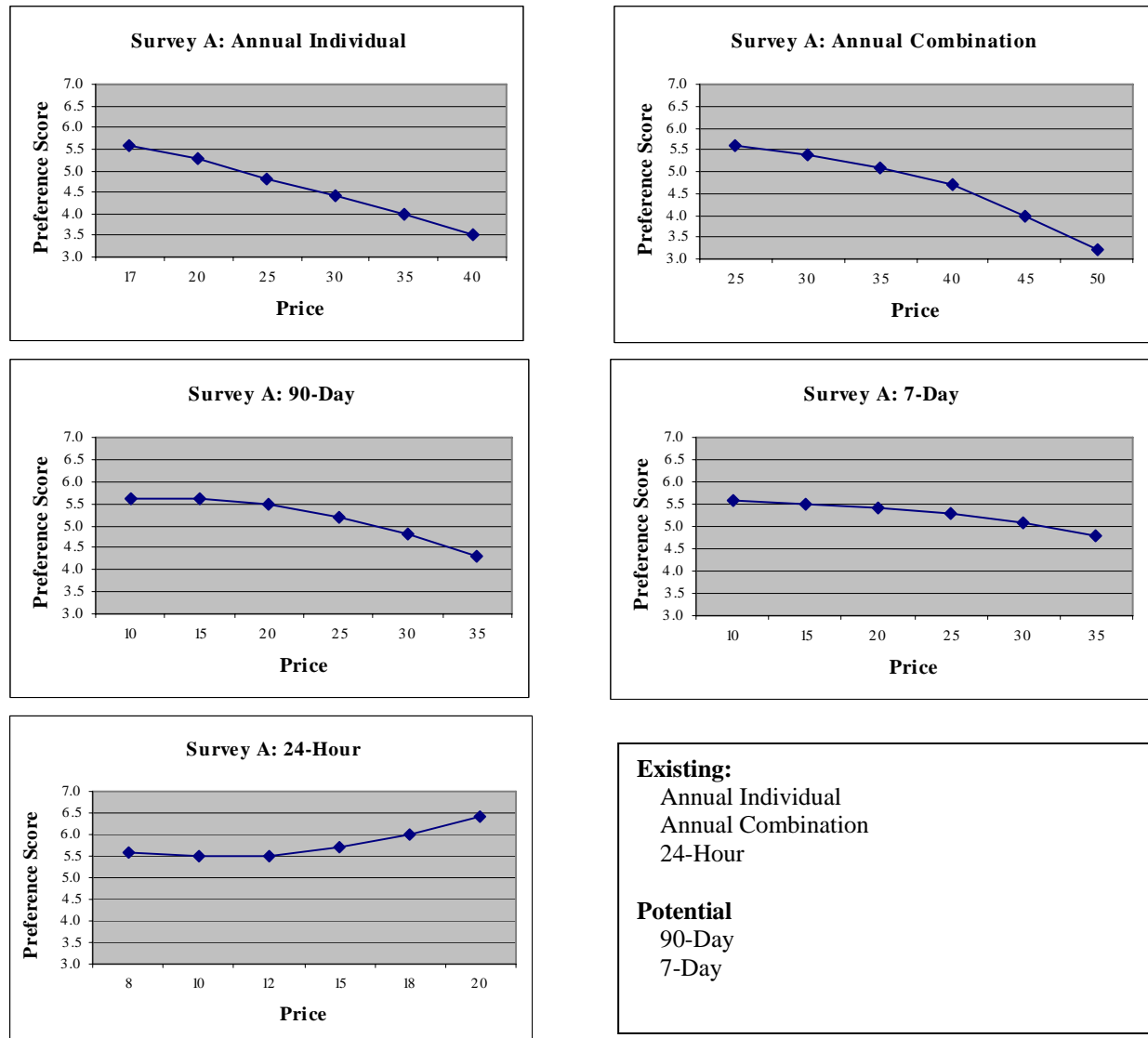


Figure 6.1. Price Changes for Each Survey A Fishing License Type, Holding Other License Prices Constant

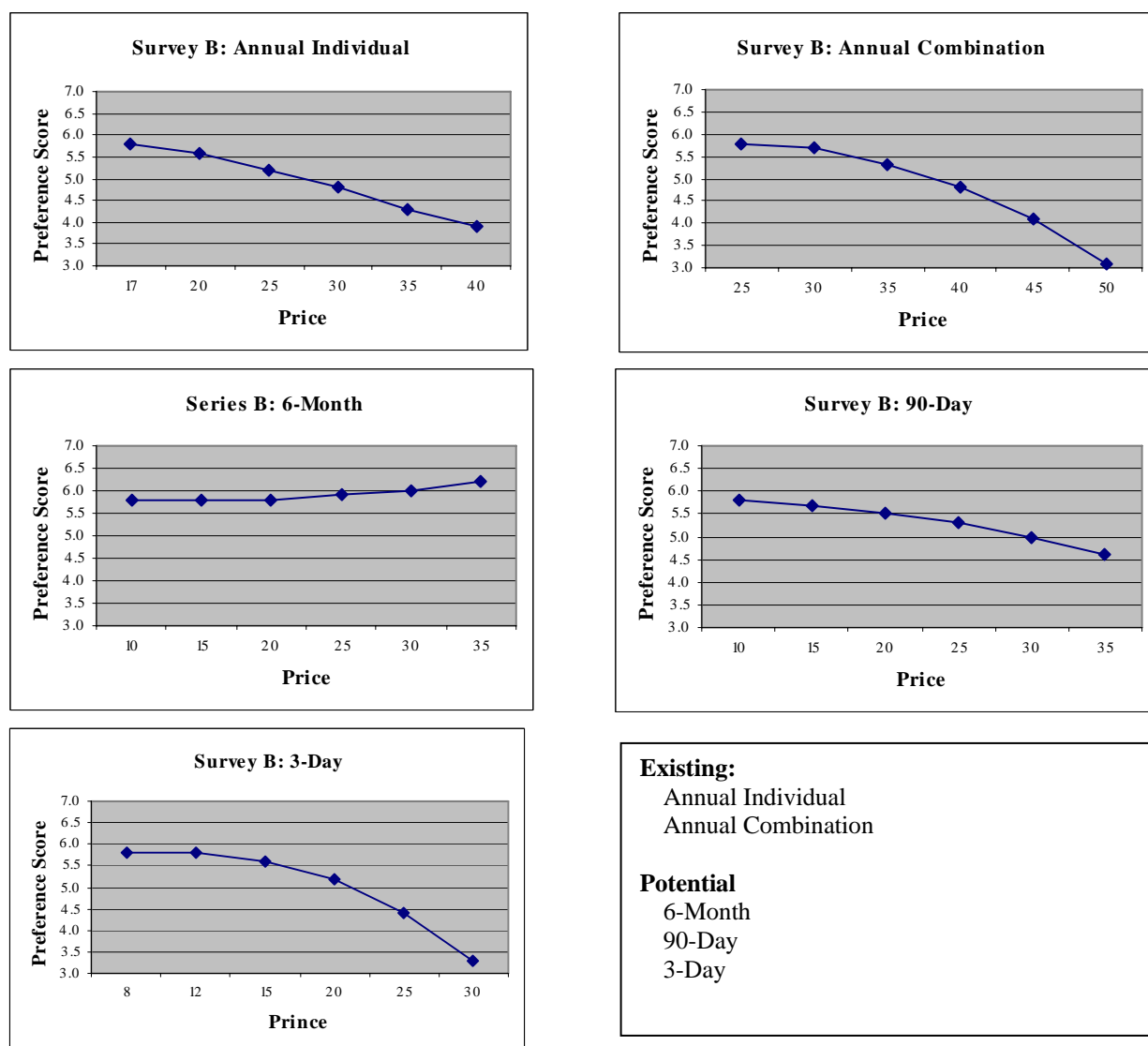


Figure 6.2. Price Changes for Each Survey B Fishing License Type, Holding Other License Prices Constant

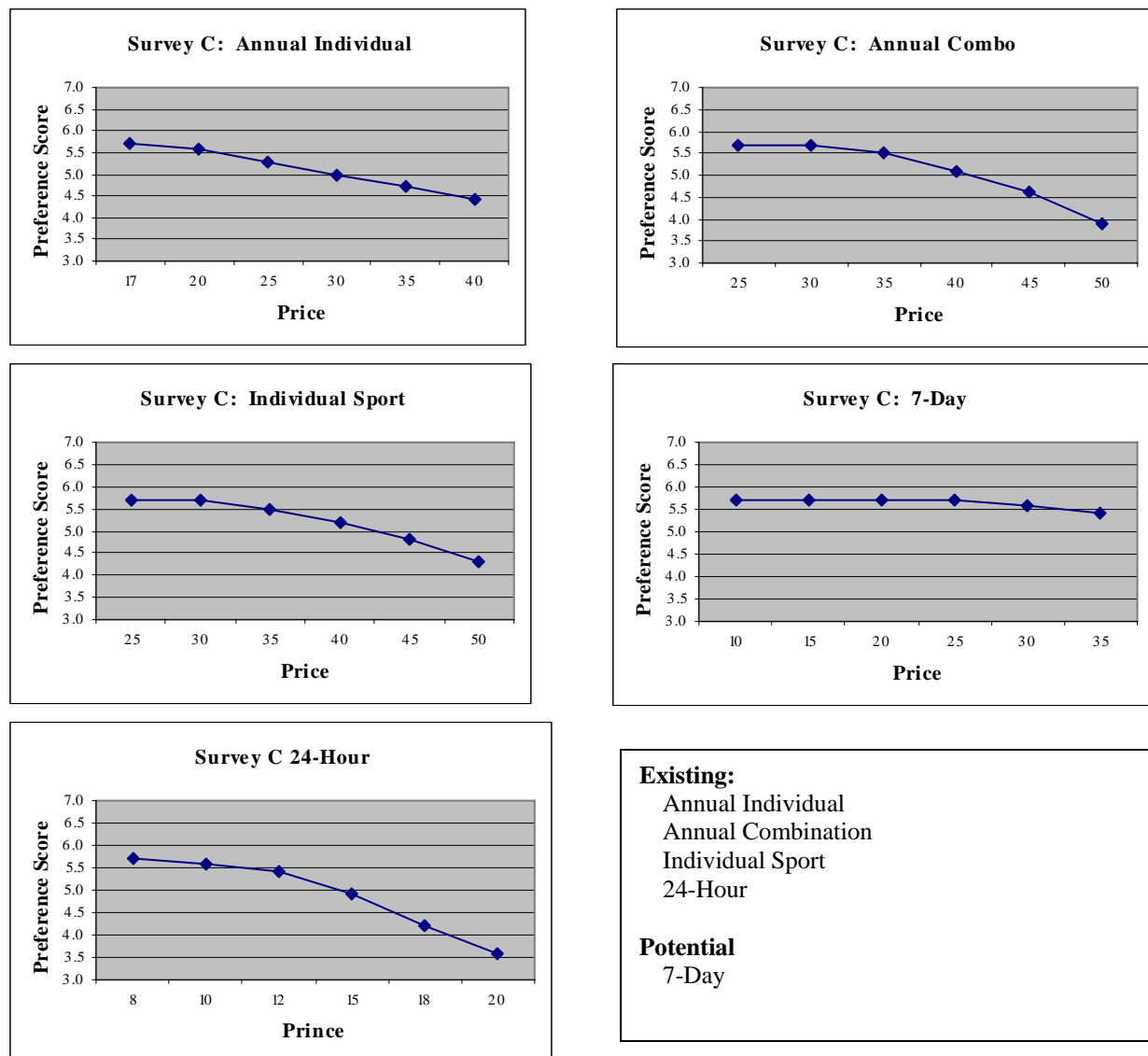


Figure 6.3. Price Changes for Each Survey C Fishing License Type, Holding Other License Prices Constant

The graphs in Figure 6.3 again follow the initial shallow decline for the three annual licenses followed by much steeper declines as prices increase. Likewise, the 7-Day license displays a very small decline in preference scores over the range of prices. This indicates that the license is not highly preferred by respondents and that the price does *not* have much effect on preferences.

Contrary to the 24-Hour license graph in Figure 6.1, the same graph in Figure 6.3 shows a very strong price-preference relationship. Between \$8.00 and \$12.00 in Figure 6.3, the slope of the line is relatively flat, but beyond \$12.00 preferences decrease rapidly. The differences between the two graphs for the 24-Hour license are not readily discernable but are most likely related to the other four licenses in the set being rated.

Because the study involved eight licenses with three or four price levels each, it was necessary to use three separate choice sets on three survey versions to assess the initial relationships between licenses and prices (otherwise, the survey would have been too long for any one respondent). This situation did not allow for an assessment of the relative importance of all licenses simultaneously. To address this shortcoming, a series of regressions were used to estimate utilities for each license based on the overall set of licenses and prices. The utilization of all resident licenses resulted in some shifts in the utilities and resulting importance of each license compared to the utilities and relative importance for each license presented in Surveys A, B, and C.

The utility range and relative importance of each license in the overall assessment are shown in Table 6.6. When all licenses were combined in the analysis, the three annual licenses had the greatest importance of the eight licenses. All of the short-term licenses remained low in importance but showed some notable changes over the assessments in the individual survey analyses. For example, the 6-Month and 7-Day licenses remained low in importance as before; however, the 24-Hour license, which was of moderate importance in Surveys A and C, was reduced in importance when all other licenses were considered. The 90-Day and 3-Day licenses were the two short-term licenses with slightly higher importance.

Table 6.6. Utility Range and Relative Importance of Short-Term Fishing License Types

License Type	Utility Range	Relative Importance
Annual Individual	1.4284	21.7%
Annual Combination	1.5244	23.2%
Individual Sport	1.3337	20.3%
6-Month	0.2395	3.6%
90-Day	0.7875	12.0%
7-Day	0.3885	5.9%
3-Day	0.6441	9.8%
24-Hour	0.2256	3.4%
Total	6.5717	100.0%

Using the regression analysis, it was possible to estimate utilities for each license in one-dollar increments. The benefit of completing these calculations was that preference scores for any combination of licenses and prices could be calculated without relying on running simulations each time a new license package was considered.

Calculating preference scores for different license combinations at varying price levels is accomplished by adding the part-worth utilities for a set of licenses at specific prices to the constant for the model. The part-worth utilities and constant are shown in Table 6.7. To calculate the preference score for the set of licenses containing the lowest priced alternative for a package consisting of Annual Individual, Annual Combination, Individual Sport, and 24-Hour license, the following equation was used:

$$4.3362 \text{ (constant)} + (-1.3490) \text{ (Ann. Individual)} + 2.2240 \text{ (Ann. Combination)} + 1.6991 \text{ (Individual Sport)} + (-0.6126) \text{ (24-Hour)} = 6.2977$$

Table 6.7. License Prices and Utilities for Calculating Annual and Short-Term Fishing License Preference Scores

Annual Individual	Price	\$17	\$18	\$19	\$20	\$21	\$22	\$23	\$24	\$25		
	Utility	-1.3490	-1.4284	-1.5077	-1.5871	-1.6664	-1.7458	-1.8251	-1.9045	-1.9838		
Annual Combination	Price	\$25	\$26	\$27	\$28	\$29	\$30	\$31	\$32	\$33	\$34	\$35
	Utility	2.2240	2.1846	2.1452	2.1058	2.0664	2.0269	1.9875	1.9481	1.9087	1.8693	1.8299
	Price	\$36	\$37	\$38	\$39	\$40	\$41	\$42	\$43	\$44	\$45	
	Utility	1.7169	1.6038	1.4908	1.3778	1.2647	1.1517	1.0387	0.9256	0.8126	0.6996	
Individual Sport	Price	\$29	\$30	\$31	\$32	\$33	\$34	\$35	\$36			
	Utility	1.6991	1.6636	1.6281	1.5926	1.5571	1.5216	1.4861	1.3882			
	Price	\$37	\$38	\$39	\$40	\$41	\$42	\$43	\$44	\$45		
	Utility	1.2904	1.1925	1.0946	0.9968	0.8989	0.8010	0.7031	0.6053	0.5074		
6-Month	Price	\$15	\$16	\$17	\$18	\$19	\$20	\$21	\$22	\$23		
	Utility	-0.1438	-0.1410	-0.1383	-0.1356	-0.1328	-0.1301	-0.1513	-0.1725	-0.1938		
90-Day	Price	\$15	\$16	\$17	\$18	\$19	\$20	\$21	\$22	\$23		
	Utility	0.1209	0.1019	0.0829	0.0638	0.0448	0.0257	-0.0340	-0.0937	-0.1534		
7-Day	Price	\$10	\$11	\$12	\$13	\$14	\$15					
	Utility	0.0955	0.0857	0.0760	0.0663	0.0566	0.0469					
3-Day	Price	\$8	\$9	\$10	\$11	\$12	\$13					
	Utility	0.5181	0.4940	0.4700	0.4459	0.4218	0.3977					
24-Hour	Price	\$8	\$9	\$10	\$11	\$12	\$13					
	Utility	-0.6116	-0.6350	-0.6585	-0.6820	-0.7054	-0.7289					
Constant	4.3362											

By substituting the Annual Individual license utility for \$21.00 (-1.6664) into the equation above, a preference score of 5.9803 is generated. Thus, by increasing the Annual Individual license price from \$17.00 to \$21.00, the preference score declines by 0.3, or about 5%. Using the utilities and constant in Table 6.7 allows for the calculation of preference scores for many different license package combinations. The range of utilities for each license type presented in Table 6.7 was limited to the license price range the MN DNR determined was realistic for any future price change.

Preference scores for several additional license packages are presented in Table 6.8. These scores were calculated from the corresponding utilities for the license prices shown in the table. The purpose of these simulations was to show the effects of incrementally increasing the price of one or more licenses or substituting one license for another. The change in utility from one price to the next is generally very small and results in a correspondingly small change in preference. This is particularly true for the short-term licenses.

In Table 6.8, license packages 1 through 4 show the effect of incremental \$2.00 increases in the price of an Annual Individual license with no change in price for the other three licenses. Packages 5 and 6 make up an example of when two of the four license prices are changed. In this case, increasing the Annual Combination license from \$25.00 to \$32.00 results in a decrease of 0.3 points, or 5.7%, in the preference score from Package 3 and a 0.6 point drop, or 10.7%, from the base Package 1. Packages 7 and 8 show a moderate impact, ranging from a 6.7% to a 13.3% drop, when increasing the Individual Sport license from \$32.00 to \$35.00. Change in any of the annual licenses results in greater impacts than changing the price of short-term licenses.

Table 6.8. Preference Scores for Annual and Short-Term Fishing License Packages

License Package	Price								Preference Score
	Annual Individual	Annual Combination	Individual Sport	6-Month	90-Day	7-Day	3-Day	24-Hour	
Package 1	\$17	\$25	\$29	NO	NO	NO	NO	\$8.50	6.3
Package 2	\$19	\$25	\$29	NO	NO	NO	NO	\$8.50	6.1
Package 3	\$21	\$25	\$29	NO	NO	NO	NO	\$8.50	6.0
Package 4	\$23	\$25	\$29	NO	NO	NO	NO	\$8.50	5.8
Package 5	\$21	\$32	\$29	NO	NO	NO	NO	\$8.50	5.7
Package 6	\$23	\$35	\$29	NO	NO	NO	NO	\$8.50	5.4
Package 7	\$21	\$32	\$32	NO	NO	NO	NO	\$8.50	5.6
Package 8	\$23	\$35	\$35	NO	NO	NO	NO	\$8.50	5.2
Package 9	\$21	\$32	\$32	NO	NO	NO	\$9	NO	6.7
Package 10	\$23	\$32	\$32	NO	NO	NO	\$9	NO	6.5
Package 11	\$25	\$32	\$32	NO	NO	NO	\$9	NO	6.4
Package 12	\$21	\$32	\$32	NO	\$0	NO	\$9	NO	6.8
Package 13	\$23	\$32	\$32	NO	\$0	NO	\$9	NO	6.6
Package 14	\$25	\$32	\$32	NO	\$0	NO	\$9	NO	6.5
Package 15	\$23	\$32	\$32	NO	\$17	NO	\$9	NO	6.6
Package 16	\$23	\$32	\$32	NO	\$20	NO	\$9	NO	6.6
Package 17	\$21	\$30	\$32	NO	\$17	NO	\$10	NO	6.8
Package 18	\$23	\$35	\$35	NO	\$20	NO	\$12	NO	6.3
Package 19	\$25	\$38	\$35	NO	\$20	NO	\$12	NO	5.8
Note: NO = Not Offered; Package 1 is the package that is currently offered.									

By changing the price of an Annual Individual license, adding a 3-Day license, and dropping the 24-Hour license, an overall net gain in preference is seen in Packages 9 through 11. The 3-Day license boosts the overall preference score from 6.3 to 6.7, or 6.3% (particularly because the 24-Hour license has a negative utility). A slight increase in the preference score is seen when a 7-Day license is added to the 3-Day license in Packages 12 through 14. This is due to the small utility for the license. Dropping the 7-Day license and adding the 90-Day license in Packages 15 and 16 does not result in any appreciable change in the overall preference scores.

Clearly, dropping the 24-Hour license and offering residents a 3-Day or 7-Day license option instead is worth considering. Adding a 90-Day license is more problematic and would likely have little value because its price would need to be within a few dollars of the Annual Individual license price, given the narrow price range between the 24-Hour and Annual Individual license.

The data in Table 6.8 also indicate that the Annual Individual license price can be raised from \$17.00 to \$23.00 without much impact on preference scores. Likewise, the Annual Combination and Individual Sport licenses can accommodate increases as well without a substantial drop in overall preference. By adding the 3-Day or 7-Day license to the overall license mix, some of the impact of the Annual Individual license price increases could be ameliorated.

RESIDENT ANNUAL AND LONG-TERM FISHING LICENSES

The MN DNR is also interested in evaluating the desirability of offering a more comprehensive fishing and hunting combination (Super Individual Sports—this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk) and a long-term license of 3 or 5 years. These options were evaluated by a set of nine choice scenarios. The three price levels used with the four license types (Table 6.9) were used to keep the number of choices being rated by respondents to an overall manageable level because the survey called on respondents to rate the 16 resident license scenarios and 18 hunting license scenarios as well.

Table 6.9. Long-Term Fishing License Types and Pricing Levels Tested

License Type	Price		
	Level 1	Level 2	Level 3
Annual Individual	\$17	\$25	\$35
Super Individual Sports	\$0	\$80	\$90
3-Year	\$0	\$50	\$65
5-Year	\$0	\$75	\$90

The relative importance of each of the long-term license options is shown in Table 6.10. The Annual Individual license was given the most importance followed by the Super Individual Sports and 5-Year licenses. The 3-Year license was the lowest in importance of the four licenses. The relative importance percentage shows which licenses are most sensitive to price changes, as denoted by larger utility ranges. Thus, when contemplating whether to offer a 3-Year or 5-Year license, the question becomes whether to offer a 5-Year license that is more price sensitive but with slightly stronger appeal than the 3-Year license, or to offer a 3-Year license that is less price sensitive but is lower in importance to potential buyers. This question is addressed below.

Table 6.10. Utility Range and Relative Importance of Long-Term Fishing License Types

License Type	Utility Range	Relative Importance
Annual Individual	1.4720	37.4
Super Individual Sports	1.0959	27.8
5-Year	0.8394	21.3
3-Year	0.5333	13.5
Sum of Importance	3.9406	100.0

The graphs in Figure 6.4 show the effect of increasing license prices on preference scores while holding the prices of other licenses constant. The slope of the graph for the Annual Individual Fishing license is similar to that for the same license shown in Figures 6.1, 6.2, and 6.3. The preference score for this license begins to decline substantially after \$20.00. The Annual Super Sport license declines steadily after the initial \$80.00 price, although the decline in preference at each price point is much less proportionally than for the Annual Individual license. This is likely

related to the large number of licenses, stamps, and privileges associated with this proposed license alternative.

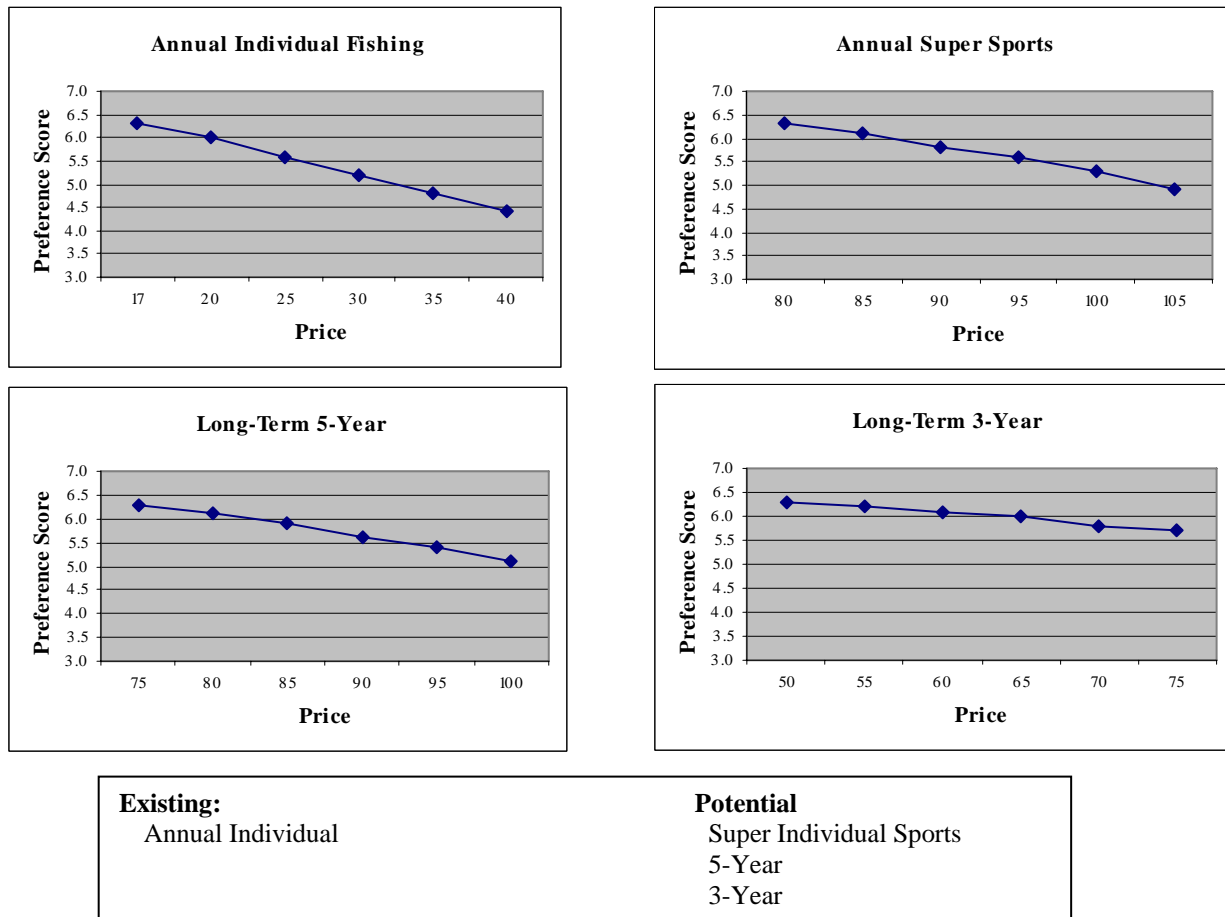


Figure 6.4. Price Changes for Each Long-Term Fishing License Type, Holding Other License Prices Constant

Preferences for the 3-Year and 5-Year licenses were very similar, with the 5-Year having slightly greater preference and also being slightly more sensitive to pricing than the 3-Year license. In this analysis, the 3-Year license may be the better selection because of its less sensitivity to price, which would allow it to be priced at three times the Annual Individual license and still remain attractive to anglers.

As shown in Table 6.11, the Super Individual Sports license has a value of \$7.00 more than its component parts based on an initial price of \$70.00. Because the license is not currently offered, this initial price was determined to be a reasonable beginning price, as it offered an incentive for individuals who both hunt and fish to purchase the license. For analysis purposes, the 3-Year and 5-Year licenses were priced at their true value (3 times and 5 times the Annual Individual license price, respectively). Discounting either license a few dollars to provide an incentive to anglers would likely increase the popularity of this license, although among avid anglers it could

result in a net revenue loss. On the other hand, discounting the license may result in a net revenue gain, if the license is bought by casual anglers.

Table 6.11. Current and Estimated Prices for Annual/Long-Term Fishing License Types

License Type	Price								Value	
	Current	Estimated	Base	Fish	Hunt	Water-fowl	Pheasant	Deer	Total	Over Base
Annual Individual	\$17	-	\$17	\$17	\$0	\$0	\$0	\$0	\$17	\$0
Super Individual Sports	-	\$70	\$70	\$17	\$19	\$7.50	\$7.50	\$26	\$77	\$7
3-Year	-	\$51	\$51	\$51	\$0	\$0	\$0	\$0	\$51	\$0
5-Year	-	\$85	\$85	\$85	\$0	\$0	\$0	\$0	\$85	\$0

Part-worth utilities were estimated for each annual and long-term license at price points that allowed for estimating preference scores for 3-Year and 5-Year licenses at par value (3 times and 5 times the Annual Individual license price, respectively) and at selected discounted prices in Table 6.12. Preference scores can be calculated substituting utilities for license prices in the following formula:

$$\text{Constant} + \text{Ann. Individual} + \text{Super Individual Sports} + \text{5-Year} + \text{3-Year} = \text{Preference Score}$$

For example, calculating the preference score for the Package 1 in Table 6.12 would be as follows:

$$\text{Constant (5.196)} + \$17 \text{ Annual Individual (-1.3903)} + \$70 \text{ Super Individual Sports (1.4318)} + \$85 \text{ 5-Year (0.4185)} + \$51 \text{ 3-Year (0.5131)} = \text{Preference Score (6.1691)}$$

Table 6.12. License Prices and Utilities for Calculating Annual and Long-Term Fishing License Preference Scores

Annual	Price	\$17	\$19	\$21	\$23	\$25					
	Utility	-1.3903	-1.5539	-1.7174	-1.8810	-2.0445					
Super Individual Sports	Price	\$70	\$75	\$80	\$85	\$90	\$95				
	Utility	1.4318	1.2139	1.0959	0.8780	0.6600	0.4421				
5-Year	Price	\$80	\$85	\$90	\$95	\$100	\$105	\$110	\$115	\$120	\$125
	Utility	0.6290	0.4185	0.2081	-0.0023	-0.2128	-0.5132	-0.7336	-1.1441	-1.8545	-1.9649
3-Year	Price	\$48	\$51	\$54	\$57	\$60	\$63	\$66	\$69	\$72	\$75
	Utility	0.5736	0.5131	0.4527	0.3922	0.3318	0.2013	0.1508	0.1104	0.0899	0.0295
Constant	5.196										

Table 6.13 shows preference scores for several annual and long-term license packages. The first four packages reveal how preference scores change as the price of an Annual Individual license increases, when holding other license prices constant. There is a 0.3 point drop in the preference score when the Annual Individual license price increases from \$17.00 to \$21.00 but only a 0.1 point drop when the price increases to \$23.00. It drops another 0.2 points as the price hits \$25.00.

Packages 5 and 6 show what happens when the price of 5-Year and 3-Year licenses are discounted in Package 5 relative to when the par value of both licenses are used in Package 6. The preference score drops by 0.4 point, or 8.3%.

Table 6.13. Preference Scores for Annual and Long-Term Fishing License Packages

License Package	Price				Preference Score
	Annual Individual	Super Individual Sports	5-Year	3-Year	
Package 1	\$17	\$70	\$85	\$51	6.2
Package 2	\$21	\$70	\$85	\$51	5.8
Package 3	\$23	\$70	\$85	\$51	5.7
Package 4	\$25	\$70	\$85	\$51	5.5
Package 5	\$21	\$75	\$100	\$60	4.8
Package 6	\$21	\$75	\$105	\$63	4.4
Package 7	\$23	\$75	\$105	\$60	4.3
Package 8	\$23	\$75	\$110	\$63	4.0
Package 9	\$23	\$75	\$115	\$66	3.5

Using the utilities and constant in Table 6.12, a large number of license combinations can be studied. It should be noted that the preference score changes in Table 6.13 do not necessarily mean buyers will stop purchasing the long-term licenses as the price increases. The most likely result may be that sales of long-term licenses will be suppressed, with purchases directed at the annual licenses.

NON-RESIDENT FISHING LICENSES

The non-resident fishing survey included a set of 18 fishing license choice scenarios for respondents to rate. The six licenses listed in Table 6.14 all are offered to non-residents. Historically, the Annual Individual and 7-Day licenses have had the greatest number of sales. Current prices for each license are shown in Table 6.14, with the Annual Individual license price listed as the Level 1 price and Level 2 prices for the remaining licenses. The three levels of prices were used in the license preference analysis to determine if some of these licenses could be dropped and how license price increases might affect future sales.

Table 6.14. Non-Resident Fishing License Types and Pricing Levels Tested

License Type	Price		
	Level 1	Level 2	Level 3
Annual Individual	\$39.50	\$45	\$50
24-Hour	\$0	\$8.50	\$12
72-Hour	\$0	\$24	\$30
7-Day	\$0	\$28.50	\$35
14-Day Couple	\$0	\$40	\$50
Family	\$0	\$52.50	\$62

The Family, 7-Day, and Annual Individual licenses all were about the same in importance, as rated by non-resident respondents (Table 6.15). These licenses were the most sensitive to price changes, as noted by their utility ranges. The 24-Hour and 72-Hour licenses were the lowest in importance.

Table 6.15. Utility Range and Relative Importance of Non-Resident Fishing License Types

License Type	Utility Range	Relative Importance
Annual Individual	1.6593	20.4%
24-Hour	0.7538	9.3%
72-Hour	0.6956	8.6%
7-Day	1.8930	23.3%
14-Day Couple	1.0387	12.8%
Family	2.0763	25.6%
Total	8.1167	100.0%

The price sensitivity of the each non-resident license is seen in the graphs in Figure 6.5. The graphs depict the effect on preference scores of price changes in a specific license while holding the prices of all other licenses constant. The Annual Individual license has the greatest initial decline of any of the licenses, indicating that small price increases will have a proportionally greater effect on buyers' preferences for this license than for other licenses with shallower slopes, such as the 24-Hour, 72-Hour, and 14-Day Couple licenses. The 14-Day Couple license also shows a modest decline in preference scores from \$40 to \$47 before becoming much steeper. The conclusion here is that the Annual Individual and Family licenses would have much greater consumer resistance to price changes than would the other short-term licenses up to a point. The 24-Hour license could likely be increased \$3 to \$4 before buyers looked at alternative licenses or decided not to buy. The same is true for the 72-Hour and 7-Day licenses, which could be increased to \$14 and \$32, respectively, without substantial impacts on preference scores.

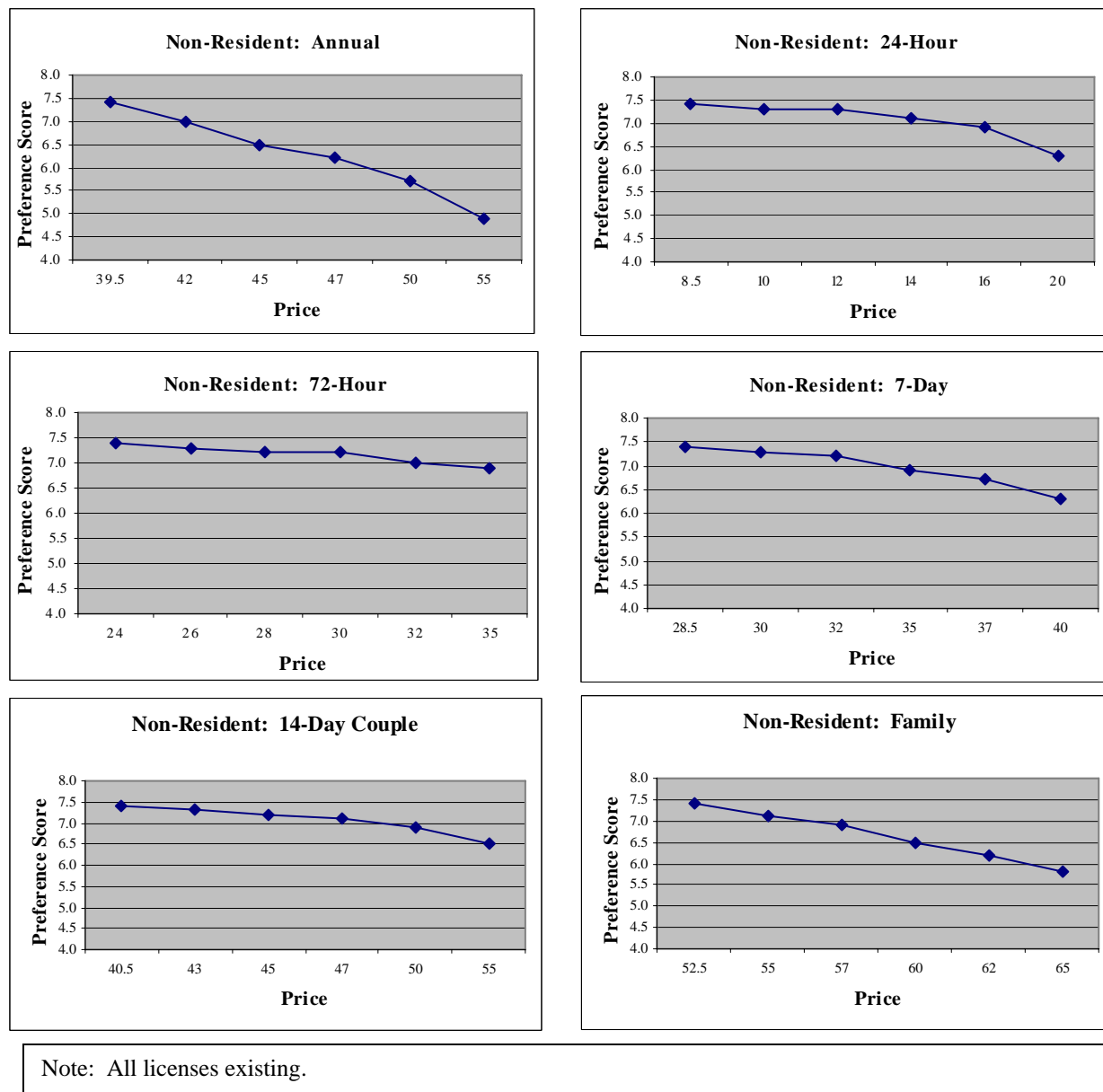


Figure 6.5. Price Changes for Each Non-Resident License Type, Holding Other License Prices Constant

To facilitate calculating preference scores for a variety of different license combinations and prices by the MN DNR, part-worth utilities were calculated for \$1 and \$2 increments (Table 6.16). These utilities can then be used to calculate preference scores for various license and price combinations as shown in Table 6.17. The method for calculating a preference score is exactly the same as mentioned in the previous sections: add the utility coefficient for each license/price point in a particular package to the constant coefficient to determine the preference score.

Table 6.16. License Prices and Utilities for Calculating Non-Resident Fishing License Preference Scores

Annual	Price	\$39.50	\$41	\$42	\$43	\$44	\$45	\$46	\$47	\$48	\$49	\$50
	Utility	-6.2428	-6.4166	-6.5903	-6.7641	-6.9378	-7.1116	-7.2696	-7.4276	-7.5857	-7.7437	-7.9017
24-Hour	Price	\$8.50	\$9	\$10	\$11	\$12	\$13	\$14				
	Utility	0.7538	0.7353	0.7168	0.6982	0.6797	0.6612	0.6427				
72-Hour	Price	\$24	\$25	\$26	\$27	\$28	\$29	\$30				
	Utility	0.6956	0.6620	0.6284	0.5948	0.5611	0.5275	0.4939				
7-Day	Price	\$28.50	\$29	\$30	\$31	\$32	\$33	\$34	\$35			
	Utility	1.893	1.829	1.765	1.701	1.637	1.573	1.509	1.445			
14-Day Couple	Price	\$40.50	\$41	\$42	\$43	\$44	\$45	\$46	\$47	\$48	\$49	\$50
	Utility	1.0387	0.9911	0.9435	0.8960	0.8484	0.8008	0.7532	0.7056	0.6581	0.6105	0.5629
Family	Price	\$52.50	\$53	\$54	\$55	\$56	\$57	\$58	\$59	\$60	\$61	\$62
	Utility	2.0763	1.9646	1.8529	1.7411	1.6294	1.5177	1.4060	1.2943	1.1825	1.0708	0.9591
Constant	7.137											

Table 6.17: Preference Scores for Non-Resident Fishing License Packages

Package	Price						Preference Score
	24-Hour	72-Hour	7-Day	14-Day Couple	Annual	Family	
Package 1	\$8.50	24.00	\$28.50	\$40.50	\$39.50	\$52.50	7.4
Package 2	\$8.50	NO	\$28.50	\$40.50	\$39.50	\$52.50	6.7
Package 3	\$8.50	NO	\$28.50	\$40.50	\$42	\$52.50	6.3
Package 4	\$8.50	NO	\$28.50	\$40.50	\$44	\$52.50	6.0
Package 5	\$8.50	NO	\$28.50	\$40.50	\$46	\$52.50	5.6
Package 6	NO	\$24	\$32	\$50	\$46	\$52.50	4.9
Package 7	NO	\$24	\$32	\$50	\$46	\$54	4.7
Package 8	NO	\$24	\$32	\$50	\$46	\$56	4.5
Package 9	\$10	\$24	\$32	\$50	\$46	\$56	5.3
Note: NO = Not Offered; Package 1 is the package that is currently offered.							

Preference scores for several license packages were calculated and shown in Table 6.17. The first package is the current set of licenses offered by the Department. The next four packages show how preference scores change while increasing the price of the Annual Individual license from \$39.50 to \$46.00 without the 72-Hour license. With each of the other licenses at their current value, except the elimination of the 72-Hour license, the preference score for the licenses in Packages 2 through 5 declines by 1.1 points, or 16%.

License Packages 6 through 8 show the impact of raising the Family license while dropping the 24-Hour license from the current offerings. Preference scores for these packages are all below those of Packages 1 through 5 and result in small decreases in preference scores from the Family license price increases.

Package 9 is the result of increasing each of the six licenses across the board. This license/price configuration is only slightly lower than that in Package 5.

RESIDENT HUNTING LICENSES

The focus of the conjoint analysis of hunting licenses was on 6 of the 10 licenses the MN DNR was interested in evaluating. The licenses selected were the three existing licenses (Small Game, Individual Sports, and Sports Combination) and three potential licenses (Super Individual Sport—this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk; Annual; and 24-Hour).

The six hunting license types and their associated price levels used in the analysis are shown in Table 6.18. The ranges in prices were once again designed to begin at the current price or an estimated beginning price and end with a price well beyond those being considered.

Table 6.18. Hunting License Types and Pricing Levels Tested

License Type	Price			
	Level 1	Level 2	Level 3	Level 4
Super Individual Sport	\$0	\$70	\$80	\$90
Individual Super Sport	\$0	\$30	\$40	-
Combination Sport	\$38	\$45	-	-
Annual Hunting	\$0	\$30	\$45	-
Small Game	\$19	\$30	-	-
24-Hour	\$0	\$8	\$12	-

An examination of the importance of each hunting license (Table 6.19) finds that the existing Individual Sport and potential Annual licenses have the greatest importance. The proposed Super Individual Sport was also relatively high in importance as well. The Combination Sport and 24-Hour licenses were the lowest in importance. The existing Small Game license was also relatively low in importance, quite likely because of other more attractive licenses available in the overall mix.

Table 6.19. Utility Range and Relative Importance of Hunting License Types

License Type	Utility Range	Relative Importance
Super Individual Sport	0.7941	19.0%
Combination Sport	0.1871	4.5%
Small Game	0.5423	13.0%
Individual Sport	1.2932	30.9%
Annual	1.1047	26.4%
24-Hour	0.2575	6.2%
	4.1789	100.0%

The utility ranges and relative importance reflect the sensitivity of each license to price changes. Among the hunting license group in Table 6.19, the proposed Annual and existing Individual Sport licenses were most sensitive to price change. The graphs in Figure 6.6 further support this observation, as both have relatively steep declines in preference scores after the \$40.00 point.

Preference scores for the Small Game license begin to decline significantly after the \$22.00 level is reached.

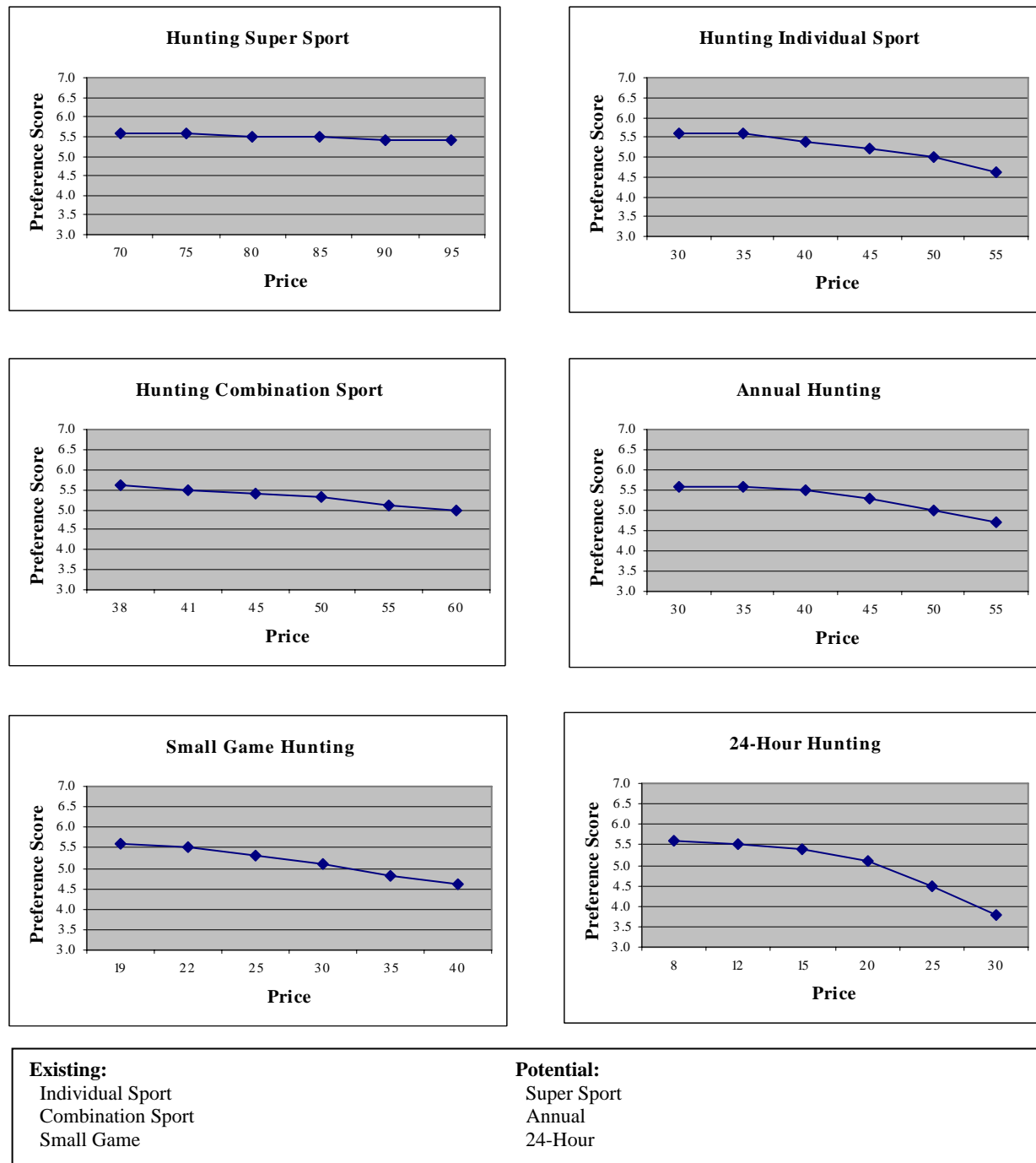


Figure 6.6. Price Changes for Each Hunting License Type, Holding Other License Prices Constant

Both the Super Individual Sports and Combination Sports licenses show a very slow decline in preference scores as price increases. In the case of the potential Super Individual Sports license, respondents evidently understood the value of the multi-faceted license and did not believe that a price in excess of \$90.00 exceeded the overall value of the license. The popularity of this license and its relative insensitivity to price could allow for a variety of component and pricing options that would be attractive to individuals who both hunt and fish.

The Combination Sports license within the mix of these six licenses does not have strong appeal and is relatively price insensitive out to the \$50.00 point. After this point, preference scores begin to drop more precipitously.

The final graph in Figure 6.6 that bears discussion is the potential 24-Hour license. The importance of this license is very low, and in a previously shown table was rated as *very desirable* by only 12% of the respondents. This is likely one reason why preference scores drop very little up to \$15.00 and then begin to decline more sharply. The lack of interest in this license is also related to the low price (\$19.00) of the Small Game license.

Each of the licenses except Small Game has a value greater than its existing price or the estimated base price as seen in Table 6.20. The Combination Sport has the greatest value, with its cost of \$38.50 being \$14.50 below the value of two Annual Individual fishing licenses and one Small Game license that make up the license.

Table 6.20. Current and Estimated Prices for Hunting License Types

License Type	Price								Value	
	Current	Estimated	Base	Fish	Hunt	Water-fowl	Pheasant	Deer	Total	Over Base
Super Individual Sport	-	\$70	\$70	\$17	\$19	\$7.50	\$7.50	\$26	\$77	\$7
Individual Sport	\$29.50	-	\$30	\$17	\$19	\$0	\$0	\$0	\$36	\$6
Combination Sport	\$38.50	-	\$39	\$34	\$19	\$0	\$0	\$0	\$53	\$14
Annual Hunt	-	\$30	\$30	\$0	\$19	\$7.50	\$7.50	\$0	\$34	\$4
Small Game	\$19	-	\$19	\$0	\$19	\$0	\$0	\$0	\$19	\$0
24-Hour	-	\$12	\$12	\$0	\$12	\$7.50	\$7.50	\$0	\$27	\$15

Utilities for each of the six hunting licenses were estimated for small dollar intervals (Table 6.21) to allow for hand calculating preference scores for a variety of license scenarios of interest. Using the following formula, which sums the constant and utilities for each license, will result in the preference score for a specific set of licenses and prices.

Constant + Super Individual Sport + Combination Sport + Small Game + Individual Sport + Annual Hunting + 24-Hour = Preference Score

Using the base price for each license would result in the following calculations: Constant (4.1049) + \$70 Super Individual Sport (0.7941) + \$38 Combination Sport (-1.0155) + \$19 Small Game (-0.9366) + \$30 Individual Sport (1.2932) + \$30 Annual Hunting (1.1047) + \$8 24-Hour (0.2575) = Preference Score (5.6023). The preference score for this set of hunting licenses and prices is analogous to that of Package 15 in Table 6.21.

Table 6.21. License Prices and Utilities for Calculating Annual and Short-Term Hunting License Preference Scores

Super Individual Sport	Price	\$70	\$72	\$74	\$76	\$78	\$80	\$82	\$84	\$86
	Utility	0.7941	0.7827	0.7713	0.7599	0.7485	0.7371	0.7172	0.6972	0.6773
Combination Sport	Price	\$38	\$40	\$42	\$44	\$45	\$46	\$48	\$50	
	Utility	-1.0155	-1.0690	-1.1224	-1.1759	-1.2026	-1.2293	-1.2828	-1.3362	
Small Game	Price	\$19	\$22	\$24	\$26	\$28	\$30	\$32	\$34	
	Utility	-0.9366	-1.0091	-1.0575	-1.1059	-1.1542	-1.2026	-1.2510	-1.2993	
Individual Sport	Price	\$30	\$32	\$34	\$36	\$38	\$40	\$42	\$44	\$45
	Utility	1.2932	1.2451	1.1971	1.1490	1.1010	1.0529	1.0049	0.9568	0.9328
Annual Hunting	Price	\$30	\$32	\$34	\$36	\$38	\$40	\$42	\$44	\$45
	Utility	1.1047	1.0614	1.0181	0.9747	0.9314	0.8881	0.8448	0.8015	0.7798
24-Hour	Price	\$8	\$10	\$12	\$14	\$16	\$18	\$20		
	Utility	0.2575	0.2300	0.2025	0.1750	0.1475	0.1200	0.0925		
Constant	4.1049									

Similar calculations were made for other hunting license and price configurations shown in Table 6.22. Packages 1 through 3 reflect the effect of incremental increases in the price of the existing Small Game license. Increasing the price of this license while keeping all other licenses constant results in essentially no effect on preference scores. This result indicates that respondents placed low importance on the Small Game license within the mix of other alternatives they had available in the scenarios they rated.

Table 6.22. Preference Scores for Hunting License Packages

Package	Price						Preference Score
	Super Individual Sport	Individual Sport	Combo Sport	Annual Hunting	Small Game	24-Hour	
Package 1	NO	\$30	\$38	NO	\$19	NO	3.4
Package 2	NO	\$30	\$38	NO	\$22	NO	3.4
Package 3	NO	\$30	\$38	NO	\$24	NO	3.3
Package 4	NO	\$30	\$38	\$30	NO	NO	5.5
Package 5	NO	\$30	\$38	\$32	NO	NO	5.4
Package 6	NO	\$30	\$38	\$34	NO	NO	5.4
Package 7	NO	\$34	\$38	\$34	NO	NO	5.4
Package 8	NO	\$34	\$42	\$34	NO	NO	5.2
Package 9	\$70	\$34	\$42	\$34	NO	NO	6.0
Package 10	\$76	\$34	\$42	\$34	NO	NO	6.0
Package 11	\$76	\$34	\$42	\$34	NO	\$10	6.2
Package 12	\$76	\$34	\$42	\$34	NO	\$12	6.2
Package 13	\$76	\$40	\$42	\$34	NO	\$14	6.0
Package 14	\$76	\$45	\$42	\$34	NO	\$14	5.9
Package 15	\$70	\$30	\$38	\$30	\$19	\$8	5.6
Note: NO = Not Offered; Package 1 is the package that is currently offered.							

Packages 4 through 6 show the effect of adding the Annual license and incrementally increasing the price while deleting the Small Game license. The result from adding the Annual license was a substantial increase in the preference scores, which did not decline significantly as the price was raised from \$30.00 to \$34.00. Further price increases in the Annual license would result in

only small declines in preference scores, as the incremental decrease in the utility coefficient for this license was relatively small for each dollar increase shown in Table 6.21.

Packages 7 and 8 in Table 6.22 show that a price increase from \$38 to \$42 in the Combination Sport license would have a minimal effect on overall preference scores. Adding a Super Individual Sport license, in Packages 9 through 12, boosts the overall preference score for the set of licenses, and increasing its price also has a negligible effect on preference scores. Increasing the price of the Individual Sport license from \$34 to \$45 has a small negative effect on preference scores, although a small portion of this effect would be mitigated by the addition of the 24-Hour license. Eliminating the 24-Hour license from Package 14 would drop the preference score to 5.7. Again, using the utilities and constant in Table 6.21 allows for the calculation of preference scores for license and price combinations not presented in Table 6.22.

DISCUSSION OF CONJOINT ANALYSIS FINDINGS

RESIDENT ANNUAL AND SHORT-TERM FISHING LICENSES

The Resident Annual Individual license anchored the evaluation of other annual and short-term and long-term fishing licenses. This license was the most sensitive to price changes of all licenses in this group.

The current Annual Individual, Annual Combination, and 24-Hour licenses do not allow for the addition of other intermediate short-term licenses. The \$9 difference between the two could support one additional short-term license, either a 7-Day or 90-Day license. These licenses would fit better into the mix, if the price of the Annual Individual license is increased.

Given the low popularity of the 24-Hour license to Minnesota residents, a 3-Day license could be a good substitute for the 24-Hour license and possibly attract casual or lapsed anglers. The pricing for this license could be from \$10 to \$12. This option would then allow for the inclusion of another short-term license.

A 7-Day or 6-Month license is not as important to anglers as other licenses and would be difficult to fit into the current license structure and pricing. The 3-Day or 90-Day licenses would be more favorable additions. A 90-Day license priced from \$17 to \$21 is viewed as desirable by anglers and could be fit into the mix, if the Annual Individual license is priced from \$23 to \$25.

Pricing of the Annual Individual license could be increased to \$21 and up to \$25 without a substantial decrease in sales. The addition of one or two short-term licenses, such as 3-Day and/or 90-Day licenses, could help offset Annual Individual license sales losses to marginal anglers who may be more price sensitive or only fish occasionally. Beyond \$25, preference scores declined substantially, and it is assumed that angler demand for the Annual Individual license would follow suit.

The Annual Individual Sports and Annual Combination licenses are both specialized licenses targeting unique segments of the angling market (angler/hunters and married couples, respectively). Demand for these licenses has remained steady in recent years. The potential Super Individual Sports license may affect Individual Sports license sales, but in a positive

manner. Nearly two-thirds (64%) of Individual Sports license buyers rated the Super Individual Sports license as *very* desirable. The Annual Combination license is a good value for couples. The pricing on this license could increase to \$30 up to \$35 (or slightly more) and would still provide good incentive for couples to purchase it, particularly if the Annual Individual license price is increased.

Pricing of any of the licenses is dependent to some degree upon price increases of the Annual Individual license. Thus, proportional increases in other annual and short-term licenses should be considered.

RESIDENT ANNUAL AND LONG-TERM FISHING LICENSES

Analysis of annual and long-term license options showed similar results for the Annual Individual and Annual Combination licenses similar to the section above. The Annual Individual preference scores declined modestly up to \$25 and then saw a steeper decline at increasing price points.

The Super Individual Sports license also had value to many anglers who also hunted. The survey shows that this license could be priced from \$80 to \$90 and still be attractive to sportspersons, particularly if annual hunting and fishing license prices are increased. Further, this license may generate a greater net revenue benefit because buyers may exceed the actual dollars spent on them individually in previous years.

The 3-Year and 5-Year fishing licenses are attractive to many anglers, including some casual anglers as well. Overall, a rating of *very* desirable was given to the 3-Year license by 50% of anglers, and the same percentage gave a rating of *very* desirable to the 5-Year license. Also, 48% of the casual anglers rated the 3-Year license as *very* desirable, and 45% rated the 5-Year license as *very* desirable. However, the pricing for the 3-Year license was less of a concern and thus could be offered at par value (3 times the Annual Individual price) or at a slight discount to provide an incentive to buyers. The slight discount may attract casual anglers and, thus, be a net revenue generator, as some revenue from normally “skipped” years of buying would occur. This is also true for the 5-Year license.

NON-RESIDENT FISHING LICENSES

Each of the non-resident fishing licenses currently offered by the MN DNR appears to have its own constituency. However, the Annual Individual, Family, and 7-Day licenses are the more preferred licenses and are most sensitive to price changes. Small increases of up to \$7 in these licenses would likely have only a small impact on sales, as preference scores would see a decline of from 0.2 to 0.4 points.

There was much less sensitivity to price on the short-term non-resident licenses, including the 14-Day Couple license. Each of these could be increased by up to 10% without a major reduction in overall preference scores. This would likely hold for purchases as well.

RESIDENT ANNUAL AND SHORT-TERM HUNTING LICENSES

There appears to be strong support for an Annual Hunting license that includes small game, waterfowl, and pheasant stamps. The initial estimated value for this license was \$34 but could be increased, based on any change in the price of the Small Game license (stamps purchased separately).

The Small Game license could be replaced with the Annual Hunting license that includes pheasant and state waterfowl stamps. This may also be a net revenue generator, as some hunters who typically do not buy waterfowl and pheasant stamps would be paying for the privilege without using it. The \$34 initial price could go up as high as \$40 or slightly more because of the overall value of the license.

The potential Super Individual Sports license also has a constituency in avid sportspersons. The desirability of this license was very high among regular (participated more than 3 of the past 5 years) anglers/hunters and represents a good value to avid sportspersons. Pricing for this alternative could range from \$80 to \$90 and still be perceived as a value. This license is a no-cost license to the agency, as hunters would still have the Annual Hunting or Small Game licenses plus individual species privileges available.

The 3-Year and 5-Year Small Game hunting licenses are not very desirable alternatives, compared to the corresponding 3-Year and 5-Year Individual Sports alternatives. While a pricing analysis was not conducted, these latter two licenses are generally a no-cost license to the agency that would not displace hunters or anglers and may attract those who purchase fishing and/or hunting licenses irregularly, for a net gain in revenue.

There was very little interest in the 24-Hour Small Game, Waterfowl, and Pheasant licenses. This is likely due to the low price of the Small Game license and choice of buying either waterfowl or pheasant stamps separately.

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APPENDIX A: SURVEY INSTRUMENTS

RESIDENT SURVEY A

Responsive Management



November 2010

Dear Minnesota Sportsperson:

Responsive Management, a Virginia-based research firm specializing in public attitudes toward natural resource and outdoor recreation issues, is working with the Minnesota Department of Natural Resources (MN DNR) on a study of the Department's fishing and hunting license options. The MN DNR is evaluating its license structures for fishing and hunting licenses and is seeking your input.

We encourage you to complete this brief survey to offer your feedback and recommendations for Minnesota's license structure and pricing. This survey will take approximately 10 minutes to complete, and the results will enable the MN DNR to better meet your needs regarding fishing and hunting opportunities in the state. As an incentive for taking the time to complete this survey, you will be entered into a drawing to **WIN YOUR CHOICE OF EITHER A LIFETIME FISHING OR LIFETIME HUNTING LICENSE**. Only 2,000 fellow anglers and hunters will be completing this survey, so the odds of winning are good. **Please complete the survey by November 29, 2010, to be eligible for a chance to win a lifetime license in Minnesota.**

To ensure that you have the opportunity to respond, please expect a call from a Responsive Management interviewer within the next week to confirm receipt of the mail survey or to assist you in completing this survey by telephone if you have not already done so. For your preference, we can schedule a telephone survey at an appointed date and time that is convenient for you; simply call (540) 432-1888 or email amanda@responsivemanagement.com to schedule a telephone survey, which also enters you in the drawing. Interviewers are available to conduct this survey Monday through Friday from 1:00 pm-9:00 pm, and the interview will require approximately 10 minutes of your time. As another alternative, you can access this survey online at www.surveymk.com/s/residentA. The online survey will require you to provide the following personal identification number: _____.

Responsive Management ensures complete confidentiality of responses and comments to surveys. Responses are never associated with a name; results are analyzed and reported anonymously. Any identifying information used to ensure accuracy of data collection is excluded from the final analysis.

Thank you for taking the time to assist us with this study. Please let me know if you have any questions or need additional information.

Sincerely,

Amanda C. Ritchie

Amanda C. Ritchie
Research Associate

**NOTE: YOU MUST COMPLETE
THE ENTIRE SURVEY TO BE
ENTERED INTO THE DRAWING
TO WIN A LIFETIME LICENSE.**

RESIDENT Minnesota Angling and Hunting Survey

ID #:

Attitudes Toward Fishing Licenses***** Please complete this section even if you do not fish. *****

This section of the survey asks about specific license options and fees for **fishing** in Minnesota. Even if you did not fish in Minnesota, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

1. In which of the past five years (2006-2010) did you fish in Minnesota? (check all that apply)
☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not fish in Minnesota → *Go to Question 6*

2. How old were you when you first began to fish (not necessarily in MN)? *If uncertain please estimate.* _____ years old

3. We are interested in whom you fished with during the last year you fished. Please indicate (a) whether you fished with the listed people, and (b) about how many days you fished with them during that year.

	Did you fish with the listed people during the last year you fished? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished. Please circle one number.

Minnesota fishing is: Much Worse About the Same Much Better Only fish in MN
0 1 2 3 4 5 6 7 8 9 10 ☐

5. If you went fishing in Minnesota in the past 5 years, which type of license did you purchase during the last year you fished? (check only one)

- ☐ 24 hour angling
☐ Resident Annual Angling Individual
☐ Resident Angling Combination (husband and wife)
☐ Resident Individual Sports (angling and small game)
☐ Resident Sports Combination (angling and small game with spouse)
☐ Individual Angling Conservation (the limit is half of a regular license)
☐ Conservation Combination (husband and wife; the limit is half of a regular license)
☐ Other (please specify): _____

6. In this section, we would like to get your opinions on several **existing** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
24-Hour (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)			
Annual Individual Fishing (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)			
Annual Combination (husband/wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)			
Individual Sports (for a resident age 18 and older for angling and small game hunting)			
Sports Combination (husband/wife) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			
Individual Conservation (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)			
Conservation Combination (husband/wife) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)			

7. In this section, we would like to get your opinions on several **potential** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
3-Day (for a resident to fish for 72 continuous hours)			
7-Day (for a resident to fish for 7 consecutive days)			
90-Day (for a resident to fish 90 consecutive days)			
6-Month (for a resident to fish April 1-September 30 or October 1-March 31)			
3-Year Annual (for a resident to fish 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to fish 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

8. The purpose of this section is to determine your preferences for hypothetical license types and prices. This section contains 16 different resident license fee scenarios for annual and short-term licenses. Although they may look similar, they are not. Each scenario differs in at least one way from the others. Please indicate your preference for each license and fee scenario based on these differences. An example of a license fee scenario and how you rate it is provided below. The licenses in the scenarios refer to the existing licenses in Question 6 and the potential licenses in Question 7. It is important that you **rate all 16** of the alternatives below.

EXAMPLE:

On a scale of 0 to 10, please rate how strongly you would support each **HYPOTHETICAL** fishing license scenario by circling the appropriate number, as shown in the example below.

Scenario	Fee
Annual Indiv.	17.00
3-Month	Not Offered
3-Day	Not Offered
1-Day	8.50
Annual Combo.	29.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Would
Not Support

Would
Strongly Support

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee
Annual Indiv.	35.00
Ann. Combo.	45.00
90 - Day	10.00
7 - Day	30.00
24 - Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-2	Fee
Annual Indiv.	17.00
Ann. Combo.	Not Offered
90 - Day	Not Offered
7 - Day	Not Offered
24 - Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-3	Fee
Annual Indiv.	17.00
Ann. Combo.	35.00
90 - Day	20.00
7 - Day	30.00
24 - Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee
Annual Indiv.	35.00
Ann. Combo.	25.00
90 - Day	30.00
7 - Day	Not Offered
24 - Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-5	Fee
Annual Indiv.	17.00
Ann. Combo.	45.00
90 - Day	30.00
7 - Day	10.00
24 - Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-6	Fee
Annual Indiv.	17.00
Ann. Combo.	Not Offered
90 - Day	30.00
7 - Day	30.00
24 - Hour	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee
Annual Indiv.	25.00
Ann. Combo.	45.00
90 - Day	20.00
7 - Day	Not Offered
24 - Hour	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-8	Fee
Annual Indiv.	17.00
Ann. Combo.	35.00
90 - Day	10.00
7 - Day	Not Offered
24 - Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-9	Fee
Annual Indiv.	35.00
Ann. Combo.	35.00
90 - Day	Not Offered
7 - Day	10.00
24 - Hour	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-10	Fee
Annual Indiv.	17.00
Ann. Combo.	25.00
90 - Day	10.00
7 - Day	20.00
24 - Hour	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-11	Fee
Annual Indiv.	17.00
Ann. Combo.	45.00
90 - Day	Not Offered
7 - Day	20.00
24 - Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-12	Fee
Annual Indiv.	35.00
Ann. Combo.	Not Offered
90 - Day	20.00
7 - Day	20.00
24 - Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Fishing Scenario-13	Fee	Fishing Scenario-14	Fee	Fishing Scenario-15	Fee	Fishing Scenario-16	Fee
Annual Indiv.	25.00	Annual Indiv.	25.00	Annual Indiv.	25.00	Annual Indiv.	17.00
Ann. Combo.	Not Offered	Ann. Combo.	25.00	Ann. Combo.	35.00	Ann. Combo.	25.00
90 - Day	10.00	90 - Day	Not Offered	90 - Day	30.00	90 - Day	20.00
7 - Day	10.00	7 - Day	30.00	7 - Day	20.00	7 - Day	10.00
24 - Hour	8.00	24 - Hour	12.00	24 - Hour	Not Offered	24 - Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

9. The following are nine enhanced and multi-year fishing license options that the Minnesota DNR is evaluating. Please indicate how strongly you would support each of the nine scenarios. Please **rate all 9** scenarios.

**Would
Not Support**

**Would
Strongly Support**

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee	Fishing Scenario-2	Fee	Fishing Scenario-3	Fee
Annual Individual	25.00	Annual Individual	35.00	Annual Individual	17.00
Annual Super Sports	80.00	Annual Super Sports	Not Offered	Annual Super Sports	90.00
5-Year	75.00	5-Year	75.00	5-Year	75.00
3-Year	Not Offered	3-Year	65.00	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee	Fishing Scenario-5	Fee	Fishing Scenario-6	Fee
Annual Individual	35.00	Annual Individual	17.00	Annual Individual	35.00
Annual Super Sports	90.00	Annual Super Sports	Not Offered	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	Not Offered
3-Year	Not Offered	3-Year	Not Offered	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee	Fishing Scenario-8	Fee	Fishing Scenario-9	Fee
Annual Individual	25.00	Annual Individual	25.00	Annual Individual	17.00
Annual Super Sports	Not Offered	Annual Super Sports	90.00	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	90.00
3-Year	50.00	3-Year	65.00	3-Year	65.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Attitudes Toward Hunting Licenses

*** Please complete this section even if you do not hunt. ***

This section of the survey asks about specific license options and fees for **adults (18 and older) hunting** in Minnesota. Even if you did not hunt in Minnesota or are younger than 18, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

10. In which of the past five years (2006-2010) have you hunted in Minnesota? (check all that apply)

☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not hunt in Minnesota → *Go to Question 16*

11. How old were you when you first began to hunt (not necessarily in MN)? *If uncertain please estimate.* _____ years old

12. We are interested in whom you hunted with during the last year you hunted. Please indicate (a) whether you hunted with the listed people, and (b) about how many days you hunted with them during that year.

	Did you hunt with the listed people during the last year you hunted? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is better, compare hunting in Minnesota to other states where you have hunted. Please circle one number.

Minnesota hunting is: Much Worse About the Same Much Better Only hunt in MN
 0 1 2 3 4 5 6 7 8 9 10 ☐

14. If you went hunting in Minnesota in the past 5 years, which types of license did you purchase during the last year you hunted? (check all that apply)

- ☐ Small Game
☐ Deer Firearm
☐ Deer Archery
☐ Individual Sports (angling and small game)
☐ Sports Combination (angling with spouse and small game)
☐ Other (please specify): _____

15. Did you hunt for any of the following small game species during the last year you hunted? (check all that apply)

- ☐ Cottontail rabbit
☐ Snowshoe hare
☐ Gray or fox squirrel
☐ Ruffed grouse
☐ Pheasant
☐ Mourning dove
☐ Woodcock
☐ Waterfowl
☐ Other (please specify): _____

16. In this section, we would like to get your opinions on several **existing** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Small Game (for a resident to hunt small game; stamps are required to take pheasant and migratory waterfowl)			
Individual Sports (for a resident to fish and hunt small game)			
Sports Combination (husband/wife) (for legally married residents age 18 and older, providing fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			

17. In this section, we would like to get your opinions on several **potential** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)			
24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)			
3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)			
3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)			
5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

Would .. 0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 Would
Not Support Strongly Support

Hunting Scenario-4	Fee
Super Ind. Sports	90.00
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-8	Fee
Super Ind. Sports	70.00
Ind. Sports	30.00
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-12	Fee
Super Ind. Sports	90.00
Ind. Sports	Not Offered
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-16	Fee
Super Ind. Sports	Not Offered
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Survey A ■ Page 7

The following demographic questions are for background information that will help us analyze the results.

19. In what year were you born? _____
20. Please check if you are: ☐ Male ☐ Female
21. Please check the box that best represents your race/ethnicity. (check all that apply)
- ☐ White or Caucasian
 - ☐ Black or African American
 - ☐ Hispanic or Latino
 - ☐ Native American or Alaskan native or Aleutian
 - ☐ Native Hawaiian
 - ☐ Middle Eastern
 - ☐ East Asian
 - ☐ South Asian
 - ☐ African (NOT African-American)
 - ☐ Other
22. Which of the following best describes your current marital status (check only one)
- ☐ Single
 - ☐ Divorced or widowed
 - ☐ Living with a partner
 - ☐ Married
23. Do you currently have children (under age 19) living with you? (check only one)
- ☐ Yes, I have children living with me on a full-time basis
 - ☐ Yes, I have children living with me on a part-time basis
 - ☐ No
24. How many years have you lived in Minnesota? _____ years
25. What is the highest grade level you completed in school? (check only one)
- ☐ Not a high school graduate
 - ☐ High school graduate or equivalent
 - ☐ Some college or trade school, no degree
 - ☐ Associate or trade school degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Professional degree or doctorate degree (e.g., M.D. or Ph.D.)

26. Do you consider your place of residence to be in a large city, suburban area, a small city, a rural area, or a farm? (check only one)

- ☐ Large city or urban area
- ☐ Suburban area
- ☐ Small city or town
- ☐ Rural area on a farm or ranch
- ☐ Rural area NOT on a farm or ranch

27. Which of these categories best describes your total household income before taxes last year? (check only one)

- ☐ Less than \$19,999
- ☐ \$20,000 to \$39,999
- ☐ \$40,000 to \$59,999
- ☐ \$60,000 to \$79,999
- ☐ \$80,000 to \$99,999
- ☐ \$100,000 or more

THANK YOU FOR TAKING THE TIME TO COMPLETE OUR SURVEY.

You have been entered into a drawing to win your choice of either a lifetime fishing or lifetime hunting license.

RESIDENT SURVEY B

Responsive Management



November 2010

Dear Minnesota Sportsperson:

Responsive Management, a Virginia-based research firm specializing in public attitudes toward natural resource and outdoor recreation issues, is working with the Minnesota Department of Natural Resources (MN DNR) on a study of the Department's fishing and hunting license options. The MN DNR is evaluating its license structures for fishing and hunting licenses and is seeking your input.

We encourage you to complete this brief survey to offer your feedback and recommendations for Minnesota's license structure and pricing. This survey will take approximately 10 minutes to complete, and the results will enable the MN DNR to better meet your needs regarding fishing and hunting opportunities in the state. As an incentive for taking the time to complete this survey, you will be entered into a drawing to **WIN YOUR CHOICE OF EITHER A LIFETIME FISHING OR LIFETIME HUNTING LICENSE**. Only 2,000 fellow anglers and hunters will be completing this survey, so the odds of winning are good. **Please complete the survey by November 29, 2010, to be eligible for a chance to win a lifetime license in Minnesota.**

To ensure that you have the opportunity to respond, please expect a call from a Responsive Management interviewer within the next week to confirm receipt of the mail survey or to assist you in completing this survey by telephone if you have not already done so. For your preference, we can schedule a telephone survey at an appointed date and time that is convenient for you; simply call (540) 432-1888 or email amanda@responsivemanagement.com to schedule a telephone survey, which also enters you in the drawing. Interviewers are available to conduct this survey Monday through Friday from 1:00 pm-9:00 pm, and the interview will require approximately 10 minutes of your time. As another alternative, you can access this survey online at <http://www.surveymk.com/s/residentB>. The online survey will require you to provide the following personal identification number: _____.

Responsive Management ensures complete confidentiality of responses and comments to surveys. Responses are never associated with a name; results are analyzed and reported anonymously. Any identifying information used to ensure accuracy of data collection is excluded from the final analysis.

Thank you for taking the time to assist us with this study. Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Amanda C. Ritchie".

Amanda C. Ritchie
Research Associate

**NOTE: YOU MUST COMPLETE
THE ENTIRE SURVEY TO BE
ENTERED INTO THE DRAWING
TO WIN A LIFETIME LICENSE.**

RESIDENT Minnesota Angling and Hunting Survey

ID #:

Attitudes Toward Fishing Licenses***** Please complete this section even if you do not fish. *****

This section of the survey asks about specific license options and fees for **fishing** in Minnesota. Even if you did not fish in Minnesota, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

1. In which of the past five years (2006-2010) did you fish in Minnesota? (check all that apply)
☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not fish in Minnesota → *Go to Question 6*
2. How old were you when you first began to fish (not necessarily in MN)? *If uncertain please estimate.* _____ years old
3. We are interested in whom you fished with during the last year you fished. Please indicate (a) whether you fished with the listed people, and (b) about how many days you fished with them during that year.

	Did you fish with the listed people during the last year you fished? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished. Please circle one number.

Minnesota fishing is: Much Worse About the Same Much Better Only fish in MN

0 1 2 3 4 5 6 7 8 9 10 ☐

5. If you went fishing in Minnesota in the past 5 years, which type of license did you purchase during the last year you fished? (check only one)
☐ 24 hour angling
☐ Resident Annual Angling Individual
☐ Resident Angling Combination (husband and wife)
☐ Resident Individual Sports (angling and small game)
☐ Resident Sports Combination (angling and small game with spouse)
☐ Individual Angling Conservation (the limit is half of a regular license)
☐ Conservation Combination (husband and wife; the limit is half of a regular license)
☐ Other (please specify): _____

6. In this section, we would like to get your opinions on several **existing** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
24-Hour (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)			
Annual Individual Fishing (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)			
Annual Combination (husband/wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)			
Individual Sports (for a resident age 18 and older for angling and small game hunting)			
Sports Combination (husband/wife) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			
Individual Conservation (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)			
Conservation Combination (husband/wife) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)			

7. In this section, we would like to get your opinions on several **potential** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
3-Day (for a resident to fish for 72 continuous hours)			
7-Day (for a resident to fish for 7 consecutive days)			
90-Day (for a resident to fish 90 consecutive days)			
6-Month (for a resident to fish April 1-September 30 or October 1-March 31)			
3-Year Annual (for a resident to fish 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to fish 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

8. The purpose of this section is to determine your preferences for hypothetical license types and prices. This section contains 16 different resident license fee scenarios for annual and short-term licenses. Although they may look similar, they are not. Each scenario differs in at least one way from the others. Please indicate your preference for each license and fee scenario based on these differences. An example of a license fee scenario and how you rate it is provided below. The licenses in the scenarios refer to the existing licenses in Question 6 and the potential licenses in Question 7. It is important that you **rate all 16** of the alternatives below.

EXAMPLE:

On a scale of 0 to 10, please rate how strongly you would support each **HYPOTHETICAL** fishing license scenario by circling the appropriate number, as shown in the example below.

Scenario	Fees
Annual Indiv.	17.00
3-Month	Not Offered
3-Day	Not Offered
1-Day	8.50
Annual Combo.	29.50
Rate= 0 - 1 - 2 - 3 - 4 - <u>5</u> - 6 - 7 - 8 - 9 - 10	

Would Not Support Would Strongly Support

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee
Annual Indiv.	35.00
Ann.Combo.	35.00
6 - Month	Not Offered
90 - Days	20.00
3 - Days	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-2	Fee
Annual Indiv.	17.00
Ann.Combo.	35.00
6 - Month	30.00
90 - Days	10.00
3 - Days	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-3	Fee
Annual Indiv.	35.00
Ann.Combo.	45.00
6 - Month	30.00
90 - Days	Not Offered
3 - Days	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee
Annual Indiv.	25.00
Ann.Combo.	35.00
6 - Month	20.00
90 - Days	Not Offered
3 - Days	20.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-5	Fee
Annual Indiv.	17.00
Ann.Combo.	Not Offered
6 - Month	20.00
90 - Days	20.00
3 - Days	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-6	Fee
Annual Indiv.	25.00
Ann.Combo.	Not Offered
6 - Month	30.00
90 - Days	30.00
3 - Days	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee
Annual Indiv.	17.00
Ann.Combo.	25.00
6 - Month	30.00
90 - Days	20.00
3 - Days	20.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-8	Fee
Annual Indiv.	17.00
Ann.Combo.	45.00
6 - Month	20.00
90 - Days	10.00
3 - Days	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-9	Fee
Annual Indiv.	17.00
Ann.Combo.	25.00
6 - Month	10.00
90 - Days	Not Offered
3 - Days	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-10	Fee
Annual Indiv.	17.00
Ann.Combo.	Not Offered
6 - Month	Not Offered
90 - Days	Not Offered
3 - Days	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-11	Fee
Annual Indiv.	25.00
Ann.Combo.	45.00
6 - Month	10.00
90 - Days	20.00
3 - Days	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-12	Fee
Annual Indiv.	25.00
Ann.Combo.	25.00
6 - Month	Not Offered
90 - Days	10.00
3 - Days	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Fishing Scenario-13	Fee	Fishing Scenario-14	Fee	Fishing Scenario-15	Fee	Fishing Scenario-16	Fee
Annual Indiv.	17.00	Annual Indiv.	17.00	Annual Indiv.	35.00	Annual Indiv.	35.00
Ann.Combo.	35.00	Ann.Combo.	45.00	Ann.Combo.	25.00	Ann.Combo.	Not Offered
6 - Month	10.00	6 - Month	Not Offered	6 - Month	20.00	6 - Month	10.00
90 - Days	30.00	90 - Days	30.00	90 - Days	30.00	90 - Days	10.00
3 - Days	8.00	3 - Days	20.00	3 - Days	Not Offered	3 - Days	20.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

9. The following are nine enhanced and multi-year fishing license options that the Minnesota DNR is evaluating. Please indicate how strongly you would support each of the nine scenarios. Please **rate all 9** scenarios.

**Would
Not Support**

**Would
Strongly Support**

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee	Fishing Scenario-2	Fee	Fishing Scenario-3	Fee
Annual Individual	25.00	Annual Individual	35.00	Annual Individual	17.00
Annual Super Sports	80.00	Annual Super Sports	Not Offered	Annual Super Sports	90.00
5-Year	75.00	5-Year	75.00	5-Year	75.00
3-Year	Not Offered	3-Year	65.00	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee	Fishing Scenario-5	Fee	Fishing Scenario-6	Fee
Annual Individual	35.00	Annual Individual	17.00	Annual Individual	35.00
Annual Super Sports	90.00	Annual Super Sports	Not Offered	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	Not Offered
3-Year	Not Offered	3-Year	Not Offered	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee	Fishing Scenario-8	Fee	Fishing Scenario-9	Fee
Annual Individual	25.00	Annual Individual	25.00	Annual Individual	17.00
Annual Super Sports	Not Offered	Annual Super Sports	90.00	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	90.00
3-Year	50.00	3-Year	65.00	3-Year	65.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Attitudes Toward Hunting Licenses

*** Please complete this section even if you do not hunt. ***

This section of the survey asks about specific license options and fees for **adults (18 and older) hunting** in Minnesota. Even if you did not hunt in Minnesota or are younger than 18, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

10. In which of the past five years (2006-2010) have you hunted in Minnesota? (check all that apply)

☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not hunt in Minnesota → **Go to Question 16**

11. How old were you when you first began to hunt (not necessarily in MN)? *If uncertain please estimate.* _____ years old

12. We are interested in whom you hunted with during the last year you hunted. Please indicate (a) whether you hunted with the listed people, and (b) about how many days you hunted with them during that year.

	Did you hunt with the listed people during the last year you hunted? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is better, compare hunting in Minnesota to other states where you have hunted. Please circle one number.

Minnesota hunting is: Much Worse About the Same Much Better Only hunt in MN
 0 1 2 3 4 5 6 7 8 9 10 ☐

14. If you went hunting in Minnesota in the past 5 years, which types of license did you purchase during the last year you hunted? (check all that apply)

- ☐ Small Game
☐ Deer Firearm
☐ Deer Archery
☐ Individual Sports (angling and small game)
☐ Sports Combination (angling with spouse and small game)
☐ Other (please specify): _____

15. Did you hunt for any of the following small game species during the last year you hunted? (check all that apply)

- ☐ Cottontail rabbit
☐ Snowshoe hare
☐ Gray or fox squirrel
☐ Ruffed grouse
☐ Pheasant
☐ Mourning dove
☐ Woodcock
☐ Waterfowl
☐ Other (please specify): _____

16. In this section, we would like to get your opinions on several **existing** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Small Game (for a resident to hunt small game; stamps are required to take pheasant and migratory waterfowl)			
Individual Sports (for a resident to fish and hunt small game)			
Sports Combination (husband/wife) (for legally married residents age 18 and older, providing fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			

17. In this section, we would like to get your opinions on several **potential** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)			
24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)			
3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)			
3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)			
5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

The following demographic questions are for background information that will help us analyze the results.

19. In what year were you born? _____

20. Please check if you are: ☐ Male ☐ Female

21. Please check the box that best represents your race/ethnicity. (check all that apply)

- ☐ White or Caucasian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native American or Alaskan native or Aleutian
- ☐ Native Hawaiian
- ☐ Middle Eastern
- ☐ East Asian
- ☐ South Asian
- ☐ African (NOT African-American)
- ☐ Other

22. Which of the following best describes your current marital status (check only one)

- ☐ Single
- ☐ Divorced or widowed
- ☐ Living with a partner
- ☐ Married

23. Do you currently have children (under age 19) living with you? (check only one)

- ☐ Yes, I have children living with me on a full-time basis
- ☐ Yes, I have children living with me on a part-time basis
- ☐ No

24. How many years have you lived in Minnesota? _____ years

25. What is the highest grade level you completed in school? (check only one)

- ☐ Not a high school graduate
- ☐ High school graduate or equivalent
- ☐ Some college or trade school, no degree
- ☐ Associate or trade school degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Professional degree or doctorate degree (e.g., M.D. or Ph.D.)

26. Do you consider your place of residence to be in a large city, suburban area, a small city, a rural area, or a farm? (check only one)

- ☐ Large city or urban area
- ☐ Suburban area
- ☐ Small city or town
- ☐ Rural area on a farm or ranch
- ☐ Rural area NOT on a farm or ranch

27. Which of these categories best describes your total household income before taxes last year? (check only one)

- ☐ Less than \$19,999
- ☐ \$20,000 to \$39,999
- ☐ \$40,000 to \$59,999
- ☐ \$60,000 to \$79,999
- ☐ \$80,000 to \$99,999
- ☐ \$100,000 or more

THANK YOU FOR TAKING THE TIME TO COMPLETE OUR SURVEY.

You have been entered into a drawing to win your choice of either a lifetime fishing or lifetime hunting license.

RESIDENT SURVEY C

Responsive Management



November 2010

Dear Minnesota Sportsperson:

Responsive Management, a Virginia-based research firm specializing in public attitudes toward natural resource and outdoor recreation issues, is working with the Minnesota Department of Natural Resources (MN DNR) on a study of the Department's fishing and hunting license options. The MN DNR is evaluating its license structures for fishing and hunting licenses and is seeking your input.

We encourage you to complete this brief survey to offer your feedback and recommendations for Minnesota's license structure and pricing. This survey will take approximately 10 minutes to complete, and the results will enable the MN DNR to better meet your needs regarding fishing and hunting opportunities in the state. As an incentive for taking the time to complete this survey, you will be entered into a drawing to **WIN YOUR CHOICE OF EITHER A LIFETIME FISHING OR LIFETIME HUNTING LICENSE**. Only 2,000 fellow anglers and hunters will be completing this survey, so the odds of winning are good. **Please complete the survey by November 29, 2010, to be eligible for a chance to win a lifetime license in Minnesota.**

To ensure that you have the opportunity to respond, please expect a call from a Responsive Management interviewer within the next week to confirm receipt of the mail survey or to assist you in completing this survey by telephone if you have not already done so. For your preference, we can schedule a telephone survey at an appointed date and time that is convenient for you; simply call (540) 432-1888 or email amanda@responsivemanagement.com to schedule a telephone survey, which also enters you in the drawing. Interviewers are available to conduct this survey Monday through Friday from 1:00 pm-9:00 pm, and the interview will require approximately 10 minutes of your time. As another alternative, you can access this survey online at www.surveymk.com/s/residentC. The online survey will require you to provide the following personal identification number: _____.

Responsive Management ensures complete confidentiality of responses and comments to surveys. Responses are never associated with a name; results are analyzed and reported anonymously. Any identifying information used to ensure accuracy of data collection is excluded from the final analysis.

Thank you for taking the time to assist us with this study. Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in dark ink that reads "Amanda C. Ritchie". The signature is fluid and cursive.

Amanda C. Ritchie
Research Associate

**NOTE: YOU MUST COMPLETE
THE ENTIRE SURVEY TO BE
ENTERED INTO THE DRAWING
TO WIN A LIFETIME LICENSE.**

RESIDENT Minnesota Angling and Hunting Survey

ID #:

Attitudes Toward Fishing Licenses***** Please complete this section even if you do not fish. *****

This section of the survey asks about specific license options and fees for **fishing** in Minnesota. Even if you did not fish in Minnesota, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

1. In which of the past five years (2006-2010) did you fish in Minnesota? (check all that apply)
☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not fish in Minnesota → *Go to Question 6*

2. How old were you when you first began to fish (not necessarily in MN)? *If uncertain please estimate.* _____ years old

3. We are interested in whom you fished with during the last year you fished. Please indicate (a) whether you fished with the listed people, and (b) about how many days you fished with them during that year.

	Did you fish with the listed people during the last year you fished? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is much better, compare fishing in Minnesota to other states where you have fished. Please circle one number.

Minnesota fishing is: Much Worse About the Same Much Better Only fish in MN
0 1 2 3 4 5 6 7 8 9 10 ☐

5. If you went fishing in Minnesota in the past 5 years, which type of license did you purchase during the last year you fished? (check only one)

- ☐ 24 hour angling
☐ Resident Annual Angling Individual
☐ Resident Angling Combination (husband and wife)
☐ Resident Individual Sports (angling and small game)
☐ Resident Sports Combination (angling and small game with spouse)
☐ Individual Angling Conservation (the limit is half of a regular license)
☐ Conservation Combination (husband and wife; the limit is half of a regular license)
☐ Other (please specify): _____

Record Number [MAIL MERGE WITH LICENSE RECORD]

Survey C ■ Page 1

6. In this section, we would like to get your opinions on several **existing** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
24-Hour (for a resident 16 and older to fish for a 24 hour period; trout stamp not required)			
Annual Individual Fishing (for a resident 16 and older to fish for the license year; angler needs a separate trout stamp)			
Annual Combination (husband/wife) (for residents legally married age 16 and older to fish; each angler needs a separate trout stamp)			
Individual Sports (for a resident age 18 and older for angling and small game hunting)			
Sports Combination (husband/wife) (for legally married residents age 18 and older; includes fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			
Individual Conservation (for a resident 16 and older to fish; angler needs a separate trout stamp; the limit is half of a regular license)			
Conservation Combination (husband/wife) (for legally married residents age 16 and older to fish; each angler needs a separate trout stamp)			

7. In this section, we would like to get your opinions on several **potential** fishing licenses that the Minnesota DNR is evaluating to better meet the needs of the state's anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
3-Day (for a resident to fish for 72 continuous hours)			
7-Day (for a resident to fish for 7 consecutive days)			
90-Day (for a resident to fish 90 consecutive days)			
6-Month (for a resident to fish April 1-September 30 or October 1-March 31)			
3-Year Annual (for a resident to fish 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to fish 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license including trout, pheasant, and waterfowl stamps that are normally purchased separately and including a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

8. The purpose of this section is to determine your preferences for hypothetical license types and prices. This section contains 16 different resident license fee scenarios for annual and short-term licenses. Although they may look similar, they are not. Each scenario differs in at least one way from the others. Please indicate your preference for each license and fee scenario based on these differences. An example of a license fee scenario and how you rate it is provided below. The licenses in the scenarios refer to the existing licenses in Question 6 and the potential licenses in Question 7. It is important that you **rate all 16** of the alternatives below.

EXAMPLE:

On a scale of 0 to 10, please rate how strongly you would support each **HYPOTHETICAL** fishing license scenario by circling the appropriate number, as shown in the example below.

Scenario	Fees
Annual Indiv.	17.00
3-Month	Not Offered
3-Day	Not Offered
1-Day	8.50
Annual Combo.	29.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Would Not Support 5 Would Strongly Support

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee
Annual Indiv.	25.00
Ann Combo	25.00
Indiv. Sports	25.00
7 - Day	10.00
1 - Day	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-2	Fee
Annual Indiv.	25.00
Ann Combo	45.00
Indiv. Sports	35.00
7 - Day	Not Offered
1 - Day	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-3	Fee
Annual Indiv.	17.00
Ann Combo	25.00
Indiv. Sports	35.00
7 - Day	30.00
1 - Day	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee
Annual Indiv.	35.00
Ann Combo	35.00
Indiv. Sports	35.00
7 - Day	20.00
1 - Day	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-5	Fee
Annual Indiv.	17.00
Ann Combo	Not Offered
Indiv. Sports	Not Offered
7 - Day	Not Offered
1 - Day	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-6	Fee
Annual Indiv.	17.00
Ann Combo	45.00
Indiv. Sports	25.00
7 - Day	20.00
1 - Day	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee
Annual Indiv.	35.00
Ann Combo	Not Offered
Indiv. Sports	25.00
7 - Day	30.00
1 - Day	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-8	Fee
Annual Indiv.	17.00
Ann Combo	35.00
Indiv. Sports	45.00
7 - Day	10.00
1 - Day	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-9	Fee
Annual Indiv.	17.00
Ann Combo	35.00
Indiv. Sports	25.00
7 - Day	Not Offered
1 - Day	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-10	Fee
Annual Indiv.	25.00
Ann Combo	35.00
Indiv. Sports	Not Offered
7 - Day	30.00
1 - Day	15.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-11	Fee
Annual Indiv.	35.00
Ann Combo	45.00
Indiv. Sports	Not Offered
7 - Day	10.00
1 - Day	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-12	Fee
Annual Indiv.	25.00
Ann Combo	Not Offered
Indiv. Sports	45.00
7 - Day	20.00
1 - Day	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Fishing Scenario-13	Fee	Fishing Scenario-14	Fee	Fishing Scenario-15	Fee	Fishing Scenario-16	Fee
Annual Indiv.	17.00	Annual Indiv.	35.00	Annual Indiv.	17.00	Annual Indiv.	17.00
Ann Combo	Not Offered	Ann Combo	25.00	Ann Combo	45.00	Ann Combo	25.00
Indiv. Sports	35.00	Indiv. Sports	45.00	Indiv. Sports	45.00	Indiv. Sports	Not Offered
7 - Day	10.00	7 - Day	Not Offered	7 - Day	30.00	7 - Day	20.00
1 - Day	15.00	1 - Day	15.00	1 - Day	Not Offered	1 - Day	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

9. The following are nine enhanced and multi-year fishing license options that the Minnesota DNR is evaluating. Please indicate how strongly you would support each of the nine scenarios. Please **rate all 9** scenarios.

**Would
Not Support**

**Would
Strongly Support**

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Fishing Scenario-1	Fee	Fishing Scenario-2	Fee	Fishing Scenario-3	Fee
Annual Individual	25.00	Annual Individual	35.00	Annual Individual	17.00
Annual Super Sports	80.00	Annual Super Sports	Not Offered	Annual Super Sports	90.00
5-Year	75.00	5-Year	75.00	5-Year	75.00
3-Year	Not Offered	3-Year	65.00	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-4	Fee	Fishing Scenario-5	Fee	Fishing Scenario-6	Fee
Annual Individual	35.00	Annual Individual	17.00	Annual Individual	35.00
Annual Super Sports	90.00	Annual Super Sports	Not Offered	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	Not Offered
3-Year	Not Offered	3-Year	Not Offered	3-Year	50.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Fishing Scenario-7	Fee	Fishing Scenario-8	Fee	Fishing Scenario-9	Fee
Annual Individual	25.00	Annual Individual	25.00	Annual Individual	17.00
Annual Super Sports	Not Offered	Annual Super Sports	90.00	Annual Super Sports	80.00
5-Year	90.00	5-Year	Not Offered	5-Year	90.00
3-Year	50.00	3-Year	65.00	3-Year	65.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10		Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Attitudes Toward Hunting Licenses

*** Please complete this section even if you do not hunt. ***

This section of the survey asks about specific license options and fees for **adults (18 and older) hunting** in Minnesota. Even if you did not hunt in Minnesota or are younger than 18, please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for Minnesota.

10. In which of the past five years (2006-2010) have you hunted in Minnesota? (check all that apply)

☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not hunt in Minnesota → **Go to Question 16**

11. How old were you when you first began to hunt (not necessarily in MN)? *If uncertain please estimate.* _____ years old

12. We are interested in whom you hunted with during the last year you hunted. Please indicate (a) whether you hunted with the listed people, and (b) about how many days you hunted with them during that year.

	Did you hunt with the listed people during the last year you hunted? (Circle one)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

13. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is better, compare hunting in Minnesota to other states where you have hunted. Please circle one number.

Minnesota hunting is: Much Worse About the Same Much Better Only hunt in MN

0 1 2 3 4 5 6 7 8 9 10 ☐

14. If you went hunting in Minnesota in the past 5 years, which types of license did you purchase during the last year you hunted? (check all that apply)

- ☐ Small Game
☐ Deer Firearm
☐ Deer Archery
☐ Individual Sports (angling and small game)
☐ Sports Combination (angling with spouse and small game)
☐ Other (please specify): _____

15. Did you hunt for any of the following small game species during the last year you hunted? (check all that apply)

- ☐ Cottontail rabbit
☐ Snowshoe hare
☐ Gray or fox squirrel
☐ Ruffed grouse
☐ Pheasant
☐ Mourning dove
☐ Woodcock
☐ Waterfowl
☐ Other (please specify): _____

16. In this section, we would like to get your opinions on several **existing** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

EXISTING ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Small Game (for a resident to hunt small game; stamps are required to take pheasant and migratory waterfowl)			
Individual Sports (for a resident to fish and hunt small game)			
Sports Combination (husband/wife) (for legally married residents age 18 and older, providing fishing license for both and small game hunting license for primary customer; each angler needs a separate trout stamp)			

17. In this section, we would like to get your opinions on several **potential** hunting licenses that the Minnesota DNR is evaluating to better meet the needs of the state's hunters. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check **one** rating **for each** type of license.

POTENTIAL ADULT Resident Hunting License	Very Desirable	Somewhat Desirable	Not at all Desirable
Annual Hunting (for a resident to hunt small game for the license year, with duck and pheasant stamps included; currently, these are purchased separately)			
24-Hour Small Game (for a resident to hunt small game for a 24-hour period with state waterfowl and pheasant stamps included)			
3-Year Annual (for a resident to hunt small game only for 3 consecutive years from date of purchase)			
3-Year Individual Sports (for a resident to fish and hunt small game for 3 consecutive years from date of purchase)			
5-Year Annual (for a resident to hunt small game only for 5 consecutive years from date of purchase)			
5-Year Individual Sports (for a resident to fish and hunt small game for 5 consecutive years from date of purchase)			
Super Individual Sports (this would include one fishing and one small game license that includes stamps that are normally purchased separately and includes a deer privilege and any lottery application fees, such as for moose, turkey, prairie chicken, and elk)			

18. In this section, we would like to ask you about several different resident adult (18 and older) hunting license fee scenarios. The purpose is to determine your preferences for license types and prices. This section contains 16 different resident license fee scenarios. Although they may look similar, they are not. Each scenario differs in at least one way from the others. Please indicate your preference for each fee scenario based on these differences. The licenses in the scenarios refer to the existing licenses in Question 16 and the potential licenses in Question 17. It is important that you **rate all 16** scenarios.

Would .. 0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
Not Support

Would
Strongly Support

Hunting Scenario-1	Fee
Super Ind. Sports	70.00
Ind. Sports	45.00
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-2	Fee
Super Ind. Sports	90.00
Ind. Sports	30.00
Combo. Sports	38.00
Annual Hunting	45.00
Small Game	19.00
24-Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-3	Fee
Super Ind. Sports	Not Offered
Ind. Sports	30.00
Combo. Sports	38.00
Annual Hunting	30.00
Small Game	30.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-4	Fee
Super Ind. Sports	90.00
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-5	Fee
Super Ind. Sports	70.00
Ind. Sports	Not Offered
Combo. Sports	45.00
Annual Hunting	30.00
Small Game	30.00
24-Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-6	Fee
Super Ind. Sports	90.00
Ind. Sports	45.00
Combo. Sports	45.00
Annual Hunting	30.00
Small Game	19.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-7	Fee
Super Ind. Sports	80.00
Ind. Sports	30.00
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-8	Fee
Super Ind. Sports	70.00
Ind. Sports	30.00
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-9	Fee
Super Ind. Sports	80.00
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	30.00
Small Game	19.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-10	Fee
Super Ind. Sports	80.00
Ind. Sports	45.00
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-11	Fee
Super Ind. Sports	Not Offered
Ind. Sports	Not Offered
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	12.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-12	Fee
Super Ind. Sports	90.00
Ind. Sports	Not Offered
Combo. Sports	45.00
Annual Hunting	Not Offered
Small Game	30.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-13	Fee
Super Ind. Sports	80.00
Ind. Sports	Not Offered
Combo. Sports	45.00
Annual Hunting	45.00
Small Game	19.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-14	Fee
Super Ind. Sports	70.00
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	45.00
Small Game	30.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-15	Fee
Super Ind. Sports	Not Offered
Ind. Sports	45.00
Combo. Sports	45.00
Annual Hunting	45.00
Small Game	30.00
24-Hour	8.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Hunting Scenario-16	Fee
Super Ind. Sports	Not Offered
Ind. Sports	Not Offered
Combo. Sports	38.00
Annual Hunting	Not Offered
Small Game	19.00
24-Hour	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

The following demographic questions are for background information that will help us analyze the results.

19. In what year were you born? _____
20. Please check if you are: ☐ Male ☐ Female
21. Please check the box that best represents your race/ethnicity. (check all that apply)
- ☐ White or Caucasian
 - ☐ Black or African American
 - ☐ Hispanic or Latino
 - ☐ Native American or Alaskan native or Aleutian
 - ☐ Native Hawaiian
 - ☐ Middle Eastern
 - ☐ East Asian
 - ☐ South Asian
 - ☐ African (NOT African-American)
 - ☐ Other
22. Which of the following best describes your current marital status (check only one)
- ☐ Single
 - ☐ Divorced or widowed
 - ☐ Living with a partner
 - ☐ Married
23. Do you currently have children (under age 19) living with you? (check only one)
- ☐ Yes, I have children living with me on a full-time basis
 - ☐ Yes, I have children living with me on a part-time basis
 - ☐ No
24. How many years have you lived in Minnesota? _____ years
25. What is the highest grade level you completed in school? (check only one)
- ☐ Not a high school graduate
 - ☐ High school graduate or equivalent
 - ☐ Some college or trade school, no degree
 - ☐ Associate or trade school degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Professional degree or doctorate degree (e.g., M.D. or Ph.D.)

26. Do you consider your place of residence to be in a large city, suburban area, a small city, a rural area, or a farm? (check only one)

- ☐ Large city or urban area
- ☐ Suburban area
- ☐ Small city or town
- ☐ Rural area on a farm or ranch
- ☐ Rural area NOT on a farm or ranch

27. Which of these categories best describes your total household income before taxes last year? (check only one)

- ☐ Less than \$19,999
- ☐ \$20,000 to \$39,999
- ☐ \$40,000 to \$59,999
- ☐ \$60,000 to \$79,999
- ☐ \$80,000 to \$99,999
- ☐ \$100,000 or more

THANK YOU FOR TAKING THE TIME TO COMPLETE OUR SURVEY.

You have been entered into a drawing to win your choice of either a lifetime fishing or lifetime hunting license.

NON-RESIDENT SURVEY

Responsive Management



November 2010

Dear Non-Resident Angler:

The Minnesota Department of Natural Resources (MN DNR) customer records indicate that during the past 5 years you purchased a non-resident fishing license in Minnesota. The MN DNR is evaluating its license structure for non-resident fishing and is seeking your input. Responsive Management, a Virginia-based research firm specializing in public attitudes toward natural resource and outdoor recreation issues, is working with the MN DNR on this study of the Department's non-resident fishing license options.

We encourage you to complete this brief survey to offer your feedback and recommendations for Minnesota's non-resident license structure and pricing. This survey will take approximately 10 minutes to complete, and the results will enable the MN DNR to better meet your needs regarding fishing opportunities in the State of Minnesota. As an incentive for taking the time to complete this survey, you will be entered into a drawing to **WIN A LIFETIME FISHING LICENSE IN MINNESOTA**. Only 2,000 fellow hunters and anglers will be completing this survey, so the odds of winning are good. **Please complete the survey by November 22, 2010, to be eligible for a chance to win a lifetime fishing license in Minnesota.**

To ensure that you have the opportunity to respond, please expect a call from a Responsive Management interviewer within the next week to confirm receipt of the mail survey or to assist you in completing this survey by telephone if you have not already done so. For your preference, we can schedule a telephone survey at an appointed date and time that is convenient for you; simply call (540) 432-1888 or email amanda@responsivemanagement.com to schedule a telephone survey. Interviewers are available to conduct this survey Monday through Friday from 1:00 pm-9:00 pm, and the interview will require approximately 10 minutes of your time. As another alternative, you can access this survey online at <http://www.surveymk.com/s/nonresident>. The online survey will require you to provide the following personal identification number: _____.

Responsive Management ensures complete confidentiality of responses and comments to surveys. Responses are never associated with a name; results are analyzed and reported anonymously. Any identifying information used to ensure accuracy of data collection is excluded from the final analysis.

Thank you for taking the time to assist us with this study. Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink that reads "Amanda C. Ritchie".

Amanda C. Ritchie
Research Associate

**NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE
ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.**

NON-RESIDENT Minnesota Angling Survey

ID #:

Non-Residents' Attitudes Toward Fishing Licenses in Minnesota

Our customer records indicate that during the past 5 years you purchased a non-resident fishing license in Minnesota. This survey asks about specific license options and fees for non-resident **fishing** in Minnesota. Please take some time to answer these questions because it will help the Minnesota DNR determine the best set of license options for customers who fish in Minnesota.

1. In which of the past five years (2006-2010) did you fish in Minnesota? (check all that apply)
☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ I did not fish in Minnesota → Go to Question 6.

2. How old were you when you first began to fish (not necessarily in MN); *if uncertain please estimate.*
 _____ years old

3. We are interested in whom you fished with during the last year you fished. Please indicate (a) whether you fished with the listed people, and (b) about how many days you fished with them during that year.

	Did you fish with the listed people during the last year you fished? (Circle one.)		About how many days?
Spouse or significant other	Yes	No	_____ days
Children (< 19 years of age)	Yes	No	_____ days
Parent(s)	Yes	No	_____ days
Siblings	Yes	No	_____ days
Other family members	Yes	No	_____ days
Friends	Yes	No	_____ days
Alone	Yes	No	_____ days

4. On a scale of 0 to 10, where 0 is much worse, 5 is about the same, and 10 is better, compare fishing in Minnesota to other states where you have fished. Please circle one number.

Minnesota fishing is: Much Worse About the Same Much Better Only fish in MN
 0 1 2 3 4 5 6 7 8 9 10 ☐

5. If you went fishing in Minnesota in the past 5 years, which type of license did you purchase during the last year you fished? (check all that apply)
- ☐ 24 hour individual angling
 - ☐ 72 hour individual angling
 - ☐ 7 day individual angling
 - ☐ 14 day husband and wife-angling
 - ☐ Annual Individual
 - ☐ Family (one or both parents and children under age 16)
 - ☐ Other (please specify): _____

6. In this section, we would like to get your opinions on several **existing** non-resident fishing licenses that the Minnesota DNR is evaluating to better meet the needs of its non-resident anglers. Please rate how desirable it would be for YOU PERSONALLY to have each license available for purchase. Please check one rating for each type of license.

EXISTING Non-Resident Fishing License	Very Desirable	Somewhat Desirable	Not at all Desirable
24-Hour (for a non-resident to fish for a 24 hour period; trout stamp not required to fish for trout)			
72-Hour (for a non-resident to fish for 72 continuous hours; trout stamp may be required for trout fishing)			
7-Day (for a non-resident to fish for 7 consecutive days; trout stamp may be required for trout fishing)			
14-Day Couple (for a legally married couple to fish for 14 consecutive days; trout stamp required for trout fishing; spouse may fish with this license, but must purchase a trout stamp separately to fish for trout)			
Non-Resident Annual Individual Fishing (for a non-resident to fish for the license year; trout stamp may be required for trout fishing)			
Non-Resident Annual Family (for a legally married couple and their children under age 16 to fish and for each family member to possess a limit of fish; trout stamp may be required to trout fish; spouse may fish with this license, but must purchase a trout stamp separately to fish for trout)			

7. The purpose of this section is to determine your preferences for hypothetical license types and prices. This section contains 18 different non-resident license fee scenarios. Although they may look similar, they are not. Each scenario differs in at least one way from the others. Please indicate your preference for each license and fee scenario based on these differences. An example of a license fee scenario and how you would rate it is provided below. The licenses in the scenarios refer to those listed in Question 6. It is important that you rate **all 18** of the alternatives on the following page.

EXAMPLE:

On a scale of 0 to 10, please rate how strongly you would support each **HYPOTHETICAL** fishing license scenario by circling the appropriate number, as shown in the example below.

Scenario	Fees
Annual Indiv.	40.00
3-Month	Not Offered
7-Day	Not Offered
1-Day	8.50
Annual Family	52.00
Rate= 0 - 1 - 2 - 3 - 4 - <u>5</u> - 6 - 7 - 8 - 9 - 10	

Would
Not Support

Would
Strongly Support

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

PLEASE NOTE: YOU MUST COMPLETE THE ENTIRE SURVEY TO BE ENTERED INTO THE DRAWING TO WIN A LIFETIME LICENSE.

Scenario-1	Fees
24-Hour	12.00
72-Hour	30.00
7-Day	Not Offered
14-Day Couple	50.00
Ann. Individual	45.00
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-2	Fees
24-Hour	8.50
72-Hour	30.00
7-Day	35.00
14-Day Couple	50.00
Ann. Individual	39.50
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-3	Fees
24-Hour	12.00
72-Hour	Not Offered
7-Day	Not Offered
14-Day Couple	40.50
Ann. Individual	45.00
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-4	Fees
24-Hour	8.50
72-Hour	Not Offered
7-Day	35.00
14-Day Couple	40.50
Ann. Individual	39.50
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-5	Fees
24-Hour	12.00
72-Hour	24.00
7-Day	35.00
14-Day Couple	Not Offered
Ann. Individual	50.00
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-6	Fees
24-Hour	Not Offered
72-Hour	Not Offered
7-Day	28.50
14-Day Couple	50.00
Ann. Individual	50.00
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-7	Fees
24-Hour	Not Offered
72-Hour	24.00
7-Day	Not Offered
14-Day Couple	50.00
Ann. Individual	39.50
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-8	Fees
24-Hour	12.00
72-Hour	30.00
7-Day	28.50
14-Day Couple	Not Offered
Ann. Individual	39.50
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-9	Fees
24-Hour	Not Offered
72-Hour	24.00
7-Day	35.00
14-Day Couple	40.50
Ann. Individual	45.00
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-10	Fees
24-Hour	12.00
72-Hour	24.00
7-Day	28.50
14-Day Couple	40.50
Ann. Individual	39.50
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-11	Fees
24-Hour	Not Offered
72-Hour	30.00
7-Day	35.00
14-Day Couple	Not Offered
Ann. Individual	45.00
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-12	Fees
24-Hour	8.50
72-Hour	30.00
7-Day	Not Offered
14-Day Couple	40.50
Ann. Individual	50.00
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-13	Fees
24-Hour	12.00
72-Hour	Not Offered
7-Day	35.00
14-Day Couple	50.00
Ann. Individual	50.00
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-14	Fees
24-Hour	Not Offered
72-Hour	30.00
7-Day	28.50
14-Day Couple	40.50
Ann. Individual	50.00
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-15	Fees
24-Hour	8.50
72-Hour	24.00
7-Day	28.50
14-Day Couple	50.00
Ann. Individual	45.00
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-16	Fees
24-Hour	Not Offered
72-Hour	Not Offered
7-Day	Not Offered
14-Day Couple	Not Offered
Ann. Individual	39.50
Annual Family	Not Offered
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-17	Fees
24-Hour	8.50
72-Hour	24.00
7-Day	Not Offered
14-Day Couple	Not Offered
Ann. Individual	50.00
Annual Family	52.50
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

Scenario-18	Fees
24-Hour	8.50
72-Hour	Not Offered
7-Day	28.50
14-Day Couple	Not Offered
Ann. Individual	45.00
Annual Family	62.00
Rate= 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10	

The following demographic questions are for background information that will help us analyze the results.

8. In what year were you born? _____
9. Please check if you are: ☐ Male ☐ Female
10. Please check the box that best represents your race/ethnicity. (check all that apply)
- ☐ White or Caucasian
 - ☐ Black or African American
 - ☐ Hispanic or Latino
 - ☐ Native American or Alaskan native or Aleutian
 - ☐ Native Hawaiian
 - ☐ Middle Eastern
 - ☐ East Asian
 - ☐ South Asian
 - ☐ African (NOT African-American)
 - ☐ Other
11. Which of the following best describes your current marital status (check only one)
- ☐ Single
 - ☐ Divorced or widowed
 - ☐ Living with a partner
 - ☐ Married
12. Do you currently have children (under age 19) living with you? (check only one)
- ☐ Yes, I have children living with me on a full-time basis
 - ☐ Yes, I have children living with me on a part-time basis
 - ☐ No
13. In which state do you live? _____
14. How many years have you lived in the state where you live now? _____ years
15. What is the highest grade level you completed in school? (check only one)
- ☐ Not a high school graduate
 - ☐ High school graduate or equivalent
 - ☐ Some college or trade school, no degree
 - ☐ Associate or trade school degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Professional degree or doctorate degree (e.g., M.D. or Ph.D.)

16. Do you consider your place of residence to be in a big city, suburban area, a small city, a rural area, or a farm? (check only one)

- ☐ Large city or urban area
- ☐ Suburban area
- ☐ Small city or town
- ☐ Rural area on a farm or ranch
- ☐ Rural area NOT on a farm or ranch

17. Which of these categories best describes your total household income before taxes last year? (check only one)

- ☐ Less than \$19,999
- ☐ \$20,000 to \$39,999
- ☐ \$40,000 to \$59,999
- ☐ \$60,000 to \$79,999
- ☐ \$80,000 to \$99,999
- ☐ \$100,000 or more

THANK YOU FOR TAKING THE TIME TO COMPLETE OUR SURVEY.

You have been entered into a drawing to win a lifetime fishing license in Minnesota.

APPENDIX B: SOURCES OF DATA AND DIFFERING DEFINITIONS OF “PARTICIPANT”

Differing data have been presented regarding the number of anglers and hunters in the United States. These differences stem from differing sources of information and their differing operational definitions of “angler” and “hunter.”

The five major sources of data on participation in fishing and hunting are:

- the *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (National Survey)*, conducted every 5 years since 1955 by the U.S. Fish and Wildlife Service (FWS) and the U.S. Bureau of the Census,
- license sales data collected by the individual states and compiled by the FWS (known as *federal assistance data*, because the data are used to allocate funding under the Federal Assistance in Sport Fish and Wildlife Restoration Programs),
- the National Sporting Goods Association (NSGA),
- the Sporting Goods Manufacturers Association (SGMA), and
- the *National Survey on Recreation and the Environment (NSRE)*, which is managed by the U.S. Forest Service.

NATIONAL SURVEY DATA

The *National Survey* determines numbers of participants based on participation rates in a large random sample of U.S. households. Data for the *National Survey* are collected and reported separately for two age groups (ages 6 to 15 and ages 16 and older), and these numbers can be summed to determine participation for all individuals age 6 and older. The *National Survey* asks about participation in Fishing and Hunting in the previous year (i.e., a 1-year time frame), and a participant need only participate one time to be considered an angler or hunter. Furthermore, the participant may or may not have purchased a license. Because it examines only a single year, the *National Survey* does *not* include those who may consider themselves to be an angler or a hunter but who did not participate in the single year before the survey: some anglers and hunters participate periodically, occasionally skipping years. On the other hand, the *National Survey* includes those who may have participated only once but who otherwise may *not* consider themselves to be an angler or a hunter and who may have no further plans to fish or hunt.

LICENSE SALES DATA

License sales provide another source of data on fishing and hunting participation. Data from license sales are collected by each state and submitted to the FWS, as required by the Federal Assistance in Sport Fish and Wildlife Restoration Programs. Because states can sell multiple licenses to a single individual, the data are “de-duplicated” within each state before being compiled into a number that represents the number of anglers and hunters in that state (as

opposed to the actual number of licenses issued). In other words, two licenses bought by a single angler in one state will appear in the database as one angler rather than two anglers. The numbers for each state, then, represent the number of anglers and hunters who bought at least one license in that state, whether they are residents or non-residents (and regardless of whether they actually participated). The total national number, however, is not de-duplicated for anglers and hunters who fish or hunt in more than one state. In other words, an angler who fishes in Washington and Oregon is counted in each state's total and is then counted twice in the national total.

The time frame for participation in the license sales database is a single year—the number of license holders for the given year. These participants include youths and seniors when they are required to obtain a license, but they may or may not include them when they are *not* required to obtain a license, according to the method of calculating the number of anglers and hunters in each state. In addition, these numbers do not include those who are exempt from license purchase requirements, such as people who fish from their own land in states where anglers may fish from their own land without a license or people who hunt species for which no license is required. On the other hand, these numbers will include, as mentioned earlier, those who bought a license but who did not actually participate in fishing or hunting. Strictly speaking, these data do not actually measure participation, because the respondent need only have purchased a license, regardless of whether he or she actually participated.

NSGA DATA

The third source of fishing and hunting participation data is the NSGA. The method used to collect the NSGA data is called *panel sampling*. Panel sampling identifies individuals who meet certain criteria (for example, general purchase and household size) and then invites the individuals who meet the criteria to participate in a survey. Those who turn down or ignore the invitation are discarded from the potential sample; those who accept the invitation are then kept in a database and are later contacted when they are needed to complete a survey.

The age group considered in the NSGA data is 7 years old and older. The criterion for inclusion in the NSGA data is that the respondent must have participated *more than once* in the previous year for fishing and hunting. These data will not include those anglers and hunters who did not participate in the year before the survey, or only participated once, but who otherwise consider themselves to be an angler or hunter.

SGMA DATA

The SGMA purchases its data from American Sports Data, Inc., based on panel sampling. The chief difference between the NSGA and SGMA data is that the age group considered in the SGMA data is 6 years old and older (as opposed to 7 years in the NSGA data). The SGMA counts as a participant anyone who had participated in the sport at least once in the given year. These data will *not* include those anglers and hunters who did not participate in the year before the survey but who otherwise consider themselves to be an angler or hunter. These data will include those who may have participated only once but who otherwise may *not* consider themselves to be an angler or a hunter and who may have no further plans to fish or hunt.

NSRE DATA

The final major data source is the NSRE. This U.S. Forest Service-directed survey determines participation rates in many outdoor recreational activities through a national telephone survey of U.S. residents age 16 and older. The NSRE asks about participation in the previous year, and the respondent need only have participated once. Just like the other sources of data that consider only a 1-year time frame, these data do not include anglers and hunters who did *not* participate in the year before the survey but who otherwise consider themselves to be an angler or hunter, and it will include respondents who do *not* consider themselves to be an angler or hunter but who, nonetheless, fished or hunted once in the previous year.

LIMITATIONS OF DATA ON PARTICIPATION

TIME FRAME

The data sources described above examine those who said that they participated in the previous year (the *National Survey*, NSGA, SGMA, and NSRE) and those who purchased a fishing or hunting license in the previous year. A limitation of all of these data sources is that they examine a *single year only*. Using a longer time frame may provide a more accurate view of the number of anglers and hunters in the United States.

Using a 2-year time frame to be considered an angler or hunter (in other words, the respondent must have participated at least once in the 2 years previous to the survey), researchers found that 35% of these anglers do not fish every year and 29% of these hunters do not hunt every year (Responsive Management, 1995).

Another study used a 5-year time frame. In that study, the FWS estimates that there were 44.4 million people age 16 or older who had fished in the 5 years prior to the 2006 *National Survey*, considerably more than the 30.0 million anglers estimated in the 2006 *National Survey* based on the single-year time frame, with analogous results for hunters (18.6 million in the previous 5 years versus 12.5 million in the *National Survey*) (U.S. Fish and Wildlife Service/U.S. Census Bureau, 2007).

Another potential limitation of data based on a survey question with a time frame (e.g., “Did you hunt *in the past 2 years?*”) is telescoping, which results in over-counting. An example would be a respondent who hunted 3 years previously but who incorrectly thinks that he or she fished in the previous 2 years. In other words, an event that happened some time in the past is “remembered” as having happened more recently. This might slightly inflate numbers in a set time frame.

PERCEPTIONS OF PARTICIPATING

Another consideration in examining fishing and hunting participation is that many people accompany anglers and hunters but do not actually fish or hunt themselves. Yet these people may perceive that they have participated in fishing or hunting and may answer surveys in the affirmative. A typical example is that a spouse may go along on a fishing trip but not actually participate, yet this person may indicate in a survey that he or she went fishing. This would slightly inflate actual participant numbers.

Another way to examine participation that is not limited by a time frame is simply by asking whether the respondent considers himself or herself to be an angler or hunter. Many people consider themselves to be an angler or hunter, even if they have not had a chance or the means to participate in recent years. An example is a regional study of the northeastern states (Responsive Management, 2003), which found that 13% of respondents had actually hunted in the previous 12 months, but 15% of respondents considered themselves to be hunters. Although they are not active participants, these lapsed anglers and hunters nonetheless represent a constituency of any agency that manages fishing, hunting, or natural resources.

SOURCES FOR APPENDIX B

Responsive Management (1995). *Factors Related to Hunting and Fishing Participation in the United States: Final Report*. Study conducted for the U.S. Fish and Wildlife Service. Harrisonburg, VA.

Responsive Management (2003). *Public Opinion on Fish and Wildlife Management Issues and the Reputation and Credibility of Fish and Wildlife Agencies in the Northeast United States*. Study conducted for the Northeast Conservation Information and Education Association. Harrisonburg, VA.

(Both Responsive Management sources are available on the company's website: www.responsivemanagement.com.)

U.S. Fish and Wildlife Service/U.S. Census Bureau (2007). *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*. Washington, D.C.

ABOUT RESPONSIVE MANAGEMENT

Responsive Management is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Its mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing its in-house, full-service, computer-assisted telephone and mail survey center with 45 professional interviewers, Responsive Management has conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communications plans, need assessments, and program evaluations on natural resource and outdoor recreation issues.

Clients include most of the federal and state natural resource, outdoor recreation, and environmental agencies, and most of the top conservation organizations. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn, Texas Tech, the University of California—Davis, Michigan State University, the University of Florida, North Carolina State University, Penn State, West Virginia University, and others.

Among the wide range of work Responsive Management has completed during the past 20 years are studies on how the general population values natural resources and outdoor recreation, and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of selected groups of outdoor recreationists, including anglers, boaters, hunters, wildlife watchers, birdwatchers, park visitors, historic site visitors, hikers, and campers, as well as selected groups within the general population, such as landowners, farmers, urban and rural residents, women, senior citizens, children, Hispanics, Asians, and African-Americans. Responsive Management has conducted studies on environmental education, endangered species, waterfowl, wetlands, water quality, and the reintroduction of numerous species such as wolves, grizzly bears, the California condor, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their memberships and donations. Responsive Management has conducted major agency and organizational program needs assessments and helped develop more effective programs based upon a solid foundation of fact. Responsive Management has developed websites for natural resource organizations, conducted training workshops on the human dimensions of natural resources, and presented numerous studies each year in presentations and as keynote speakers at major natural resource, outdoor recreation, conservation, and environmental conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management's research has been featured in most of the nation's major media, including CNN, ESPN, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front pages of *The Washington Post* and *USA Today*.

Visit the Responsive Management website at:

www.responsivemanagement.com