

THE INFLUENCE OF INVASIVE SPECIES ON FISHERS' SATISFACTIONS

by

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A THESIS

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfilment of the Requirements

For the Degree of Master of Science

Major: Natural Resource Sciences

Under the Supervision of Professor Kevin L. Pope

Lincoln, Nebraska

December 2023

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University of Nebraska, 2023

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Invasive species are prevalent and widespread in North America. Outdoor recreational activities, such as fishing, introduce a point in which humans may interact with invasive species and have to adapt their own behaviors. Bigheaded carp in the Missouri River below Gavin's Point Dam are a group of invasive fish species that were thought to be negatively relating to recreational fishers' satisfactions. Using a content analysis and an importance-grid, we conclude that invasive species do not strongly relate to recreational paddlefish fishers' satisfactions. Paddlefish fishers represent a small sub-set of recreational fishers in Nebraska and South Dakota. The content analysis revealed that only a very small subset of fishers' are reporting concerns related to bighead carp and an even smaller subset relate to negative sentiments about bigheaded carp. The importance-grid analysis revealed that at both the day-level and the season-level, paddlefish fishers satisfactions are strongly related to harvest of a paddlefish and that factors relating to bigheaded carp and other invasive species is unimportant rather than detrimental. There is no difference in how bigheaded carp factors are classified on the importance grid between method of take, which is contrary to the hypothesis that archery fishers may have stronger positive influence of bigheaded carp towards fishing satisfactions given the additional targets they create. It is likely that bigheaded carp are becoming normalized to the point of leniency in fishers and thus they are not identifying them categorically as invasive species and are shifting their expectations in regard to dealing with their presence. Future studies related to the influence of invasive species on fishers' satisfactions could

consider a non-limited recreational fishery and could focus more on the archery method of take, which has anecdotally been more keen to target species like bigheaded carp.

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Acknowledgements:

Funding was provided by the Water Resource Development Act, coordinated by the U.S. Fish and Wildlife Service in partnership with Missouri River Sub-Basin states, and administrated by the Nebraska Game and Parks Commission.

Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

The University of Nebraska-Lincoln Institutional Review Board, for the protection of human subjects, approved the research protocol (IRB Number: 20220421935EX; Project ID 21935).

Thank you to my advisor, Kevin L. Pope, for his steadfast assistance and guidance throughout this project. Thank you to my committee members Kirk Steffensen, Kelly Robinson, Chris Chizinski, and Jonathan Spurgeon for your time and patience in helping me with this project. Thank you to my peers in the various labs within the Nebraska Cooperative Fish and Wildlife Research Unit and University of Nebraska-Lincoln for their support. Thank you to members of the Chizinski Lab for providing feedback and discussion. Thank you to the various members of the School of Natural Resources, specifically Mark Burbach, Jessica Corman, Brooke Mott, Mark Pegg, and Becky Schuermann, for their advice and support on this journey. Finally, thank you to my family and other loved ones for being constant sources of support throughout my time here.

The University of Nebraska is a land-grant institution with campuses and programs on the past, present, and future homelands of Pawnee, Ponca, Otoe-Missouria, Omaha, Dakota, Lakota, Arapaho, Cheyenne, Apache, and Kaw Peoples, as well as the

relocated Ho-Chunk, Iowa, and Sac and Fox Peoples. Land acknowledgements are not substitutes for relationships with Indigenous Peoples but represent an important first step. This knowledge and the centering of Indigenous Peoples allows us to better understand the legacies of more than 150 years of displacement, violence, settlement, and survival that continue to inform our present and future. Thank you to the indigenous peoples who are the original and continued stewards of our landscape.

Glossary:

Archery: Using a bow and arrow to aim at targets; often done in sport and hunting.

Basic factors: When factor is significant to or essential to satisfaction, but the reward is not significant

Bigheaded carp: A taxonomic classification that refers to the invasive bighead carp and silver carp.

Bow fishing: Using archery techniques to catch fish. This method is always lethal

Content analysis: A research tool to assess themes and concepts from qualitative data

Ecosystem services: Any benefit to humans that is derived from the ecosystem.

Excitement factor: When the satisfaction factor reward is significant but the penalty is not

Explicit importance: Things that are important to anglers that are directly stated.

Fishery: the catching and usually harvesting of aquatic animals, mostly fish. This can refer to the recreational level or the commercial level.

Gavin's Point Dam: A 1.9 mile embankment that was initially built in 1957 on the Missouri River. Gavin's Point Dam forms Lewis & Clark lake which is in Northeast Nebraska, along the South Dakota Boarder. The dam generates hydroelectricity and is run by the U.S. Army Corp of Engineers.

Implicit importance: Attributes that are important to anglers that might not be directly stated. This will be measured using the correlations coefficient of Tau-B.

Importance Grid Analysis (IGA): A statistical method of assessing implicit and explicit factors contributing to satisfaction using regression analysis.

Invasive carp: An umbrella term that generally applies to four species of carp native to the Asian continent: Bighead carp (*Hypophthalmichthys nobilis*), Silver Carp (*Hypophthalmichthys molitrix*), Grass Carp (*Ctenopharyngodon idella*) and Black Carp (*Mylopharyngodon piceus*). This term often excludes common carp (*Cyprinus carpio*), which are native to Eurasia and have been established in North America since the 1800's.

Performance factors: When both the satisfaction factor reward and factor penalty are significant

Recreational fishing: any attempt to catch fish for recreational purposes.

Satisfaction: The fulfilment and often exceeding of one's expectations and or needs

Sentiment: An attitude or opinion towards something; a feeling or emotion

Snagging: An angling method that involves casting a bait-less hook and reeling it in with the hopes of the hook intercepting the body or mouth of a fish.

Chapter 1: Content analysis and fishers' sentiments

Background:

A content analysis is a broad methodology used to describe trends and themes in textual sources. There are several ways to conduct a content analysis and methodology of analysis depends on the goal or objective. A content analysis is a way managers and policy makers can assess qualitative data such as that from open ended comments or surveys. Content analysis has long been used to quantify textual analysis across a broad array of disciplines, including natural resources.

Content analysis can be used to identify trends over time, authorship, sentiments, inequity, and emerging concepts. Content analysis has been used to explore topics including race, sex, socioeconomic status, age, and income. Content analysis can use multiple sources of data, yet it is most used for textual data (Krippendorff 2012). One of the earliest uses of content analysis was determining authorship of unconfirmed texts when compared with a known text. For example, some of the federalists' papers now known to be authored by James Madison, were confirmed through a content analysis of his known authored texts (Mosteller n.d.; Stemler n.d.). Content analysis of various European paintings with fruit concluded that fruit depicted in paintings are not necessarily consistent with diet of that time, a conclusion that previous quantitative studies had not come to (Wansink et al. 2016). A content analysis of newspaper publications about French Athletes at the 2012 Olympic games, revealed that females were far less likely to get positive press photos and far less likely to get prime page or cover space. However, it also revealed, that a more important factor determining quantity

and quality of press photos is how the athlete actually performed or medal tally than what sex they are (Delorme and Testard 2015).

Content analysis is an encompassing term that does not necessarily rely on one methodology but with the mutual outcome of quantitatively assessing content of various forms including text, visuals, or auditory. A content analysis is usually done with certain objectives in mind (empirically) rather than forming unique groups without context but can be applied multiple ways. Stemler (2015), a leading scholar and publisher on the application of content analyses describes three types of content analysis: empirically driven, theoretically driven, or both theoretically and empirically driven.

Empirically driven:

There have been several modern applications of empirically driven content analysis in recent years. An empirical model would rely on an algorithm with parameters from researchers. Empirically driven models will have a previously identified goal and objective, meaning that they do require an initial judgment by people to define objectives. An example of an empirical methodology is that of the College Board experimenting with the use of content analysis to automatically grade student writing samples. The goal was to be able to have an impartial evaluator in the form of an automatic content analysis with the objective of assessing things such as word frequencies, relevance, complexity, and punctuation. A seven-year testing program identified flaws in this use of content analysis. For example, Weiss (2015) described a positive relationship between word length and higher scores, even if the words were not used correctly. Weiss (2015) also described a relationship between higher scores and the use of the double quotation character, even when a quote was misused. These are only some examples of the

complexity of using an empirical content analysis. There can be a lack of quality control for things like syntax and phrases. Syntax can be dependent on things such as dialect or culture without at all reflecting quality of work. Accounting for all variations in the syntax that still may produce a quality essay is difficult in a content analysis with parameters designed by a specific culture.

Theoretically driven content analysis:

Unlike empirically driven content analysis, a theoretically driven content analysis may not have a known objective. The goal may be similar to empirically driven content analysis as such as identifying authorship or analyzing essays, but there are no initial set parameters. Parameters and specific themes are identified post hoc and subsequently defined as a factor. An example of a theoretically driven content analysis is a study conducted by Harpster et al. (2009) examining the speech patterns of 100 homicide 911 calls. In half of the calls, the caller was the criminal, and in the other half of the calls the caller was the victim. There were no input parameters as far as what words, phrases, or syntax the analysis should associate with a criminal versus innocent. This study identified over 18 factors that could be connected to a guilty 911 caller as opposed to an innocent one. For example, almost half of the callers included extra information in their calls. Of those that included extra information, 96% of them were guilty. This suggests that callers including extra information are nearly always guilty and can thus have an application in law enforcement. Because of the theoretical approach, the factor of “adding extra information” was not previously determined by researchers as something to look for specifically in the calls, however, it was identified via content analysis as being a factor associated with criminals.

Emergent coding and grounded theory approaches to content analysis:

Human behavior is dynamic and inherently dependent on circumstances. Rarely, if ever, can human behavior be described solely through empirical methods or theoretical methods. These multiple lenses are required to assess human behavior. Emergent coding is a new type of content analysis that draws from both empirical and theoretical approaches. Emergent coding is based on ground theory (Glaser & Strauss 1967). Ground theory qualitative research relies on inductive reasoning rather than the more typical deductive hypothesis testing. It is called emergent coding because themes “emerge” from the data and can be applied as a new theoretical framework in the future. Stamler (2015) uses an example from their own research on the text of school mission statements. Two independent researchers were given data and asked to create an appropriate code book for themes and trends they have identified in the data. The researchers then compared codes and made relevant adjustments based on the other’s reasoning. There was little discrepancy between the themes and codes created by the two researchers. These results lead to the development of a theoretical framework that has subsequently been used to assess the text of school mission statements and their relation to things such as changing policies (Stamler and Bebell 2012). In another study that conducted a content analysis of a random sample of high schoolers in nine states, the deductive reasoning of emergent coding is evident. The theme of “providing a safe environment to learn” was prevalent in 62% of the collected data from the state of Colorado, whereas it was 29% for the study average. Using deductive reasoning and qualitative research in the form of a content analysis researchers can make educated guesses on causation, such as the legacy of the Columbine shooting in Colorado (Stemler et al. 2011).

Content Analysis and Wildlife:

Content analysis had been used to assess human satisfaction with the environment or experience within the environment. It is becoming a more frequently used tool in wildlife and fisheries management as human dimensions and social attitude considerations have become more of an interest to researchers. Houston et al..(2010) used a content analysis of print news media to assess attitudes within communities about wolves (*Canis lupus*). Wolves and wolf reintroduction in the lower 48 states have been contentious since the very beginning. They are a species that has frequently appeared in the news media and thus an ideal species to do a content analysis on using a database of This content analysis was able to deeper contextualize explanations for things such as variations in attitudes among states. The content analysis in this case provided possible explanations for this variation across regions in wolf attitudes such as historical presence of wolves, current presence of wolves, or anticipated presence of wolves. This is just one example in which human dimensions research, such as that done from a content analysis of existing text, can be used to understand the “why” part of differing attitudes based on things such as region (Houston et al. 2010).

The rise of the digital age and social media has presented a new avenue for content analysis. Facebook, Twitter (X), Instagram, Reddit, Discord, Tik-Tok, NextDoor, and FishBrain, all provide platforms in which fishers have been known to engage in meaningful discussions with both each other and managing agencies (Cockerill 2013). Twitter(X), has public data where a content analysis of things like word occurrences and location of public posts with certain words or phrases can be looked at (Linville et al.

2012). Human-wildlife conflict is just one example of where content analysis of social media has clarified recreators attitudes.

Wu et al. (2018) conducted a content analysis on social media related to the Indo-Pacific dolphin (*Tursiops aduncus*), an aquatic charismatic megafauna in parts of China. The objective of this content analysis was to see whether news releases about the dolphin corresponded to occurrences of the dolphin species conservation being discussed on a popular app called WeChat. The content analysis did not reveal that conservation discussions around the species increased. The study did however conclude that media type, publisher, and frequency of pictures and visuals play a role in using news to start conservation conversations. It further suggests the necessity of a concerted framework of the relationship between traditional media, social media, and conservation conversations.

Zooming in: Sentiment Analysis

Content analyses are helpful in identifying trends in words or syntax, however a more specific type of content analysis geared at sentiment further enhances the usefulness of content analysis. Sentiment is an attitude or emotion experienced by an individual. Sentiments are frequently referenced linguistically in textual comments, and they cover a diverse range of opinions and expressions.

Negative Sentiments:

Sentiments are considered negative when they reflect poorly on an experience in a way that is reflected clearly to another individual were they assessing the outcome. Individual words as well as syntax can be used to assess sentiment. Additionally, some predetermined actions or experiences may be coded negative because of the context of the study without inherently flagging negative words or syntax. A common indicator of a

negative sentiment with an experience is not wishing to participate ever again in the future. Future participation on an experience is important for managers to understand in order to manage expectations

Not all sentiments are created equal and negative sentiments are archivally more prevalent. Human psychology has long demonstrated what has now been termed “negativity bias.” Negativity bias is the phenomenon of negative emotions being amplified over positive emotions in one’s mind and memory (Ito et al. 1998). There is thought to be an evolutionary driver of negativity bias that’s leads to learned behaviors through negative re-enforcement. In humans, especially children with growing minds, negativity bias is thought to have evolved as a way to avoid danger (Vaish et al. 2008). Range frequency theory is proposed as a driver of negativity bias in humans. Range frequency theory is based on the premise that humans have the default expectation of a good outcome. This theory suggests, that for most people, the psychological reference point is skewed positively. Thus, when a negative outcome occurs, there is both the inherent negative sentiment, as well as an additional factor of surprise enhancing the negative sentiments from the outcome (Helson 1964; Fiske 1980).

Another theory about the existence of negativity bias in humans is termed the diagnosticity theory. This theory is based on the idea that negative outcomes are more informative to the future human experience because they are deviations from the norm or expectations, and thus a learning experience (Baumeister et al. 2001). A shortcoming of this is that diagnosticity theory relies on the idea that humans are inherently good and moral. Thus, a “bad” outcome would be more informative as it deviates from the norm of which is good and moral (Baumeister et al. 2001). Though many humans are good and

moral, others may not exhibit behaviors that reflect that. All theories have shortcomings which is why it is important to consider multiple lenses of analyses. Additional theories that could explain negativity biases is related to that of intensity bias. Intensity bias is the idea that more intense outcomes or experiences will amplify the sentiments experienced. This is not mutually exclusive to range frequency theory or diagnostics theory and introduces an example of how it is difficult to quantify sentiment analyses due to the varying intensity of an outcome (Fiske 1980; Ito et al. 1998).

Positive Sentiment:

Positive sentiments are ones in which an individual demonstrates a positive response to an outcome or experience (Kim and Hovy 2004). Theories behind positive sentiments are rooted in several frameworks, with one of the most influential being the broaden-and-build theory. According to this theory, positive emotions broaden an individual's thought-action repertoire, allowing that individual to explore novel ideas, build social connections, and develop a wider range of skills and resources (Fredrickson and Losada 2005). This broadening effect, in turn, leads to a cascade of positive outcomes, including enhanced resilience, creativity, and overall psychological well-being. Another key theory related to positive sentiments is the hedonic adaptation model, which posits that humans have a tendency to adapt to positive experiences over time, leading to a relatively stable level of happiness or well-being (Sheldon and Lyubomirsky 2012). In other words, the initial burst of joy from a positive event tends to fade as people become accustomed to the feeling.

Furthermore, evolutionary psychology suggests that positive sentiments may have evolved as adaptive mechanisms to promote survival and reproduction. Humans are

social creatures. Positive emotions like joy and love may have played essential roles in forming social bonds, cooperating with others, and enhancing an individual's chances of passing on their genes to the next generation. This evolutionary perspective underscores the importance of positive sentiments in human life and highlights their deep-rooted nature in our biological and psychological makeup.

Positive-Negative Asymmetry (PNA):

As previously mentioned, theories in human psychology have been used to try and understand both negativity bias and positivity bias. Positive-Negative Asymmetry (PNA effect) is the phenomenon that aims to describes these biases. Open ended comments have traditionally shown PNA in favor of negativity (Borg, 2005; Macey, 1996). This has been empirically demonstrated throughout the literature. Empirical studies also demonstrate that negative comments are more likely to be longer and more in depth (Poncheri et al. 2008). Some postulated reasons for this is that humans find it harder to clearly convey negative feelings, thus tending to embellish negative comments with additional words.

Neutral sentiments:

Not all things that have sentimental meaning are strictly positive or negative. The category of “neutral sentiment” is the most nuanced and complex of the three main general sentiments. Despite the perhaps oxymoronic name, neutral sentiments can and do exist. Neutral sentiments do not lean exclusively positively or negatively, but still do provide information that informs managers about opinions and emotions of participants. Neutral sentiments include words that do not contextually place a comment as positive or negative. Words that often appear in neutral comments include words such as fast, slow,

large, big, small, took, look, and many others that provide descriptions of experiences or outcomes, but no indication of positive or negative.

How can something be “neutral” but still have a sentiment? Sentiments can be extremely nuanced and subjective depending on the context. Some scholars argue that neutral sentiments are not in fact to be included in an sentiment analysis due to the majority of the sentiments being weak or non-opinion bearing. Humans have the most difficulty identifying a neutral opinion as they are, by some interpretations, diametrically opposed (Kim and Hovy 2004). In the broader sense of future psychological study, scholars have sometimes eliminated neutral sentiments from analyses as the objective of the research related solely to the polarity of positive and negative (Koppel and Schler 2006). However, in the practical application of sentiment analysis, such as one done on open ended survey comments with well-established parameters of positive and negative sentiments, a neutral category is necessary to reflect more nuanced sentiments that still provide insightful information around an outcome or experience.

The discourse around the usefulness of neutral sentiments has shifted significantly in the last two decades. Pang and Lee (2005) were some of the first to attempt to use automated sentiment to include neutral sentiments. A problem that arises when considering neutral comments, especially if using automated coding, is how to code comments that may contain both positive and negative comments. Neutral can be taken to mean something purely objective (Engstrom 2004), or neutral could mean positive and negative tones negate each other (Das and Chen, 2001). It is important to understand which definition of “neutral” you chose to use in a content analysis and to be consistent throughout. In the case of determining if a “neutral” sentiment is purely objective or a net

rating of sentiment from a comment, one must consider the objectives of the analysis. If “neutral” is the combination of positives and negatives, a lot of information can be lost if research choose to only look at positives and negatives.

Data Source:

Since 1997, the Nebraska Game and Parks Commission has distributed comment cards to paddlefish tag holders as a way for fishers to provide Nebraska Game and Parks Commission with comments on their fishing experience. Paddlefish tags and comment cards are sent to the address of tag holders approximately three months before the start of each season. The tag and comment card are distributed via the United States Postal Service inside a 6” x 9” orange envelope. The physical tag is attached to the paper comment card and is detached and put on the fish at harvest. The comment card is a half sheet with durable grey paper with black text. The cards have prepaid postage and a return address to Nebraska Game and Parks Commission. For both the archery and snagging comment card, fishers are asked to indicate the days within the season they fished, the location below the dam, and the status of their harvest for that particular year. Additionally, there is an open-ended comment section that includes four lines for handwriting.

Comment cards dating back to 1997 were provided to us by the Nebraska Game and Parks Commission. Personal identifying information was not included as per institutional review board policy. Data from the comment cards is inputted twice a year into a protected Microsoft Access database. The comments were hand-typed verbatim by a qualified member of the Nebraska Game and Parks Commission. The response rate for these comment cards was high, hovering between 45% and 55% of registered tag holders.

There were 3000 snagging tags and 550 archery tags distributed to paddlefish tag holders in Nebraska and South Dakota in 2022, however this number changed several times in the past 23 years.

Content Analysis and Timeline:

This study used an emerging codes style of content analysis meaning that parameters were set by researchers, as well as emerging themes not initially identified by researchers but could be explained using some deductive reasoning. A timeline of this fishery contextualizes some of the predetermined parameters as well as emerging ones. Invasive carp were first identified in the Missouri River below Gavin's Pont dam in the late 1990's, very close to the start of our data set. The two main species of invasive carp, which can collectively be referred to as bigheaded carp, are the bighead carp (*Hypophthalmichthys nobilis*) and the silver carp (*Hypophthalmichthys molitrix*). Though invasive bigheaded carp first appeared in the 1990's, they were not established in high numbers until the early 2000's (Wanner and Klumb 2009.) In 2011, there was a large flood that resulted in the cancellation of the June archery season for the year. Invasive zebra mussels first appeared and became established in 2014. There was another flood during the summer of 2019 that made fishing more dangerous and difficult. In 2020, the global coronavirus pandemic prevented many from participating in either archery or snagging season. Human psychology says that self-preservation (i.e., safety) can be an evolutionary driver for certain human behaviors. Using psychology literature and inductive reasoning such as that provided by the timeline, open ended questions can be temporally contextualized.

Empirical Drivers:

Sentiment from the comment cards was assessed from the text that fishers wrote in the open ended comment section. In this content analysis, there were assumptions made about sentiments that were determined based off anecdotal history and suspected groupings. The first major assumption that we made was that paddlefish fishers who purchased a tag and participated, did so with the goal of catching a paddlefish. This assumption is based off the fact that archery is a lethal method of take, and snagging is not permitted without a special tag suggesting a consumptive fishery rather than one of catch and release. This assumption about harvest applies to all comment cards in which an individual claimed to fish. This assumption excludes 45 total comment cards from the 25-year data set where fishers indicated that they did not participate, despite having applied for and received a tag.

Another decision that we made was initially defining sentiment at the general level and each comment held one general sentiment. For the general level, the “neutral” comments are all objective, not the result of positives and negatives cancelling out. For comments that were auto coded as having both negative and positive sentiments, two qualified researchers made a joint decision on what sentiment was most reflected in the general tone. For those comments that are recoded after being auto-coded as neutral, the specific positive and negatives will be reflected in the sentiment of specific factors, rather than the general sentiment.

Arguably the most important empirical driver in this content analysis comes from the funding of this project. We were looking at the potential effects of invasive species, notably invasive carp, on recreational fishers. We know from the literature and anecdotally that invasive species impact recreational fishing. Our operating hypothesis

was that invasive species were related to negative sentiments in paddlefish snaggers and were not related to more positive sentiments in archers. Thus, we empirically know that we were looking at themes related to invasive species, and thus not part of subsequent emergent coding. The predetermined content analysis groupings that were suspected to be reflected by comment cards are as follows: participation, social engagement, management, access, and environmental.

Methods:

General sentiment:

MAXQDA 2022 is the software program in which comment cards were uploaded and analyzed. The sentiment analyses tool was used to auto code all comments with their general sentiment. All comments were then manually checked and confirmed by two individuals that the coding was accurate. A word search for certain sentiment words was then done manually after initial auto coding to ensure that the general sentiments were properly coded. The lexicon chosen to confirm positives and negatives is in Table 2.2. Capitalization was not considered, and the words were lemmatized.

Table 2.2: Words associated with. Negative and positive sentiments

<u>Positive</u>	<u>Negative</u>
Exciting	Bad
Fun	Not good
Pleasant	No fun
Good	Not fun
Great	Stink
Excellent	Smell
Beautiful	Sucks
Gorgeous	Dirty
Perfect	Gross
Enjoyable	Worst
Brilliant	Poor
Wonderful	Boring
Thrilling	Lame
Excite	Stupid
Paradise	Disgusting
Pleased	Horrible
Appreciate	Disrespectful
☺	☹
;)	;(

Code System and Emerging Codes:

Code System:

In addition to general sentiments, a more specific content and sentiment analysis was done related to the empirically decided topics. From these previously determined topics, additional trends “emerged” from the existing codes.

Results:

Using MAXQDA 2022, comment cards from 1997 to 2022 went through a content analysis. There were 8095 individual comment responses from paddlefish fishers. Of these responses, 7942 indicated they participated in fishing for the year of the returned comment card. Of these comment cards, 32% (N=2503) were from archers and 68% (N=5449) were from snaggers. Of the responses that went through a sentiment analysis, 32% (N=2623) were positive, 29% (N=2304) were neutral, 37% were negative (N=2956), and 2% (N=199) were free of any sentiment (Figure 1.1)

From the content analysis, five codes emerged as the most distinct patterns of responses. They are, participation, harvest, management, social, and environment. Invasive species was not an emergent code but was included a priori given the research objective.

Discussion:

The high response rates of comment cards relative to the number of cards distributed suggests highly engaged fishers. Response rates did not vary over time, suggesting that the norm response rate of 45-55% is likely to remain consistent under existing circumstances. Though there was an uptake in comments referring to invasive species over time, comments still represent less than 5% of returned comments.

Participation:

A large number of fishers, no matter year or method, brought up factors related to participation. Positive comments regarding participation included ones such as “Thank you for the tag, was able to fish with a buddy.” Neutral comments about participation included a lot of the questions, such as “How many tags does each state get?” Negative comments regarding participation largely stemmed around complaints of crowding, poor facilities such as boat ramps and parking, and not getting a tag with friends and family. A small subset of fishers who returned comments but didn’t fish most often reference illness or work as the barrier to participation.

Harvest:

Harvest was one of the most consistently brought up themes in the comment cards. Harvest is the most important thing relating to fishers satisfaction and thus appears along all sentiment levels, likely relating to if a fisher harvested or not. Most negative comments about harvest were related to not being able to harvest or facing significant barriers to harvest. Many of the neutral comments were just people listing the size of their fish or asking questions about harvest. Negative comments about harvest did demonstrate some intra-method trends. Fishers frequently brought up frustration with the protected harvest slot. Many also left suggestions for what they think would be a better solution than having a protected slot. Appearing multiple times was fishers wanting to be able harvest the first fish that they snagged. Snaggers may catch multiple fish before they catch one that they can legally harvest. As the season goes on, many of the fish in the protective slot may be caught multiple times. This can lead to decreased condition of the released fish that may be wounded. Snaggers have reported discomfort with releasing

some of the slot size fish given how damaged they can be. For Archers there was less of a concern for condition because it is a lethal method of take.

Management:

Archers and snaggers have consistently commented praises and complaints related to management. The most frequent management agencies mentioned are Nebraska Game and Parks Commission, South Dakota Game, Fish, and Parks, and the U.S. Army Corps of engineers. Many of the positive sentiment comments related to positive interactions with workers; for example, “met a very smart and knowledgeable game warden. He helped direct me where to put my rostrum. “There were negative comments related to the game wardens such as “the game warden very rude just doing his job”. Many negative sentiments directed towards the U.S. Army Corps of Engineers coincided with years where the dam gates were perceived as not producing favorable fishing conditions. A particularly interesting sentiment that was directed towards the Army Corps was the idea that its employees were intentionally preventing fishers from doing well. Comments accusing the Army Corps of being against fishers occurred periodically over the 25-year period of comment cards, though particularly during 1997 and 2012. Many of the comments that were directed towards management were questions. There was a subset of responses that had questions particularly about bigheaded carp. Starting around 2011, responses with questions about bigheaded carp increased in frequency. The vast majority are questions about what managers are going to do with about the species or why managers haven’t done anything about them. Questions regarding management included questions about next year’s tag distribution, quotas, ecology, and facilities.

Social:

Similar to the other categories, comments regarding social aspects of fishing were roughly evenly distributed across the range of sentiments. Within the negative sentiments a theme that emerged as particularly concerning for fishers was crowding. These concerns were more reflected in the responses from snaggers than archers. This is to be expected given that 3000 snagging tags are distributed annually and only 550 archery tags are distributed annually. Some of the negative comments directly stated experiences that were negative interactions with other fishers. For example, there was a comment that said “my line was crossed so many times I ran out my spool cutting it loose.” Particularly in the snagging seasons, comments reflected some intra-fisher interference between bank fishers and boat fishers. Comments that reflected a positive sentiment about social experiences included things like having fun with friends, spending time with family, and meeting new people.

Environment:

Environment category encompasses a wide range of topics and themes one major part that emerged was the value of maintaining good facilities. Mentioned frequently over the years were parking and boat ramps. These comments included both praises and criticism but indicates that it is important to the fishers. Common theme within the environment category were comments about the weather on the day that they fished. These were also a broad range of being positive and negative with comments about weather, however there were more negative than positive comments. This is an example of positive negative asymmetry; fishers were more likely to remember and experience strong feelings about a negative experience, such as bad weather. Water clarity was a

theme that emerged within this category of environment. After 2014 there are a handful of comments, mostly from archers, referencing the improved visibility of the water.

Though this does represent a very small portion of the respondents, the emergence of this theme after 2014 is significant. Zebra mussels were fully established in the upper Missouri River below Gavin's Point Dam by 2014. Zebra mussels are filter feeders and filter very efficiently. The prevalence of zebra mussels alongside the increased presence of bigheaded carp could be an explanation of why water clarity is brought up more after 2014.

Invasive Species:

Understanding Fisher's sentiments towards invasive species was a main objective of this study. Bigheaded carp, an invasive species, occur in large numbers where most of the paddlefish fishers chose to fish. As early as 1997, the word carp appears in the response cards. Most of these early occurrences of mentioning carp are referring to common carp or a colloquial name for the native Buffalo species, "Buffalo carp" (*Ictiobus bubalus*, *I. cyprinellus*, *I. niger*). These early occurrences give a base line for expectations of how often carp related terms occur before they became a bigger concern regarding active management in the 2000's. A comment that distinctly refers to bigheaded carp does not occur until 2006 snagging season, in which the first bigheaded carp related comment was "...Asian carp (huge) lots of fish entrails".

Though not representing a large amount of the comments, many of the comments that are about carp include very strong and intense language. Sentiment can be reflected at different intensities, adding context to a statement. For example in the English language, the word "great" elicits a more intense response than "good", however a less

intense response than “excellent”. The adjectives that occur most often alongside comments regarding bigheaded carp are smelly, bad, awful, terrible, and stinky. Though not inherently negative comments, many individuals mention things about their high numbers. Comments such as “I saw a lot of carp” do not reflect a positive or negative sentiment and thus are neutral. Comments such as “I saw too many carp” reflect a negative sentiment. These comments could easily apply to the same circumstance, demonstrating how sentiment differs person to person. The frequency of invasive species related comments or words does increase overtime, peaking in 2016. Though these comments do not represent many responses, they do tend to evoke more intense words of sentiment, affirming current management practice that have heavily emphasized bigheaded carp as being despised by fishers.

Safety

Chosen codes and emergent codes provides insight into fishers’ perspectives. Though we had several predefined groups based off existing knowledge about what fishers’ desire, some categories demonstrated in the comment cards emerged that we did not initially include. The most notable factor that emerged through the content analysis of comment cards was the topic of safety. Safety is an innate human need, and thus critical to all recreational experiences (Townhill et al. 2019). Another emergent code for the content analyses was a specific sub-code within safety regarding water flow. Initially this was thought to be coded solely under weather, but it appeared much more within comments regarding safety. The comments about safety and water flow and coincide with flood years, particularly 2011 and 2019. Climate change will lead to more extreme weather events such as floods (Bathke et al. 2014). Given that safety in fast water is

already appearing in comment cards, it can be expected that more concerns about safety will occur in the future. Managers must do their best to anticipate how safety concerns may change in the face of climate change.

Conclusion:

Many fishers share similar sentiments around particular themes related to their recreational fishing experience. Harvest was one of the most common themes mentioned in the comment cards. This supports current literature that documents a strong relationship between harvest and sentiment. Though comments regarding invasive species increased over time from both archers and snaggers, they only represent a very small set of respondents to the comment cards. Other topics such as harvest and management occur more consistently between years and method of take. This indicates that invasive species, particularly bigheaded carp, are not strongly related to the sentiments of fishers as reflected in the comment cards. This suggests that managers may want to reassess where to delegate resources towards increasing harvest, if the goal is maintaining and improving fishers recreational experiences.

Table 2.3: Frequencies and Percent of sentiments of comment cards from 1998-2021.

Sentiment	Frequency	Percent
Positive	2623	32
Negative	2304	29
Neutral	2956	37
No Sentiment	199	2

Chapter 2: Fisher's Satisfaction.

Introduction:

Satisfaction has long been used as a metric of assessing an individual's experience with a product, service, or experience (McColl-Kennedy and Schneider 2000).

Satisfaction is a way to describe an outcome in the contexts of one's own expectations and refers to the state of contentment, fulfillment, or gratification that an individual experiences when their desires, needs, or expectations are met. It is a subjective and often emotional response to the perceived level of attainment or performance in relation to one's goals, desires, or standards (Lopez and Snyder 2011). Satisfaction can encompass various aspects of life, including products, services, relationships, work, and personal wellness.

Foundational:

Cardozo (1965) described two major contributors to consumer satisfaction: one's expectations and effort exerted to acquire a product or experience. This was built upon by multiple empirical studies with both consumer products and experience. Veenhoven (1996) described developments in the existing satisfaction framework for social index research. This created a way for satisfaction with a particular aspect of a product or experience to be assessed. Since the 1960's, expectations as an integral part of satisfaction has been reaffirmed (Johnson et al. 1995; Voss et al. 1998.)

Despite the extensive literature in which satisfaction is measured or assessed, satisfaction is not consistently defined throughout the literature. Giese and Cote (2002) conducted a meta-analysis of literature in which satisfaction was defined. They identified three major themes widely used in satisfaction frameworks. The first is that consumer

satisfaction is reactive and illicit either an emotional or cognitive response. The second qualifier is that the response pertains to a specific subject. This can be in response to an experience, product, or expectation. The third major requirement is that the response occurs at a specific time relative to an experience or product use. Thus, satisfaction must illicit a response, be focused (have expectations), and be temporally relevant.

Eliciting a Response:

Humans are reactive beings, and our behaviors can depend on our reactions to the environment (Wrangham 2018.) Evolutionarily, the fight or flight reflex is the body reacting to a stimulus and eliciting an immediate response (Goldstein and Kopin 2007.) Reactions can be a complex blend of emotional and physical characteristics. A key trait of responses is that they can vary in their intensity (Larsen et al. 1986.) Nearly all languages have words that may more strongly represent a particular response or satisfaction level than others. For example, in the English language, “good” and “great” are both categorically positive, yet the word “great” typically suggests a greater intensity of satisfaction than “good.”

Focus of Response:

For satisfaction assessments to be most useful, they must be focused on a particular consumer product or experience. When satisfaction is asked at too broad a level, the inherent nuances in the framework can present a problem to an individual deciding about satisfaction. By specifically identifying a topic or aspect of a topic, it is easier to see how what truly is driving satisfaction. For example, an investigator may ask how satisfied you with your experience today. A more focused question would identify the product and/or experience and specific aspects of the product or experience that are

suspected to relate to satisfaction. For example, if an investigator wants to know if the newly installed seatbelts in a car are comfortable, rather than asking “are you comfortable?” more information would be gained to the investigator if the question was “is the seatbelt comfortable?”

Timing of Response:

It has been generally accepted that satisfaction with a product is a phenomenon that can only occur after purchase of a good or planning of an experience. The beginning of developing one’s expectations starts when a decision has been made but not applied yet (Chen et al. 2014.) The time in which a product or experience is evaluated is extremely important when trying to understand responses (Tse et al. 1990). Many evaluations for satisfaction are immediately clear to a user while others may become more apparent for a user over time, post experience. Satisfaction is dynamic and psychology tells us that recall bias impacts introspection (Larsen et al. 1986) when evaluating satisfaction. Thus, Cardozo (1965) suggests that satisfaction cannot even be evaluated over a time frame and is only true in the moment of evaluation. Though satisfaction is dynamic, timing is everything for the most robust evaluation of satisfaction from multiple individuals.

The Kano Model:

The Kano Model, developed by Professor Noriaki Kano in the 1980s, is a powerful framework used to analyze and categorize consumer preferences and needs from a product or experience. This model provides a structured approach to understanding how different features or attributes of a product or experience impact user satisfaction. It goes beyond the traditional view of user satisfaction as uniform and

introduces the idea that not all user needs are equal. The Kano Model classifies these needs into five categories: Basic Needs, Performance Needs, Excitement Needs, Indifferent Needs, and Reverse Needs.

Basic Needs (Must-be Quality):

These are fundamental requirements that users (the original model referred to customers and products or services) expect an experience to fulfill. If these needs are not met, users become dissatisfied, but meeting them doesn't necessarily increase satisfaction significantly. Basic needs are considered prerequisites for even considering a product or experience. Users may not explicitly identify these factors as important because they are a most basic expectation which may be subconscious to a user; however if the factors are not performing well, they strongly relate decreased satisfaction as reflected implicitly.

Performance Needs (One-dimensional Quality):

Performance needs, also called one-dimensional qualities, are directly related to an individual's level of satisfaction with an experience or product. As performance (i.e., outcome) improves, so does satisfaction, and as performance deteriorates, satisfaction decreases. Users are aware of these needs and can explicitly state their preferences.

Excitement Needs (Attractive Quality):

Excitement needs, or attractive qualities, are unexpected features or attributes that positively effect user satisfaction when present, but do not necessarily lead to dissatisfaction when absent. These features can create a competitive advantage and generate positive word-of-mouth by creating memorable experiences. Individuals that exceed expectations in this category can achieve a "wow" factor that is more likely to become a meaningful memory.

Indifferent Needs (Unimportant):

Indifferent needs are aspects of a product, service, or experience that neither increase nor decrease user satisfaction in a meaningful way. Users are generally neutral about these features, and they do not impact their behaviors. It's essential for managers to recognize these aspects and not invest unnecessary resources in them.

Reverse Needs (Questionable Quality):

Reverse needs are features that, when present, can lead to dissatisfaction. These attributes might not align with the users' preferences or may even be considered drawbacks. In such cases, removing or reducing these features can improve overall satisfaction. It is often assumed that invasive species would fall into this category when looking into satisfaction.

The Importance Grid

Kano's model has been built upon and refined over time to best assess satisfaction. One major framework that Kano's model led to was that of an Importance-Grid Analysis (IGA). An IGA resembles an importance-performance analysis (IPA) however it can directly relate performance of an attribute to satisfaction. An IPA, first described by Martilla and James (1977) as a tool to assess company performance, plots explicit importance on the x-axis and explicit performance on the y-axis. Lines are then placed at the mean values for the x-axis and the y-axis creating quadrants, and where the factors fall on the quadrants determines what factors are valued and how they are performing. Though an IPA can give indication on what is important to users and what is performing well, it does not directly relate any factors to satisfaction.

Vavra (1997) sought to relate importance to performance and satisfaction and described how Kano's model can be modified and visually represented through a grid with quadrants that represent four categories, modified from Kano's original five categories. This is referred to as an importance grid. The importance grid allows us to perform an Important Grid Analysis (IGA). An IGA is a tool used to prioritize features or attributes based on three key factors: user importance, user performance (i.e., outcome relative to expectation), and overall satisfaction. The x-axis represents the explicit importance dimension of the grid. This is typically represented by a number representing a categorical scale such as a Likert scale; Thus, a low x-axis placement suggests a factor that users are not recognizing as important. The y-axis, which represents implicit importance, is the correlation coefficient, Tau-B, between overall satisfaction and user stated performance relative to any expectations that they have. Tau-B is a correlation coefficient designed for the use on categorical variables, such as importance. Both satisfaction and performance of each factor relative to expectations are explicitly asked, typically post experience, before being correlated and creating the implicit importance dimension of the grid. The IGA involves plotting features on a grid with these two dimensions (implicit importance and explicit importance) to determine where to allocate resources and focus efforts (Figure 2.1; Vavra, 1997; Smith and Deppa, 2009). The factor of user importance represents how important a particular feature is to users. It is often assessed through surveys, feedback, or market research. Factors that are highly valued by users receive a high rating for explicit importance (y-axis). User performance (outcome) evaluates how well an experience or product currently performs in delivering a specific feature. It is often measured through internal assessments, quality control, or performance

metrics. If user performance is high, but not strongly related to satisfaction nor ranked as very important to users, it will be reflected in its placement on the grid.

The resulting grid divides factors into four quadrants which are formed from plotting vertical and horizontal lines at the mean explicit importance (x-axis) and the mean implicit importance (y-axis) for all factors being assessed. This allows factors relating to satisfaction to be prioritized relative to each other. The first quadrant is classified by low implicit importance and high explicit importance (i.e., below mean of all factors implicit importance, above mean of all factors for explicit importance). Factors in this quadrant are called “basic” factors. Factors in this quadrant are considered critical to users but are not explicitly stated. These factors require continuous resources from managers and are currently being managed sufficiently according to fishers. The next quadrant is classified by high implicit importance, high explicit importance and are deemed “importance-performance” factors. Factors in this quadrant are both highly valued by users and well-executed by managers. Managers should maintain and potentially enhance these features to maintain user satisfaction. The next quadrant is classified by low implicit importance and low explicit importance. These are called “performance-unimportant” factors, but in this study will be simply referred to as “unimportant”. Factors in this quadrant are not significant to users, and the management does not currently excel in delivering them. Managers may choose to deprioritize or eliminate these factors as significant drivers of satisfaction. The final quadrant is classified by high implicit importance, low explicit importance. These factors are called “excitement” factors. They can enhance satisfaction if achieved, however unlike basic factors, they will not lower satisfaction if not achieved. Managers can consider maintaining these factors but should be cautious about allocating

excessive resources to them. This integrated approach allows management agencies to allocate resources strategically, focusing on factors that are not only aligned with user needs but also provide a competitive advantage and enhance overall satisfaction. It helps ensure that efforts are directed toward areas that will have the greatest impact on user loyalty and success.

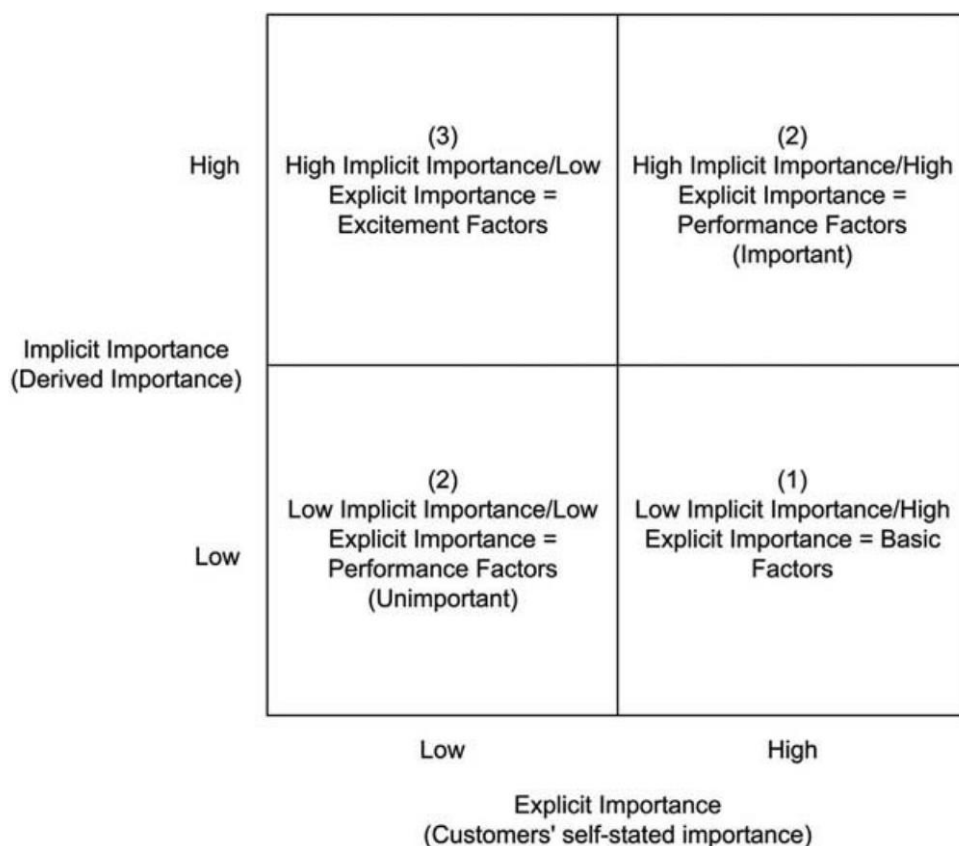


Figure 2.1 A conceptual model of the importance-grid, as modified from Kano's model by Vavra 1997

Invasive species:

In the United States of America, the management of invasive species is a significant environmental, ecological, economic, and social challenge. Invasive species is

a legal term for species that are non-native, that, when introduced to a new ecosystem, can cause harm to the native ecosystem. Though most species that are non-native and have invasive tendencies have this legal classification, some non-native species that have invasive traits are not legally considered invasive. One example is the domestic cat (*Felis catus*). Cats have devastated native ecosystems globally, yet they are not legally classified as invasive. The same is true for the Common Carp (*Cyprinus carpio*) which is not native to North America, yet it has been so normalized that it is not legally classified as an invasive.

The management of invasive species in the U.S.A. is a complex and multifaceted endeavor involving federal, state, and local agencies, as well as non-governmental organizations and concerned citizens. Typically, the stance on invasive species management follows along the basic idea of containing their ranges and controlling their impacts. Various laws, such as the Lacey Act and the Plant Protection Act, empower authorities to regulate and control the import, export, possession, and transport of potentially invasive species. Government agencies, research institutions, and other conservation organizations conduct extensive research and monitoring to identify and understand invasive species. The U.S. Geological Survey uses a what is called the RAD framework to approach management decisions regarding invasive species. This stands for resist, accept, and direct and is an adaptive framework for phases of managing invasive species (Lynch et al. 2021). Resistance can be in the form of resisting spread of the species range, or prevention. Accept refers to when no management actions in place and there are none in the immediate future. Direct is where managers actively try and steer

towards a certain objective while also recognizing that returning to a historical ecosystem structure is either not feasible or in line with current objectives.

Prevention is the most effective way of keeping invasive species from devastating a native ecosystem (Leung et al. 2002.) Efforts are made to prevent the introduction of new invasive species through strict regulations on international trade, public awareness campaigns, and early detection systems (Burgos-Rodríguez and Burgiel 2020.)

Researchers are getting better at anticipating potential spread of invasive species, which is important if prevention or eradication is the goal. In cases where invasive species have been determined to have already established a foothold beyond total eradication, management strategies may include contain and control efforts. These can involve chemical treatments, physical removals or relocations, biological controls, or a combination of methods, depending on the species and its impact (Allendorf and Lundquist 2003; Weidlich et al. 2020.) Invasive species management often requires collaboration between various stakeholders, including government agencies, landowners, conservation groups, and the public. Partnerships at local, regional, and national levels are crucial to addressing this complex issue (Simpson et al. 2009.)

Invasive species management is a continuous process that is dynamic. As ecosystems change and new threats emerge, management strategies must continue to adapt. Agencies and organizations must employ adaptive management approaches to continue to refine their techniques and strategies based on evolving knowledge and experience. Human caused climate change has increased the potential for some species to become invasive (Hellmann et al. 2008.) For very robust invasive species, this could mean that their range is expanding. For threatened species, it may mean their range is

shrinking. Considering the probable range shifts of potential invasive species is important for managers to anticipate so that management can be proactive (Beaury et al. 2020.)

Paddlefish:

Life History and Ecology:

The American paddlefish (*Polyodon spathula*) is a large bony freshwater fish in the *Acipenseridae* family. The *Acipenseridae* family includes all sturgeon and paddlefish species and is one of the most primitive clades, with features that have minimally changed in evolutionary time. There are two modern species of paddlefish which are from different genera within this family: The American paddlefish of North America and the recently extinct Chinese paddlefish (*Psephurus gladius*) of the Yangtze River basin. The American paddlefish differs from its sturgeon and Chinese paddlefish cousins in that it is a filter feeder with a very distinctive large mouth and long rostrum. The rostrum is used by the paddlefish to detect the electrical signals of zooplankton in the water column (Wilkins and Hofman, 2007) however some studies suggest only limited reduced fitness or ability to find zooplankton in paddlefish that have lost their rostrums due to trauma (Rosen and Hales, 1980). The rostrum is one of the most distinguishing physical features of the paddlefish earning the species the nickname “spoonbill”. They are easily identifiable compared to other native species due to their long and smooth rostrum that can be up to one-third of the fish’s total body length.

The American paddlefish has been recorded as weighing as much as nearly 90kg and reaching over 2m long in length (Eipfanio et al. 1996). However, paddlefish of this size are not and never were very common. Like its sturgeon relatives, paddlefish can be very long lived with some estimates putting their lifespan at 55-60 years, but most

estimates center around 30 years (Epifanio et al. 1996). Like all fish, they have indeterminate growth and can continue to grow throughout their lifespans; This allows for the assumption that the largest fish are also the oldest specimens.

Range:

The current range of the American paddlefish is greatly reduced from what it was once thought to be. There are historical accounts of paddlefish in 26 U.S. states and at least one Canadian Province. It is currently assumed to be extirpated from four states and the one Canadian province with recorded specimens: Maryland, North Carolina, New York, Pennsylvania, and Ontario. All these localities are on the periphery of the historic range of the American Paddlefish. In Pennsylvania and New York, re-introduction methods have been put in place to attempt to expand the current range to what it once was (NYDECA) Reports of Paddlefish in Canada have all been in the Great Lakes and have not been documented since 1917 and there are no reports of active conservation efforts by the Canadian governments (Halkett 1913; Committee on the Status of Species at Risk in Ontario, 2020).

Status:

The International Union for the Conservation of Animals (IUCN) places American Paddlefish as red-listed and thus vulnerable to extinction (More and Rider, 2022; IUCN Species Assessment). The U.S. Fish & Wildlife Service does not list American Paddlefish as having any direct federal protections. Like all species, paddlefish are protected by the Lacey Act which is a federal law criminalizing the illegal trade and trafficking of animals and animal products. This federal protection indirectly has affected paddlefish which are prone to illegal exploitation for their valuable roe. In a 2009 species

status report conducted by the United States Geological Survey funded Tennessee Cooperative Fish & Wildlife Research Unit, three states listed the status of their respective paddlefish fisheries as “declining” or “stable/declining”: Montana, Louisiana, and Tennessee; all three of which continue to participate in a limited recreational harvest fishery. The same 2009 status study states that the status of paddlefish is “unknown” in Virginia and Texas and “stable/unknown” in Iowa. Iowa still allows a limited recreational fishery. The study placed the populations as “stable” or “stable/increasing” in 16 states: Alabama, Arkansas, Illinois, Indiana, Kansas, Kentucky, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, West Virginia, and Wisconsin (Bettoli et al. 2009). As of 2022, all these states with the exception of Alabama, Indiana, Ohio, West Virginia, and Wisconsin (all on the periphery of the native range) allow for some form of harvesting of paddlefish.

Paddlefish in Nebraska:

The state of Nebraska allows the recreational harvest of paddlefish two months out of the year in the Missouri River, below Gavin’s Point Dam. No individual can have more than two paddlefish tags per year. Both Residents and non-residents can apply for a paddlefish permit in Nebraska. Holders of a tag from Nebraska or South Dakota can fish on either side of the Missouri river below Gavin’s Point Dam.

Paddlefish in Nebraska are stocked by several hatcheries. Gavin’s Point National Fish Hatchery located just North of the dam on the South Dakota side of the Missouri River stocks various game and non-game fish including paddlefish. Hatchery-reared individuals are released annually in stretches of the Missouri River above and below Gavin’s Point Dam. In addition to fish from the national hatchery, many states also stock

paddlefish in the Missouri River. Nebraska has not stocked Paddlefish into the Missouri river (NGPC database) since 1985, however neighboring states within the Missouri River basin do stock them including Missouri, South Dakota, and Montana.

June paddlefish season is exclusive to archery for method of capture. There are no length limits for harvesting paddlefish via archery and the first fish hit must be harvested. In October, snagging is the exclusive method of harvest for paddlefish tag holders. In October, any paddlefish snagged that is between 35” and 45” must be returned to the water unharmed. This is known colloquially as a “slot fish” and most snagged fish do fall into the restricted length slot. Unlike in archery season, multiple fish can be caught via snagging before one is harvested and you do not have to harvest the first fish landed. This can result in some slot-sized fish being snagged multiple times, potentially reducing fitness and condition. Additionally, paddlefish below dams including Gavin’s Point are more likely to be missing rostrums, thought to be a result of passing through turbines (Turney et al. 2022).

Recent threats to paddlefish outside of historical overharvest and exploitation includes the presences of invasive species. Invasive carp species have been present on the Missouri river since the 1990’s but did not become established until the early 2000’s (Cooke 2016). Since establishing, they have caused devastating ecological effects on native species and humans alike. Invasive carp is an encompassing term to refer to four species all native to Asia: Silver Carp (*Hypophthalmichthys molitrix*), Bighead carp (*Hypophthalmichthys nobilis*), Grass carp (*Ctenopharyngodon idella*), and Black carp (*Mylopharyngodon piceus*). Common carp (*Cyprinus carpio*) are also technically invasive but generally not considered within “invasive carp” because they have been

established for over a century in the region. Other aliases to refer to these four species include jumping carp and Asian carp. Bigheaded carp is a taxonomic reference to two species in the *Hypophthalmichthys* genus: bighead carp and silver carp. Though not all species jump out of the water, this behavioral trait found mostly in silver carp has become a well-known phenomenon across anglers and recreators alike.

Methods:

Onsite Survey---Archery

Tag holders were intercepted at the boat launch. If they consented, they were be asked a series of questions including tag number, zip code, and party size. After getting that basic information, they were asked to rank 20 different experiences that may hold importance to archers targeting paddlefish. The rankings were asked on a five-point scale: not at all important, slightly important, moderately important, very important, and extremely important. The importance ranking is done at the party level, not the individual level. After having assigned ranked importance to the 20 different experiences, parties with tag holders were able to continue with their launch.

Upon return, the tag holders were once again be intercepted. They were then asked to rank the same 20 experiences relative to the expectations they had for that day. This was also on a five-point scale: far below expectations, below expectations, met expectations, exceeded expectations, and far exceeds expectations. This allows for a comparison of the predeparture importance rankings to the post trip assessment of expectations. For example, if the experience “opportunities to shoot at bigheaded carp” was ranked as high importance during pre-departure, yet after the trip it is decided that there were far fewer opportunities to shoot at carp then expected, it will be reflected when comparing the importance relative to expectations.

In addition to the 20 ranked experiences, post trip surveys included questions on harvest, effort, overall satisfaction and aquatic invasive species (AIS). If a paddlefish was harvested, tag holders were asked to self-report the size of the paddlefish (less than 35”, between 35” and 45”, and greater than 45”), condition of the fish, and number of shots

fired before harvest. If the party had harvested other species including bigheaded carp, number of shots fired, and number individuals of other species harvested was also be recorded. Overall satisfaction was measured at the party level on a five-point scale: very dissatisfied, somewhat dissatisfied, neither dissatisfied nor satisfied, somewhat satisfied, and very satisfied. Questions about aquatic invasive species (AIS) were primarily focused on awareness, such as asking if the party knows where zebra mussels are located in Nebraska and if they believe they are present in the Missouri River below Gavin's Point Dam. They were also be asked if they have heard of the phrase "clean, drain, dry", a common phrase describing the steps taken to prevent the spread of zebra mussels to different waterbodies via traversing boats. A final question about aquatic invasive species (AIS) asked if parties have been impacted by aquatic invasive species (AIS) today. If they responded yes, a direct follow-up question was asked about if it was a positive impact or negative impact.

Mail Survey---Archery

A mail survey was sent to all paddlefish archery tag holders in the months following the completion of the season. The mail survey had two formats; one to accommodate individuals who already returned Nebraska Game and Parks supplied comment cards, and one for those who have not returned the annually distributed comment cards. Nebraska Game and Parks Commission have distributed comment cards to all tag holders since at least 1997. These comment cards request that archers and snaggers mark days fished, locations fished, harvest size, and any additional comments that they may wish to share. Since 2019, return rates of these comment cards have centered around 45-55%. To avoid asking tag holders redundant questions on both the

comment cards and separate surveys, one survey format was sent to non-respondents that includes information found on the comment cards, whereas another format included only the new survey questions not found on the comment card.

The questions unique to the survey that are sent to all tag holders asked about the same 20 experiences that may be of importance that were asked onsite. Tag holders were once again be asked to rank importance and to rank outcomes relative to their expectations, however, this is on the season level rather than the daily level. Due to the fact that an individual may fish more than one day of the season, understanding a wholistic impression of the fishing season is important. In addition to the 20 experiences, additional factors that are only relevant on the season scale were asked to be ranked. This included ranked importance relative to expectations for things such as amount of meat harvested, quality of meat harvested, and length of fish harvested. Overall satisfaction at the season level was also be asked and provides important data for correlations.

Information on effort, paddlefish size, paddlefish condition, other species harvested, and aquatic invasive species was asked in the same way they were during the onsite surveys. This allows us to assess recall bias among respondents that were interviewed onsite, while also providing that information from individuals who fished the June Archery season and were not intercepted onsite.

Onsite Survey---Snagging

Onsite snagging surveys were conducted very similarly to the onsite archery surveys. The most notable difference is that there are many more snaggers than archers and that they snag from both boats and from the shore. Logistically, this is more complicated than archery season as the surveyor had to intercept fishers at boat ramps

and at a central location to snaggers on the shore. Apart from this, there was slight modifications to the list of experiences that were asked to rank importance (pre-departure) and relative to expectations (post-trip). These modifications are to reflect the differences in methods. For example, instead of asking “opportunities to shoot at paddlefish” it was modified to “opportunities to snag paddlefish”. Instead of “shots fired”, it was be asked “estimated number of casts” and “fish landed before harvest”. In snagging season, anglers can be selective and wait till they snag a fish that is of a certain legal size. Though without a size limitation, archers must harvest the first fish they land due to the mortality of the method. Snaggers are afforded a bit more flexibility and may land dozens of fish before landing one to harvest.

Mail Survey---Snagging

Mail surveys for snagging were distributed in the same way the archery mail surveys were. Two formats were used account for individuals who have already answered the Nebraska Game and Parks Commission annual comment card and those who have not returned comment cards. Similarly, to the onsite survey, snagging mail surveys were slightly modified from either archery survey to account for different terminology and questions that are method specific.

Figures

Figure 2.2 The Missouri River. Gavins Point Dam is identified in the left upper corner.

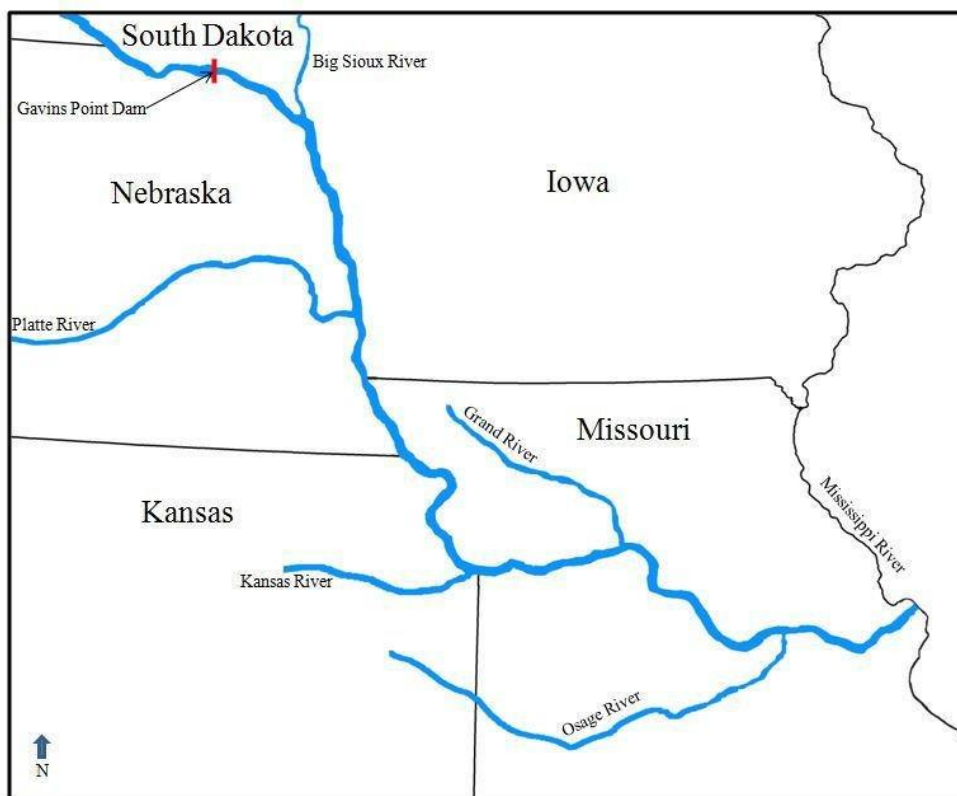


Figure 2.3: Gavins Point Dam Tailwaters. Yello stars indicate areas of boat access.

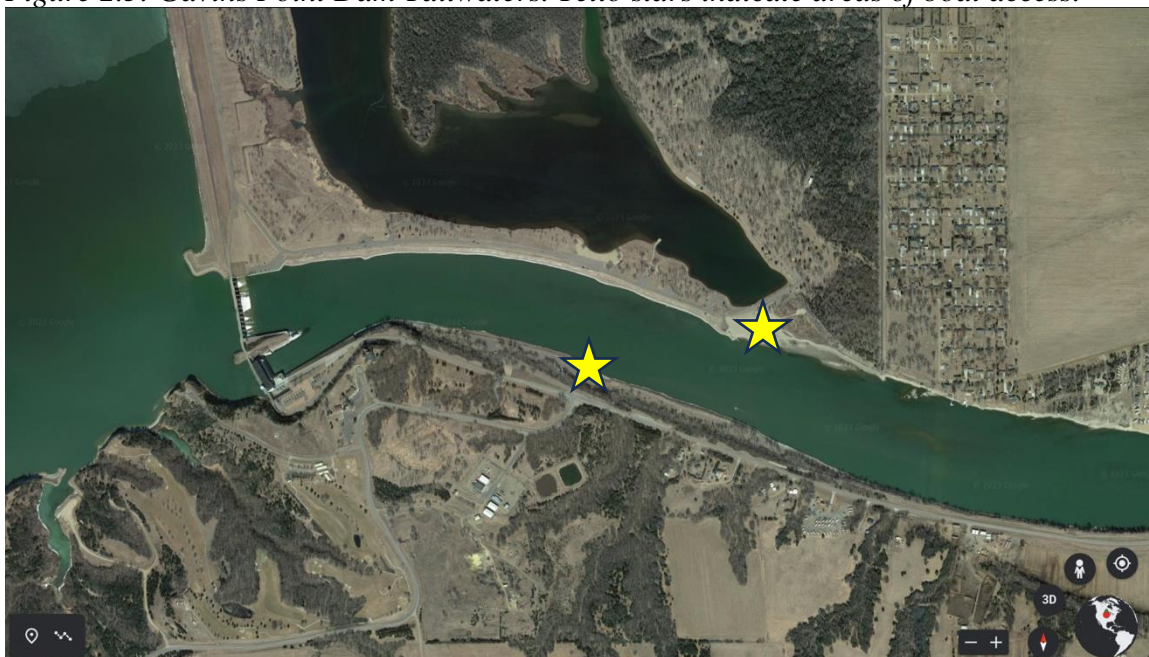


Table 2.1 Factor codes for importance-grid analysis at the day level

June Onsite Factors	Code	October Onsite Factors	Code
Seeing Paddlefish	SEPF	Seeing Paddlefish	SEPF
Shooting at Paddlefish	SAPF	Snagging Paddlefish	SNPF
Harvesting Paddlefish	HVPF	Harvesting Paddlefish	HVPF
Harvesting a Trophy Paddlefish	TRPF	Harvesting Trophy Paddlefish	TRPF
Seeing Bigheaded Carp	SEBH	Seeing Bigheaded Carp	SEBH
Shooting Bigheaded Carp	SABH	Snagging Bigheaded Carp	SNBH
Harvesting Bigheaded Carp	HVBH	Harvesting Bigheaded Carp	HVBH
Seeing Other Species	SEOT		
Shooting at Other Species	SAOT		
Harvesting Other Species	HVOT		
Seeing other People Harvest	PLHV	Seeing Other People Harvest	PLHV
Weather	WTHR	Weather	WTHR
Fishing Waterbodies Free of AIS	AISF	Fishing Waterbodies free of AIS	AISF
Fishing Uncrowded Conditions	UNCR	Fishing Uncrowded Conditions	UNCR
No Interference	INTF	No Interference	INTF
Access to Fishing Spot	ACFS	Access to Fishing Spot	ACFS
Time	TIME	Time	TIME
Effort (Number of shots)	EFFT	Effort	EFFT
Access to Waterbody	ACWB	Access To Waterbody	ACWB
Social	SOCL	Social	SOCL

Table 2.2 Factor codes for the importance-grid at the season level

June Season Factors	Code	October Season Factors	Code
Seeing Paddlefish	SEPF	Seeing Paddlefish	SEPF
Shooting at Paddlefish	SAPF	Shooting at Paddlefish	SNPF
Harvesting Paddlefish	HVPF	Harvesting Paddlefish	HVPF
Harvesting a Trophy Paddlefish	TRPF	Harvesting a Trophy Paddlefish	TRPF
Seeing Bigheaded Carp	SEBH	Seeing Bigheaded Carp	SEBH
Shooting at Bigheaded Carp	SABH	Shooting at Bigheaded Carp	SNBH
Harvesting Bigheaded Carp	HVBH	Harvesting Bigheaded Carp	HVBH
Harvesting a Trophy Bigheaded Carp	TRBH	Harvesting a Trophy Bigheaded Carp	TRBH
Weather	WTHR	Weather	WTHR
Fishing Waterbodies Free of Invasive Species	AISF	Fishing Waterbodies Free of Invasive Species	AISF
Interference	INTF	Interference	INTF
Fishing Uncrowded Condition	UNCR	Fishing Uncrowded Condition	UNCR
Access to Fishing Spot	ACFS	Access to Fishing Spot	ACFS
Time	TIME	Time	TIME
Effort	EFFT	Effort	EFFT
Access to Waterbody	ACWB	Access to Waterbody	ACWB
Social	SOCL	Social	SOCL
Quality of Meat	QLMT	Quality of Meat	QLMT
Pounds of Meat	LBMT	Pounds of Meat	LBMT
Feeling of Nature	NTRE	Feeling of Nature	NTRE
Feeling of Outdoors	OTDR	Feeling of Outdoors	OTDR
Length of Paddlefish' Condition	LNGT	Length of Paddlefish' Condition	LNGT
Seeing Others Harvest	PLHV	Seeing Others Harvest	PLHV
Seeing Other Species	SEOH	Seeing Other Species	SEOH
Shooting Other Species	SHOH	Shooting Other Species	SNOH
Harvesting Other Species	HVOH	Harvesting Other Species	HVOH
Harvesting a Trophy Other Species	TROH	Harvesting a Trophy Other Species	TROH

Table 2.4 Archers Day Level Correlations

June Day Level Correlations					
	Factor	Explicit Importance	Expectations	Tau-B	Significance
1	SHPF	4.16	4.12	0.314	0.001
2	SEPF	4.43	4.03	0.376	0.001
3	HVPF	3.73	3.87	0.371	0.001
4	TRPF	2.67	2.73	0.194	0.008
5	SEBH	2.80	2.70	0.011	0.882
6	SHBH	3.23	2.92	0.069	0.343
7	HVBH	2.87	2.66	0.064	0.383
8	SEOH	2.68	2.66	0.058	0.433
9	SHOH	2.40	2.52	0.109	0.137
10	HVOH	2.25	2.38	0.128	0.082
11	PLHV	3.15	3.03	0.307	0.001
12	WTHR	3.89	3.83	0.232	0.002
13	AISF	3.34	3.32	0.159	0.030
14	UNCR	3.73	3.68	0.115	0.121
15	INTF	3.98	3.88	0.125	0.092
16	ACFS	3.90	4.07	0.098	0.193
17	TIME	3.53	3.17	0.090	0.218
18	EFFT	2.67	2.71	0.019	0.791
19	ACWB	4.44	4.35	0.268	0.001
20	SOCL	4.27	4.37	0.202	0.009
N	20	20	20	20	20
Mean		3.4060	3.3500	0.16545	0.18645
Median		3.4350	3.2450	0.12650	0.08700
Std. Error of Mean		0.15543	0.15065	0.025198	0.058368
Range		2.19	1.99	0.365	0.881
Std. Deviation		0.69510	0.67371	0.112689	0.261029
Variance		0.483	0.454	0.013	0.068
a. Limited to first 100 cases.					

Table 2.5 Snaggers Day Level Correlations:

	Factor	Explicit Importance	Expectation	Tau-b	Significance
1	SNPF	4.05	2.46	0.521	0.001
2	SNKP	3.98	1.98	0.443	0.001
3	HVPF	3.82	2.06	0.529	0.001
4	TRPF	2.88	1.63	0.385	0.001
5	SEBH	1.47	2.71	0.162	0.003
6	SNBH	1.39	2.52	0.127	0.021
7	HVBH	1.37	2.42	0.087	0.115
8	PLHV	3.20	2.29	0.422	0.001
9	WTHR	3.69	3.93	0.017	0.765
10	AISF	3.51	2.84	0.041	0.475
11	UNCR	3.90	3.17	0.083	0.135
12	INTF	3.88	3.39	0.080	0.151
13	ACFS	3.96	3.32	0.232	0.001
14	TIME	3.49	2.97	0.155	0.006
15	EFFT	2.96	3.59	-0.185	0.001
16	ACWB	4.54	3.99	0.012	0.837
17	SOCL	4.37	4.08	0.123	0.033
Total	N	17	17	17	17
	Mean	3.3212	2.9029	0.19024	0.14988
	Median	3.6900	2.8400	0.12700	0.00600
	Range	3.17	2.45	0.714	0.836
	Std. Deviation	1.01114	0.73980	0.201737	0.272185
	Std. Error of Mean	0.24524	0.17943	0.048928	0.066014
	Variance	1.022	0.547	0.041	0.074
a. Limited to first 100 cases.					

Table 2.7 Snaggers Season Level Correlations
Case Summaries

		Factor	Importance	Expectation	Tau-B	Significance
1		SEPF	3.65	2.68	0.580	0.001
2		SNPF	4.31	2.86	0.467	0.001
3		HVPF	3.48	2.48	0.501	0.001
4		TRPF	2.46	2.24	0.424	0.001
5		LNGT	3.13	2.43	0.447	0.001
6		LBMT	2.75	2.29	0.409	0.001
7		QLMT	3.44	2.55	0.364	0.001
8		CNDN	3.07	2.64	0.365	0.001
9		SEBH	1.52	3.17	-0.085	0.053
10		SNBH	1.31	3.01	-0.088	0.046
11		HVBH	1.32	2.91	-0.077	0.082
12		TRBH	1.22	2.75	-0.035	0.435
13		SEOH	2.54	2.55	0.147	0.001
14		SNOH	2.43	2.52	0.112	0.014
15		HVOH	2.88	2.52	0.120	0.008
16		TROH	2.86	2.46	0.103	0.023
17		PLHV	3.41	2.81	0.456	0.001
18		WTHR	3.47	3.25	0.312	0.001
19		AISF	3.61	2.61	0.186	0.001
20		UNCR	3.80	2.65	0.197	0.001
21		INTF	3.75	2.72	0.160	0.001
22		ACFS	3.39	2.90	0.211	0.001
23		TIME	3.72	3.14	0.230	0.001
24		EFFT	3.64	3.08	0.127	0.004
25		ACWB	4.23	3.16	0.170	0.001
26		SOCL	4.20	3.35	0.197	0.001
27		OTDR	2.83	3.64	0.165	0.001
28		NTRE	2.56	3.64	0.158	0.001
.						
Total	N	28	28	28	28	28
	Minimum	ACFS	1.22	2.24	-0.088	0.001
	Maximum	WTHR	4.31	3.64	0.580	0.435
	Mean		3.0350	2.8400	0.22582	0.02446
	Median		3.2600	2.7500	0.19150	0.00100
	Std. Error of Mean		0.16560	0.07037	0.034680	0.015641
	Range		3.09	1.40	0.668	0.434
	Std. Deviation		0.87625	0.37894	0.183508	0.082763
	Variance		0.768	0.144	0.034	0.007

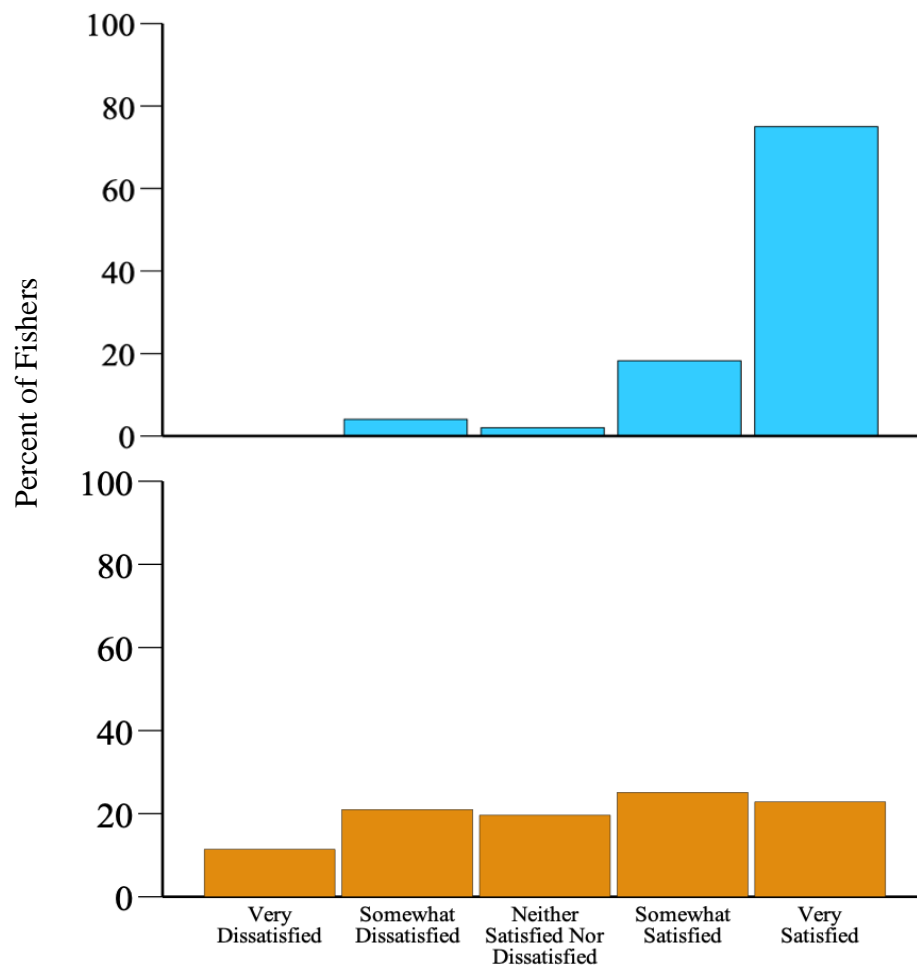


Figure 2.4 Overall satisfaction of paddlefish fishers at the season-level. Blue represents archers, (N = 151) orange represents snaggers (N = 346)

Table 2.8: Frequency tables of overall satisfaction

Archery Day-Level Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Dissatisfied	1	0.7	0.7	0.7
	Somewhat Dissatisfied	7	4.6	4.6	5.3
	Neither Satisfied nor Dissatisfied	6	4.0	4.0	9.3
	Somewhat Satisfied	26	17.2	17.2	26.5
	Very Satisfied	111	73.5	73.5	100.0
	Total	151	100.0	100.0	

Snagging Day Level Overall Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Dissatisfied	25	11.4	11.4	11.4
	Somewhat Dissatisfied	46	21.0	21.0	32.4
	Neither Satisfied nor Dissatisfied	43	19.6	19.6	52.1
	Somewhat Satisfied	55	25.1	25.1	77.2
	Very Satisfied	50	22.8	22.8	100.0
	Total	219	100.0	100.0	

Archery Season Level Overall Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Dissatisfied	2	1.4	1.4	1.4
	Somewhat Dissatisfied	4	2.7	2.7	4.1
	Neither Satisfied nor Dissatisfied	9	6.2	6.2	10.3
	Somewhat Satisfied	27	18.5	18.5	28.8
	Very Satisfied	104	71.2	71.2	100.0
	Total	146	100.0	100.0	

Snagging Season-Level Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Dissatisfied	51	12.7	12.8	12.8
	Somewhat Dissatisfied	77	19.2	19.3	32.0
	Neither Satisfied nor Dissatisfied	60	14.9	15.0	47.0
	Somewhat Satisfied	114	28.4	28.5	75.5
	Very Satisfied	98	24.4	24.5	100.0
	Total	400	99.5	100.0	

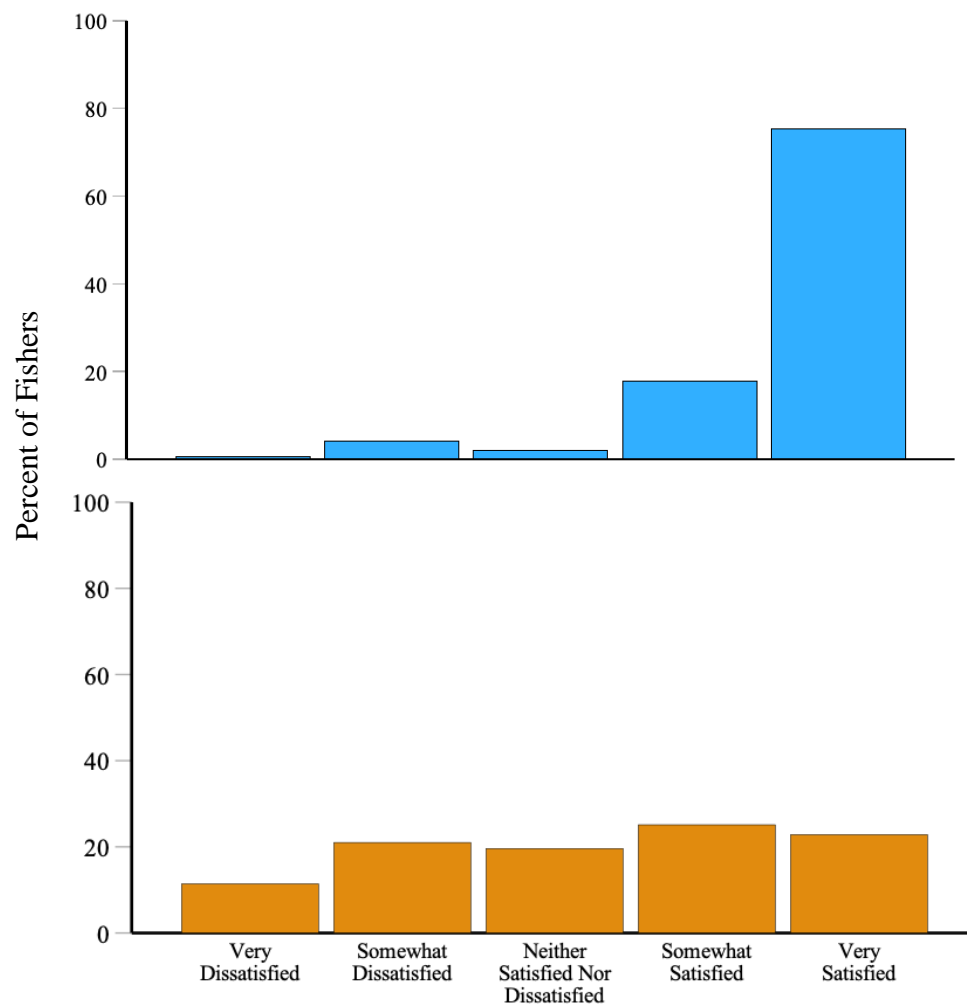


Figure 2.5 : Overall satisfaction of paddlefish fishers at the day-level. Blue represents archers, (N = 146) orange represents snaggers (N = 217)

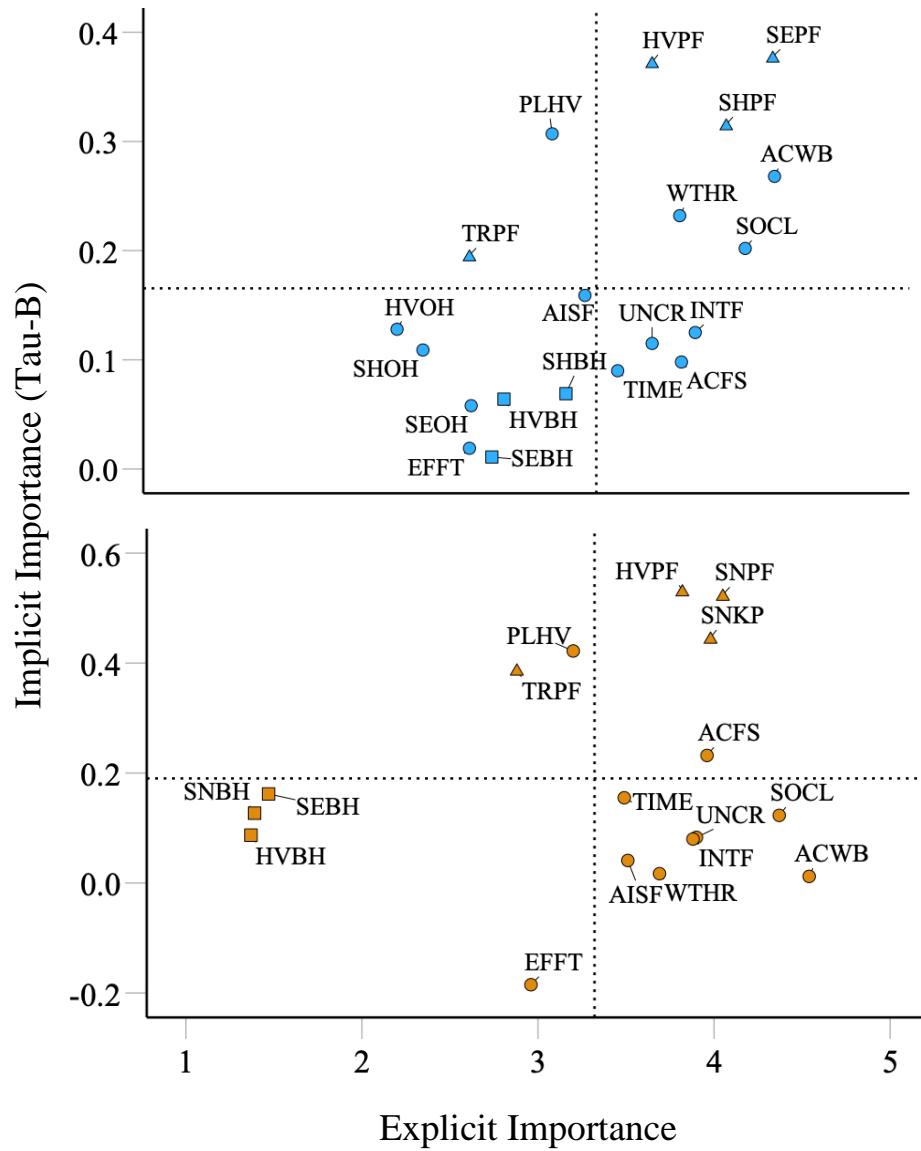


Figure 2.5. An importance grid of paddlefish fishers on the day-level. Blue represents archers (top) and Orange Represents snaggers (bottom). Triangles are paddlefish factors and squares are bigheaded carp factors. Circles are used for the remaining factors.

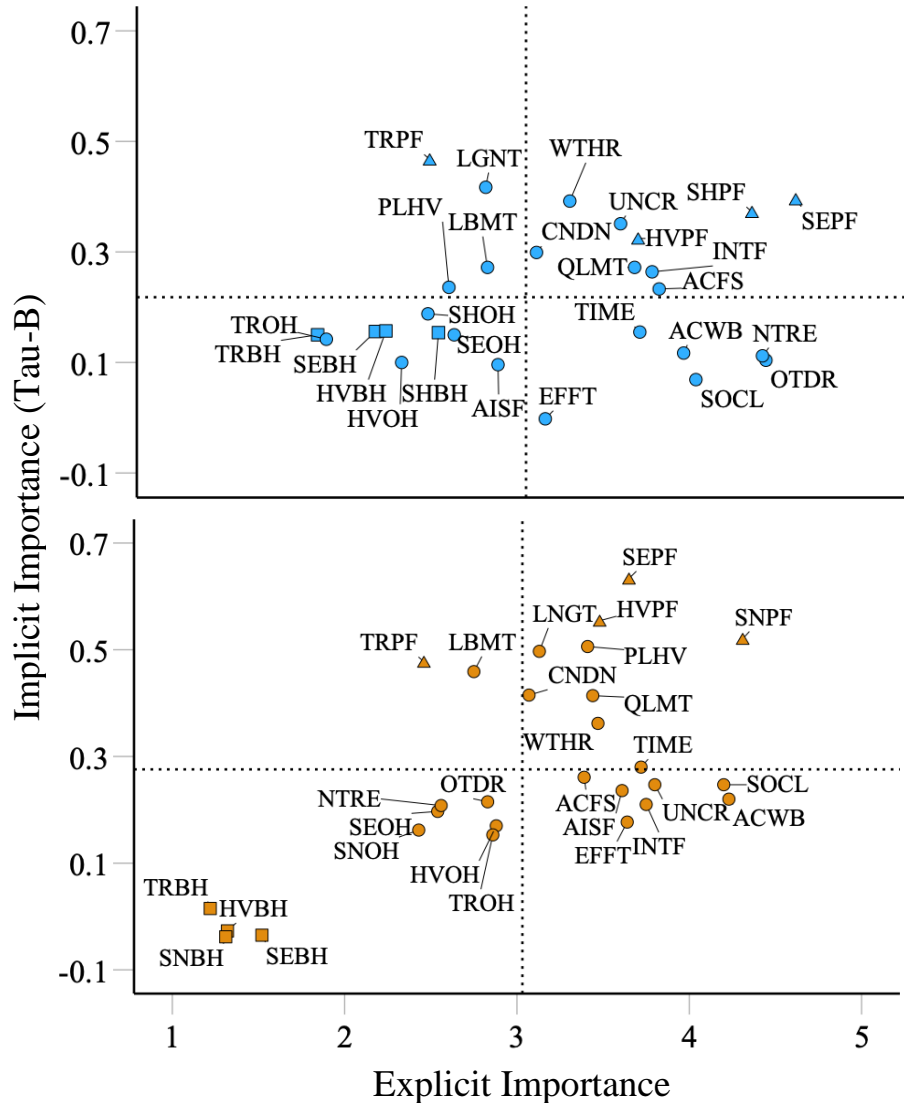


Figure 2.6. An importance grid of paddlefish fishers on the season-level. Blue represents archers (top) and Orange Represents snaggers (bottom). Triangles are paddlefish factors and squares are bigheaded carp factors. Circles are used for the remaining factors.

Table 2.9: Frequency Tables of the impacts of invasive species

Snagging Day Level Invasive Species

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negatively Impacted	36	16.4	16.5	16.5
	Positively Impact	11	5.0	5.0	21.6
	Not Impacted	171	78.1	78.4	100.0
	Total	219	99.5	100.0	
Total		219	100.0		

Archery Day-Level Invasive Species

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative Impact	13	8.6	8.6	8.6
	Positive Impact	9	6.0	6.0	14.6
	No Impact	129	85.4	85.4	100.0
	Total	151	100.0	100.0	

Snagging Season Level Invasive Species

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negatively Impacted	123	30.6	30.8	30.8
	Positively Impacted	36	9.0	9.0	39.8
	Not Impacted	240	59.7	60.2	100.0
	Total	399	99.3	100.0	
Total		399	100.0		

Archery Season-Level Invasive Species

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative Impact	10	6.8	6.9	6.9
	Positive Impact	23	15.8	15.9	22.8
	No Impact	112	76.7	77.2	100.0
	Total	145	99.3	100.0	
Total		146	100.0		

Table 2.10 : Frequency tables of encounters with bigheaded carp

Archery Season-Level Bigheaded Carp Encounter

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	126	86.3	87.5	87.5
	No	18	12.3	12.5	100.0
	Total	144	98.6	100.0	
Total		146	100.0		

Archery Day-Level Bigheaded Carp Encounters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	19	12.6	12.6	12.6
	Yes	132	87.4	87.4	100.0
	Total	151	100.0	100.0	

Snagging Season-Level Bigheaded Carp Encounters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	67	16.7	17.0	17.0
	Yes	328	81.6	83.0	100.0
	Total	395	98.3	100.0	
Total		395	100.0		

Snagging Day-Level Bigheaded Carp Encounters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	59	26.9	26.9	26.9
	Yes	160	73.1	73.1	100.0
	Total	219	100.0	100.0	

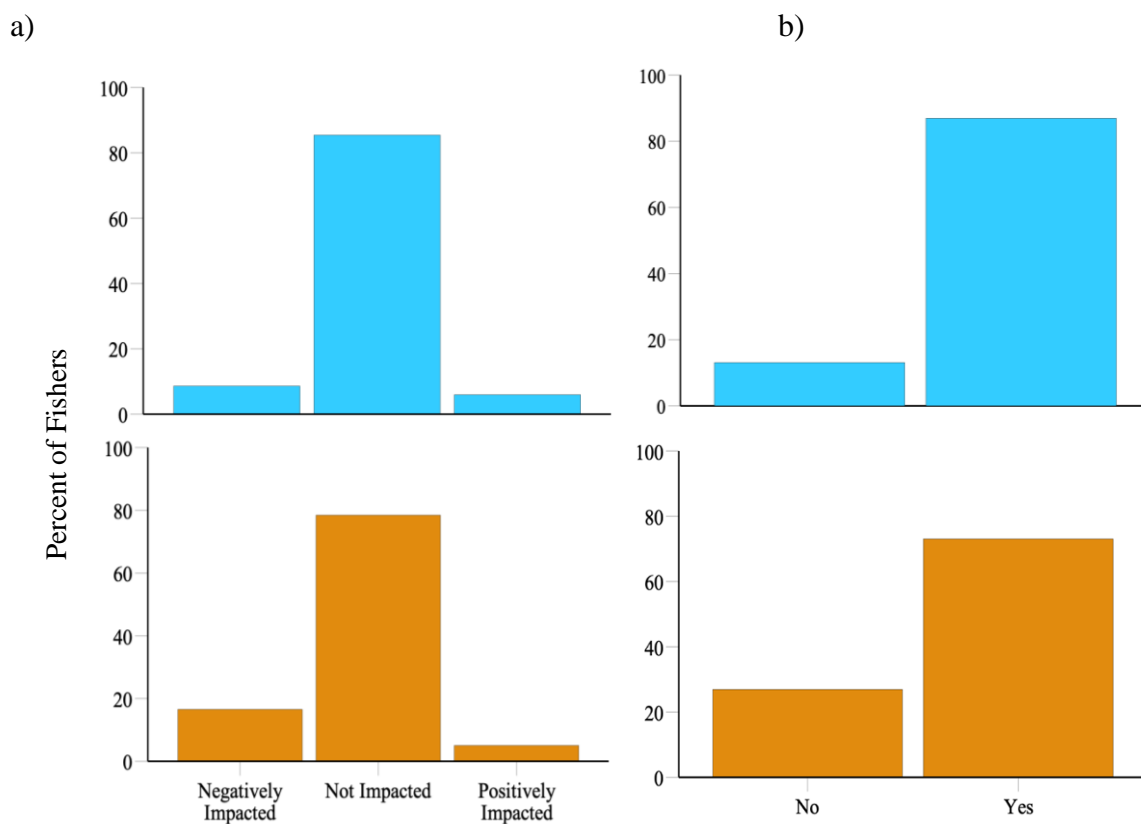


Figure 2.7 Day-level results, blue represents archers and orange represents snaggers. Figure a. (left) are percentages of fishers responses to the question “Have you been influenced by invasive species today”? Figure b (right) are the percentage of fishers who answered that they encountered a bigheaded carp.

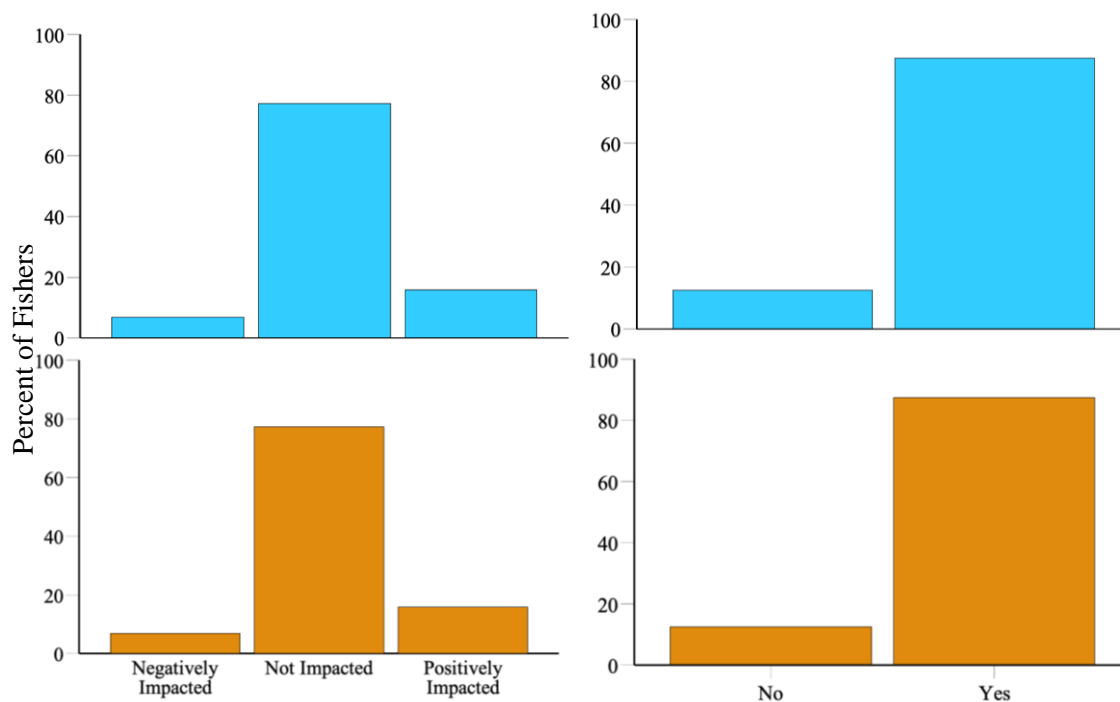


Figure 2.8 Season-level results, blue represents archers and orange represents snaggers. Figure a. (left) are percentages of fishers' responses to the question "Have you been influenced by invasive species today"? Figure b (right) are the percentage of fishers who answered that they encountered a bigheaded carp.

Results

Day Level Surveys:

Most snaggers (73% ; N= 219) and archers (88% ; N=151) reported seeing a carp during their recreational fishing experience (Figure 2.2). In archery season, 93% of fishers (N = 146, Figure 2.2) reported being either somewhat satisfied or very satisfied. In snagging season, 48% of fishers (N= 219, Figure 2.2) were either somewhat satisfied or very satisfied. Explicit importance is the direct stated importance of a factor as reported by the fisher. Implicit importance is the correlation between the mean importance of each factor and mean total fishers' satisfactions.

All levels of responses were provided pre and post survey. For the archery day level IGA, correlations (Tau-B) between satisfaction responses and each explicitly reported factor of importance ranged between 0.019 (effort) and 0.463 (harvesting a trophy paddlefish ; Figure 2.5; Table 2.4). For snagging day level IGA, correlations (Tau-B) between satisfaction responses and each explicitly reported factor of importance ranged between -0.185 (effort) and 0.529 (harvest; Table 2.3)

For archers, access to fishing spot was a basic factor. For snaggers, no interference, uncrowded conditions, social experiences, fishing waterbodies free of invasive species, and access to fishing spot were also basic factors. For both archers and snaggers, seeing a paddlefish, shooting or snagging a paddlefish, and harvesting a paddlefish are important performance factors (Figure 2.2). For archers, no interference, uncrowded conditions, and social experience of fishing are important performance factors. For snaggers, access to fishing spot is an important performance factor.

For archers and snaggers, seeing others harvest paddlefish and harvesting a trophy paddlefish are excitement factors (Figure 2.2). For archers and snaggers, seeing bigheaded carp, shooting or snagging (method dependent) bigheaded carp, harvesting bigheaded carp, and effort are performance unimportant factors. Archers additionally identified seeing other species, shooting other species, harvesting other species, and fishing waterbodies free of invasive species unimportant performance factors.

We asked fishers to self-report the influence of invasive species on their recreational experience. Vast majorities (>76%) of archers and (>78%) of snaggers reported that they had not been impacted by invasive species (Figure 2.2). For the archers and snaggers that reported being impacted by invasive species ($S_{\text{snagging}} = 47$; $N_{\text{archery}} = 33$), 30% of archers and 70% of snaggers were negatively impacted (Figure 2.2).

Season Level Surveys:

Most snaggers (82%; $N = 395$) and archers (88%; $N = 146$) reported seeing a carp during the season (Figure 2.2). In archery season, 90% of fishers ($N = 146$, Figure) reported being either somewhat satisfied or very satisfied. In snagging season, 53% of fishers (Figure 2.4) were either somewhat satisfied or very satisfied. Explicit importance is the direct stated importance of a factor as reported by the fisher. All levels of responses were provided pre and post survey. For the archery season level IGA, correlations (Tau-B) between satisfaction responses and each explicitly reported factor of importance ranged between 0.02 (effort) and 0.464 (harvesting a trophy paddlefish ; Table 2.6). For the snagging season-level IGA, correlations (Tau-B) between satisfaction responses and each explicitly reported factor of importance ranged between -0.008 (snagging bigheaded carp) and 0.580 (harvest; Table 2.3)

At the season level for archers, access to waterbody, time, feeling of nature, feeling of being outdoors, and social were basic factors. For snaggers, no interference, uncrowded conditions, social experiences, fishing waterbodies free of invasive species, and access to fishing spot were also basic factors. For both archers and snaggers, seeing a paddlefish, shooting or snagging a paddlefish, and harvesting a paddlefish are important performance factors (Figure 2.2).

For archers and snaggers, seeing others harvest paddlefish and harvesting a trophy paddlefish are excitement factors (Figure 2.2). For archers and snaggers, seeing bigheaded carp, shooting, or snagging (method dependent) bigheaded carp, harvesting bigheaded carp, and effort are performance unimportant factors. The additional factor asked on the season level including pounds of meat was an excitement factor for both methods, and length were excitement for archers and important performance factors for snaggers.

We asked fishers to self-report the influence of invasive species on their entire season recreational paddlefish fishing experiences. Vast majorities (>76%) of archers and (>59%) of snaggers reported that they had not been impacted by invasive species (Figure 2.4).

Discussion:

Satisfaction and harvest:

Harvest has long been considered the most important factor contributing to hunters' or fishers' satisfaction. Successfully harvesting game or catching fish can represent a significant accomplishment for hunters and fishers. It often requires skill, knowledge, and patience that can also result in a trophy as a display of expertise. Hunting

and fishing have historically been essential for human survival and development, providing a source of food, especially protein, and other material resources such as fabrics. Harvesting game or fish can directly contribute to sustenance and self-sufficiency, or at least temporarily reduce reliance on other food sources, making it a highly practical and satisfying endeavor. In wildlife studies, harvest related factors such as reaching your bag limit and seeing a lot of the target species have been consistently reported as influencing satisfaction (Schroeder et al. 2019). Using an importance grid, Gruntorod et al. (2020) studied factors that influence turkey hunter satisfaction in Nebraska and similarly identified harvest-related factors such as seeing a turkey, opportunities to shoot a turkey, and harvesting a turkey as performance-important factors (i.e., implicitly important, and explicitly very important).

Bigheaded Carp:

Invasive species may be directly or indirectly influencing fishers' ability to harvest. Invasive bigheaded carp species, particularly the silver carp and bighead carp, are species that are not native to North America and have become significant economic, ecological, and social concerns since their appearance on the continent in the 1960's (Kolar et al. 2010). These carp species have thrived outside of their native range because of their adaptability to North American food sources, high fecundity, and tolerance to broad environmental factors (Hayer et al. 2014). Bigheaded carp have been established below Gavin's Point Dam since at least the 1990's. A population of the native species the American paddlefish occupy the waters below Gavin's Point Dam in a relatively high density (Mestl and Sorensen, 2009). This is because Gavin's Point Dam is considered the uppermost un-impounded stretch of the Missouri River, and thus a congregation point for

fishes swimming upriver. It is currently impossible for fish to pass the dam upstream, which leads into Lewis and Clark Lake. Both bigheaded carp and paddlefish are planktivorous, however there is little known on how the species specifically may compete for resources. If there is competition between the bigheaded carp and paddlefish, this may indirectly affect potential to harvest, and thus satisfaction. More research is needed to determine the role of competition between bigheaded carp and paddlefish. Our data are very consistent with the literature in suggesting that harvest is an important factor to paddlefish fishers' satisfaction.

Bigheaded carp on the importance grid:

The importance grid framework classifies factors that are basic and important as the ones in which resources should be directed to when managing for satisfaction. Because of this, the basic factors are the most important to managers to direct research to. There are several factors that have been mutually identified by snaggers and archers as influencing and not influencing satisfaction at both the day-level and the season-level. We initially hypothesized that snaggers will be negatively influenced by the presence bigheaded carp while archers may feel not influenced or positively influenced by their presence. This is because archers may enjoy the additional targets and additional ability to continue fishing after filling their paddlefish tag. It was hypothesized that snaggers may be more negatively influenced by the carp species as they are often incidentally snagged, requiring fishers to expend energy that was meant for paddlefish. The importance grid analyses for both methods of take at both temporal scales did not support our hypotheses that invasives species are influencing fishers' satisfaction.

Snaggers and archers at both the day level and the season level mutually identify seeing carp, shooting, or snagging bigheaded carp, and harvesting bigheaded carp as unimportant factors. The season level survey indicates that the additional bigheaded carp factor of catching a trophy bigheaded carp is similarly unimportant. Seeing other species, snagging or shooting at other species, harvesting other species and, (on the season level survey), harvesting a trophy of another fish species are also basic factors. The mutual assignment of the bigheaded carp factors as basic at all levels and methods of take, is contrary to our initial hypothesis that postulated that the additional targets during archery season may allow for a synergistic fishing experience for paddlefish archers. It was not thought this would be positively related to snaggers given that snagging is not visual in the way that archery is as far as targeting certain species. Given that the importance grid places bigheaded carp factors, and other species factors as basic suggests that there is not an influence of opportunities for synergistic fishing on paddlefish fishers satisfactions.

It is possible that explicit importance of factors relating to bigheaded carp is consciously or subconsciously under reported. There are some social and cultural stigmas surrounding the presence of bigheaded carp in North America (Morgan and Ho 2018). They have heavily been vilified by the media and by natural resource managers (Mando and Stack 2019). When they first arrived in North America, there was talk of total eradication, however it quickly became clear that that would be very difficult. Attention shifted towards limiting their range and their numbers to manageable levels (Carlson and Vondracek 2014.) Because of this stigma, fishers may be less likely to report having positive associations with catching and harvesting the species. Another reason is that compliance with existing removal and disposal of the species is not clear. It is possible

fishers did not list it as explicitly important to their fishing experience as they did not wish to reveal themselves as catching or harvesting the fish while knowingly being incompliant with the disposal laws. This suggests that as the culture around bigheaded carp shifts, their influence on fisher satisfaction may also shift.

Paddlefish on the importance grid:

Understanding what factors positively influence fisher satisfaction is important to management of recreational fisheries (Royce, 1983). For the season level surveys that were completed in the mail and the day level surveys that were performed onsite, both snaggers and archers listed seeing a paddlefish, snagging or shooting a paddlefish, and harvesting a paddlefish as important-performance factors. This further supports the consensus that harvest factors are the most important factors for fishers' satisfaction. In addition to the paddlefish factors, also in the performance-important quadrant for snaggers at the season level are condition, quality of meat and length of harvest. Non-catch based for snaggers at the season level are weather, time, and seeing other individual's harvest. Catch based factors are considered to be more important than non-catch based factors to fishers (Birdsong et al. 2021; Gundelund et al. 2022), and all catch based factors were performance-important or excitement factors,

Trophy paddlefish in Nebraska as are defined as an individual greater than 45" when measured from the eye to the fork of the tail; or greater than 50lbs. Given the protected slot for paddlefish in the snagging season is 45", any snagger to harvest a fish over the slot would be a qualified trophy fish according to the state of Nebraska. The proportion of fish being harvested during snagging season that are over the slot length has slightly increased over the past 20 years, but still dwarfs the proportion of fish harvested

that are below the slot (Kolar et al. 2010.). This suggests that fishers, particularly those that are experienced in the region, may have a strong basis for low expectations for the harvest of a trophy paddlefish, thus making it an excitement, factor rather than basic or important. Some fishers have anecdotally reported being selective towards the harvest of a smaller individual, usually right one below the protected harvest slot. Some fishers report that they prefer the flavor of the meat off of smaller fish, or are more comfortable with fish that have less bioaccumulation of pollutants (Mims 2015). There is little active research or scientific consensus on how exactly size of an individual fish may influence taste, however taste would presumably be part of the motivation, for most fishers, to harvest a fish.

Management insights of the importance grid

Though our initial hypothesis about bigheaded carp and fishers' satisfaction was not supported by the importance grid, additional factors placements support the validity of the framework as it is consistent with previous work studying fishers satisfaction. There are many barriers that limit participation in fishing for paddlefish. Those barriers could include lack of facilities or accessibility to the fishing locations (Arlinghaus 2006). Time is a basic factor between snaggers and archers the day level and is basic at the season level for archers. It is an important is perhaps the most important basic factor. This make sense considering all individuals need time in order to participate in recreational angling (Arlinghaus et al. 2015). Though one cannot directly manage an individual's time spent fishing, there are indirect ways managers can ensure there is an appropriate amount of permitted fishing time. This is currently managed by having an entire month season for each method of take, and for having permitted fishing hours.

Time that an individual has to participate in recreation activities is highly variable however some trends emerge. For example, retired individuals are more likely to have time to devote to recreational activities than employed individuals (Freudenberg and Arlinghaus 2009). Many of these retired individuals who participate in fishing also make up a large portion of fishers who may face physical barriers to access like operating a boat to or getting to more remote fishing locations.

Access to waterbody is a basic factor for snaggers at both temporal levels and for archers on the season level. For archers at the day scale, access to waterbody is a performance factor, thus also warranting attention by managers. Logically this also makes sense at the most basic level as fish live in water, however it also has greater implications. Fishers that face barriers in access to waterbodies are more likely to be dissatisfied. Barriers to access to waterbodies include poorly maintained boat ramps, limited parking, safety, and crowding. It is important for managers to be constantly managing to prevent these barriers from arising. Our surveys indicate that current perceived management and status of the access points to waterbodies is sufficient in most cases (basic or important) however it should not be reduced in favor of other resources. For snaggers, at both the season level and the day level, access to fishing spot is a basic factor. For archers, access to fishing spot is basic at the day level and important at the season level. Access to fishing spot is different than access to waterbody as it specifically refers to the ability (or inability) to reach the desired point on a waterbody to fish. Access to fishing spot is related to social factors such as crowding, but it can also be affected by non-anthropogenic things. For example, the 0.6 miles directly downstream of Gavin's Point Dam is where most of the paddlefish fishing occurs. This small stretch of river

includes an effluent from the power station and the effluents from the dam gates, which is can be highly variable. In October 2023, there were gates open at the dam for most of the season. When the gates are open, dam managers closes the immediate 100 yards downstream to fishing out of safety concerns. Some of the most prized fishing spots are within that section that may be open or may be closed on any given day. Additionally, things like flooding may impact ability to catch an anchor or flood shore fishing spots.

Crowding and intra-fisher interference are basic factors for snaggers on both time scales and archers. For archers, crowding and intra-fisher interference are basic at the day level and important at the season level. When there was a quota-based season for snagging paddlefish before 1997, crowding was a major safety concern and was responsible for injuries. Fishers would be condensed in a very small stretch of river hoping to harvest a paddlefish before the quota was reached, often within a few hours (Ranger David Mines, Army Corps of Engineers, personal comm.). Following concerns raised in public meetings, the season changed from a quota system to a tag-based system to start in 1997, partially in attempt to relieve the crowding and potential for intra-fisher interference. Despite some of these previous attempts to relieve some of the consequences of a tag based seasonal fishery, the new system still is getting criticism for crowding, specifically how it effects fisher safety on days that are naturally more busy such as weekends and holidays. Access to fishing spot can be influenced by number of fishers fishing as preferential fishing spots may be already occupied. Barriers to access to waterbody in the form of boat ramp traffic or limited parking availability are influenced by the number of fishers with tags. Because of these various factors, the number of tags distributed, and the permitted fishing season have been criticized. For the 2022 and 2023

snagging season, roughly 3000 paddlefish tags were distributed to applicants of South Dakota and Nebraska. This is the most tags distributed since the start of the tag system. In 2000, there were 1400 snagging tags distributed between Nebraska and South Dakota. For the 2022 and 2023 archery season, roughly 550 tags were distributed between applicants of the two states. This is more tags than in some past years. The different number of distributed tags could partially explain why at both the season and day level, crowding and intra-fisher interference are performance important factors for archers rather than a basic factor as it is for snaggers; they are important to satisfaction, however not an essential “expectation” as it is for snaggers to achieve satisfaction.

Additional factors that may influence fishers’ satisfactions were included in the season level surveys as they could not practically be answered on the day level or were factors that were added post hoc. These factors are length, pounds of meat, quality of meat, feeling of being outdoors, feeling of being in nature, harvesting a trophy bigheaded carp, and harvesting a trophy of another species. Additionally for snaggers, factors related to seeing other species, snagging other species, and harvesting other species were added to the season-level survey (they had already been included in the archery season level survey.)

Satisfaction and Invasive Species:

A high level of total satisfaction is seen at the day level and for archers. Total satisfaction at the day level and season level for snaggers is much lower and likely related to the lower harvest rates, which is known to strongly influence satisfaction. In archery, 75% of fishers reported being very satisfied at the day level, compared to just 23% of very satisfied snaggers on the day level. Harvest has repeatedly been identified as the

most important factor influencing total satisfaction in fishers and hunters (Gigliotti 2000). Harvest rates for snaggers were much lower than archers in 2022 and 2023. Nebraska Game and Parks Commission currently manages the snagging season with the expectation that ~50%, or 800 fish, will be harvested. Harvest rates were lower than this for respondents of this survey, however that does not necessarily mean that the goal of 50% wasn't achieved.

It is unclear if invasive species have directly influenced harvest potential for paddlefish fishers', but it does not seem like they are directly influencing fishers satisfactions. For both archers and snaggers on the day-level and the season-level the majority of fishers selected that they had not been influenced by invasive species. However, the survey also asked if fishers had encountered a bigheaded carp, which over 70% of fishers indicated that they had. This suggests that fishers are not associating bigheaded carp with the term invasive species. This could indicate that bigheaded carp are shifting from the resist phase to direct phase for managers and fishers in North America. Another explanation is that Nebraska has heavily focused on education and prevention of the spread of zebra mussels. Zebra mussels have become the poster species of aquatic invasive species in Nebraska and active resistance management exists throughout the state. Nebraska employs individuals for boat inspections and gear checks. Some Nebraska waterbodies are outfitted with machines to decontaminate boats. Nearly every public boat ramp is outfitted with warning signs about removing boat plugs and posters with mussel picture and facts. Given Nebraska Game and Parks recent focus on education on zebra mussels, many fishers' defaulted to answering if they encountered zebra mussels, not if they encountered any invasive species as was asked by the question.

Conclusions:

Invasive species are not influencing satisfaction of paddlefish snaggers and archers. Bigheaded carp, though encountered by most fishers, was identified as unimportant suggesting that resources may be better allocated to addressing other factors related to satisfaction. Though legally designated as invasive species', bigheaded carp were not being identified as invasive by paddlefish fishers. This suggests that the presence of bigheaded carp is becoming normalized by paddlefish fishers and that managers may need to reassess if they are managing for human interests, or species interests.

Caveats:

We recognize that there were possible points of misinterpretation on the survey. Factor performance was asked relative to expectations with a worded scale and attached number: far below expectations (1), below expectations (2), equal to expectations (3), above expectations (4), and far above expectations (5). It is possible, especially on the mail surveys, that individuals may have misconstrued 5 as something positive, not 5 as in far above expectations, which may not always be positive. This could've occurred in factors such as time, effort, and crowding ; a five would mean far more effort and time spent, however in some surveys there is indication that 5 was mistaken as positive (i.e., less effort, less crowding which is typically positive so individuals rank a 5 instead of a 1).

It is also important to note that the importance grid analyses and other survey questions were only done on paddlefish fishers with an active paddlefish tag. Only 3000 snagging tags and 550 archery tags are distributed each year, compared to (active fishing

license data for each state) of traditional fishing license holders. Paddlefish fishers are not the exclusive users of the upper Missouri river system. The river is a federally designated recreation river with various forms of recreation occurring within its bounds. Similarly, paddlefish are not the only native planktivorous species to cohabitate with invasive non-native planktivore such as bigheaded carp. Because paddlefish fishers only represent a subset of recreators and that they have specifically been permitted to participate in a highly regulated fishery, it makes sense that, for this subset, targeting bigheaded carp or other species is not of a main concern. Paddlefish tags are distributed well before the start of the season. Just applying for a tag cost \$13 and if your name is drawn, you must pay an additional \$40 to the management agencies. These additional costs could be amplifying paddlefish fishers' priorities strictly on paddlefish given the effort and procedure that has been put in by a paddlefish fisher just to obtain a tag.

Chapter 3: Management

Objective 1: Increasing Harvest Potential

Wildlife and hunting literature has long described harvest as the most important predictor of satisfaction. Wildlife management used to operate assuming harvest would guarantee the satisfaction of hunters and fishers (Stankey et al. 1976). It has now been established that though harvest is one of the most important drivers of satisfaction, there are multiple determinants of satisfaction (Hammitt et al. 1990).

There are several evolutionary explanations relevant to fisher's behavior and subsequent satisfaction. All humans need energy and fishing and hunting for food has been a fundamental part of societies for thousands of years. To this day, hunting and fishing continue to be an integral part of many cultures and societies to meet the basic human need for food. The successful harvest of animals provides a direct source of sustenance and nutrition, potentially easing the pressure on obtaining other food resources. The satisfaction an individual derives from harvest of an animal may be further amplified in the 21st century where most individuals do not regularly participate in the procurement of their food. Thus, harvest is an opportunity to fulfil the hypothesized evolutionary driver of hunting for one's food (Darimont et al. 2017).

The concept of size limits in freshwater fisheries is a management strategy aiming to maintain or enhance fish populations by regulating the size and number of fish that can be harvested by recreational fishers (Redmond, 1986). The history of this concept in North America can be traced back to early efforts in fisheries conservation in the newly formed U.S.A. In the late 19th and early 20th centuries, managers were concerned about overfishing and the decline of some fish populations in North America (Russell 1942).

During this period, management and regulations were disjointed and primarily focused on bag limits and seasonal regulations (Gwinn et al. 2015). As fisheries management became more advanced, size restrictions emerged as an integral management tool (Shepherd et al. 1990). These regulations set minimum- and sometimes maximum-size restrictions for fish that could be harvested (Allen et al. 2013). The idea is that a minimum length limit will protect the younger and smaller fish, ensuring they have a chance to grow and reproduce before being caught and harvested. The idea of a maximum length limit is to increase the number of large or trophy fish; this approach aims to improve overall fishery status and maintain sustainable harvests in the future (Froese et al. 2016).

Protected slot length limits utilize an inverse method of minimum and maximum length restrictions by creating an intermediary size group for which harvest is prohibited (Scarnecchia et al. 1989). This means that harvest is allowed for fish shorter than the minimum of the protected slot and for fish longer than the maximum of the protected slot. The idea behind a protected slot is that protecting a critical size group can help maintain a more balanced ecosystem and provide better opportunities for fishers (Scarnecchia et al. 1989).

Though protected slots have become a common fisheries management tool, they introduce complexity for enforcement and scientific consensus. Protected slots are used in various forms and for distinct species in different regions. Modern fisheries management increasingly relies on scientific data and stock assessments to set appropriate protected slot sizes. These assessments consider the biology and life history of the fish species, as well as the specific goals of the fishery, which may vary greatly (e.g., maintaining a trophy fishery versus sustaining populations for recreational and

commercial fishing). Protected slots can be a valuable tool in fisheries management, particularly for maintaining sustainable, diverse, and healthy fish populations. They can contribute to the conservation and preservation of fisheries resources and enhance recreational fishing opportunities while minimizing the ecological impact of excessive recreational fishing and harvest. The history of protected slots in freshwater fisheries reflects an evolution in fisheries management practices, moving from simple regulations to more nuanced and science-based approaches.

In the October Paddlefish snagging season, there is a protected size slot in which fishers may not harvest individual fish that are between 35 and 45 inches, when measured from an eye to the fork of the tail. This size range was selected as a protected slot as a management action for the ecological considerations of fish species, not the recreational fishing experience. Paddlefish within this protected slot are estimated to range between 7 and 10 years of age. These individuals are protected from harvest because biologists have identified these ages of paddlefish as the ones with the greatest potential for maximizing natural reproduction in the species (Scarnecchia et al. 1989). The paddlefish population in this river is heavily supplemented through various state and federal hatchery programs. Gavin's Point National Fish Hatchery, located just alongside the dam, produces the most hatchery raised paddlefish in the nation (USFWS 2021). Hatchery-raised fish are released throughout the current geographic range of paddlefish, and many are released in the waters directly below Gavin's Point Dam.

It has been a consistent theme that the protected slot is not well received by some snaggers. The onsite surveys, mail surveys, and content analysis all reflect an expressed negative view of the protected slot. A major concern among recreators with the protected

slot is the condition of the fish. Snagging, though not fatal like bowfishing, can be damaging for the fish. By the end of the season, there have been so many slot fish released that capture of individual fish with multiple severe hook wounds is common. So even though fishers are following the laws by releasing snagged slot fish, it may not be the best for the systems effective population and desired fishing experience.

There are some recent occurrences that highlight a flaw in the idea of a protected slot size. For example, biologists in Iowa recaptured a paddlefish that had been tagged over 20 years before. This fish, now assumed to be at the upper end of the species' age limit, did not grow in length more than 1 cm, but its weight increased greatly. This fish remained in the protected slot for over 20 years, well past initial reproductive maturity. If fish do not grow out of the protected slot with age, why have a protected slot that has the objective of protecting a size group to allow it to grow? Managers and biologists could re-evaluate the biological relevance of size and maturity when it comes to paddlefish population health. If biologically feasible, removing the slot will increase harvest opportunities for fishers by allowing for all size fish landed to be harvested. There are other management actions that can result in similar outcomes as a protected slot. One method that has demonstrated similar outcomes as the desired result of a protected slot is gear regulations (Graham et al. 2007). In the snagging paddlefish season, there are already existing gear regulations. All tag holders must use a barbless hook and the shank may not exceed one-half of an inch (2/0 size hook or smaller). Only one hook and one line per tag holder is permitted to be in active use. Single or treble hooks are acceptable. Gaff hooks or any penetrative devices are not permitted to be used during snagging season. Fishing gear can be selected to target specific size classes. Lewis et al. (2017)

argues that gear restrictions and time area closures have analogous effects to slot-based size regulations. However, this is empirically based off studies that used harvest slots, which is inverse to the current regulation of a protected slot yet operates on the same theory of protecting a specific size group of a fish species.

There are very few large paddlefish in this fishery (Radigan et al. 2023). This is likely due to energy expenditure demanded in the Missouri river and interspecies competition. Fish that are longer than 45 inches may have originated in Lewis and Clark Lake upstream before getting entrained in the dam. Shrinking the protected slot to between 35 and 40 inches has been requested by fishers many times. Additionally, managers could consider how the snagging season has discriminately removed smaller and potentially younger fish from the population. Most of the fish harvested during the snagging season are below the protected slot, suggesting either a fishing method that is discriminate towards smaller fish, fishers themselves preferentially harvesting smaller fish, or there simply are very few large individuals present in the population.

One action that was proposed multiple times by fishers in the comment cards, is allowing the harvest of the first fish landed while snagging, no matter the size, as is required while bowfishing. There are both human and biological considerations for this. Fishers during snagging season may expend a lot of energy and effort reeling in slot sized fish. This can lead to exhaustion without harvest. For individuals with time constraints or physical limitations, allowing for the harvest of the first fish landed could benefit those individuals. Allowing the harvest of the first fish landed could also improve the condition of fish, which has consistently been reported as negatively affecting fishers' satisfaction. This would ideally limit the number of fish that are repeatedly snagged and released with

wounds. The mortality of snagged and released paddlefish has not been quantitatively studied, but fishers have expressed discomfort with releasing an injured slot fish when they suspect it will die shortly after release.

Objective 2: Improve and Maintain Facilities

Something that appeared consistently in both the comment cards, onsite surveys, and mail surveys was the value of facilities for paddlefish fishers. Gavin's Point Dam is run by the U.S. Army Corps of Engineers (COE). The COE is responsible for maintaining the dam and the hydroelectricity plant that is a part of the dam structure. They also manage a recreational camp site along the southside of the Nebraska tail waters. The recreational camp site includes multiple sites for tent camping and recreational vehicle parking slots. Within the campground, the COE maintains several centrally located freshwater pumps, restrooms, showers, electrical plugins, and dumpsters. On the North side of the river, past the South Dakota state line, there are campsites that are managed by South Dakota Game, Fish, and Parks. This camp area also includes water pumps, restrooms, showers, electrical plugins, and dumpsters. Additionally, the South Dakota campground includes cabin rentals, a large system of bike paths, and boat access to the adjacent Lake Yankton.

Many fishers utilize these various features as a part of their recreational fishing experience. Fishers from out of state or far distances often stay in the camp sites right on the river. In the summer, many fishers' vacation and stay at the site. Fishing is not always the singular goal of an individual that may stay at these sites, though a large, sizable portion of people in the sites do take part in fishing in addition to the camping experience. For fishers not staying onsite, the primary facilities utilized are the restrooms

and dumpsters. Maintaining the functionality and quality of the restrooms below Gavin's Point Dam is imperative. Fishing off small boats or from a densely packed shore does not allow for easy access to the restrooms. Providing the restrooms at the boat ramps and shore paths eliminates the concern of accessibility to the restrooms when on a fishing trip.

Dumpsters and other types of waste receptacles are very important to include in the recreational paddlefishing experience. Providing appropriate waste receptacles has been shown to decrease the likelihood of littering and improve appearances (Schultz et al. 2013) This allows for greater aesthetic quality throughout the fishing locations. The feeling of being in nature was ranked in the mail surveys as explicitly very important to fishers in both archery and snagging season. Aesthetics is an intrinsic part of experiencing nature (Brady 2006). Litter has a negative ecological, legal, and aesthetic association, so waste disposal sites are a tool to improve the aesthetic experience of fishing and the feeling of being in nature. Outside of aesthetics, proper waste disposal is beneficial to the river system by reducing the amount of trash that may directly enter the river. Trash and other pollutants entering the river system can be detrimental to the health of the species in the ecosystem. Improperly disposed trash, notably glass or metal materials, can also be dangerous to humans and animals when stepped on or incidentally ingested.

Almost all archery fishers and many snagging fishers utilize boats for their recreational fishing experience. There are currently two boat ramps in the immediate downstream of Gavin's Point Dam, one on the North side of the river and one on the South side of the river. Additionally, there is a boat ramp about 4 miles downstream in

Yankton, South Dakota. Fishers and other aquatic recreators utilize these boat ramps regularly. On the opening day of paddlefish snagging season in October 2023, there were over 80 boats that launched and remained in the immediate 0.6 miles downstream of Gavin's Point Dam.

It is in the best interest of managers to ensure that these boat ramps are functional, accessible, and safe for recreators and other users. Common complaints from recreators about the boat ramps include crowding, angle of incline, safety, and etiquette between fishers. Overcrowding at the boat ramps, especially in the peaks of paddlefish seasons, can be detrimental to fishers' satisfaction. It can reduce the amount of time fisher has to actively fish which may reduce harvest potential. Crowding at the boat ramps also introduces a space for intra-fisher conflict. Though there are rules and etiquette regarding the right of way at boat ramps, they are not necessarily mutually understood or known by fishers. Conflict between anglers can and has led to physical altercations, law enforcement tickets, or removal from the site. Interferences between anglers negatively affect satisfaction and can similarly reduce fishing time and harvesting potential. It is important to note that fishers are not the exclusive users of the boat ramps. Other recreators, such as water-skiers, tubers, and kayakers, utilize the boat ramp to access their recreational experience. Additionally, dam maintenance often requires onsite inspection of the gates and powerhouse. This includes underwater maintenance and can include the use of submersible technologies. The Army Corps of Engineers (COE) utilizes its own fleet of boats that launch off the public ramps to conduct this maintenance. Additionally, Nebraska Game and Parks, South Dakota Game, Fish & Parks, local universities, and federal agencies utilize the public ramps to conduct field work and study the river.

Though the ramps are mostly well received by fishers, there are concerns. A concern that appeared in the comment cards was the safety of the ramps including the length and incline. The ramps directly below Gavins' Point Dam are long and steep. The stretch of the river that both ramps are located on is not on the original flow path of the river, but instead located along the 0.6-mile stretch of rerouted river just below the dam. The area where the Nebraska tailwaters campground boat ramp now exists, used to be towering bluffs. This limits the feasibility of shorter or less steep ramps as they are a structural necessity, and thus changes in how they are managed are beyond the scope of the satisfaction framework.

Objective 3: Increase Awareness for Aquatic Invasive Species

Aquatic invasive species and aquatic non-native species exist in nearly all major river systems in North America. Invasive species is a term that is widely used to describe non-native species, however the true classification of "invasive" is strictly a legal term that does not necessarily imply all non-native species. Native species can demonstrate invasive characteristics under certain scenarios and non-native species can exist outside their range without causing invasive tendencies. Additionally, the legal use of "invasive species" is relatively new to the American legal framework; many non-native species with invasive characteristics were established and normalized before the term "invasive" became legally relevant and thus are not considered invasive under the law. An example is the Common Carp (*Cyprinus carpio*) which is native to Eastern Europe and Western Asia. They were intentionally brought to North America in the mid 1800's by waves of European immigrants expanding westward in North America. Common Carp were imported as both a food source and for its cultural tie to the European homeland. They

are now present in all the lower 48 states, Hawaii, the U.S. unincorporated island territory of Puerto Rico, the U.S. Island territory of Guam, and on Saipan, the largest island in the U.S. commonwealth of the Northern Mariana Islands. They have become so normalized that the U.S. Geological Survey defines a “native” range for the species in North America. They are currently managed in frameworks used for native species and can be considered invasive outside of this “native” range; But referring to this species as a native species is biologically incorrect.

Common carp are a prime example of non-native fish with invasive tendencies becoming normalized and thus not recognized by law or most recreational fishers as invasive species. Many other popular sport fish in North America also predate the invasive legal classification and are considered “native,” despite not being historically native to their current range. In the Midwest, these species include large and smallmouth bass, several salmonids, and bait species such as alewife and gizzard shad. It is possible that bigheaded carp are becoming normalized in the eyes of recreational anglers, potentially decreasing behaviors of fishers that protected against the spread of these invasive species. It is critical that recreational fishers are aware of bigheaded carp as invasive species and can practice behaviors that reduce their chances or pace of range expansion.

Recommendation 3.1: Include AIS information during tag Distribution.

Since at least 1997, the Nebraska Game and Parks Commission has distributed tags to fishers using 5- x6-inch orange envelopes sent via United States Postal Service. South Dakota Game, Fish, and Parks similarly uses this distribution system for tags. Included in the envelopes are a physical tag and information about fishing and boating

regulations. There is a map that identifies the zones near Gavin's Point Dam that are closed to fishers. There is a graphic of a paddlefish that demonstrates the proper way to measure a paddlefish. There is a paper that clearly lays out the relevant rules and regulations, such as slot limits, fish cleaning, gear regulations, season length, fishing hours, and local licensing laws (i.e., Nebraska Invasive Species Stamp required for non-resident boaters). Contact information for the respective state agencies is also included.

Though there is a lot of information that is distributed within the tag envelope, there is limited material regarding aquatic invasive species. The presence of carp has been identified as a factor that does not contribute positively or negatively to angler satisfaction and thus might not be on the front of fishers' minds. Anecdotally, there has been a loud voice of fishers' pushing for bigheaded carp removal. The media has amplified the negative sentiments about bigheaded carp by "painting" the species as dangerous and catastrophic to North American ecosystems. Despite the media and the indications of negative views of bigheaded carp, the majority of fishers in all seasons did not indicate that their recreational fishing experience was impacted by invasive species, even though the majority of fishers indicated they had encountered one.

Bridging this disconnect between fishers' not perceiving bigheaded carp as invasive is a critical part of understanding how invasive species truly play into fishers' satisfaction. Nebraska has heavily focused advertising resources on zebra mussels as the poster child for Nebraskan aquatic invasive species. This is the default species in which most fishers' think about when asked if their recreation fishing experiences has been impacted by invasive species. Onsite interviews about invasive species often included side remarks from fishers about knowing how to pull the boat plug or mentioning that

they will be going right to the car wash to decontaminate the boat from any potential zebra mussel hitchhikers. Rarely was there any mention of bigheaded carp as invasives in onsite surveys.

Recommendation 3.2: Utilize social media to increase awareness for invasive species.....	84

Social media is a unique 21st century phenomenon that can reach an unprecedented number of individuals. Social media platforms can reach millions of users across the entire globe. Platforms such as Facebook, Twitter (X), Instagram, Threads, and Telegram are popular among American users, particularly users that are millennials or members of Gen Z. Many state and federal agencies have a presence on social media platforms, including natural resource management agencies. Social media can be useful to government agencies by providing live updates during emergencies, providing easily access to learning materials, and creating a more intimate relationship with constituents who may not interact with management agencies outside of social media.

Social media has been an effective way to engage individuals with the natural world. A widely popular example in America is the annual “Fat Bear Week” which is run by the National Park Service out of Katami National Park in Alaska. “Fat Bear Week” was founded in 2014 and has grown widely in popularity. The premise is that individuals can go online and watch brown bears fish and put on weight for winter via trail. The bears are individually named, and viewers can vote online in a bracket style competition to select the winner of “Fat Bear Week.” During the competition, facts about bears and human’s role in bear conservation are also shared. In 2023, the National Park Service reported over 1 million people voting. “Fat Bear Week” has also been connected to increased website traffic to NPS resources and even increased National Park visitation

(Miller et al. 2019). Fat bear week has led to spin offs such as “Gar Week” which was started in 2021 and includes a week of social media information about various gar species.

Social media can and has been used to spread awareness about aquatic invasive species including bigheaded carp. In 2022, the Oklahoma Department of Wildlife Conservation posted a graphic on Twitter that was a play on a trending meme about trick-or-treating. The caption of the tweeted graphic was “Be diligent and check your child’s candy this year, just found an invasive silver carp shoved inside Milky Way. No words.” This tweet was liked by over 80,000 accounts and viewed over 1 million times on the platform. Social media provides an additional platform for education that managers can use to inform of invasive species and teach good invasive species prevention behaviors.

Conclusion:

Invasive species are changing how humans interact with the natural world. As invasive species change the environment human recreation habits will also have to change. This study demonstrates that both for both snaggers and archers targeting paddlefish, invasive species are not currently a primary of Fisher satisfactions, and thus currently resources should be delegated towards factors that more strongly influence satisfaction such as increasing harvest and maintaining accessibility to fishing.

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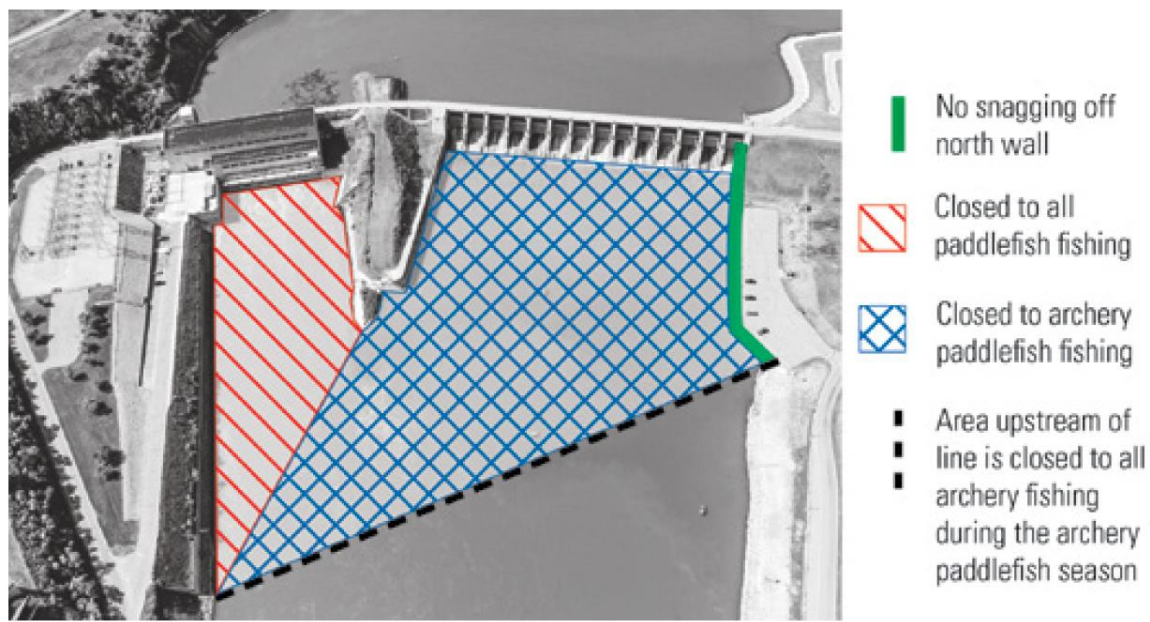
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Appendix 1: Map of the primary fishing locations in the tailwaters of Gavins Point Dam.



Appendix 2: Comment Card provided to archers.



Nebraska Game and Parks Commission
Paddlefish Archery - Response Card

Tag # _____

33-448 / rev. 1-2022

☒ Check One

☐ I fished but did not harvest a paddlefish
☐ I harvested a paddlefish less than 35 inches
☐ I harvested a paddlefish between 35 and 45 inches (slot fish)
☐ I harvested a paddlefish greater than 45 inches long
☐ I did not fish during the paddlefish season

____ Approximate number of Asian Carp taken

☒ Check One

☐ I fished only in the tailwater (*From the dam to the boat ramp on the north bank*)
☐ I fished only in the river
☐ I fished both the river and the tailwater

☒ Check the days you fished
 June 1 - June 30, 2022

Appendix 3: Comment Card provided to snaggers.



Nebraska Game and Parks Commission

Paddlefish Snagging - Response Card Tag # _____

33-447 / rev. 1-2022

☒ Check One

- ☐ I did not fish during the 2022 snagging season
☐ I fished but did not harvest a paddlefish
☐ I harvested a paddlefish less than 35 inches long
☐ I harvested a paddlefish greater than 45 inches long

How many paddlefish did you release?
(measured from the front of the eye to the natural fork of the tail)

_____paddlefish less than 35 inches long
_____paddlefish from 35 inches to 45 inches long
_____paddlefish greater than 45 inches long

_____ Approximate number of Asian Carp snagged

I spent _____ hours snagging paddlefish in 2022

Comments: _____

☒ Check ALL that apply

- ☐ I snagged in the tailwater from the bank
☐ I snagged in the tailwater from a boat
☐ I snagged in the river downstream from the tailwater from a boat

☒ Check the days you fished
October - 2022

Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Please mail in this card. If you harvested a paddlefish with a jaw tag, please record the number above. Thanks

Appendix 4: Day-level survey for archery season.

Onsite Paddlefish Survey: June 2022 Archery Season

Tag Number: A -

Date:

Zip Code:

Party UID:

Start Time:

Number in Party:

Number in Party with Open Tag:

Guide: ☐ Y ☐ N

The following is a list of experiences that may hold importance to you today as an archer targeting paddlefish. Indicate how important you view each of the following experiences when fishing for paddlefish today.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Seeing Paddlefish	①	②	③	④	⑤
Opportunities to Shoot Paddlefish	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a trophy paddlefish	①	②	③	④	⑤
Seeing Bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Opportunities to Shoot Bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤
Seeing other fish species	①	②	③	④	⑤
Opportunities to shoot other fish species	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Seeing other archers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤

Have a great day fishing. I'll have some more questions for you when you finish fishing. I look forward to hearing about your day on the water.

Appendix 4: continued.

Tag Number: A - Date: Upon ReturnEnd Time:

In respect to your expectations for today's fishing trip targeting paddlefish, how would you rate each of the following aspects of your fishing experience today?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Seeing Paddlefish	①	②	③	④	⑤
Opportunities to Shoot Paddlefish	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a trophy paddlefish	①	②	③	④	⑤
Seeing Bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Opportunities to Shoot Bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤
Seeing other fish species	①	②	③	④	⑤
Opportunities to shoot other fish species	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Seeing other archers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤

Overall, how satisfied or dissatisfied were you with your fishing experience today?

	Very dissatisfied	Somewhat dissatisfied	Neither dissatisfied nor satisfied	Somewhat satisfied	Very satisfied
Overall satisfaction	①	②	③	④	⑤

Appendix 4: continued.

Tag Number: A - Date: *Fish Species Encountered:*

Species	Seen	Shot At	Estimated Number of Shots Fired	Landed	Number of Individuals Landed
Paddlefish	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N	
Bigheaded Carp (Silver, Bighead, "Jumping Carp", Invasive carp, Asian Carp)	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N	
Other: (e.g., gar spp., buffalo spp., common carp)	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N	
Other:	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N	
Other:	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N	

Have you heard of the phrase "Clean, Drain, Dry"? ☐ Y ☐ N

Have you been impacted by aquatic invasive species (AIS) in your recreational experience today?

- ☐ Yes, positively impacted
- ☐ No, not impacted
- ☐ Yes, negatively impacted

Do you know where zebra mussels are currently located in Nebraska? ☐ Y ☐ NDo you believe zebra mussels are present in this waterbody? ☐ Y ☐ N**IF PADDLEFISH HARVESTED TODAY:**

Fish size?

- ☐ Less than 35 inches
- ☐ Between 35 and 45 inches ("slot fish")
- ☐ Greater than or equal to 45 inches

Did the fish you harvested have any noticeable wounds other than the arrow wound? ☐ Y ☐ N

Appendix 5: Season-level survey for archery season.

1

Paddlefish Satisfaction Survey: 2022 Bow Fishing Season

Tag Number:

		A	-			
--	--	---	---	--	--	--

☒ Check the days you fished
June 1 - June 30, 2022

1. Did you fish for paddlefish this season? ☐ Y ☒ N
- a. Did you employ a guide service? ☐ Y ☒ N
2. Select what best applies to your paddlefish experience this season:
- ☒ I fished only in the tail waters bank
 - ☒ I fished only in the river
 - ☒ I fished from both the river and the tail water

Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

3. The following is a list of experiences that may hold importance to you as an archer targeting paddlefish this past 2022 season. Indicate how important you view each of the following experiences when you fished for paddlefish during the 2022 season.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Seeing Paddlefish	①	②	③	④	⑤
Opportunities to Shoot Paddlefish	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a <u>trophy</u> paddlefish	①	②	③	④	⑤
Length of harvested paddlefish	①	②	③	④	⑤
Pounds of paddlefish meat obtained	①	②	③	④	⑤
Quality of paddlefish meat obtained	①	②	③	④	⑤
Ounces of paddlefish roe obtained	①	②	③	④	⑤
Quality of paddlefish roe obtained	①	②	③	④	⑤
Appearance (condition) of paddlefish harvested	①	②	③	④	⑤
Seeing bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Opportunities to shoot bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤

Appendix 5: continued.

2

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Harvesting a trophy bigheaded carp	①	②	③	④	⑤
Seeing other fish species	①	②	③	④	⑤
Opportunities to shoot other fish species	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Harvesting a trophy of another fish species	①	②	③	④	⑤

4. The following is a list of additional experiences that may hold importance to you as an archer targeting paddlefish this past 2022 season. Indicate how important you view each of the following experiences when you fished for paddlefish during the 2022 season.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Seeing other archers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤
Feeling of being outdoors	①	②	③	④	⑤
Feeling of being in nature	①	②	③	④	⑤

Appendix 5: continued.

3

5. In respect to your expectations for this past year's archery paddlefish season, how would you rate each of the following aspects of your overall fishing experience for **the entire 2022 archery season** (June 1-30, 2022)?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Seeing Paddlefish	①	②	③	④	⑤
Opportunities to Shoot Paddlefish	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a trophy paddlefish	①	②	③	④	⑤
Length of harvested paddlefish	①	②	③	④	⑤
Pounds of paddlefish meat obtained	①	②	③	④	⑤
Quality of paddlefish meat obtained	①	②	③	④	⑤
Ounces of paddlefish roe obtained	①	②	③	④	⑤
Quality of paddlefish roe obtained	①	②	③	④	⑤
Appearance (condition) of paddlefish harvested	①	②	③	④	⑤
Seeing bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Opportunities to shoot bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤
Harvesting a trophy bigheaded carp	①	②	③	④	⑤
Seeing other fish species	①	②	③	④	⑤
Opportunities to shoot other fish species	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Harvesting a trophy of another fish species	①	②	③	④	⑤

Appendix 5: continued.

6. In respect to your expectations for this past year's archery paddlefish season, how would you rate each of the following additional aspects of your overall fishing experience for the entire 2022 archery season?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Seeing other archers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤
Feeling of being outdoors	①	②	③	④	⑤
Feeling of being in nature	①	②	③	④	⑤

7. Overall, how satisfied or dissatisfied were you with your fishing experience for the entire 2022 archery season?

	Very dissatisfied	Somewhat dissatisfied	Neither dissatisfied nor satisfied	Somewhat satisfied	Very satisfied
Overall satisfaction	①	②	③	④	⑤

8. With regard to all fish species you may have encountered while archery fishing, please complete the following table. Please write species name in "other" category if applicable (i.e. Gar, buffalo, common carp, walleye, etc.)

Fish Species Encountered:

Species	Seen	Shot At	Estimated Number of Shots Fired	Landed	Number of Individuals Landed
Paddlefish	Y N	Y N		Y N	
Bigheaded Carp (Silver, Bighead, "Jumping Carp", Invasive carp, Asian Carp)	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	

Appendix 5: continued.

5

9.

	Yes, positively impacted	No, not impacted	Yes, negatively impacted
Were you impacted by aquatic invasive species (AIS) in your recreational experiences during the 2022 archery paddlefish season?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10.

	Yes	No
Have you heard of the phrase "Clean, Drain, Dry"?	<input type="radio"/>	<input type="radio"/>
Do you know where zebra mussels are currently located in Nebraska?	<input type="radio"/>	<input type="radio"/>
Do you believe zebra mussels were present in the Missouri River below Gavin's Point dam?	<input type="radio"/>	<input type="radio"/>
Do you intend to apply for a Nebraska archery permit for June 2023?	<input type="radio"/>	<input type="radio"/>

If YOU HARVESTED A PADDLEFISH IN JUNE 2022:

11. What best describes the Fish size from eye to the fork in the tail?
- ☐ Less than 35 inches
 - ☐ Between 35 and 45 inches ("slot fish")
 - ☐ Greater than or equal to 45 inches

12.

	Yes	No
Did the paddlefish you harvest have any noticeable wounds on it, other than the one inflicted by your arrow?	<input type="radio"/>	<input type="radio"/>
Did you harvest roe (fish eggs, "caviar") from your paddlefish?	<input type="radio"/>	<input type="radio"/>

13. Do you have any additional comments?

Please fold this paper in half and seal it in the provided envelope before sending. Thank you for your time and attention in completing this survey.

Appendix 5: continued.

6

Paddlefish Angler Satisfaction Survey

Hello!

I am conducting a research study. The purpose of this research is to better understand paddlefish angler satisfaction in the presence of bigheaded carp. If you hold a paddlefish tag, you may participate in this research.

Participation in this study will require approximately 15 minutes of your time. You will be asked to answer a series of questions about your paddlefishing experience this past season. Please read the instructions for each question before answering.

Reasonable steps will be taken to protect the privacy and the confidentiality [or anonymity] of your study data; however, in some circumstances we cannot guarantee absolute privacy and/or confidentiality. Research records will be stored [electronically through University approved methods, in a locked cabinet in the investigator's office, etc.]. Records will only be seen by the research team and/or those authorized to view, access, or use the records during and after the study is complete.

If you have questions about this project, you may contact Dr. Kevin Pope at 402-472-7028. If you have questions about your rights or complaints about the research, contact the Institutional Review Board (IRB) at (402)472-6965 or irb@unl.edu.

You can decide not to be in this research study, or you can withdraw at any time before, during, or after the research begins for any reason. Deciding not to be in this research study or deciding to withdraw will not affect your relationship with the investigator, the University of Nebraska-Lincoln, or Nebraska Game and Parks Commission.

You are voluntarily making a decision whether or not to participate in this research study. By completing and by submitting your survey responses you have given your consent to participate in the research. You should print/keep a copy of this page for your records.

Appendix 6: Day-level survey for snagging season.

Onsite Paddlefish Survey: October Snagging Season

Tag #s

		A-			
		A-			

 Date:

--	--	--	--	--	--

 ZIP:

--	--	--	--	--	--

 UID

--	--	--

Start Time

--	--	--	--

 Number in Party

--	--

 Tags in Party:

--	--

 Guide? ☐ Y ☐ N

The following is a list of experiences that may hold importance to you today as an archer targeting paddlefish. Indicate how important you view each of the following experiences when fishing for paddlefish today.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Snagging any Paddlefish	①	②	③	④	⑤
Snagging a Paddlefish outside of slot length	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a trophy paddlefish	①	②	③	④	⑤
Seeing Bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Snagging Bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤
Seeing other anglers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤

Have a great day fishing. I'll have some more questions for you when you finish fishing. I look forward to hearing about your day on the water.

Appendix 6: continued.

Upon Return: Date End Time UID:

In respect to your expectations for today's fishing trip targeting paddlefish, how would you rate each of the following aspects of your fishing experience today?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Snagging a Paddlefish(any length)	①	②	③	④	⑤
Snagging a Paddlefish outside of slot length	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a trophy paddlefish	①	②	③	④	⑤
Seeing Bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Snagging Bigheaded carp					
Harvesting bigheaded carp	①	②	③	④	⑤
Seeing other anglers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤

Overall, how satisfied or dissatisfied were you with your fishing experience today?

	Very dissatisfied	Somewhat dissatisfied	Neither dissatisfied nor satisfied	Somewhat satisfied	Very satisfied
Overall satisfaction	①	②	③	④	⑤

Appendix 6: continued.

Date End Time UID: *Fish Species Encountered:*

Species	Seen	Snagged	Estimated Number of casts	Landed	<35	slot	>45
Paddlefish	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N			
Bigheaded Carp (Silver, Bighead, "Jumping Carp", Invasive carp, Asian Carp)	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N			
Other: (e.g., gar spp., buffalo spp., common carp)	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N			
Other:	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N			
Other:	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N		<input type="radio"/> Y <input type="radio"/> N			

Have you heard of the phrase "Clean, Drain, Dry"? ☐ Y ☐ N

Have you been impacted by aquatic invasive species (AIS) in your recreational experience today?

- ☐ Yes, positively impacted
☐ No, not impacted
☐ Yes, negatively impacted

Do you know where zebra mussels are currently located in Nebraska? ☐ Y ☐ NDo you believe zebra mussels are present in this waterbody? ☐ Y ☐ N**IF PADDLEFISH HARVESTED TODAY: (Specify tag #)**Did the fish you harvested have any noticeable wounds other than the snagging wound? ☐ Y ☐ NDid you harvest the first fish you snagged that was outside of the "slot"? ☐ Y ☐ NEstimated Number of Paddlefish Snagged *before* harvest:

<35 in:	
Slot:	
>45 in:	

Harvest Length(Circle): <35in >45in

Jaw Tagged? ☐ Y ☐ N

Tag Location: _____

Appendix 7: Season-level survey for snagging season.

Paddlefish Satisfaction Survey: 2022 Snagging Fishing Season

1. Did you fish for paddlefish this season? (Y) (N)
- a. Did you employ an guide service? (Y) (N)
2. Select what best applies to your paddlefish experience this season:
- ✓ I fished only in the tail waters bank
 - ✓ I fished only in the river
 - ✓ I fished from both the river and the tail water

☑ Check the days you fished October - 2022						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

1. The following is a list of experiences that may hold importance to you as a snagger targeting paddlefish this past 2022 season. Indicate how important you view each of the following experiences when you fished for paddlefish during the 2022 season.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Seeing Paddlefish	(1)	(2)	(3)	(4)	(5)
Opportunities to Snag Paddlefish	(1)	(2)	(3)	(4)	(5)
Harvesting a paddlefish	(1)	(2)	(3)	(4)	(5)
Harvesting a <u>trophy</u> paddlefish	(1)	(2)	(3)	(4)	(5)
Length of harvested paddlefish	(1)	(2)	(3)	(4)	(5)
Pounds of paddlefish meat obtained	(1)	(2)	(3)	(4)	(5)
Quality of paddlefish meat obtained	(1)	(2)	(3)	(4)	(5)
Ounces of paddlefish roe obtained	(1)	(2)	(3)	(4)	(5)
Quality of paddlefish roe obtained	(1)	(2)	(3)	(4)	(5)
Appearance (condition) of paddlefish harvested	(1)	(2)	(3)	(4)	(5)
Seeing bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	(1)	(2)	(3)	(4)	(5)
Opportunities to Harvest bigheaded carp	(1)	(2)	(2)	(4)	(5)
Harvesting bigheaded carp	(1)	(2)	(3)	(4)	(5)
Harvesting a <u>trophy</u> bigheaded carp	(1)	(2)	(3)	(4)	(5)
Seeing other fish species	(1)	(2)	(3)	(4)	(5)
Opportunities to harvest other fish species	(1)	(2)	(3)	(4)	(5)

Appendix 7: continued.

2. The following is a list of additional experiences that may hold importance to you as a snagger targeting paddlefish this past 2022 season. Indicate how important you view each of the following experiences when you fished for paddlefish during **the 2022 season**.

	Not at all important	Slightly important	Moderately important	Very Important	Extremely Important
Seeing other snaggers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤
Feeling of being outdoors	①	②	③	④	⑤
Feeling of being in nature	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Harvesting a trophy of another fish species	①	②	③	④	⑤

Appendix 7: continued.

3. In respect to your expectations for this past year's snagging paddlefish season, how would you rate each of the following aspects of your overall fishing experience for **the entire 2022 snagging season** (October 1-31, 2022)?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Seeing Paddlefish	①	②	③	④	⑤
Opportunities to snag Paddlefish	①	②	③	④	⑤
Harvesting a paddlefish	①	②	③	④	⑤
Harvesting a <u>trophy</u> paddlefish	①	②	③	④	⑤
Length of harvested paddlefish	①	②	③	④	⑤
Pounds of paddlefish meat obtained	①	②	③	④	⑤
Quality of paddlefish meat obtained	①	②	③	④	⑤
Ounces of paddlefish roe obtained	①	②	③	④	⑤
Quality of paddlefish roe obtained	①	②	③	④	⑤
Appearance (condition) of paddlefish harvested	①	②	③	④	⑤
Seeing bigheaded carp ("invasive carp", "jumping carp", "Asian carp")	①	②	③	④	⑤
Opportunities to harvest bigheaded carp	①	②	③	④	⑤
Harvesting bigheaded carp	①	②	③	④	⑤
Harvesting a <u>trophy</u> bigheaded carp	①	②	③	④	⑤
Seeing other fish species	①	②	③	④	⑤
Opportunities to harvest other fish species	①	②	③	④	⑤
Harvesting other fish species	①	②	③	④	⑤
Harvesting a trophy of another fish species	①	②	③	④	⑤

Appendix 7: continued.

4. In respect to your expectations for this past year's snagging paddlefish season, how would you rate each of the following additional aspects of your overall fishing experience for the entire 2022 snagging season?

	Far below expectations	Below expectations	Equal to expectations	Above expectations	Far above expectations
Seeing other snaggers harvest paddlefish	①	②	③	④	⑤
Fishing in favorable weather conditions	①	②	③	④	⑤
Fishing waterbodies free of aquatic invasive species	①	②	③	④	⑤
Fishing in uncrowded conditions	①	②	③	④	⑤
Not being interfered with by other fishers	①	②	③	④	⑤
Access to desired fishing spots	①	②	③	④	⑤
Time spent fishing	①	②	③	④	⑤
Effort required for harvest	①	②	③	④	⑤
Access to waterbody (parking, boat ramp, dock)	①	②	③	④	⑤
Fishing with other people in my party	①	②	③	④	⑤
Feeling of being outdoors	①	②	③	④	⑤
Feeling of being in nature	①	②	③	④	⑤

5. Overall, how satisfied or dissatisfied were you with your fishing experience for the entire 2022 snagging season?

	Very dissatisfied	Somewhat dissatisfied	Neither dissatisfied nor satisfied	Somewhat satisfied	Very satisfied
Overall satisfaction	①	②	③	④	⑤

6. With regard to all fish species you may have encountered while snagging, please complete the following table. Please write species name in "other" category if applicable (i.e. Gar, buffalo, common carp, walleye, etc.)

Fish Species Encountered:

Species	Seen?	Landed?	Estimated Number of Casts	Harvested?	Number of Individuals Harvested
Paddlefish	Y N	Y N		Y N	
Bigheaded Carp (Silver, Bighead, "Jumping Carp", Invasive carp, Asian Carp)	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	
Other:	Y N	Y N		Y N	

Appendix 7: continued.

7.

	Yes, positively impacted	No, not impacted	Yes, negatively impacted
Were you impacted by aquatic invasive species (AIS) in your recreational experiences during the 2022 snagging paddlefish season?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8.

	Yes	No
Have you heard of the phrase “Clean, Drain, Dry”?	<input type="radio"/>	<input type="radio"/>
Do you know where zebra mussels are currently located in Nebraska?	<input type="radio"/>	<input type="radio"/>
Do you believe zebra mussels were present in the Missouri River below Gavin’s Point dam?	<input type="radio"/>	<input type="radio"/>
Do you intend to apply for a Nebraska snagging permit for October 2023?	<input type="radio"/>	<input type="radio"/>

If YOU HARVESTED A PADDLEFISH IN October 2022:

9. What best describes the Fish size from eye to the fork in the tail?
- ☐ Less than 35 inches
 - ☐ Greater than or equal to 45 inches

10.

	Yes	No
Did the paddlefish you harvest have any noticeable wounds on it?	<input type="radio"/>	<input type="radio"/>
Did you harvest roe (fish eggs, “caviar”) from your paddlefish?	<input type="radio"/>	<input type="radio"/>

Appendix 8: Season-level raw data for importance for archers.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LNMT
1	NE-173	5	4	4	2	2	2
2	NE-105	4	5	3	3	2	2
3	NE-145	5	3	3	3	3	3
4	NE-253	3	3	3	4	1	4
5	NE-88	5	5	4	1	3	3
6	NE-13	4	4	3	2	3	3
7	NE-162	5	5	5	2	3	3
8	NE-57	4	4	2	3	3	2
9	NE-260	5	4	4	3	3	3
10	NE-281	5	5	5	4	5	5
11	NE-32	5	4	2	2	3	3
12	NE-70	4	4	3	1	3	2
13	NE-207	3	3	2	2	2	2
14	NE-221	5	5	4	3	3	3
15	NE-108	5	4	3	2	3	4
16	NE-244	4	4	2	1	3	3
17	NE-214	4	4	4	2	3	3
18	NE-60	5	4	4	3	4	3
19	NE-74	5	4	3	2	3	2
20	NE-17	4	4	3	2	2	3
21	NE-228	5	4	3	2	1	1
22	NE-50	5	5	4	3	2	2
23	NE-213	5	5	5	2	2	3
24	NE-225	5	5	4	2	2	2
25	NE-132	5	3	2	1	3	3
26	NE-27	4	3	2	5	5	3
27	NE-5	5	4	2	2	2	2
28	NE-19	5	3	3	2	2	2
29	NE-36	5	5	4	2	2	3
30	NE-220	5	4	4	3	3	3
31	NE-250	3	3	5	2	2	2
32	NE-18	5	5	4	3	4	3
33	NE-233	4	3	3	1	2	2
34	NE-211	4	3	3	2	2	2
35	NE-251	4	5	4	4	4	3
36	NE-203	5	5	4	2	3	3
37	NE-43	5	5	4	2	2	2
38	NE-121	4	3	3	3	4	4
39	NE-89	5	4	3	2	3	3
40	NE-188	5	5	5	3	3	3
41	NE-204	5	4	2	1	1	1

Appendix 8: continued.

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
1	2	3	2	2	2	2	2
2	2	3	1	1	1	1	3
3	4	3	1	1	1	1	3
4	4	1	3	4	3	4	3
5	3	1	1	1	1	1	3
6	4	3	1	1	1	1	1
7	2	2	5	5	4	1	2
8	4	4	3	3	3	3	3
9	4	5	3	3	3	1	2
10	5	4	3	3	2	1	4
11	4	2	2	2	1	1	2
12	3	2	3	3	3	2	5
13	2	4	2	2	2	2	2
14	4	4	3	3	3	3	3
15	5	5	1	4	4	2	3
16	4	3	1	1	1	1	4
17	5	4	2	4	3	4	2
18	3	5	1	4	2	3	1
19	4	4	1	1	1	1	2
20	4	2	3	1	1	1	2
21	2	1	1	1	1	2	2
22	5	3	5	5	5	5	4
23	3	1	1	3	3	1	3
24	1	5	5	5	5	4	3
25	5	4	3	3	3	3	3
26	3	5	3	3	3	2	3
27	4	4	2	2	2	2	3
28	5	5	1	1	1	1	2
29	3	3	1	1	1	1	1
30	3	2	1	1	1	1	3
31	4	4	2	2	1	1	3
32	5	5	1	1	1	1	1
33	3	4	1	2	1	1	4
34	4	3	1	1	1	1	3
35	4	3	3	3	3	3	3
36	4	2	3	3	3	1	3
37	3	2	3	4	4	4	1
38	4	4	1	1	1	1	1
39	4	1	1	1	1	1	1
40	3	2	3	5	5	5	5
41	2	2	2	2	2	2	3

Appendix 8: continued.

Case Summaries							
	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
1	2	2	1	1	3	3	5
2	1	1	1	3	3	4	3
3	2	2	1	3	3	2	4
4	3	3	4	1	2	3	4
5	3	2	1	1	2	4	3
6	1	2	1	3	3	4	3
7	1	1	1	3	5	5	3
8	3	3	3	3	4	3	3
9	1	1	1	3	3	2	3
10	4	3	1	3	4	3	3
11	2	2	2	1	2	2	4
12	3	3	3	3	2	2	3
13	2	2	2	3	2	1	1
14	3	2	2	2	2	3	2
15	3	3	1	1	3	2	4
16	2	2	2	4	4	4	3
17	2	2	2	3	4	3	4
18	4	3	3	1	4	3	4
19	2	2	2	3	4	4	4
20	2	1	1	3	3	3	3
21	2	1	2	3	2	2	1
22	3	3	3	4	2	2	5
23	3	3	1	4	3	3	4
24	3	3	3	4	2	2	5
25	3	3	3	3	3	3	4
26	3	3	4	3	4	1	5
27	3	3	2	2	4	3	2
28	2	2	1	1	2	5	4
29	2	2	2	3	3	2	4
30	3	3	1	4	4	5	5
31	2	2	2	4	4	4	4
32	1	1	1	4	1	5	3
33	2	1	1	3	3	4	4
34	2	2	2	2	3	3	3
35	4	3	3	3	4	3	3
36	4	3	1	1	4	3	3
37	1	1	1	3	2	2	4
38	1	1	1	4	3	3	4
39	1	1	1	1	2	3	4
40	5	5	5	3	4	1	4
41	3	2	2	3	3	2	4

Appendix 8: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
1	5	5	3	3	2	1	5
2	4	4	4	4	4	4	5
3	4	3	3	3	3	4	4
4	4	4	3	3	4	3	5
5	2	4	4	3	3	4	5
6	5	3	3	3	4	4	4
7	2	5	2	1	5	5	5
8	4	3	4	3	4	4	4
9	3	3	4	4	5	5	5
10	4	3	5	5	5	3	5
11	4	3	3	3	3	3	4
12	3	4	3	3	4	5	5
13	2	3	4	3	4	4	4
14	3	3	3	3	3	4	3
15	5	5	5	2	5	3	4
16	3	3	4	3	3	4	4
17	5	4	3	4	4	5	4
18	3	4	2	3	4	5	4
19	4	4	4	3	4	4	5
20	3	4	3	3	5	4	5
21	1	2	1	2	2	2	5
22	4	4	5	4	5	5	5
23	4	4	3	3	4	4	4
24	4	4	5	4	5	5	5
25	4	4	4	4	4	4	3
26	5	4	4	2	3	4	5
27	2	2	4	3	4	4	4
28	3	5	5	5	5	5	5
29	5	4	4	4	3	3	4
30	5	5	4	4	4	3	5
31	4	3	3	2	3	5	5
32	5	5	5	5	5	5	5
33	4	4	4	3	4	5	5
34	3	3	4	4	4	4	4
35	4	4	4	4	3	3	3
36	4	4	4	1	4	4	4
37	4	4	5	3	3	5	5
38	4	4	4	3	3	4	4
39	5	4	2	2	4	4	4
40	4	5	4	4	5	5	5
41	4	4	2	1	4	4	4

Appendix 8: continued.

Case Summaries

	NTRE
1	5
2	5
3	4
4	5
5	5
6	4
7	5
8	4
9	5
10	5
11	4
12	5
13	4
14	3
15	4
16	4
17	3
18	4
19	4
20	5
21	5
22	5
23	4
24	5
25	3
26	5
27	4
28	5
29	4
30	5
31	5
32	5
33	5
34	4
35	3
36	4
37	5
38	4
39	4
40	5
41	4

Appendix 8: continued.

Appendix 8: continued.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LNMT
42	NE-76	5	5	5	5	5	4
43	NE-264	5	4	3	2	2	3
44	NE-161	5	5	5	5	5	5
45	NE-238	5	5	4	3	4	1
46	NE-37	5	5	4	3	3	2
47	NE-42	5	5	5	1	3	3
48	NE-187	5	5	5	4	4	3
49	NE-186	5	5	5	3	3	3
50	NE-25	5	5	5	5	5	5
51	NE-230	5	5	3	2	2	2
52	NE-123	5	5	5	3	3	4
53	NE-157	5	5	5	4	3	2
54	NE-197	5	5	4	3	4	2
55	NE-235	4	4	4	3	3	3
56	NE-41	5	5	4	3	2	4
57	NE-183	5	5	5	5	5	5
58	NE-12	5	5	5	3	3	3
59	127	5	4	5	2	4	4
60	54	4	4	3	1	2	2
61	34	5	5	5	3	3	3
62	265	5	4	3	3	3	3
63	240	4	4	4	1	2	2
64	61	5	5	5	5	5	5
65	221	5	5	3	2	3	4
66	189	5	5	5	3	4	5
67	160	4	4	3	1	2	2
68	52	4	4	3	1	2	2
69	153	4	5	4	4	3	5
70	9	5	4	4	5	4	2
71	257	5	5	5	3	3	3
72	127	4	4	4	2	3	3
73	30	4	3	3	2	2	2
74	162	5	4	5	3	5	5
75	64	4	4	4	4	4	4
76	204	5	5	4	3	4	2
77	2	4	3	3	3	3	3
78	124	4	4	2	3	3	3
79	59	3	2	2	3	1	1
80	47	5	5	4	1	2	5
81	185	4	4	3	3	3	3
82	130	4	3	3	3	3	4

Appendix 8: continued.

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
42	4	3	1	3	2	4	5
43	3	3	2	3	3	2	3
44	5	5	5	5	5	5	5
45	2	2	3	3	2	2	2
46	2	3	1	1	1	1	1
47	5	4	1	1	1	1	4
48	4	4	4	4	4	4	1
49	3	3	5	5	5	4	3
50	5	5	3	3	1	3	4
51	4	3	1	1	1	1	4
52	4	4	1	1	1	1	1
53	2	3	3	3	3	3	3
54	3	1	5	5	5	3	3
55	3	3	3	4	3	4	4
56	5	4	5	5	4	3	2
57	5	4	4	5	5	5	5
58	5	5	3	3	3	4	4
59	4	5	3	4	4	3	3
60	3	2	1	1	1	1	2
61	4	3	1	1	1	1	3
62	4	3	3	4	4	2	3
63	2	2	3	4	3	1	3
64	5	3	1	1	1	1	1
65	5	2	1	1	1	1	3
66	5	4	4	4	4	4	4
67	4	3	4	4	4	2	1
68	4	3	3	3	2	1	2
69	5	4	2	3	2	1	3
70	2	3	3	4	4	4	3
71	4	4	4	4	4	1	4
72	4	3	2	1	1	1	2
73	4	3	3	3	3	3	2
74	5	3	1	1	1	1	3
75	4	4	1	1	1	1	1
76	2	3	1	2	1	1	4
77	5	3	3	4	3	3	4
78	5	4	1	1	1	1	1
79	1	1	1	2	1	1	3
80	4	4	5	5	5	1	2
81	3	3	2	3	3	2	3
82	4	3	1	1	1	1	2

Appendix 8: continued.

Case Summaries							
	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
42	5	5	5	5	5	5	3
43	2	2	2	3	2	2	3
44	5	5	5	5	5	5	5
45	2	2	2	1	3	5	3
46	1	1	1	1	4	5	3
47	4	4	1	1	5	1	3
48	1	1	1	2	4	1	4
49	5	5	3	3	4	1	3
50	3	4	4	3	5	4	5
51	3	4	2	3	4	5	5
52	3	3	2	3	4	4	4
53	3	3	3	1	5	5	2
54	3	3	2	3	3	1	3
55	4	4	4	2	3	2	3
56	2	2	2	3	2	2	4
57	5	5	4	4	3	4	3
58	5	3	2	2	5	4	4
59	3	3	2	3	4	4	3
60	2	1	1	1	3	3	4
61	3	3	1	3	4	3	5
62	2	2	1	3	3	3	3
63	3	2	1	2	4	1	3
64	1	1	1	3	5	5	5
65	2	2	1	3	4	2	4
66	4	4	4	3	4	2	4
67	1	1	1	3	1	1	2
68	3	3	1	3	4	5	3
69	2	1	1	4	4	2	4
70	3	3	3	3	3	2	3
71	4	4	1	3	4	2	2
72	1	1	1	2	4	2	4
73	2	2	2	2	3	2	3
74	2	2	1	3	4	4	5
75	1	1	1	1	4	1	4
76	4	3	2	1	3	3	4
77	4	3	3	1	1	3	5
78	3	1	4	4	1	1	4
79	2	2	1	1	1	1	3
80	3	3	1	5	3	2	3
81	4	3	2	1	2	3	4
82	2	2	1	2	3	3	3

Appendix 8: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
42	4	4	5	2	4	4	5
43	3	3	4	2	4	4	5
44	5	5	5	5	5	5	5
45	3	3	3	3	4	3	5
46	3	3	3	3	3	3	4
47	3	5	2	3	5	5	5
48	5	4	2	4	5	4	3
49	4	3	4	4	5	3	5
50	5	5	4	5	5	5	5
51	5	5	5	4	5	5	5
52	5	5	5	5	5	5	5
53	4	5	3	4	5	5	4
54	3	3	4	4	4	5	5
55	4	4	3	3	3	4	4
56	4	4	3	2	3	5	5
57	3	3	5	5	5	5	5
58	4	5	3	3	4	4	2
59	3	3	4	3	4	4	3
60	4	4	3	3	4	3	4
61	5	4	5	4	3	4	4
62	4	4	4	3	3	4	4
63	4	3	4	1	5	4	5
64	4	5	4	3	5	4	4
65	5	4	4	3	5	4	5
66	4	4	4	4	4	4	5
67	3	3	3	3	4	3	3
68	4	4	3	3	4	4	4
69	5	4	4	3	2	3	4
70	3	4	4	3	4	4	4
71	2	3	4	2	4	5	5
72	4	3	3	3	3	4	4
73	4	4	4	4	4	4	4
74	5	5	5	5	5	3	5
75	4	4	4	4	4	4	4
76	5	4	5	4	4	5	5
77	5	3	5	3	3	2	5
78	1	4	4	2	5	3	4
79	3	4	3	1	3	5	5
80	4	5	5	5	5	1	5
81	4	4	5	3	3	4	5
82	3	2	3	3	3	4	4

Appendix 8: continued.

Case Summaries

	NTRE
42	5
43	5
44	5
45	5
46	4
47	5
48	3
49	5
50	5
51	5
52	5
53	4
54	5
55	4
56	5
57	5
58	2
59	3
60	4
61	4
62	4
63	5
64	3
65	5
66	5
67	3
68	4
69	4
70	4
71	5
72	4
73	4
74	5
75	4
76	5
77	5
78	4
79	5
80	5
81	5
82	4

Appendix 8: continued.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LNMT
83	181	4	4	3	1	2	2
84	171	4	5	4	3	3	3
85	33	5	5	4	4	4	3
86	195	5	5	3	2	3	3
87	245	5	5	4	4	3	3
88	10	5	5	4	3	3	2
89	57	5	3	3	1	2	2
90	15	5	3	3	1	2	2
91	32	5	5	4	3	3	3
92	202	5	5	5	3	3	3
93	183	3	3	3	1	2	2
94	71	5	5	3	3	4	4
95	194	3	3	4	5	3	1
96	156	3	4	3	1	2	1
97	249	5	5	5	3	1	1
98	206	5	5	4	2	3	3
99	93	5	3	3	1	1	1
100	109	5	5	4	1	3	3
101	61	5	5	3	1	1	1
102	17	5	4	3	1	1	2
103	163	4	4	5	4	4	4
104	35	5	4	4	3	3	2
105	92	4	4	3	2	3	2
106	19	5	4	2	2	2	1
107	48	3	5	4	2	2	3
108	103	5	5	4	3	3	3
109	12	3	3	3	1	1	2
110	94	3	3	4	2	3	3
111	125	5	5	5	3	3	3
112	214	3	3	3	3	3	3
113	22	5	5	2	1	1	1
114	193	5	5	5	1	1	3
115	97	4	4	4	3	3	4
116	82	4	4	4	4	1	3
117	218	5	5	4	3	3	3
118	269	4	4	3	1	2	2
119	62	5	4	4	3	3	4
120	14	4	4	3	1	3	2
121	46	4	4	2	1	2	2
122	280	5	5	4	1	3	4
123	75	4	4	3	2	2	3

Appendix 8: continued.

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
83	4	4	3	3	3	4	3
84	5	3	5	5	5	3	4
85	4	2	2	2	2	1	2
86	3	1	3	3	1	1	3
87	4	1	1	1	2	1	1
88	2	2	4	4	4	3	3
89	4	4	1	1	1	1	1
90	4	4	1	1	1	1	1
91	3	2	4	4	4	2	2
92	3	2	1	1	1	1	3
93	2	2	3	3	2	1	1
94	4	3	3	3	1	1	3
95	1	1	1	5	1	1	4
96	2	2	2	3	2	1	3
97	4	4	1	1	1	1	1
98	3	3	2	3	2	3	4
99	1	3	3	4	3	1	3
100	4	4	1	1	1	1	1
101	3	2	1	1	1	1	1
102	5	4	1	1	1	1	1
103	4	3	1	3	2	2	1
104	2	2	1	1	1	1	1
105	4	4	1	2	1	1	4
106	2	4	4	3	3	2	2
107	4	1	1	1	1	1	2
108	4	4	1	1	1	1	1
109	4	1	3	4	4	3	2
110	4	3	1	1	1	1	1
111	4	3	1	1	1	1	3
112	3	2	1	2	2	1	2
113	3	3	1	1	1	1	5
114	4	1	1	5	5	1	2
115	4	4	2	2	1	2	4
116	3	3	2	4	3	3	3
117	5	5	3	3	3	2	2
118	2	3	1	1	1	1	2
119	4	4	1	2	2	1	2
120	2	3	1	1	1	1	5
121	2	2	1	1	1	1	1
122	5	3	1	1	1	1	1
123	4	3	2	2	1	2	3

Appendix 8: continued.

Case Summaries							
	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
83	3	3	3	2	2	4	4
84	4	4	2	2	4	3	4
85	2	2	2	3	4	1	3
86	3	3	3	3	3	1	3
87	2	2	2	1	4	1	1
88	3	3	3	2	4	1	2
89	1	1	1	3	4	3	3
90	1	1	1	3	4	3	4
91	2	2	2	1	4	2	3
92	3	3	3	2	4	2	4
93	2	2	1	2	3	2	3
94	3	3	3	3	2	2	3
95	4	4	5	2	4	4	5
96	3	3	1	3	2	2	2
97	1	1	1	5	1	2	4
98	3	3	2	4	4	2	2
99	4	3	2	3	2	1	3
100	1	1	1	3	5	5	5
101	1	1	1	1	2	2	3
102	1	1	1	1	5	5	5
103	1	1	1	3	5	2	4
104	1	1	1	1	4	1	4
105	2	2	1	1	4	5	4
106	2	2	3	2	1	1	3
107	2	2	1	2	4	1	2
108	1	1	1	2	3	2	5
109	2	4	2	1	3	1	3
110	1	1	1	1	3	4	4
111	1	1	1	2	4	4	5
112	3	3	3	3	3	2	2
113	1	1	1	4	3	5	2
114	1	1	1	3	4	3	4
115	3	3	3	2	4	5	4
116	3	2	2	3	4	4	4
117	2	2	2	3	4	4	4
118	1	1	1	3	4	3	3
119	2	2	1	2	4	4	4
120	3	5	3	4	2	4	2
121	1	1	1	2	2	2	2
122	1	1	1	1	4	3	4
123	3	1	1	3	3	4	3

Appendix 8: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
83	4	4	3	4	3	4	4
84	5	5	5	3	5	5	5
85	2	4	3	2	4	4	5
86	3	4	5	2	5	5	5
87	1	4	3	2	4	4	5
88	2	2	3	3	2	4	4
89	3	4	3	2	4	4	4
90	4	3	1	2	3	4	5
91	3	3	3	3	4	4	4
92	5	4	4	4	4	5	4
93	4	2	2	3	2	2	3
94	3	3	5	4	4	4	5
95	5	3	3	2	4	4	4
96	2	2	3	2	3	4	4
97	4	3	4	4	4	3	5
98	3	3	4	2	5	4	5
99	3	4	4	1	5	5	5
100	5	5	4	4	5	4	5
101	3	3	2	2	3	4	3
102	5	5	5	4	4	5	5
103	4	4	4	4	4	4	4
104	4	4	4	2	4	2	3
105	4	4	4	4	4	2	5
106	4	4	4	2	4	4	5
107	4	3	2	3	4	5	5
108	5	4	4	4	4	3	2
109	1	4	5	3	5	5	5
110	4	3	3	3	2	3	3
111	5	4	4	4	3	2	5
112	3	3	3	3	3	3	4
113	1	2	5	4	5	5	5
114	5	4	4	3	4	5	5
115	5	4	3	4	3	3	5
116	3	4	3	3	3	4	4
117	5	5	3	4	3	4	5
118	4	3	3	3	3	4	4
119	4	4	3	2	4	4	3
120	2	4	3	2	3	3	4
121	3	3	3	3	3	4	4
122	5	4	3	3	4	5	5
123	4	4	4	3	4	4	4

Appendix 8: continued.

Case Summaries

	NTRE
83	4
84	5
85	5
86	5
87	5
88	4
89	4
90	5
91	4
92	4
93	3
94	5
95	4
96	4
97	5
98	5
99	5
100	5
101	3
102	5
103	4
104	3
105	5
106	5
107	5
108	2
109	5
110	3
111	5
112	4
113	5
114	5
115	5
116	4
117	5
118	4
119	3
120	4
121	4
122	5
123	4

Appendix 8: continued.

Case Summaries

	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LNMT
124	77	5	5	3	1	3	1
125	14	5	5	5	2	3	3
126	149	4	4	3	1	2	2
127	170	5	5	4	4	3	3
128	168	3	3	3	1	2	2
129	236	5	4	3	3	3	3
130	67	4	4	3	2	3	3
131	118	4	4	3	2	2	2
132	242	5	5	3	1	1	1
133	285	5	4	4	3	3	4
134	231	5	5	3	1	1	3
135	230	5	5	3	2	2	4
136	233	5	5	4	1	4	3
137	46	5	4	3	2	2	2
138	224	4	5	4	2	3	2
139	24	4	4	3	3	3	3
140	246	5	5	5	5	5	5
Total	N	140	140	140	140	140	140

Case Summaries

	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SECH
124	4	4	5	5	5	1	3
125	5	3	1	1	1	1	1
126	4	4	1	3	4	2	4
127	3	2	3	3	3	3	2
128	3	3	1	1	1	1	1
129	4	4	2	3	2	1	3
130	3	2	1	2	1	1	3
131	4	3	1	3	1	1	5
132	4	2	2	1	1	1	1
133	4	3	4	4	4	2	4
134	4	3	1	2	1	1	2
135	4	2	2	2	2	1	3
136	3	3	1	2	1	1	3
137	4	3	3	3	3	2	4
138	5	3	1	1	1	1	1
139	4	3	1	1	1	1	1
140	5	5	5	5	5	5	5
Total	N	140	140	140	140	140	140

Case Summaries

		SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
124		3	3	1	3	4	2	3
125		1	1	1	3	4	3	4
126		3	3	1	2	1	3	2
127		2	2	2	3	3	2	3
128		1	1	1	2	3	2	3
129		2	2	2	3	4	3	4
130		2	1	1	1	3	2	3
131		4	3	1	3	2	5	4
132		2	1	1	1	2	3	5
133		4	4	2	4	4	3	5
134		2	2	2	3	2	3	5
135		3	3	3	3	3	4	5
136		2	2	1	3	3	2	4
137		3	2	3	4	3	3	3
138		1	1	1	1	1	2	5
139		1	1	1	3	3	2	3
140		5	5	5	5	5	5	5
Total	N	140	140	140	140	140	140	140

Case Summaries

		INTF	ACFS	TIME	EFRT	ACWB	SOCL	OTDR
124		4	4	4	1	5	4	4
125		4	4	4	4	5	5	5
126		3	2	2	2	4	4	5
127		3	3	3	3	4	4	4
128		2	2	2	2	2	3	3
129		2	3	4	5	4	3	5
130		3	3	3	3	4	4	4
131		4	4	4	3	3	4	5
132		5	5	3	4	4	4	3
133		4	4	4	3	4	4	4
134		4	4	4	3	4	5	5
135		3	4	4	3	4	4	4
136		3	3	3	3	4	5	4
137		3	4	4	3	4	4	4
138		5	5	4	1	3	3	2
139		3	3	3	2	4	3	5
140		5	5	5	5	5	5	5
Total	N	140	140	140	140	140	140	140

Case Summaries

		NTRE
124		4
125		5
126		5
127		4
128		3
129		5
130		4
131		5
132		3
133		4
134		5
135		4
136		4
137		4
138		2
139		5
140		5
Total	N	140

Appendix 9: Season-level raw data for outcomes relative to expectations for archers.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LBMT
1	NE-173	5	5	5	3	3	3
2	NE-105	4	4	4	3	3	3
3	NE-145	4	4	4	3	3	3
4	NE-253	3	3	3	1	2	1
5	NE-88	1	2	4	3	2	4
6	NE-13	3	4	4	2	2	2
7	NE-162	5	5	4	2	3	3
8	NE-57	4	4	4	3	3	3
9	NE-260	5	5	5	3	3	3
10	NE-281	4	5	5	3	4	4
11	NE-32	3	3	4	2	2	2
12	NE-70	4	4	4	3	3	3
13	NE-207	3	3	3	3	3	3
14	NE-221	4	4	4	2	3	3
15	NE-108	5	5	5	4	5	5
16	NE-244	5	5	4	3	5	4
17	NE-214	3	3	3	2	3	3
18	NE-60	2	3	3	2	2	3
19	NE-74	4	3	3	3	3	3
20	NE-17	5	5	5	4	3	3
21	NE-228	4	5	3	2	2	3
22	NE-50	5	5	5	3	4	4
23	NE-213	5	5	4	3	3	3
24	NE-225	5	5	5	3	4	4
25	NE-132	5	5	3	3	3	3
26	NE-27	5	5	5	1	2	2
27	NE-5	5	5	5	4	4	4
28	NE-19	4	4	3	2	3	3
29	NE-36	5	5	5	3	3	3
30	NE-220	5	5	5	3	4	4
31	NE-250	5	5	5	3	4	4
32	NE-18	5	5	3	3	4	3
33	NE-233	4	4	4	3	3	3
34	NE-211	4	4	4	3	3	3
35	NE-251	4	4	4	4	3	3
36	NE-203	4	4	3	3	3	3
37	NE-43	5	5	4	3	3	3
38	NE-121	3	3	2	2	2	2
39	NE-89	4	4	4	3	3	3
40	NE-188	5	5	5	2	3	3
41	NE-204	5	5	3	3	3	3

Appendix 9: continued.

	Case Summaries						
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
1	3	3	3	3	3	2	3
2	3	3	4	4	4	3	3
3	3	3	3	3	3	3	3
4	3	3	2	2	1	2	2
5	4	4	5	5	4	4	3
6	4	3	3	3	3	3	3
7	4	4	3	4	4	1	4
8	3	3	3	2	2	2	2
9	5	5	4	4	4	3	1
10	4	4	4	4	3	3	3
11	3	3	3	3	3	1	2
12	3	3	4	4	3	3	3
13	3	2	3	3	3	3	3
14	3	3	2	2	2	2	3
15	5	5	3	3	3	3	4
16	4	5	4	4	1	1	4
17	3	4	2	2	1	1	1
18	3	2	3	3	3	3	2
19	3	3	3	3	3	3	3
20	3	4	4	4	3	3	2
21	3	3	2	2	2	2	2
22	4	4	4	5	5	5	4
23	3	3	2	2	2	2	3
24	4	4	4	5	5	5	4
25	3	3	3	3	3	3	3
26	2	2	3	3	3	2	3
27	4	4	2	2	2	2	2
28	3	3	3	2	2	2	3
29	3	3	3	3	3	3	3
30	3	4	3	3	3	2	3
31	4	4	3	3	3	3	3
32	3	3	3	3	3	3	3
33	3	3	3	3	3	3	3
34	3	3	4	4	4	4	4
35	3	4	3	3	3	3	3
36	3	3	3	3	3	3	4
37	3	3	2	2	2	2	1
38	2	2	2	2	2	2	2
39	3	3	3	3	3	3	3
40	3	3	3	3	3	3	2
41	3	3	4	4	4	4	4

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Appendix 9: continued.

Case Summaries							
	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
1	3	3	3	5	3	3	3
2	3	3	3	3	3	3	3
3	3	3	3	3	3	2	3
4	2	1	1	3	3	3	1
5	3	3	3	3	3	3	3
6	4	2	3	3	4	3	3
7	4	4	4	5	5	4	3
8	1	2	2	4	4	3	2
9	1	1	1	4	4	1	3
10	3	3	3	2	3	3	4
11	2	2	1	3	3	3	3
12	2	2	1	4	5	3	3
13	3	3	3	4	3	3	3
14	3	3	3	3	4	3	3
15	3	3	3	3	3	3	3
16	4	1	1	4	5	3	5
17	1	1	1	2	3	3	3
18	2	2	2	3	3	3	3
19	3	3	3	3	4	3	3
20	2	2	2	4	4	3	4
21	3	3	2	3	3	2	3
22	4	4	5	5	4	3	1
23	3	3	2	4	4	3	3
24	4	4	5	5	4	3	1
25	3	3	3	3	3	3	3
26	3	3	2	5	3	3	2
27	2	2	2	4	4	3	4
28	3	3	3	3	3	3	3
29	3	3	3	3	3	4	4
30	3	3	2	4	4	1	4
31	3	3	3	4	4	4	4
32	3	3	3	4	3	3	3
33	3	3	3	3	3	3	3
34	4	4	4	3	4	2	3
35	4	3	3	3	4	4	4
36	4	4	1	3	3	3	3
37	1	1	1	3	3	3	3
38	1	1	1	3	3	2	2
39	3	3	3	3	4	2	3
40	1	1	1	4	4	3	3
41	4	4	3	5	5	3	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
1	4	3	3	3	3	3	5
2	3	3	4	4	3	3	4
3	3	3	3	4	3	3	3
4	1	1	3	3	4	3	4
5	3	3	3	4	3	3	3
6	3	4	5	5	4	5	4
7	3	5	1	1	5	3	3
8	2	3	3	4	3	3	3
9	3	5	3	3	5	5	5
10	4	4	4	3	4	3	5
11	2	3	3	3	3	4	4
12	3	3	4	3	3	4	4
13	3	3	3	3	3	3	3
14	3	3	4	4	3	3	3
15	3	3	3	3	3	3	3
16	5	5	5	1	3	4	5
17	3	4	4	4	4	5	5
18	2	2	3	4	3	4	4
19	4	3	3	3	3	3	3
20	3	3	2	1	4	3	5
21	3	3	2	3	3	3	4
22	1	2	4	4	3	5	5
23	3	3	3	3	3	4	4
24	1	2	4	4	3	5	5
25	3	3	3	3	3	3	3
26	3	3	3	1	3	5	5
27	4	4	4	5	4	4	3
28	3	3	3	4	3	3	3
29	4	4	4	4	4	4	4
30	4	4	4	2	4	1	4
31	4	4	4	4	4	5	5
32	3	3	3	5	3	3	3
33	3	3	4	4	3	4	4
34	3	4	4	4	4	4	4
35	4	4	4	3	4	3	4
36	3	3	2	3	3	3	3
37	2	3	4	4	4	5	5
38	2	3	3	3	3	4	4
39	3	3	5	5	3	3	3
40	2	3	3	5	3	3	4
41	2	3	3	1	3	3	4

Appendix 9: continued.

Case Summaries

	NTRE	Satisfaction
1	5	5
2	4	4
3	3	5
4	4	2
5	3	5
6	4	5
7	3	5
8	3	5
9	5	5
10	5	5
11	4	4
12	4	5
13	3	5
14	3	5
15	3	5
16	5	5
17	3	4
18	4	3
19	3	5
20	5	5
21	4	4
22	5	3
23	4	5
24	5	3
25	3	5
26	5	3
27	3	5
28	3	5
29	4	5
30	4	5
31	5	5
32	3	5
33	4	5
34	4	5
35	4	5
36	3	5
37	5	4
38	4	4
39	3	5
40	4	5
41	4	5

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LBMT
42	NE-76	5	4	5	3	4	4
43	NE-264	4	3	2	2	2	3
44	NE-161	5	3	3	2	3	3
45	NE-238	3	3	3	3	3	3
46	NE-37	3	3	3	3	3	3
47	NE-42	5	5	5	4	4	4
48	NE-187	5	5	3	2	3	3
49	NE-186	5	4	5	5	5	4
50	NE-25	5	4	3	3	3	3
51	NE-230	5	5	5	3	3	3
52	NE-123	2	2	2	2	2	2
53	NE-157	2	2	2	3	3	3
54	NE-197	5	5	5	3	2	3
55	NE-235	5	5	4	3	3	3
56	NE-41	3	3	3	3	3	3
57	NE-183	3	3	3	3	3	3
58	NE-12	2	2	5	2	3	4
59	127	3	4	3	3	3	3
60	54	3	2	2	2	2	3
61	34	4	4	3	2	3	3
62	265	4	4	3	3	3	3
63	240	5	5	5	3	4	3
64	61	5	5	3	3	3	3
65	221	4	4	5	4	4	5
66	189	5	5	5	3	3	3
67	160	4	4	3	3	3	3
68	52	4	4	3	2	2	3
69	153	5	5	5	4	4	3
70	9	5	4	4	2	2	3
71	257	4	5	4	3	2	3
72	127	2	2	1	1	1	1
73	30	4	5	4	3	3	3
74	162	5	5	5	3	3	3
75	64	4	4	4	3	4	4
76	204	4	4	5	3	3	3
77	2	4	4	4	2	2	3
78	124	4	4	2	3	3	2
79	59	4	4	4	3	3	2
80	47	1	1	1	1	1	1
81	185	4	4	5	3	3	3
82	130	5	5	5	5	4	4

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
42	4	4	3	4	3	2	4
43	3	3	2	3	3	2	2
44	3	1	1	1	1	2	2
45	3	2	3	3	3	2	3
46	3	2	3	3	3	3	3
47	4	3	5	5	5	3	5
48	3	4	2	2	2	3	3
49	3	3	3	2	2	2	2
50	3	3	3	3	3	3	2
51	3	3	3	3	3	3	2
52	2	2	2	2	2	2	2
53	3	3	3	3	3	3	3
54	3	3	1	1	1	1	2
55	3	3	3	3	3	2	3
56	3	3	4	3	3	3	3
57	3	3	4	4	3	3	3
58	5	4	3	3	3	3	3
59	3	3	2	2	2	2	3
60	3	3	3	3	3	3	3
61	3	3	3	3	3	3	3
62	3	3	2	2	2	2	3
63	4	4	5	5	5	3	5
64	3	3	3	3	3	3	3
65	3	3	4	4	3	3	1
66	3	3	3	3	3	3	3
67	3	3	2	2	2	2	2
68	3	3	4	3	3	2	2
69	3	3	3	4	4	3	3
70	3	3	4	4	4	3	4
71	4	2	2	3	2	3	2
72	1	1	1	1	1	1	1
73	3	3	3	3	3	3	2
74	3	4	3	4	4	3	3
75	4	4	1	1	1	1	1
76	3	3	4	4	4	3	4
77	4	3	2	2	2	2	3
78	4	2	1	1	1	1	2
79	5	3	3	3	3	3	3
80	1	1	2	1	1	1	2
81	3	3	3	3	2	2	2
82	4	4	2	2	2	2	2

Case Summaries

	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
42	3	3	3	5	5	3	2
43	2	2	2	3	3	3	3
44	2	2	2	5	3	3	3
45	3	3	3	3	3	3	3
46	3	3	3	3	2	2	3
47	5	5	3	4	5	3	3
48	3	3	3	2	4	3	4
49	2	2	2	3	3	3	3
50	3	2	2	4	4	3	3
51	2	2	3	4	5	3	4
52	2	2	2	3	3	2	2
53	3	3	3	1	3	3	3
54	2	2	2	2	4	3	3
55	3	3	2	2	4	3	3
56	3	3	3	3	3	3	3
57	2	2	2	3	3	3	3
58	4	3	2	4	4	3	3
59	3	3	3	3	3	3	3
60	3	3	3	3	2	3	3
61	3	3	3	3	3	3	3
62	3	3	3	3	3	3	3
63	5	5	3	5	5	3	4
64	3	3	3	4	3	3	3
65	1	1	1	3	4	2	3
66	3	3	3	3	3	3	3
67	2	2	2	4	3	3	3
68	2	2	2	3	4	4	4
69	3	3	3	5	5	3	3
70	4	4	3	3	3	3	3
71	2	2	3	4	5	3	4
72	1	1	1	3	3	3	2
73	2	2	2	3	4	3	3
74	3	4	4	4	3	3	3
75	1	1	1	4	4	3	3
76	4	4	3	3	3	3	4
77	3	3	2	3	3	3	2
78	3	3	4	5	5	3	4
79	3	3	3	3	5	3	5
80	1	1	1	1	3	3	2
81	2	2	3	3	3	3	3
82	2	2	2	4	4	3	3

Appendix 9: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
42	3	3	1	1	2	3	3
43	2	3	4	3	3	4	4
44	3	3	3	5	3	4	3
45	3	3	3	2	3	3	4
46	3	3	3	3	3	3	4
47	5	5	5	3	3	5	5
48	4	3	1	1	4	3	3
49	3	3	3	3	3	3	3
50	3	3	3	3	3	3	3
51	4	4	4	5	5	4	3
52	2	2	2	2	2	2	2
53	3	3	3	4	3	3	3
54	3	3	3	1	3	3	3
55	3	3	3	1	3	3	4
56	3	3	3	3	3	3	3
57	4	4	4	3	3	5	5
58	3	5	4	4	4	4	3
59	3	3	3	3	3	3	3
60	4	4	3	4	4	3	4
61	3	3	3	3	3	3	3
62	3	3	3	3	3	3	3
63	4	4	3	5	3	3	3
64	3	3	3	1	3	3	3
65	3	3	2	2	3	3	4
66	3	3	3	3	3	3	3
67	3	3	3	3	3	3	3
68	4	5	3	3	3	4	5
69	2	3	5	5	3	4	5
70	3	3	2	2	4	3	3
71	4	3	4	1	5	4	5
72	3	4	3	2	3	4	4
73	3	3	4	4	3	3	4
74	3	3	1	1	3	3	3
75	3	3	3	3	3	3	3
76	4	4	5	4	5	5	5
77	3	3	2	4	4	3	4
78	5	3	5	5	3	5	5
79	3	3	5	5	5	5	3
80	3	2	3	4	4	1	3
81	3	3	4	4	4	4	5
82	3	4	5	5	3	4	4

Appendix 9: continued.

Case Summaries

	NTRE	Satisfaction
42	3	5
43	4	5
44	3	4
45	4	5
46	4	4
47	5	5
48	3	5
49	3	5
50	3	5
51	3	5
52	2	1
53	3	4
54	3	4
55	4	5
56	3	5
57	5	5
58	3	3
59	3	4
60	4	2
61	3	4
62	3	4
63	3	5
64	3	5
65	4	5
66	3	5
67	3	5
68	5	5
69	5	5
70	3	4
71	5	5
72	4	2
73	4	5
74	3	5
75	3	5
76	5	5
77	4	4
78	5	5
79	3	5
80	3	1
81	5	5
82	4	5

Appendix 9: continued.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LBMT
83	181	3	3	3	2	3	3
84	171	4	4	5	3	3	3
85	33	5	5	4	4	3	4
86	195	4	4	4	2	4	4
87	245	5	5	5	4	4	4
88	10	5	5	5	4	4	3
89	57	4	4	3	3	2	3
90	15	2	2	3	1	2	2
91	32	5	5	5	3	3	3
92	202	3	2	2	2	2	2
93	183	4	5	4	4	4	2
94	71	3	3	3	3	3	3
95	194	5	5	2	2	2	3
96	156	5	5	4	3	3	3
97	249	4	4	3	3	3	3
98	206	4	4	5	3	4	3
99	93	5	5	3	3	3	3
100	109	3	3	3	1	3	3
101	61	4	4	3	3	3	3
102	17	5	5	5	3	4	4
103	163	4	4	4	4	4	4
104	35	3	3	4	4	4	4
105	92	4	4	3	3	4	4
106	19	4	4	4	3	3	3
107	48	5	5	5	3	3	2
108	103	3	3	3	3	3	3
109	12	5	5	4	3	4	3
110	94	4	4	4	3	3	3
111	125	4	4	3	1	1	1
112	214	4	4	4	3	3	3
113	22	5	5	5	3	3	3
114	193	5	5	5	3	3	3
115	97	4	4	4	3	3	4
116	82	5	5	4	3	3	3
117	218	4	4	4	3	3	3
118	269	4	3	4	3	3	3
119	62	3	3	3	2	2	3
120	14	3	4	3	3	3	3
121	46	4	4	4	3	3	3
122	280	5	5	3	3	3	3
123	75	4	4	3	3	3	3

Appendix 9: continued.

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
83	3	3	4	4	4	4	3
84	3	4	4	5	5	3	3
85	5	3	3	3	3	3	3
86	4	4	4	4	4	4	4
87	4	4	3	3	3	3	3
88	3	3	2	2	2	2	2
89	3	3	1	2	2	1	2
90	3	2	4	4	4	4	3
91	3	3	4	4	4	4	3
92	2	2	2	2	2	2	2
93	4	3	1	1	1	1	2
94	3	3	4	3	3	3	3
95	3	3	5	5	5	2	3
96	4	3	3	4	4	3	3
97	3	3	3	3	3	3	3
98	4	5	4	4	4	3	5
99	3	3	3	2	1	3	3
100	3	3	1	1	1	1	1
101	4	4	3	3	3	3	3
102	4	4	2	3	3	3	3
103	4	4	3	2	2	2	2
104	3	3	3	3	3	3	3
105	3	3	3	3	3	3	3
106	3	4	3	3	3	3	3
107	3	3	3	3	3	3	3
108	3	3	3	3	3	3	3
109	3	3	3	3	3	2	4
110	3	3	2	2	1	1	1
111	3	3	4	4	3	3	3
112	3	3	3	3	3	3	3
113	3	3	3	3	3	3	3
114	3	3	4	3	3	3	3
115	3	3	1	2	1	1	3
116	4	4	2	2	2	2	2
117	3	4	3	3	3	3	3
118	3	3	3	2	2	2	3
119	3	3	3	3	3	3	3
120	3	3	4	4	3	3	3
121	3	3	3	2	2	2	2
122	3	3	4	4	4	3	3
123	3	3	3	3	3	3	3

Appendix 9: continued.

Case Summaries

	SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
83	3	3	3	3	3	3	3
84	3	3	2	1	4	2	3
85	3	3	3	3	4	3	3
86	4	4	4	4	4	2	4
87	3	4	4	3	4	3	3
88	2	2	2	4	4	3	2
89	2	2	2	3	4	1	3
90	3	3	3	3	2	2	3
91	3	3	3	4	4	4	4
92	2	2	2	2	4	3	4
93	2	2	2	2	3	3	2
94	3	3	3	3	5	3	3
95	3	3	3	3	3	3	3
96	3	3	3	4	4	2	4
97	3	3	3	3	3	3	3
98	4	4	3	3	5	2	4
99	3	2	3	4	4	3	2
100	1	1	1	4	3	1	2
101	3	3	3	3	4	3	4
102	3	3	3	3	5	3	3
103	2	2	2	3	4	3	3
104	3	3	3	2	3	3	4
105	2	2	2	3	4	4	3
106	3	3	3	3	3	3	3
107	3	3	3	4	4	3	5
108	3	3	3	3	3	3	2
109	3	3	3	4	3	3	4
110	1	1	1	3	3	3	3
111	3	3	3	3	3	3	3
112	3	3	3	3	4	3	4
113	3	3	3	5	5	3	4
114	3	3	3	3	5	3	5
115	3	4	4	3	4	4	4
116	2	2	2	5	5	3	4
117	3	3	3	3	3	3	3
118	3	3	3	3	4	3	3
119	3	3	3	3	4	1	3
120	2	2	2	3	3	3	3
121	2	2	2	4	4	4	3
122	3	3	3	3	3	3	3
123	3	3	3	3	4	3	4

Appendix 9: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
83	3	3	3	3	3	3	3
84	3	3	4	4	3	5	5
85	3	3	3	3	3	3	3
86	4	4	2	4	4	4	3
87	3	3	3	3	4	4	5
88	3	3	4	4	3	4	4
89	3	4	4	3	4	4	5
90	4	3	3	4	2	4	5
91	4	4	4	4	4	4	4
92	4	3	3	4	3	3	3
93	2	3	1	1	2	2	3
94	4	4	4	3	3	3	3
95	3	3	3	3	3	3	3
96	4	4	4	4	4	4	4
97	3	3	3	3	3	3	3
98	5	5	4	4	4	5	5
99	2	3	5	3	3	4	5
100	2	3	3	3	3	3	3
101	4	4	4	3	3	4	4
102	3	3	3	3	3	3	4
103	3	3	3	3	3	3	3
104	4	3	2	2	4	3	3
105	3	3	3	3	4	3	4
106	3	3	4	4	3	3	4
107	5	3	5	5	3	4	3
108	2	3	3	3	3	3	3
109	4	3	3	3	3	3	4
110	3	3	3	3	3	3	3
111	4	4	4	5	3	3	3
112	3	3	3	3	3	3	3
113	5	5	3	3	4	4	5
114	5	5	1	1	3	3	3
115	5	4	4	4	3	4	4
116	4	4	5	5	4	5	5
117	3	3	5	3	3	1	5
118	3	3	3	3	4	4	4
119	3	4	4	3	3	4	3
120	3	3	3	2	3	3	3
121	3	3	3	3	4	4	4
122	2	3	3	3	3	3	3
123	4	3	3	3	3	3	3

Appendix 9: continued.

Case Summaries

	NTRE	Satisfaction
83	3	4
84	5	5
85	3	5
86	3	5
87	5	5
88	4	5
89	5	5
90	5	3
91	4	5
92	3	3
93	3	4
94	3	5
95	3	4
96	4	5
97	3	5
98	5	5
99	5	5
100	3	4
101	4	5
102	4	5
103	3	5
104	3	5
105	4	5
106	4	5
107	3	5
108	3	4
109	4	5
110	3	4
111	3	4
112	3	5
113	4	5
114	3	5
115	4	3
116	5	5
117	5	5
118	4	5
119	3	4
120	3	4
121	4	5
122	3	5
123	3	5

Appendix 9: continued.

Case Summaries							
	Tag Number	SEPF	SHPF	HVPF	TRPF	LGNT	LBMT
124	77	4	4	4	3	3	3
125	14	4	5	4	3	3	3
126	149	5	5	4	4	3	3
127	170	5	5	5	4	4	4
128	168	5	5	5	4	4	3
129	236	4	4	3	3	3	3
130	67	3	3	3	3	3	3
131	118	4	3	3	2	2	2
132	242	4	2	3	1	3	3
133	285	5	5	3	4	3	4
134	231	5	5	5	3	4	4
135	230	5	5	5	3	4	4
136	233	5	5	5	3	2	4
137	46	5	5	4	4	4	3
138	224	3	3	3	3	3	3
139	24	3	3	4	3	3	3
140	246	5	5	5	5	5	5
141		.	.	.	.	.	.
Total	N	141	140	140	140	140	140

Case Summaries							
	QUMT	CNDN	SEBH	SHBH	HVBH	TRBH	SEOH
124	3	2	2	3	2	3	3
125	3	3	1	1	1	1	1
126	3	3	3	3	4	3	3
127	4	3	4	4	4	4	2
128	3	2	3	3	3	3	3
129	3	4	2	2	2	2	4
130	3	3	3	3	2	2	2
131	3	4	3	3	1	1	3
132	3	4	2	3	2	1	1
133	4	4	4	4	4	3	4
134	4	4	2	2	2	2	2
135	3	3	2	2	2	2	2
136	3	3	3	2	2	3	2
137	3	3	3	3	3	3	2
138	3	3	3	3	3	3	3
139	3	1	1	1	1	1	1
140	5	5	3	3	3	3	3
141	.	.	.	.	.	.	.
Total	N	140	140	140	140	140	140

Appendix 9: continued.

Case Summaries								
		SHOH	HVOH	TROH	PLHV	WTHR	AISF	UNCR
124		3	3	3	2	4	3	4
125		1	1	1	4	4	3	5
126		3	3	3	3	4	3	1
127		2	2	2	3	4	3	3
128		3	3	3	4	3	3	3
129		3	3	3	4	5	4	2
130		2	2	2	3	3	3	3
131		3	3	3	4	3	3	2
132		1	1	1	4	4	3	2
133		4	4	4	4	4	3	4
134		1	1	1	4	5	4	3
135		1	1	2	4	5	2	3
136		2	2	3	3	5	3	3
137		2	2	2	4	3	3	3
138		3	3	3	3	3	3	3
139		1	1	1	3	4	1	5
140		3	3	3	3	3	3	3
141		.	.	.	.	.	.	.
Total	N	140	140	140	140	140	140	140

Case Summaries								
		INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
124		3	3	2	3	3	3	3
125		5	4	4	4	3	4	5
126		3	4	1	1	3	3	3
127		3	3	4	2	3	3	3
128		3	3	3	2	3	3	3
129		3	3	4	4	3	3	5
130		3	3	3	3	3	3	3
131		4	3	3	3	2	4	4
132		3	5	4	3	3	4	4
133		4	4	4	3	4	4	4
134		3	5	5	5	3	5	5
135		4	5	5	3	3	5	5
136		4	5	5	1	4	3	4
137		3	3	3	3	3	3	3
138		3	3	3	3	3	3	3
139		5	5	5	5	5	3	5
140		3	3	3	3	3	3	3
141		.	.	.	.	.	.	.
Total	N	140	140	140	140	140	140	140

Appendix 9: continued.

Case Summaries

		NTRE	Satisfaction
124		3	5
125		5	5
126		3	5
127		3	5
128		3	5
129		5	5
130		3	3
131		4	5
132		5	5
133		4	5
134		5	5
135		4	5
136		4	4
137		3	5
138		3	4
139		5	5
140		3	5
141		.	.
Total	N	140	140

Appendix 10: Day-level raw data for importance for archers.

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
1	1	5	4	3	1	1	3
2	2	5	5	4	2	2	2
3	5	4	5	5	4	4	4
4	6	3	3	3	3	4	4
5	7	4	4	3	3	3	3
6	9	4	4	4	2	1	3
7	10	4	4	2	1	2	5
8	11	5	5	4	4	5	5
9	12	4	4	4	2	2	2
10	13	5	5	5	2	3	5
11	14	5	5	3	1	3	4
12	15	5	5	3	1	3	3
13	17	5	5	4	1	1	1
14	18	4	4	4	3	4	4
15	19	4	1	2	4	1	5
16	20	4	4	4	1	3	3
17	23	2	2	2	1	2	2
18	25	3	3	3	2	4	5
19	26	3	3	3	4	3	3
20	27	4	3	3	2	2	2
21	28	5	4	4	1	1	3
22	29	4	4	4	1	2	2
23	30	5	5	5	4	1	5
24	32	3	3	3	3	4	4
25	35	3	3	2	1	1	3
26	36	4	4	5	5	3	3
27	37	2	2	2	1	4	4
28	38	5	5	5	3	4	5
29	39	5	5	5	2	5	5
30	40	5	4	4	2	3	4
31	42	5	5	4	1	3	3
32	43	5	5	3	3	3	3
33	47	4	4	4	4	1	1
34	49	5	5	3	4	4	4
35	50	3	3	3	3	1	5
36	51	4	4	5	3	1	2
37	53	1	3	3	1	1	5
38	54	5	5	5	3	5	5
39	55	5	4	4	1	4	4
40	56	5	5	5	3	2	1
41	57	5	5	5	4	4	3

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Appendix 10: continued.

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
1	1	4	4	4	3	1	3
2	1	1	1	1	1	4	1
3	4	3	3	3	4	4	4
4	3	3	4	3	4	3	4
5	1	3	3	1	4	5	4
6	3	1	1	1	4	5	4
7	5	5	4	4	4	4	4
8	1	3	3	3	3	5	1
9	2	2	2	2	3	5	2
10	5	3	3	3	5	5	5
11	3	1	1	1	4	5	4
12	1	1	1	1	3	1	5
13	1	3	3	1	3	4	4
14	4	1	1	1	1	4	1
15	5	1	3	3	1	4	1
16	3	3	3	3	3	4	4
17	2	2	2	2	3	1	1
18	5	3	3	1	4	2	4
19	3	4	3	3	4	1	4
20	2	2	2	2	1	4	2
21	3	1	1	1	1	3	2
22	1	1	1	1	2	4	4
23	1	4	1	3	1	3	5
24	4	4	4	4	4	1	1
25	3	4	4	4	4	4	4
26	1	1	1	1	2	4	3
27	4	2	2	2	1	2	3
28	5	5	5	5	5	5	5
29	4	2	2	1	4	5	4
30	4	4	4	4	2	4	4
31	3	3	3	3	4	4	4
32	3	3	3	3	4	4	4
33	1	1	1	1	4	4	2
34	4	3	3	3	5	4	5
35	5	3	3	3	3	4	1
36	2	3	3	3	3	3	4
37	5	1	3	3	2	1	5
38	5	2	1	1	3	4	3
39	4	1	1	1	1	5	5
40	1	5	3	3	3	5	5
41	3	1	1	1	3	5	4

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
1	3	3	4	3	1	5	4
2	3	4	2	2	2	4	5
3	3	3	4	3	3	4	4
4	3	4	1	3	3	3	5
5	4	5	3	1	3	4	5
6	3	4	4	3	3	4	4
7	2	4	4	3	2	4	5
8	4	5	4	5	5	5	5
9	3	3	3	5	1	4	4
10	3	3	4	4	3	5	5
11	3	3	3	3	3	4	5
12	3	5	3	1	1	5	3
13	4	4	4	4	1	5	1
14	3	3	3	1	1	5	4
15	3	3	4	4	3	4	5
16	3	4	3	4	3	4	4
17	3	4	1	4	1	4	5
18	4	3	3	1	1	4	5
19	4	3	4	3	1	4	4
20	4	4	4	4	2	4	4
21	3	3	3	4	3	3	4
22	4	4	2	3	2	4	3
23	5	5	5	3	1	4	5
24	3	1	4	4	3	4	4
25	4	4	4	1	1	4	5
26	2	5	4	4	3	4	5
27	2	3	3	4	4	5	3
28	5	5	5	3	5	5	5
29	4	4	5	2	3	4	4
30	3	4	4	2	1	5	4
31	4	4	4	3	3	4	4
32	4	4	3	4	3	4	4
33	4	4	4	3	2	5	5
34	5	5	5	3	3	5	4
35	5	5	5	5	1	5	4
36	5	5	4	4	2	4	5
37	1	2	3	1	1	1	3
38	4	4	4	4	3	5	5
39	5	4	4	4	3	5	5
40	1	1	3	4	3	5	3
41	5	5	5	2	2	5	5

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Appendix 10: continued.

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
42	58	5	5	5	4	3	2
43	59	5	5	5	5	5	5
44	60	5	5	5	5	5	5
45	62	5	5	5	3	1	1
46	63	5	5	5	3	5	5
47	202	4	4	3	2	3	3
48	203	5	4	3	2	3	4
49	206	5	5	5	1	4	4
50	208	5	4	4	3	1	2
51	209	5	5	5	3	1	2
52	211	5	4	3	2	1	2
53	212	5	4	3	2	3	3
54	213	5	5	3	3	1	1
55	214	4	4	2	1	1	1
56	215	5	5	5	5	4	5
57	216	5	5	4	4	1	1
58	218	5	4	4	3	4	4
59	219	5	5	5	3	3	4
60	220	5	4	3	5	4	5
61	222	5	4	4	3	3	3
62	224	2	2	2	1	3	3
63	225	5	5	3	1	1	3
64	226	4	4	3	2	2	3
65	227	5	5	5	4	3	3
66	301	3	3	3	2	1	3
67	302	4	4	4	1	4	2
68	303	5	5	5	1	4	4
69	1	5	5	5	5	1	3
70	2	5	3	3	1	1	3
71	3	5	5	2	4	5	5
72	5	5	3	3	2	3	3
73	6	5	5	5	5	5	5
74	7	5	5	5	5	5	5
75	9	5	5	5	3	5	5
76	10	5	5	3	3	1	1
77	11	4	5	5	2	3	3
78	12	5	5	5	3	5	3
79	13	5	5	5	3	4	4
80	14	5	5	3	2	4	4
81	14	5	5	5	3	1	5
82	15	5	5	5	3	3	3

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
42	2	1	1	1	1	4	4
43	5	5	5	5	1	5	5
44	5	3	4	2	2	4	2
45	1	2	2	2	3	4	4
46	5	2	2	2	1	5	5
47	3	4	4	4	4	5	4
48	2	4	4	2	3	1	2
49	4	5	5	5	5	5	5
50	1	1	1	1	2	3	4
51	2	4	4	4	1	5	4
52	2	4	4	4	3	5	5
53	3	3	3	3	4	2	5
54	1	1	3	3	3	3	3
55	1	4	4	3	3	4	5
56	1	1	1	1	5	1	5
57	1	1	1	1	5	2	5
58	4	4	4	4	5	4	5
59	4	3	3	3	4	5	4
60	5	3	3	3	5	3	4
61	3	3	3	3	4	4	4
62	3	1	1	2	4	4	1
63	3	3	3	3	4	4	1
64	3	3	4	4	4	4	4
65	3	2	2	2	3	4	3
66	1	3	1	1	3	4	4
67	1	4	1	1	4	5	4
68	3	1	1	1	3	5	1
69	3	3	3	3	1	5	1
70	1	4	1	1	4	5	5
71	2	4	2	2	4	5	4
72	3	3	1	1	2	3	3
73	5	3	2	3	5	5	5
74	4	4	5	4	3	5	4
75	5	1	5	1	1	1	1
76	1	1	1	1	4	4	1
77	3	5	2	2	5	5	5
78	3	4	2	2	5	5	5
79	4	4	1	1	1	4	4
80	3	3	2	2	3	3	3
81	5	5	2	2	4	3	1
82	3	3	3	3	3	5	5

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
42	3	4	5	1	2	5	4
43	5	5	5	5	1	5	3
44	4	3	4	2	3	4	5
45	5	5	5	4	3	4	5
46	5	5	5	3	3	5	5
47	3	4	3	4	4	4	4
48	4	5	5	3	3	4	5
49	3	5	5	5	5	5	5
50	3	4	4	4	3	4	4
51	4	4	4	5	4	5	4
52	5	5	5	4	3	5	3
53	4	5	4	5	5	5	5
54	4	4	4	3	1	5	5
55	4	1	5	5	4	5	5
56	4	5	5	5	5	5	1
57	3	2	4	3	2	5	3
58	4	3	4	5	5	5	5
59	5	5	4	4	4	4	5
60	3	5	3	5	2	5	5
61	3	4	4	4	4	4	5
62	2	4	4	5	3	4	5
63	3	3	3	3	2	5	5
64	5	5	4	3	4	4	3
65	5	5	4	5	4	5	5
66	2	2	4	3	3	4	4
67	3	1	2	1	3	4	5
68	4	4	4	4	4	4	3
69	5	5	5	5	5	5	5
70	5	5	5	4	1	5	1
71	4	4	4	5	3	5	5
72	3	3	3	2	2	4	3
73	5	5	5	5	1	5	5
74	4	5	5	5	5	5	5
75	5	5	5	1	1	5	5
76	2	2	2	2	1	2	5
77	4	4	5	5	5	5	5
78	5	5	5	3	1	5	5
79	4	4	4	3	3	5	5
80	4	3	3	3	3	4	3
81	5	2	3	3	1	5	5
82	5	5	5	5	5	5	5

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
83	16	5	4	4	4	1	4
84	17	5	5	5	2	1	1
85	18	5	5	5	3	5	5
86	19	5	3	2	1	1	1
87	21	5	5	5	3	3	3
88	22	5	5	1	1	2	2
89	23	5	5	5	3	5	5
90	24	5	5	5	1	1	3
91	24	5	5	5	3	3	2
92	25	5	5	5	5	3	3
93	26	4	4	4	3	4	4
94	27	5	5	5	2	3	3
95	28	3	4	4	2	5	5
96	29	3	3	3	2	1	1
97	30	4	4	4	3	3	4
98	32	3	3	3	3	1	1
99	34	5	5	5	5	5	5
100	35	3	4	4	4	2	2
101	36	5	1	3	5	5	5
102	37	5	4	4	3	2	1
103	40	5	5	3	3	1	1
104	41	4	2	2	2	3	4
105	42	5	5	5	2	1	1
106	43	5	4	4	3	1	5
107	44	5	5	4	3	4	4
108	45	5	3	1	1	3	4
109	46	5	5	5	5	5	5
110	47	5	5	5	3	5	5
111	48	5	5	3	1	3	3
112	50	3	3	3	1	3	3
113	51	3	3	3	2	3	3
114	53	4	3	3	2	1	1
115	56	4	3	3	2	4	4
116	61	3	3	3	4	4	5
117	61	5	5	1	1	3	3
118	62	5	2	2	2	1	1
119	63	5	4	4	4	5	5
120	63	5	5	5	3	1	1
121	64	2	2	1	1	1	1
122	65	5	5	4	4	5	5
123	66	5	5	5	3	1	1

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
83	2	4	1	1	4	4	4
84	1	1	1	1	5	5	5
85	5	5	5	5	5	5	2
86	1	3	1	1	2	4	4
87	4	1	1	1	4	5	4
88	2	2	1	1	2	2	2
89	5	5	5	2	3	5	3
90	1	1	1	1	3	1	1
91	1	3	3	2	3	4	4
92	1	3	2	1	3	4	3
93	4	4	4	4	3	4	2
94	3	1	1	1	4	5	5
95	5	4	4	4	5	3	1
96	1	1	1	1	3	3	4
97	4	3	3	3	2	3	3
98	1	2	2	2	1	3	2
99	5	5	5	5	5	5	5
100	2	3	3	4	4	4	2
101	5	5	5	5	5	1	1
102	1	3	1	1	4	5	2
103	1	1	1	1	2	3	4
104	3	2	1	1	1	3	3
105	1	3	2	2	5	5	5
106	5	1	1	1	1	5	1
107	4	3	3	3	5	5	3
108	3	3	3	3	4	4	4
109	5	3	3	4	1	5	5
110	5	3	1	1	4	5	3
111	3	3	3	3	3	4	2
112	3	3	3	3	5	4	3
113	3	2	2	1	3	4	1
114	1	2	2	2	3	3	4
115	3	3	3	2	3	4	3
116	5	3	1	1	3	5	2
117	3	5	5	5	4	3	3
118	1	5	1	1	5	5	5
119	5	1	1	1	1	1	5
120	1	1	1	1	5	5	3
121	1	1	1	1	3	1	1
122	5	3	3	3	1	5	1
123	1	1	1	1	5	5	1

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
83	3	4	4	3	1	4	4
84	5	5	5	3	3	5	5
85	2	2	2	5	1	5	5
86	5	5	4	3	3	5	5
87	4	4	4	3	4	5	4
88	2	2	2	1	1	5	1
89	5	4	5	3	3	5	5
90	4	4	5	1	1	4	4
91	4	4	4	4	4	4	4
92	4	4	4	2	3	5	5
93	4	4	5	3	1	5	2
94	5	5	5	5	4	5	5
95	3	3	4	4	4	4	5
96	2	3	3	2	2	4	4
97	4	4	3	3	1	4	3
98	4	4	3	1	1	2	1
99	5	5	5	5	5	5	5
100	1	1	2	1	1	3	5
101	4	5	3	5	1	5	3
102	3	3	3	2	2	4	4
103	4	5	5	5	1	5	5
104	3	4	3	3	2	4	4
105	5	5	5	2	1	5	5
106	4	4	4	5	1	5	5
107	3	4	4	4	4	5	5
108	3	5	4	4	2	4	5
109	5	5	5	5	5	5	3
110	3	4	4	5	1	4	5
111	3	4	4	4	2	5	5
112	3	5	3	3	1	5	5
113	4	4	4	4	3	5	1
114	2	3	3	3	1	4	5
115	3	3	4	3	3	4	4
116	3	5	3	4	2	5	5
117	3	3	3	5	3	5	5
118	5	5	5	3	3	5	5
119	4	4	5	2	3	5	5
120	5	5	5	5	5	5	5
121	3	3	3	1	1	3	5
122	4	4	5	5	1	5	5
123	5	5	5	5	3	5	5

Case Summaries								
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH	
124	68	5	5	5	2	3	5	
125	69	5	5	4	3	4	4	
126	70	5	5	5	3	5	5	
127	73	4	3	3	1	3	2	
128	74	4	4	3	2	1	1	
129	101	3	3	3	3	1	1	
130	101	1	5	1	4	3	3	
131	102	5	4	3	1	3	3	
132	102	5	5	3	2	2	4	
133	103	5	5	3	3	4	4	
134	104	5	4	4	4	3	3	
135	104	5	3	3	2	2	2	
136	105	3	3	3	1	1	1	
137	106	3	3	3	3	3	3	
138	106	5	4	3	3	4	4	
139	107	5	3	3	4	3	3	
140	107	5	5	5	3	3	3	
141	112	5	2	2	2	1	1	
142	200	5	5	4	4	3	5	
143	201	4	5	5	5	4	3	
144	202	5	4	4	3	4	4	
145	203	2	2	2	2	4	4	
146	208	5	5	5	5	1	1	
Total	N	146	146	146	146	146	146	

Case Summaries								
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF	
124	5	3	3	3	2	5	5	
125	4	3	1	1	4	5	4	
126	5	1	1	2	3	5	1	
127	3	4	3	3	3	2	3	
128	1	1	1	1	2	3	5	
129	1	1	1	1	3	3	3	
130	1	1	5	4	1	5	2	
131	3	3	1	3	3	5	1	
132	5	3	3	3	4	5	4	
133	4	3	3	3	3	5	3	
134	3	3	3	3	4	5	3	
135	2	2	2	2	4	5	3	
136	1	3	1	1	4	5	5	
137	3	3	2	1	1	1	1	
138	4	3	3	3	1	5	3	
139	3	2	2	2	4	3	5	
140	1	3	3	1	1	3	1	
141	1	1	1	1	1	4	2	
142	4	5	5	4	4	5	5	
143	3	3	3	3	4	5	5	
144	3	3	3	3	3	4	4	
145	4	1	1	1	2	5	5	
146	1	1	1	1	5	5	5	
Total	N	146	146	146	146	146	146	

Case Summaries								
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL	
124	3	3	2	5	3	5	2	
125	4	5	5	4	3	5	5	
126	5	5	5	5	1	5	5	
127	4	3	3	3	3	3	4	
128	4	4	4	5	3	3	5	
129	1	3	1	3	3	3	3	
130	5	5	5	4	4	5	3	
131	5	5	5	5	3	5	5	
132	3	5	5	4	3	5	4	
133	3	5	5	5	3	5	5	
134	4	4	5	4	4	4	4	
135	4	3	4	4	1	4	4	
136	3	3	4	5	1	5	3	
137	1	5	1	1	4	3	5	
138	5	5	4	3	3	4	5	
139	4	3	3	3	4	3	3	
140	4	4	4	3	3	5	3	
141	5	5	2	5	3	3	3	
142	4	4	4	5	4	5	5	
143	5	5	5	5	5	5	5	
144	4	4	4	4	4	4	4	
145	5	5	5	5	5	5	5	
146	5	5	5	5	5	5	5	
Total	N	146	146	146	146	146	146	146

Appendix 11: Day-level raw data for outcomes relative to expectations for archers.

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
1	1	5	4	3	1	1	3
2	2	5	5	4	2	2	2
3	5	4	5	5	4	4	4
4	6	3	3	3	3	4	4
5	7	4	4	3	3	3	3
6	9	4	4	4	2	1	3
7	10	4	4	2	1	2	5
8	11	5	5	4	4	5	5
9	12	4	4	4	2	2	2
10	13	5	5	5	2	3	5
11	14	5	5	3	1	3	4
12	15	5	5	3	1	3	3
13	17	5	5	4	1	1	1
14	18	4	4	4	3	4	4
15	19	4	1	2	4	1	5
16	20	4	4	4	1	3	3
17	23	2	2	2	1	2	2
18	25	3	3	3	2	4	5
19	26	3	3	3	4	3	3
20	27	4	3	3	2	2	2
21	28	5	4	4	1	1	3
22	29	4	4	4	1	2	2
23	30	5	5	5	4	1	5
24	32	3	3	3	3	4	4
25	35	3	3	2	1	1	3
26	36	4	4	5	5	3	3
27	37	2	2	2	1	4	4
28	38	5	5	5	3	4	5
29	39	5	5	5	2	5	5
30	40	5	4	4	2	3	4
31	42	5	5	4	1	3	3
32	43	5	5	3	3	3	3
33	47	4	4	4	4	1	1
34	49	5	5	3	4	4	4
35	50	3	3	3	3	1	5
36	51	4	4	5	3	1	2
37	53	1	3	3	1	1	5
38	54	5	5	5	3	5	5
39	55	5	4	4	1	4	4
40	56	5	5	5	3	2	1
41	57	5	5	5	4	4	3

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
1	1	4	4	4	3	1	3
2	1	1	1	1	1	4	1
3	4	3	3	3	4	4	4
4	3	3	4	3	4	3	4
5	1	3	3	1	4	5	4
6	3	1	1	1	4	5	4
7	5	5	4	4	4	4	4
8	1	3	3	3	3	5	1
9	2	2	2	2	3	5	2
10	5	3	3	3	5	5	5
11	3	1	1	1	4	5	4
12	1	1	1	1	3	1	5
13	1	3	3	1	3	4	4
14	4	1	1	1	1	4	1
15	5	1	3	3	1	4	1
16	3	3	3	3	3	4	4
17	2	2	2	2	3	1	1
18	5	3	3	1	4	2	4
19	3	4	3	3	4	1	4
20	2	2	2	2	1	4	2
21	3	1	1	1	1	3	2
22	1	1	1	1	2	4	4
23	1	4	1	3	1	3	5
24	4	4	4	4	4	1	1
25	3	4	4	4	4	4	4
26	1	1	1	1	2	4	3
27	4	2	2	2	1	2	3
28	5	5	5	5	5	5	5
29	4	2	2	1	4	5	4
30	4	4	4	4	2	4	4
31	3	3	3	3	4	4	4
32	3	3	3	3	4	4	4
33	1	1	1	1	4	4	2
34	4	3	3	3	5	4	5
35	5	3	3	3	3	4	1
36	2	3	3	3	3	3	4
37	5	1	3	3	2	1	5
38	5	2	1	1	3	4	3
39	4	1	1	1	1	5	5
40	1	5	3	3	3	5	5
41	3	1	1	1	3	5	4

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
1	3	3	4	3	1	5	4
2	3	4	2	2	2	4	5
3	3	3	4	3	3	4	4
4	3	4	1	3	3	3	5
5	4	5	3	1	3	4	5
6	3	4	4	3	3	4	4
7	2	4	4	3	2	4	5
8	4	5	4	5	5	5	5
9	3	3	3	5	1	4	4
10	3	3	4	4	3	5	5
11	3	3	3	3	3	4	5
12	3	5	3	1	1	5	3
13	4	4	4	4	1	5	1
14	3	3	3	1	1	5	4
15	3	3	4	4	3	4	5
16	3	4	3	4	3	4	4
17	3	4	1	4	1	4	5
18	4	3	3	1	1	4	5
19	4	3	4	3	1	4	4
20	4	4	4	4	2	4	4
21	3	3	3	4	3	3	4
22	4	4	2	3	2	4	3
23	5	5	5	3	1	4	5
24	3	1	4	4	3	4	4
25	4	4	4	1	1	4	5
26	2	5	4	4	3	4	5
27	2	3	3	4	4	5	3
28	5	5	5	3	5	5	5
29	4	4	5	2	3	4	4
30	3	4	4	2	1	5	4
31	4	4	4	3	3	4	4
32	4	4	3	4	3	4	4
33	4	4	4	3	2	5	5
34	5	5	5	3	3	5	4
35	5	5	5	5	1	5	4
36	5	5	4	4	2	4	5
37	1	2	3	1	1	1	3
38	4	4	4	4	3	5	5
39	5	4	4	4	3	5	5
40	1	1	3	4	3	5	3
41	5	5	5	2	2	5	5

Case Summaries

	Satisfaction
1	5
2	5
3	5
4	4
5	4
6	5
7	5
8	5
9	5
10	5
11	5
12	5
13	5
14	5
15	5
16	5
17	5
18	5
19	5
20	4
21	4
22	4
23	4
24	4
25	5
26	5
27	5
28	5
29	5
30	5
31	5
32	5
33	5
34	3
35	5
36	5
37	5
38	4
39	5
40	5
41	5

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
42	58	5	5	5	4	3	2
43	59	5	5	5	5	5	5
44	60	5	5	5	5	5	5
45	62	5	5	5	3	1	1
46	63	5	5	5	3	5	5
47	202	4	4	3	2	3	3
48	203	5	4	3	2	3	4
49	206	5	5	5	1	4	4
50	208	5	4	4	3	1	2
51	209	5	5	5	3	1	2
52	211	5	4	3	2	1	2
53	212	5	4	3	2	3	3
54	213	5	5	3	3	1	1
55	214	4	4	2	1	1	1
56	215	5	5	5	5	4	5
57	216	5	5	4	4	1	1
58	218	5	4	4	3	4	4
59	219	5	5	5	3	3	4
60	220	5	4	3	5	4	5
61	222	5	4	4	3	3	3
62	224	2	2	2	1	3	3
63	225	5	5	3	1	1	3
64	226	4	4	3	2	2	3
65	227	5	5	5	4	3	3
66	301	3	3	3	2	1	3
67	302	4	4	4	1	4	2
68	303	5	5	5	1	4	4
69	1	2	2	2	3	5	5
70	2	5	5	5	3	3	3
71	3	5	5	5	3	4	4
72	5	5	5	5	4	1	1
73	6	3	1	3	3	1	1
74	7	5	5	5	4	1	1
75	9	5	5	5	5	3	3
76	10	5	5	5	5	3	3
77	11	5	5	5	3	2	2
78	12	4	4	5	4	2	2
79	13	5	5	5	3	5	5
80	14	4	4	5	4	2	1
81	14	5	5	5	3	2	2
82	15	4	5	5	3	1	1

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
42	2	1	1	1	1	4	4
43	5	5	5	5	1	5	5
44	5	3	4	2	2	4	2
45	1	2	2	2	3	4	4
46	5	2	2	2	1	5	5
47	3	4	4	4	4	5	4
48	2	4	4	2	3	1	2
49	4	5	5	5	5	5	5
50	1	1	1	1	2	3	4
51	2	4	4	4	1	5	4
52	2	4	4	4	3	5	5
53	3	3	3	3	4	2	5
54	1	1	3	3	3	3	3
55	1	4	4	3	3	4	5
56	1	1	1	1	5	1	5
57	1	1	1	1	5	2	5
58	4	4	4	4	5	4	5
59	4	3	3	3	4	5	4
60	5	3	3	3	5	3	4
61	3	3	3	3	4	4	4
62	3	1	1	2	4	4	1
63	3	3	3	3	4	4	1
64	3	3	4	4	4	4	4
65	3	2	2	2	3	4	3
66	1	3	1	1	3	4	4
67	1	4	1	1	4	5	4
68	3	1	1	1	3	5	1
69	5	5	5	5	5	5	5
70	3	3	3	3	2	3	3
71	4	4	4	4	4	5	4
72	1	3	3	3	3	3	3
73	1	1	1	1	1	3	3
74	1	1	1	1	3	5	3
75	3	2	2	2	5	5	3
76	3	3	3	3	3	5	5
77	2	2	2	2	5	5	3
78	2	3	3	3	4	4	3
79	5	4	4	4	3	4	3
80	1	3	2	1	3	5	3
81	2	2	2	2	3	5	5
82	1	1	1	1	1	5	5

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
42	3	4	5	1	2	5	4
43	5	5	5	5	1	5	3
44	4	3	4	2	3	4	5
45	5	5	5	4	3	4	5
46	5	5	5	3	3	5	5
47	3	4	3	4	4	4	4
48	4	5	5	3	3	4	5
49	3	5	5	5	5	5	5
50	3	4	4	4	3	4	4
51	4	4	4	5	4	5	4
52	5	5	5	4	3	5	3
53	4	5	4	5	5	5	5
54	4	4	4	3	1	5	5
55	4	1	5	5	4	5	5
56	4	5	5	5	5	5	1
57	3	2	4	3	2	5	3
58	4	3	4	5	5	5	5
59	5	5	4	4	4	4	5
60	3	5	3	5	2	5	5
61	3	4	4	4	4	4	5
62	2	4	4	5	3	4	5
63	3	3	3	3	2	5	5
64	5	5	4	3	4	4	3
65	5	5	4	5	4	5	5
66	2	2	4	3	3	4	4
67	3	1	2	1	3	4	5
68	4	4	4	4	4	4	3
69	5	5	5	4	4	5	5
70	1	3	3	1	2	3	3
71	5	5	5	3	1	5	5
72	3	3	3	1	3	3	3
73	5	5	3	3	3	5	5
74	3	2	5	1	1	5	5
75	5	5	5	5	1	5	5
76	3	3	3	1	1	5	5
77	4	5	5	1	2	5	5
78	3	3	5	4	3	5	5
79	3	5	4	4	3	4	5
80	3	3	4	5	1	1	4
81	3	3	3	4	2	3	3
82	5	5	5	5	5	5	5

Case Summaries

	Satisfaction
42	5
43	5
44	4
45	4
46	5
47	5
48	4
49	5
50	5
51	5
52	5
53	5
54	5
55	5
56	5
57	5
58	5
59	5
60	5
61	5
62	5
63	5
64	5
65	5
66	5
67	5
68	5
69	5
70	5
71	5
72	5
73	5
74	5
75	5
76	5
77	5
78	5
79	5
80	5
81	5
82	5

Case Summaries							
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH
83	16	5	4	4	4	2	2
84	17	4	5	5	3	2	2
85	18	5	5	5	3	2	2
86	19	5	5	5	4	1	1
87	19	5	5	5	4	2	1
88	21	5	5	5	3	2	2
89	22	2	3	3	1	3	3
90	23	5	5	5	5	3	3
91	24	4	4	4	3	1	1
92	24	5	5	5	3	4	4
93	25	5	5	5	5	3	3
94	26	5	5	5	4	2	2
95	27	4	5	5	4	2	2
96	28	1	2	2	3	4	5
97	30	5	5	5	2	4	3
98	32	4	4	4	2	2	2
99	34	5	5	5	3	5	5
100	35	5	5	5	3	2	2
101	36	5	5	5	4	3	3
102	37	4	4	5	2	1	1
103	40	5	5	5	3	2	1
104	41	3	5	5	3	2	2
105	42	3	5	5	3	3	3
106	43	5	5	5	3	1	1
107	44	5	5	5	5	3	3
108	45	3	3	4	3	4	4
109	46	4	4	5	2	4	3
110	47	5	4	5	4	5	4
111	48	5	5	5	3	4	5
112	49	3	4	4	4	4	4
113	50	3	3	4	4	1	1
114	53	2	2	3	3	3	3
115	56	2	3	2	2	3	2
116	61	1	1	1	1	2	1
117	61	4	4	5	3	1	1
118	62	3	2	1	1	3	3
119	63	5	5	5	4	5	5
120	63	1	1	1	1	1	1
121	64	3	5	5	2	4	3
122	65	3	2	2	1	1	1
123	66	2	1	1	1	2	2

Case Summaries							
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF
83	2	2	2	2	3	4	5
84	2	3	3	3	4	5	3
85	2	3	3	3	4	5	4
86	1	3	1	1	4	5	3
87	1	1	1	1	4	2	2
88	3	3	3	3	4	5	1
89	3	4	4	4	3	5	3
90	3	3	3	3	5	5	3
91	1	1	1	1	3	5	3
92	4	3	3	3	4	4	4
93	3	1	1	1	3	5	3
94	2	4	4	4	3	3	2
95	2	2	2	2	3	5	2
96	5	4	5	5	2	1	1
97	4	4	2	2	3	1	3
98	2	2	2	2	2	1	2
99	5	5	5	5	3	5	5
100	1	4	3	3	4	3	3
101	3	4	3	1	4	1	3
102	1	2	2	1	2	3	3
103	1	1	1	1	2	5	3
104	2	4	3	3	4	3	2
105	3	3	3	3	3	5	3
106	1	3	3	1	1	5	3
107	3	4	4	4	4	4	3
108	5	3	4	4	2	5	4
109	1	1	1	1	3	5	5
110	5	3	3	3	2	5	3
111	5	1	1	1	1	5	3
112	4	4	2	2	4	2	3
113	1	3	2	2	3	1	1
114	3	3	3	3	4	4	3
115	2	2	2	2	2	2	2
116	1	1	1	1	1	3	2
117	1	3	3	3	4	5	2
118	3	3	3	3	1	5	3
119	5	4	3	3	4	4	4
120	1	1	1	1	1	3	3
121	3	3	3	3	1	1	3
122	1	2	1	1	1	3	3
123	1	2	1	1	2	3	1

Case Summaries							
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL
83	4	4	5	1	1	5	5
84	5	5	5	2	3	5	5
85	4	4	4	2	3	5	5
86	4	5	5	1	2	5	5
87	5	5	5	1	1	5	5
88	3	3	4	1	3	3	3
89	4	3	3	1	1	5	5
90	3	3	3	5	3	3	3
91	4	4	5	1	2	5	5
92	5	5	5	5	5	5	5
93	5	4	5	1	3	5	5
94	2	5	3	4	4	5	5
95	3	5	5	2	3	4	5
96	5	5	4	1	2	5	5
97	3	3	3	3	3	4	5
98	2	5	4	3	2	5	4
99	5	3	5	3	2	5	5
100	3	3	4	1	1	5	5
101	2	1	5	4	5	3	5
102	3	3	3	2	2	3	3
103	5	4	4	2	2	5	5
104	2	4	4	4	4	5	5
105	5	5	5	1	1	5	5
106	5	3	3	5	3	3	3
107	4	5	5	4	5	4	5
108	5	5	5	4	4	3	4
109	5	5	5	3	3	5	5
110	5	5	5	3	2	5	5
111	5	5	5	1	1	3	5
112	4	2	4	3	4	4	3
113	3	4	4	2	5	5	5
114	3	3	4	3	3	4	5
115	3	4	4	2	4	4	4
116	4	3	3	3	1	3	3
117	5	5	5	5	1	5	5
118	3	3	5	3	3	5	5
119	4	5	5	2	2	5	5
120	5	5	5	3	1	3	3
121	4	4	4	1	1	4	3
122	3	4	4	2	1	5	5
123	2	1	1	3	1	3	3

Case Summaries

	Satisfaction
83	5
84	5
85	5
86	5
87	5
88	5
89	5
90	5
91	5
92	5
93	4
94	4
95	5
96	5
97	5
98	4
99	5
100	5
101	5
102	4
103	5
104	5
105	5
106	5
107	5
108	5
109	5
110	5
111	5
112	4
113	5
114	5
115	3
116	2
117	5
118	4
119	5
120	2
121	5
122	4
123	2

Case Summaries								
	UID	SEFF	SHPF	HVPF	TRPF	SEBH	SHBH	
124	68	3	2	1	1	4	5	
125	69	2	1	1	1	2	2	
126	70	1	1	1	1	1	1	
127	73	4	3	3	1	3	2	
128	74	2	2	2	1	2	1	
129	101	3	3	3	3	3	3	
130	101	4	5	1	1	5	5	
131	102	5	5	5	4	2	1	
132	102	5	5	5	3	1	1	
133	103	5	5	5	3	3	4	
134	104	5	3	4	1	3	2	
135	104	5	5	5	5	3	1	
136	105	5	5	3	3	3	3	
137	106	5	5	5	2	2	2	
138	106	5	5	5	4	3	3	
139	107	5	5	5	5	3	5	
140	107	4	4	3	2	3	3	
141	112	5	5	4	4	1	1	
142	200	1	1	1	3	4	4	
143	201	2	1	5	3	5	5	
144	202	4	4	4	4	4	4	
145	203	3	2	1	1	3	3	
146	208	2	1	1	1	4	4	
Total	N	146	146	146	146	146	146	

Case Summaries								
	HVBH	SEOH	SHOH	HVOH	PLHV	WTHR	AISF	
124	5	3	4	4	1	5	4	
125	2	3	3	3	2	3	3	
126	1	1	1	1	1	5	3	
127	3	4	3	3	3	2	3	
128	1	3	2	2	1	4	2	
129	3	3	3	3	3	3	3	
130	1	1	1	1	5	1	2	
131	1	2	2	2	4	5	2	
132	1	1	1	1	5	5	3	
133	1	5	5	1	5	5	3	
134	3	3	1	1	1	5	3	
135	1	1	1	1	3	5	4	
136	3	3	3	3	5	5	3	
137	2	4	4	4	5	5	3	
138	3	3	3	3	3	5	5	
139	5	1	1	1	5	5	3	
140	2	2	2	2	3	4	3	
141	1	1	1	1	1	4	3	
142	4	3	4	3	1	2	4	
143	5	5	5	5	2	4	5	
144	4	4	4	4	4	4	4	
145	3	4	1	1	4	2	3	
146	4	2	2	2	1	5	5	
Total	N	146	146	146	146	146	146	

Case Summaries								
	UNCR	INTF	ACFS	TIME	EFFT	ACWB	SOCL	
124	2	2	5	3	2	5	5	
125	2	3	3	2	2	3	3	
126	4	3	3	1	1	3	3	
127	4	3	3	3	3	3	4	
128	4	5	5	4	3	5	4	
129	3	3	3	3	3	3	3	
130	1	1	4	5	4	4	3	
131	5	5	5	5	5	5	5	
132	4	4	5	4	4	5	5	
133	4	5	5	5	5	5	5	
134	2	2	5	3	3	5	5	
135	5	5	5	4	4	5	5	
136	3	5	5	5	3	5	5	
137	5	4	5	4	4	4	5	
138	5	5	5	3	2	5	5	
139	5	5	5	5	3	5	5	
140	3	4	4	3	3	4	4	
141	5	5	5	3	3	4	3	
142	2	2	4	4	2	4	5	
143	5	5	5	5	4	5	5	
144	4	4	4	4	4	4	4	
145	3	4	4	4	4	4	4	
146	3	4	5	5	5	5	5	
Total	N	146	146	146	146	146	146	146

Case Summaries

	Satisfaction
124	4
125	2
126	2
127	4
128	4
129	3
130	5
131	5
132	5
133	5
134	4
135	5
136	5
137	5
138	5
139	5
140	4
141	4
142	2
143	5
144	4
145	4
146	1
Total	N 146

Appendix 12: Season-level raw data for importance for snaggers.

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
1	2	2	5	3	1	2	4
2	4	4	4	3	5	1	3
3	6	3	4	4	4	3	3
4	8	2	4	1	1	2	1
5	9	2	4	2	1	3	1
6	10	2	4	3	2	3	2
7	11	5	5	3	3	3	3
8	12	2	5	2	4	3	1
9	14	4	5	2	1	2	1
10	15	3	4	4	2	3	3
11	16	3	4	3	3	5	4
12	17	3	5	4	2	3	3
13	19	1	5	2	2	2	5
14	20	3	5	5	3	4	3
15	21	3	4	5	3	3	3
16	22	3	3	3	4	4	4
17	23	4	4	5	3	4	4
18	24	4	4	3	1	1	2
19	25	4	5	3	2	3	3
20	26	4	5	5	4	4	4
21	28	4	4	3	5	5	2
22	29	3	4	2	2	3	2
23	30	4	5	2	1	1	1
24	31	2	4	3	4	3	3
25	33	4	4	4	1	4	2
26	34	1	5	3	2	2	2
27	35	4	5	5	4	4	2
28	37	5	5	5	3	4	4
29	38	5	5	4	1	5	2
30	39	5	3	3	3	3	3
31	40	2	3	1	1	1	1
32	41	2	3	2	1	1	1
33	42	3	5	5	3	3	5
34	44	3	5	3	2	2	1
35	45	4	4	3	3	3	4
36	46	4	4	5	3	4	3
37	47	5	5	5	1	3	3
38	49	4	4	5	3	4	3
39	50	4	4	5	3	4	3
40	52	1	5	5	2	3	3
41	53	5	5	5	2	2	5

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Appendix 12: continued.

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
1	5	2	1	1	1	1	1
2	5	3	5	1	1	1	5
3	4	2	1	1	1	1	1
4	2	1	2	1	1	1	2
5	1	1	5	1	1	1	5
6	4	2	1	1	1	1	2
7	1	1	1	1	1	1	4
8	1	3	1	1	1	1	3
9	2	3	5	1	1	1	3
10	4	2	1	1	1	1	1
11	4	4	1	1	1	1	1
12	3	4	2	1	1	1	1
13	1	1	1	1	1	1	1
14	5	4	1	1	1	1	3
15	4	3	5	1	1	1	3
16	4	3	1	1	1	1	3
17	3	4	1	1	1	1	2
18	2	2	1	1	1	1	1
19	4	3	1	1	1	1	2
20	5	3	1	1	1	1	4
21	3	4	3	1	1	1	5
22	4	4	2	1	1	1	5
23	5	3	1	1	1	1	5
24	4	4	1	1	1	1	3
25	2	1	2	2	2	1	2
26	2	1	1	5	5	2	2
27	3	4	1	1	1	1	1
28	4	4	1	4	4	4	4
29	5	3	4	1	1	1	2
30	4	4	1	1	1	1	5
31	1	1	1	1	1	1	1
32	1	1	1	1	1	1	1
33	5	2	1	3	2	2	2
34	1	4	1	1	1	1	4
35	4	4	1	1	1	1	1
36	3	3	1	1	1	3	4
37	3	1	5	1	1	1	1
38	3	3	1	1	1	3	4
39	3	3	1	1	1	3	4
40	4	2	1	1	1	1	1
41	5	4	1	1	1	1	4

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
1	1	3	1	4	2	2	2
2	5	3	4	5	5	5	5
3	1	4	2	4	2	4	4
4	3	1	4	5	4	5	5
5	5	2	1	3	3	2	4
6	2	4	3	2	4	3	4
7	4	4	3	5	3	3	4
8	4	3	2	4	4	4	3
9	3	3	1	5	4	3	3
10	1	4	2	4	2	4	4
11	1	4	4	4	4	5	5
12	1	4	2	2	3	3	2
13	1	1	3	5	3	3	3
14	3	3	3	5	3	3	4
15	3	3	3	4	3	4	4
16	3	3	3	4	3	3	3
17	2	2	4	5	5	4	5
18	1	3	3	5	3	3	2
19	3	2	3	3	3	4	4
20	3	4	3	4	3	2	3
21	2	3	5	5	4	5	3
22	4	4	1	4	3	4	3
23	5	5	2	5	3	3	3
24	3	3	1	4	5	5	4
25	2	1	1	1	1	1	1
26	4	1	1	1	4	1	4
27	1	1	4	4	5	5	5
28	3	2	3	3	4	4	4
29	2	3	3	3	3	2	4
30	5	3	2	5	3	4	4
31	1	2	3	2	2	3	3
32	1	2	3	1	2	3	3
33	2	1	3	2	3	3	3
34	4	3	3	3	3	4	3
35	1	3	3	3	2	2	2
36	3	4	2	3	3	3	3
37	3	3	3	3	5	5	3
38	3	4	2	3	3	3	3
39	3	4	2	3	3	3	3
40	2	2	4	4	4	4	4
41	4	1	3	5	5	5	5

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Appendix 12: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
1	5	4	2	5	4	4	1
2	5	5	5	5	5	4	1
3	3	3	4	4	4	4	1
4	3	4	5	5	5	5	4
5	1	2	1	1	3	3	4
6	3	3	3	2	4	4	2
7	4	4	4	4	5	5	4
8	4	2	4	5	5	4	3
9	5	2	3	4	5	5	2
10	3	3	4	4	4	4	1
11	4	4	4	4	4	4	2
12	3	3	2	1	4	3	1
13	5	3	5	3	3	4	1
14	4	4	5	5	5	5	3
15	4	4	4	4	5	5	1
16	4	3	2	4	4	4	3
17	3	4	2	2	3	3	2
18	4	3	3	3	5	5	2
19	4	3	3	2	4	3	3
20	4	4	3	3	4	4	3
21	4	4	4	5	4	4	2
22	3	4	2	4	4	4	4
23	5	1	5	5	5	5	5
24	5	5	4	4	5	5	3
25	2	5	2	2	3	3	2
26	4	4	3	4	4	4	3
27	5	4	5	3	4	4	1
28	4	4	4	4	4	4	1
29	4	4	4	3	5	5	2
30	4	3	4	4	5	5	5
31	3	3	4	4	5	5	1
32	4	4	4	4	4	4	1
33	5	5	3	3	3	3	3
34	4	3	4	3	5	5	3
35	3	3	3	4	3	3	2
36	2	3	3	5	5	5	1
37	3	3	4	5	5	5	3
38	2	3	3	5	5	5	1
39	2	3	3	5	5	5	1
40	3	2	3	1	3	3	1
41	5	3	5	5	5	5	3

Appendix 12: continued.

Case Summaries

	NTRE
1	1
2	1
3	1
4	1
5	5
6	2
7	2
8	3
9	1
10	1
11	2
12	1
13	1
14	3
15	1
16	3
17	2
18	2
19	2
20	4
21	2
22	2
23	1
24	4
25	1
26	1
27	1
28	4
29	1
30	5
31	1
32	1
33	3
34	3
35	2
36	1
37	3
38	1
39	1
40	1
41	2

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
42	54	3	4	1	2	3	2
43	55	5	5	5	2	2	5
44	56	5	5	5	1	1	5
45	57	4	5	3	3	4	3
46	58	5	5	5	3	5	5
47	59	5	5	4	4	4	4
48	60	3	4	4	3	4	3
49	61	3	4	3	1	2	3
50	63	2	5	5	1	4	5
51	64	4	4	3	3	4	3
52	65	3	5	5	2	4	3
53	66	4	5	5	2	2	2
54	67	4	4	2	3	4	2
55	68	2	2	1	1	3	5
56	69	3	4	3	4	3	3
57	71	5	5	3	2	5	3
58	72	5	3	4	3	3	3
59	73	3	3	3	2	2	2
60	74	5	5	4	3	5	3
61	75	5	4	5	2	4	5
62	76	2	4	3	3	3	2
63	77	5	5	5	1	1	1
64	78	3	3	2	1	1	1
65	79	4	4	4	4	4	3
66	80	5	5	2	2	2	1
67	81	2	2	1	1	1	1
68	82	5	5	3	3	3	3
69	83	3	5	4	5	4	4
70	84	4	4	4	1	1	3
71	85	3	3	3	2	4	2
72	86	4	4	4	2	3	2
73	87	5	5	5	3	4	5
74	88	4	4	3	3	4	3
75	90	4	4	4	1	4	5
76	92	3	3	4	5	5	5
77	93	4	5	3	3	2	3
78	95	5	5	4	2	4	3
79	96	4	3	4	1	1	1
80	97	4	4	4	3	3	3
81	98	1	4	1	1	1	1
82	99	5	5	5	5	5	5

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
42	4	4	4	4	4	1	3
43	5	5	1	1	1	1	4
44	5	4	1	1	1	1	3
45	5	4	1	1	1	1	2
46	5	3	1	1	1	1	1
47	4	3	2	2	2	2	2
48	3	4	1	1	1	1	1
49	4	4	1	1	1	1	3
50	3	3	3	1	1	1	1
51	2	3	2	2	2	2	5
52	4	4	2	1	1	1	3
53	3	1	1	1	1	1	1
54	2	2	4	1	1	1	3
55	5	4	1	1	1	1	3
56	4	3	1	1	1	1	1
57	5	5	1	5	5	3	5
58	1	1	1	1	1	1	1
59	3	3	1	1	1	1	3
60	4	4	1	1	1	1	4
61	5	3	5	1	1	1	2
62	2	2	2	2	2	2	3
63	4	1	1	1	1	1	3
64	3	1	1	1	1	1	2
65	4	4	2	1	1	1	4
66	3	4	2	4	3	2	4
67	1	4	1	1	1	1	3
68	4	2	1	4	4	3	4
69	4	4	1	1	1	1	2
70	3	3	1	1	1	1	1
71	2	2	2	1	1	1	1
72	1	4	1	1	1	1	3
73	5	3	5	5	5	1	1
74	4	3	1	1	1	1	3
75	5	3	1	1	1	1	5
76	5	4	1	5	5	4	5
77	4	4	1	1	1	1	1
78	3	4	2	1	1	1	3
79	1	1	1	1	1	1	1
80	3	3	3	1	1	1	4
81	1	1	1	1	1	1	3
82	5	5	1	1	1	1	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
42	1	2	1	5	3	2	4
43	3	1	3	5	5	5	5
44	3	1	3	5	5	5	5
45	2	4	3	3	3	3	5
46	3	5	3	5	3	3	5
47	2	4	4	3	4	4	5
48	4	3	3	4	4	4	4
49	4	4	5	4	5	4	4
50	1	2	3	2	4	3	3
51	5	4	4	3	3	3	4
52	3	3	3	4	3	3	4
53	1	1	1	5	5	5	5
54	2	1	3	2	4	4	4
55	3	3	1	3	2	4	3
56	1	3	3	3	4	5	3
57	5	5	2	5	5	5	5
58	1	1	3	2	2	3	3
59	2	2	3	4	3	4	4
60	5	3	3	4	3	3	5
61	1	2	3	1	5	5	5
62	3	3	2	1	3	3	4
63	4	2	1	3	5	5	5
64	1	3	4	1	3	4	3
65	4	4	4	3	1	1	4
66	3	3	3	5	4	4	4
67	1	1	1	5	3	5	5
68	3	4	4	4	4	4	4
69	2	5	4	3	3	4	3
70	1	3	4	4	4	5	3
71	1	3	3	5	4	4	4
72	3	3	2	3	2	3	3
73	3	3	2	5	4	4	4
74	3	3	2	1	4	4	4
75	5	5	3	5	1	1	5
76	5	4	5	5	3	5	5
77	1	1	4	2	4	4	5
78	3	3	5	2	3	3	3
79	1	2	3	1	3	3	3
80	4	4	5	5	4	4	4
81	3	2	3	5	4	4	4
82	3	5	5	5	5	5	5

Case Summaries

	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
42	3	3	3	5	5	5	2
43	5	3	5	5	5	5	3
44	5	3	5	5	5	5	3
45	3	3	4	4	5	5	2
46	5	3	4	5	5	5	3
47	4	4	5	4	5	5	2
48	4	4	3	3	4	4	4
49	4	4	4	4	5	5	5
50	3	3	2	4	5	5	3
51	4	3	4	5	5	5	3
52	4	4	2	3	4	4	2
53	4	2	4	5	2	2	1
54	3	2	3	4	5	5	2
55	2	1	2	3	4	4	3
56	3	3	4	4	3	3	3
57	5	5	5	3	5	5	5
58	3	3	4	4	4	1	1
59	5	3	4	4	5	5	3
60	5	3	5	4	5	5	4
61	4	4	3	4	4	4	1
62	4	2	4	4	4	4	2
63	5	5	5	5	4	3	4
64	3	1	3	5	5	5	1
65	4	4	4	4	4	4	4
66	3	3	4	4	5	5	3
67	5	5	5	5	5	5	1
68	4	4	4	5	5	5	4
69	5	4	4	5	5	5	3
70	3	3	3	4	5	5	3
71	3	4	3	3	3	3	3
72	4	4	3	3	4	4	2
73	3	4	4	3	4	4	2
74	4	3	4	5	5	5	2
75	5	4	4	5	5	5	2
76	4	2	5	5	5	5	1
77	4	3	5	4	5	5	1
78	3	3	4	1	3	3	3
79	3	2	2	2	3	3	1
80	4	4	4	5	5	5	4
81	4	4	4	5	5	5	2
82	5	5	5	5	5	5	5

Appendix 12: continued.

Case Summaries

	NTRE
42	1
43	1
44	3
45	1
46	3
47	2
48	3
49	5
50	2
51	2
52	2
53	1
54	2
55	1
56	3
57	3
58	1
59	3
60	3
61	1
62	3
63	1
64	1
65	4
66	3
67	1
68	3
69	3
70	1
71	3
72	2
73	2
74	2
75	1
76	1
77	1
78	3
79	1
80	4
81	2
82	3

Appendix 12: continued.

Case Summaries

	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
83	100	3	3	1	1	1	1
84	101	3	3	3	3	3	3
85	102	4	5	4	3	3	1
86	103	5	5	5	3	3	3
87	105	5	5	5	3	3	1
88	106	3	4	4	5	4	4
89	107	4	4	1	3	3	3
90	108	3	5	4	1	3	4
91	109	4	4	2	2	3	2
92	110	3	3	3	1	5	4
93	111	3	4	4	2	4	3
94	112	5	5	3	3	3	3
95	113	4	3	1	2	2	2
96	114	1	3	2	1	3	2
97	116	4	4	4	2	4	3
98	117	4	4	3	3	3	3
99	118	5	5	1	3	3	1
100	119	4	5	3	3	2	3
101	120	4	4	4	1	1	1
102	121	3	3	2	2	2	2
103	122	3	5	4	2	3	3
104	123	2	4	1	1	1	1
105	124	4	5	2	1	2	1
106	125	3	4	1	1	1	1
107	126	2	4	5	2	4	4
108	127	3	4	3	3	2	2
109	128	3	4	4	2	4	1
110	129	2	5	5	2	3	3
111	130	5	4	3	4	4	4
112	131	4	4	2	4	2	3
113	132	5	5	4	3	4	3
114	133	5	5	3	4	4	3
115	134	3	4	4	4	4	4
116	136	4	4	4	2	3	3
117	138	2	5	3	3	3	4
118	139	1	5	3	1	3	2
119	141	5	5	5	1	5	1
120	142	5	5	3	3	2	2
121	143	5	5	4	5	4	4
122	145	5	5	3	2	3	3
123	146	1	4	5	2	3	4

Appendix 12: continued.

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
83	1	4	1	1	1	1	3
84	4	4	3	1	1	1	5
85	1	2	1	1	1	1	2
86	4	3	1	1	1	1	2
87	2	3	1	1	1	1	3
88	4	3	1	1	1	1	3
89	3	1	1	1	1	1	1
90	4	3	1	1	1	1	3
91	3	2	1	1	1	1	2
92	4	4	1	1	1	1	3
93	3	4	1	1	1	1	1
94	3	3	1	1	1	1	1
95	4	2	3	1	1	1	1
96	3	3	1	1	1	1	2
97	3	1	1	1	1	1	2
98	4	4	1	1	1	1	3
99	1	3	1	5	5	5	5
100	4	4	1	1	1	1	1
101	4	1	1	1	1	1	3
102	2	3	4	1	1	1	1
103	3	2	1	1	1	1	2
104	1	3	1	1	1	1	2
105	4	3	1	1	1	1	1
106	4	1	1	1	1	1	1
107	4	2	1	1	1	1	3
108	5	5	1	1	1	1	3
109	2	1	1	1	1	1	1
110	5	3	1	1	1	1	5
111	4	4	1	1	1	1	3
112	1	1	1	1	1	4	3
113	4	3	1	1	1	1	5
114	4	4	1	1	1	1	1
115	4	3	1	1	1	1	3
116	3	3	1	1	1	1	1
117	5	4	1	1	1	1	4
118	4	2	1	1	1	1	1
119	1	5	1	1	1	1	1
120	5	4	1	1	1	1	3
121	4	5	4	4	4	4	3
122	3	2	2	1	1	1	2
123	5	5	1	1	1	1	3

Appendix 12: continued.

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
83	3	3	3	3	3	3	3
84	4	1	3	3	4	4	3
85	2	4	3	2	4	5	4
86	2	3	4	4	3	3	4
87	3	3	3	4	4	4	4
88	3	3	3	4	4	4	4
89	1	4	4	2	3	4	4
90	1	3	5	4	4	5	4
91	2	2	3	2	3	3	3
92	1	3	1	1	3	4	3
93	1	4	2	2	5	5	5
94	1	3	2	2	3	1	5
95	1	3	3	2	4	5	4
96	3	3	3	4	4	4	4
97	1	4	3	1	3	4	3
98	3	3	3	3	4	4	4
99	5	4	4	1	3	2	4
100	1	1	4	2	4	4	5
101	3	1	2	3	4	4	4
102	1	3	3	2	3	3	3
103	1	4	3	2	3	4	4
104	1	2	4	4	5	5	4
105	1	2	3	2	4	3	5
106	1	3	3	2	4	4	4
107	3	3	3	4	4	4	3
108	3	3	5	5	5	4	4
109	1	3	5	2	4	2	4
110	5	5	5	5	3	3	5
111	1	4	4	5	5	5	5
112	3	4	3	4	3	3	4
113	5	5	3	5	3	3	5
114	1	4	3	2	3	3	3
115	3	3	3	4	4	4	3
116	1	4	4	2	4	2	4
117	4	4	3	5	3	2	4
118	1	4	2	5	4	4	4
119	1	5	5	3	5	5	2
120	4	3	3	5	5	5	5
121	3	4	5	4	5	5	5
122	1	4	4	4	4	5	5
123	3	1	3	3	5	5	5

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
83	2	1	3	3	3	3	2
84	4	4	4	1	5	5	3
85	4	3	3	4	5	5	1
86	2	3	2	4	4	4	1
87	3	3	3	3	3	3	2
88	4	3	3	3	3	3	3
89	4	4	4	4	4	4	1
90	4	3	3	2	2	2	1
91	2	2	3	4	4	4	3
92	3	3	4	4	5	5	1
93	3	1	5	3	4	4	2
94	3	3	4	3	5	5	1
95	4	4	4	4	3	3	1
96	4	4	4	4	4	4	3
97	2	3	4	4	4	4	2
98	4	3	3	1	4	4	1
99	4	4	4	4	4	4	4
100	4	3	5	4	5	5	1
101	3	2	4	4	4	4	2
102	3	3	3	3	4	4	3
103	4	4	3	4	4	4	1
104	3	2	4	4	3	3	1
105	4	2	1	4	5	5	1
106	4	2	2	5	5	5	1
107	3	3	3	4	2	2	3
108	4	5	5	3	5	5	2
109	4	2	4	5	4	4	1
110	5	5	5	5	5	5	5
111	5	4	4	4	4	5	5
112	4	3	2	3	4	4	2
113	5	5	3	2	5	5	5
114	4	5	4	5	5	5	3
115	4	3	3	4	4	4	3
116	3	4	5	5	5	5	1
117	3	4	2	4	5	5	1
118	3	3	5	2	5	5	1
119	3	5	5	5	5	5	1
120	3	3	5	5	5	5	4
121	5	4	5	5	5	5	3
122	4	3	3	5	5	5	2
123	5	4	5	5	5	5	2

Case Summaries

	NTRE
83	2
84	3
85	1
86	1
87	2
88	3
89	1
90	1
91	3
92	1
93	2
94	1
95	1
96	3
97	2
98	1
99	5
100	1
101	1
102	3
103	1
104	1
105	1
106	1
107	4
108	2
109	1
110	5
111	1
112	1
113	5
114	3
115	3
116	1
117	1
118	1
119	1
120	3
121	3
122	2
123	2

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNKT	LBMT
124	147	2	3	1	2	3	1
125	148	3	5	5	2	3	1
126	149	3	4	4	4	5	4
127	150	5	5	4	1	5	1
128	151	4	4	4	3	3	3
129	152	5	4	2	1	1	1
130	153	3	3	1	1	1	1
131	154	4	2	3	2	3	2
132	155	5	5	4	4	4	4
133	156	2	4	3	5	4	3
134	157	3	4	4	3	3	3
135	158	5	5	1	1	1	1
136	159	4	4	4	3	4	3
137	160	4	4	4	3	4	3
138	161	4	1	1	1	4	2
139	162	5	4	5	2	1	2
140	163	4	4	3	2	2	2
141	164	5	5	5	5	5	4
142	165	2	4	3	3	4	3
143	166	5	5	4	4	5	3
144	167	3	3	4	2	2	3
145	168	4	4	3	3	3	3
146	169	4	4	3	2	4	2
147	170	2	4	4	4	4	4
148	171	5	5	5	3	4	4
149	172	4	4	3	1	4	3
150	174	5	5	3	1	5	3
151	175	3	5	5	5	4	4
152	177	4	5	4	3	4	2
153	180	4	4	3	1	1	2
154	181	3	3	3	1	1	2
155	182	4	4	2	2	1	1
156	183	1	4	4	4	4	3
157	185	4	5	3	2	3	2
158	186	5	5	5	1	5	4
159	188	3	4	4	5	4	4
160	189	5	4	2	1	1	1
161	191	2	5	3	1	3	4
162	192	4	4	3	1	1	1
163	193	3	5	4	3	2	1
164	194	3	4	3	3	3	1

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
124	1	3	1	1	1	1	3
125	1	3	1	5	5	1	3
126	4	5	4	1	1	1	1
127	5	1	1	1	1	1	1
128	4	4	1	1	1	1	2
129	3	2	1	1	1	1	1
130	1	1	1	1	1	1	3
131	3	3	1	3	3	1	4
132	1	5	1	1	1	1	4
133	4	1	3	2	2	2	3
134	4	4	1	1	1	1	3
135	1	1	5	1	1	1	4
136	4	4	1	1	1	1	3
137	4	4	3	3	2	2	2
138	4	4	1	1	1	1	4
139	4	3	1	1	1	1	3
140	3	3	1	1	1	1	1
141	5	5	1	1	1	1	4
142	4	3	1	1	2	3	2
143	5	5	1	1	1	1	1
144	3	3	1	1	1	1	1
145	4	3	4	2	2	2	3
146	2	3	2	1	1	1	1
147	4	4	1	1	1	1	1
148	4	3	3	1	1	1	4
149	3	4	2	1	1	1	2
150	3	3	1	1	1	1	4
151	3	4	1	1	1	2	3
152	3	3	1	1	1	1	3
153	3	4	3	1	1	1	2
154	3	1	5	1	1	1	1
155	2	1	1	1	1	1	4
156	4	3	1	1	1	1	1
157	4	3	1	1	1	1	3
158	5	5	1	1	1	1	5
159	4	4	1	1	1	1	4
160	3	4	1	1	1	1	5
161	4	4	3	1	1	1	1
162	2	1	1	1	1	1	3
163	3	4	1	1	1	1	2
164	1	1	1	1	1	1	1

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
124	4	4	2	2	3	1	3
125	4	5	3	5	3	4	4
126	1	4	3	3	4	4	4
127	1	1	3	1	2	4	3
128	2	4	3	4	3	3	3
129	1	5	3	3	2	1	4
130	3	3	2	3	2	2	3
131	4	3	1	2	3	4	4
132	5	5	3	5	5	3	4
133	3	3	3	3	3	4	4
134	2	3	2	4	3	4	4
135	1	4	4	5	3	5	5
136	3	3	3	1	3	4	4
137	2	4	5	4	4	3	4
138	4	1	4	4	4	4	4
139	4	4	5	3	2	1	4
140	1	1	4	4	4	3	3
141	4	4	5	5	5	5	5
142	2	3	1	4	2	3	3
143	1	5	3	1	3	3	5
144	1	3	3	2	3	3	3
145	3	3	3	4	4	5	4
146	1	3	3	3	4	3	3
147	1	3	3	4	4	4	4
148	5	4	4	4	5	5	5
149	1	4	3	3	3	2	3
150	4	3	3	3	3	4	4
151	3	2	4	5	4	2	4
152	3	2	3	3	4	3	3
153	1	2	3	3	4	4	4
154	1	4	4	4	5	5	5
155	1	3	3	5	3	4	3
156	1	4	2	3	2	2	3
157	3	2	2	5	5	4	4
158	5	3	3	5	5	5	5
159	4	3	3	5	3	4	3
160	5	5	3	5	3	4	4
161	1	2	2	1	3	4	3
162	2	3	2	4	3	2	3
163	3	1	5	3	5	5	5
164	1	3	2	3	3	4	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
124	2	2	3	4	4	5	2
125	5	3	4	5	5	5	3
126	3	3	4	3	4	4	1
127	3	1	3	3	3	3	1
128	4	4	3	3	4	4	3
129	5	4	5	5	5	5	1
130	3	2	3	4	4	4	3
131	3	3	5	4	5	5	4
132	4	3	4	5	5	5	4
133	4	4	4	4	4	4	3
134	3	3	4	3	4	4	2
135	5	1	4	5	5	5	1
136	4	4	4	5	5	5	3
137	5	5	5	5	5	5	2
138	4	1	4	4	4	4	4
139	3	4	1	2	5	5	1
140	4	3	3	4	4	4	2
141	5	4	5	5	5	5	2
142	4	3	2	5	5	4	2
143	5	3	4	1	5	5	1
144	4	4	3	4	5	5	1
145	4	4	4	4	5	5	3
146	3	3	3	4	4	4	3
147	4	3	4	4	3	3	1
148	5	5	5	2	4	4	4
149	3	3	3	4	4	4	1
150	4	3	4	3	5	5	4
151	5	5	3	3	5	5	3
152	3	3	4	3	5	5	3
153	5	3	5	5	5	5	1
154	5	4	5	5	5	5	1
155	5	1	4	5	5	5	1
156	4	3	3	4	4	3	2
157	3	2	5	4	4	4	4
158	3	5	5	3	5	5	5
159	3	3	4	4	3	3	3
160	5	5	5	5	5	5	5
161	5	1	4	4	5	5	1
162	4	3	4	3	4	4	2
163	2	4	5	2	4	4	2
164	4	2	2	1	3	3	1

Case Summaries

	NTRE
124	2
125	1
126	1
127	1
128	3
129	1
130	1
131	3
132	3
133	3
134	1
135	1
136	4
137	2
138	4
139	2
140	2
141	3
142	2
143	1
144	1
145	3
146	3
147	1
148	3
149	1
150	3
151	4
152	3
153	1
154	1
155	1
156	1
157	4
158	3
159	3
160	1
161	1
162	2
163	2
164	1

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
165	195	4	5	3	2	3	2
166	196	4	4	4	3	3	3
167	197	3	5	1	1	1	1
168	198	4	4	3	2	2	2
169	199	2	4	5	1	3	3
170	200	3	3	3	2	2	2
171	201	5	5	5	2	3	3
172	202	5	5	5	2	3	3
173	204	1	5	1	3	5	3
174	205	5	5	5	5	4	5
175	206	3	4	3	1	4	1
176	207	4	4	2	3	3	3
177	209	4	5	4	2	4	3
178	211	5	5	4	1	5	3
179	212	4	4	1	1	2	2
180	213	3	4	4	1	2	3
181	215	4	4	3	2	3	3
182	219	4	4	4	3	4	4
183	220	4	3	3	1	1	1
184	222	4	5	4	3	3	3
185	223	4	4	3	3	3	2
186	224	1	4	2	1	2	1
187	225	4	5	4	2	2	2
188	226	3	5	4	2	4	4
189	227	4	4	5	3	3	4
190	229	2	4	3	3	3	2
191	230	1	5	5	2	3	1
192	231	5	5	2	1	4	3
193	232	2	4	3	2	3	3
194	235	4	5	3	3	4	2
195	236	4	5	2	3	3	2
196	237	4	4	2	2	3	1
197	238	4	4	3	1	5	3
198	239	5	5	5	3	3	3
199	240	4	4	5	3	3	3
200	241	4	4	2	1	2	1
201	243	1	5	5	1	4	4
202	244	5	5	4	3	3	3
203	245	2	4	3	1	4	3
204	246	3	4	2	1	3	2
205	248	2	3	3	2	2	1

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
165	3	4	3	1	1	1	3
166	4	4	1	1	1	1	1
167	1	3	3	5	5	1	4
168	2	2	1	1	1	1	2
169	4	2	1	1	1	1	1
170	3	2	1	1	1	1	1
171	3	3	1	1	1	1	1
172	3	2	1	1	1	1	1
173	5	5	1	1	1	1	5
174	5	3	1	1	1	1	3
175	3	2	1	1	1	1	1
176	1	2	1	1	1	1	3
177	3	2	1	3	3	3	3
178	3	1	1	1	1	1	5
179	4	4	1	1	1	1	2
180	5	3	2	2	2	1	1
181	3	2	2	1	1	1	4
182	4	3	1	1	1	1	1
183	4	3	1	1	1	1	4
184	4	3	1	1	1	1	1
185	4	3	1	3	3	3	3
186	1	1	1	1	1	1	1
187	5	5	1	1	1	1	1
188	4	2	1	1	1	1	2
189	5	5	5	2	5	1	5
190	3	4	1	1	1	1	1
191	5	4	5	1	1	1	3
192	4	3	1	1	1	1	4
193	4	4	3	3	3	3	2
194	3	3	4	1	1	1	4
195	4	4	1	1	1	1	2
196	1	1	1	1	1	1	1
197	3	2	2	1	5	1	4
198	5	3	1	1	1	1	5
199	4	3	1	1	1	1	4
200	1	1	4	1	1	1	4
201	5	3	5	5	5	5	3
202	5	2	1	1	1	1	1
203	3	4	1	1	1	1	1
204	3	3	1	1	1	1	2
205	1	2	1	1	1	1	1

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
165	3	3	3	2	4	4	4
166	1	3	4	2	3	3	4
167	4	3	4	4	4	5	4
168	2	2	2	4	3	3	4
169	1	1	1	4	3	3	4
170	1	1	3	2	2	2	3
171	1	3	2	2	4	3	2
172	1	1	2	3	4	4	3
173	5	2	3	5	5	5	5
174	3	3	3	3	4	4	4
175	1	2	3	3	5	5	4
176	3	2	3	3	4	5	4
177	3	2	4	4	3	3	3
178	5	4	3	5	5	5	5
179	1	2	3	3	5	5	5
180	1	3	3	2	3	3	3
181	3	3	3	3	3	2	3
182	1	1	4	3	3	3	4
183	4	4	2	4	3	3	4
184	1	1	3	3	4	4	4
185	3	4	2	3	3	4	4
186	1	2	3	3	3	4	4
187	1	5	2	2	3	4	3
188	1	3	2	3	4	4	4
189	5	5	3	5	5	5	5
190	1	3	3	4	3	3	4
191	3	1	5	5	4	5	5
192	5	2	2	3	4	3	3
193	1	2	3	3	3	4	4
194	4	3	2	3	4	5	3
195	3	4	3	5	3	3	4
196	1	3	4	1	3	3	4
197	1	3	2	5	4	4	4
198	1	5	5	5	5	5	5
199	5	2	3	5	4	4	4
200	3	3	5	5	4	5	4
201	3	3	3	5	5	5	5
202	1	3	4	5	5	5	5
203	1	4	2	3	2	2	3
204	1	3	3	3	3	4	4
205	1	2	2	2	3	3	2

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
165	4	3	4	4	4	4	3
166	4	3	4	3	4	3	1
167	3	3	4	4	4	4	3
168	3	3	4	3	4	4	3
169	3	3	4	1	2	2	1
170	3	3	3	4	3	3	1
171	3	3	3	2	4	4	1
172	3	4	2	2	4	4	1
173	5	2	5	5	5	5	5
174	3	3	3	4	5	5	3
175	3	3	3	1	4	4	1
176	4	2	4	5	5	5	3
177	3	3	4	2	5	5	3
178	4	4	5	5	5	5	5
179	3	3	1	3	4	4	2
180	4	3	3	4	5	5	3
181	3	3	3	3	5	5	3
182	4	3	3	3	3	3	1
183	4	4	4	3	4	4	4
184	2	4	3	4	5	5	1
185	4	4	4	4	5	5	2
186	5	2	2	5	5	5	1
187	4	1	5	5	5	5	1
188	4	3	3	3	3	3	1
189	5	5	5	5	5	5	5
190	4	4	3	2	5	5	3
191	5	1	5	3	5	5	2
192	4	1	3	4	5	5	1
193	4	4	3	4	5	5	3
194	4	3	3	4	5	5	4
195	5	3	5	5	5	5	3
196	5	3	3	4	4	4	2
197	3	3	3	3	5	5	5
198	5	5	5	5	5	5	5
199	4	5	4	4	4	4	5
200	4	3	5	5	5	5	3
201	3	3	5	5	5	5	1
202	4	4	4	5	5	5	1
203	3	3	4	5	5	5	1
204	4	2	3	5	5	5	2
205	2	1	2	2	2	2	1

Case Summaries

	NTRE
165	2
166	1
167	3
168	2
169	1
170	1
171	1
172	1
173	5
174	3
175	1
176	3
177	2
178	3
179	1
180	3
181	1
182	1
183	3
184	1
185	3
186	1
187	1
188	1
189	4
190	3
191	1
192	1
193	2
194	3
195	3
196	1
197	1
198	1
199	5
200	1
201	1
202	1
203	1
204	1
205	1

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
206	249	2	4	2	5	3	2
207	250	3	5	3	1	3	2
208	251	3	5	5	3	4	3
209	252	4	4	3	1	2	3
210	253	5	5	5	3	4	5
211	254	3	4	3	1	2	1
212	255	2	4	3	3	3	3
213	256	4	5	3	1	3	2
214	257	4	4	2	5	4	2
215	258	1	5	4	3	3	4
216	259	3	4	2	1	1	1
217	260	4	4	3	2	3	5
218	261	5	5	5	5	5	5
219	262	4	4	5	4	4	4
220	263	5	5	4	3	3	3
221	264	4	5	4	3	3	3
222	265	4	4	5	2	3	3
223	266	3	3	3	2	2	1
224	267	4	5	5	2	3	4
225	268	4	4	4	5	3	2
226	269	5	4	3	3	3	3
227	270	3	4	5	2	4	4
228	272	5	5	3	1	3	2
229	274	3	5	5	5	5	5
230	275	5	5	5	2	3	2
231	276	4	5	4	3	3	3
232	277	5	5	5	1	2	5
233	279	3	4	4	2	2	2
234	280	5	5	5	5	5	3
235	281	5	5	3	4	4	5
236	282	4	4	4	3	3	3
237	283	3	5	4	3	4	4
238	285	5	5	3	3	3	3
239	287	4	4	2	3	3	1
240	289	5	5	4	4	4	3
241	290	1	5	2	3	4	1
242	291	3	4	3	1	2	2
243	292	2	4	4	1	3	3
244	293	3	3	3	2	3	3
245	294	5	5	4	2	3	2
246	295	4	4	4	2	3	4

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
206	2	4	1	2	2	2	3
207	4	4	1	1	1	1	2
208	5	5	1	1	1	1	1
209	3	3	1	1	1	1	1
210	5	4	1	1	1	1	1
211	1	2	1	1	1	1	3
212	4	4	1	1	1	1	3
213	3	4	1	1	1	1	2
214	2	4	1	1	1	1	4
215	4	4	1	1	1	1	1
216	3	1	3	3	3	1	2
217	5	1	2	1	1	1	3
218	5	4	1	1	1	2	2
219	4	3	1	1	1	1	2
220	3	4	1	1	1	1	1
221	4	1	1	2	2	2	2
222	4	1	1	1	1	1	1
223	4	4	4	1	1	1	3
224	4	1	1	1	1	1	1
225	2	2	1	1	1	1	1
226	3	3	1	1	1	1	2
227	4	3	2	1	1	1	1
228	4	4	1	1	1	1	1
229	5	4	1	1	1	1	3
230	2	2	5	1	1	1	1
231	3	3	1	1	1	1	2
232	5	3	2	2	2	2	2
233	2	2	1	1	1	1	1
234	5	5	1	4	4	4	4
235	5	5	1	1	1	1	4
236	3	3	1	1	1	1	2
237	5	4	3	1	1	1	3
238	3	3	1	1	1	1	1
239	1	2	2	1	1	1	1
240	4	4	1	1	1	1	1
241	1	4	1	1	1	1	1
242	2	2	1	1	1	1	1
243	4	3	1	1	1	1	3
244	3	3	1	1	1	1	4
245	4	4	1	1	1	1	1
246	4	3	1	1	1	1	3

Case Summaries

	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
206	3	3	2	2	3	3	3
207	1	5	3	4	4	3	5
208	1	3	3	3	5	5	5
209	1	2	3	3	4	4	4
210	1	3	5	4	5	5	5
211	3	3	4	3	3	3	3
212	3	3	3	4	4	4	4
213	2	3	3	3	3	4	3
214	4	1	4	4	4	4	4
215	1	2	2	4	4	4	4
216	2	4	4	2	4	1	4
217	3	3	3	5	3	3	3
218	2	2	1	4	5	5	5
219	1	4	4	3	4	3	4
220	3	3	2	3	3	4	4
221	3	3	3	3	3	4	4
222	1	4	4	1	1	1	4
223	3	3	2	4	3	4	3
224	1	1	2	2	4	3	4
225	1	1	2	3	3	4	4
226	2	4	4	4	3	3	4
227	1	4	3	3	3	2	4
228	2	3	3	2	3	4	3
229	3	3	5	5	5	4	5
230	1	1	3	3	3	3	5
231	2	3	3	3	4	4	4
232	4	5	3	3	5	5	5
233	1	3	2	1	2	2	4
234	4	2	5	4	4	4	5
235	3	4	4	4	4	4	4
236	1	4	3	4	4	4	3
237	3	4	4	3	3	3	3
238	1	3	3	5	3	3	3
239	1	2	4	2	5	5	4
240	1	4	4	5	3	3	4
241	1	5	4	4	5	4	4
242	1	2	3	1	1	2	2
243	3	3	2	5	4	4	3
244	1	3	3	4	3	3	3
245	3	2	3	4	3	4	4
246	3	3	4	3	4	4	4

Appendix 12: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
206	4	2	3	2	5	5	2
207	5	4	3	5	4	5	4
208	4	3	4	3	5	5	3
209	3	2	3	3	4	4	1
210	5	4	5	5	5	5	1
211	2	3	3	4	4	4	4
212	3	3	4	3	3	3	2
213	2	2	4	3	4	4	2
214	5	4	4	5	5	5	4
215	4	4	4	3	4	4	2
216	5	1	5	5	5	5	2
217	4	4	4	1	5	5	1
218	5	3	2	4	5	5	5
219	4	4	4	5	4	4	1
220	3	4	4	4	5	5	4
221	3	3	3	3	4	4	3
222	4	4	3	4	5	5	1
223	3	4	4	4	5	5	1
224	4	3	4	4	4	4	2
225	2	2	2	1	2	2	1
226	5	3	4	5	5	5	2
227	3	2	4	3	4	3	1
228	3	3	3	2	4	4	1
229	3	4	5	5	5	5	4
230	3	4	3	4	5	5	1
231	4	3	3	4	4	4	2
232	5	5	5	5	5	5	5
233	3	3	3	3	3	3	1
234	4	5	5	5	4	4	3
235	3	3	4	4	4	4	1
236	3	3	2	2	4	4	2
237	4	4	4	4	4	4	3
238	3	3	3	4	4	4	1
239	4	2	4	4	4	4	2
240	4	4	4	4	5	5	1
241	4	4	5	5	5	5	1
242	2	2	3	3	3	3	1
243	3	2	2	3	4	4	2
244	3	3	3	3	4	4	1
245	3	3	4	5	5	5	3
246	4	4	4	4	4	4	3

Appendix 12: continued.

Case Summaries

	NTRE
206	2
207	2
208	1
209	1
210	1
211	4
212	1
213	1
214	4
215	2
216	1
217	1
218	5
219	1
220	4
221	2
222	1
223	1
224	2
225	1
226	2
227	1
228	1
229	4
230	1
231	3
232	3
233	1
234	3
235	1
236	2
237	3
238	1
239	2
240	1
241	1
242	1
243	1
244	1
245	2
246	1

Appendix 12: continued.

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
247	297	3	5	3	2	2	3
248	298	5	5	5	2	3	3
249	299	5	4	4	2	4	1
250	300	3	4	4	3	4	3
251	301	5	5	3	1	3	2
252	302	5	5	4	1	3	3
253	303	3	3	3	2	2	3
254	304	3	4	2	3	5	1
255	305	4	4	3	4	4	2
256	306	2	3	3	2	5	2
257	308	3	3	1	1	2	2
258	309	5	1	3	3	3	3
259	310	4	5	4	3	3	4
260	311	3	4	4	2	2	3
261	312	5	5	3	5	3	3
262	313	1	4	5	4	3	2
263	361	5	5	3	2	3	3
264	362	2	5	3	4	2	2
265	363	2	5	3	2	2	2
266	364	4	3	4	2	3	3
267	365	4	3	3	2	3	2
268	366	5	5	3	3	3	1
269	367	5	4	4	3	4	3
270	368	3	5	5	5	4	4
271	370	5	5	5	3	3	3
272	371	2	4	5	2	2	2
273	372	4	5	3	1	3	2
274	373	4	4	4	2	4	2
275	376	3	4	5	3	3	3
276	377	3	3	2	3	5	5
277	378	5	5	5	1	5	3
278	379	4	4	5	2	4	3
279	380	5	5	4	4	5	4
280	381	4	4	1	2	2	1
281	382	4	5	1	1	1	1
282	383	3	3	3	3	2	3
283	384	4	4	3	2	3	3
284	385	4	4	3	2	4	4
285	386	1	5	5	4	4	3
286	387	2	4	3	2	3	2
287	388	4	4	3	3	2	3

Case Summaries

	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
247	3	3	1	1	1	1	1
248	4	2	1	1	1	1	5
249	2	3	1	1	1	1	3
250	3	4	2	1	1	1	2
251	3	3	1	1	1	1	4
252	4	3	1	1	1	1	1
253	4	4	1	1	1	1	3
254	5	4	1	1	1	1	3
255	3	4	1	1	1	1	3
256	4	2	1	3	5	1	5
257	2	2	4	1	1	1	1
258	5	5	1	1	1	1	3
259	4	3	1	1	1	1	2
260	3	1	1	1	1	1	1
261	5	4	1	1	1	1	3
262	2	3	1	1	1	1	1
263	5	3	1	1	1	1	5
264	3	2	2	1	1	1	2
265	3	3	1	1	1	1	1
266	3	2	1	1	1	1	2
267	3	3	1	1	1	1	3
268	1	3	1	1	1	1	2
269	5	5	1	1	1	1	5
270	4	5	1	1	1	1	4
271	5	4	5	5	5	5	5
272	2	3	2	1	1	1	3
273	5	5	1	1	1	1	3
274	3	3	1	1	1	1	2
275	4	2	1	1	1	1	3
276	5	3	1	1	1	1	2
277	5	5	1	1	1	1	5
278	4	3	1	2	2	1	3
279	4	5	4	4	4	4	3
280	1	4	1	1	1	1	3
281	1	1	1	1	1	1	2
282	3	4	3	1	1	1	2
283	4	2	1	1	1	1	1
284	5	5	1	1	1	1	5
285	4	3	1	1	1	1	1
286	4	3	1	1	1	1	1
287	3	2	1	2	2	1	5

Appendix 12: continued.

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
247	1	3	2	3	3	3	3
248	5	4	5	4	5	5	5
249	4	2	4	3	4	4	4
250	1	3	3	5	4	3	4
251	4	4	2	1	3	1	3
252	2	4	4	5	3	3	3
253	3	3	3	3	4	3	3
254	1	4	4	5	4	4	4
255	2	4	4	5	4	4	4
256	2	3	2	5	2	4	3
257	1	3	4	4	2	3	3
258	4	3	3	4	5	5	5
259	3	3	4	3	3	2	4
260	1	4	5	3	5	5	4
261	3	5	5	5	5	2	3
262	1	2	3	2	3	4	4
263	5	3	2	3	1	5	4
264	1	1	2	2	4	4	4
265	1	1	1	1	3	3	4
266	3	3	2	4	3	3	3
267	3	3	2	3	2	3	3
268	1	1	1	2	3	5	5
269	5	5	1	5	2	5	1
270	4	4	4	4	4	5	5
271	5	5	5	5	1	1	2
272	3	3	2	3	3	2	4
273	3	1	1	2	3	3	4
274	3	3	3	3	4	3	1
275	3	3	1	2	5	2	4
276	2	2	2	3	2	4	2
277	5	5	5	5	5	5	5
278	3	3	2	2	3	4	3
279	3	3	3	4	5	4	5
280	1	1	1	3	4	3	4
281	1	1	1	2	3	3	4
282	2	2	2	3	4	5	4
283	1	1	1	3	1	4	4
284	5	3	3	4	3	4	4
285	1	1	1	3	1	3	4
286	1	1	1	3	1	1	2
287	4	4	3	3	4	3	4

Appendix 12: continued.

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
247	4	3	4	4	4	4	1
248	5	5	5	5	5	5	5
249	3	3	4	3	3	3	4
250	4	4	4	4	5	5	1
251	5	3	4	1	5	5	1
252	2	2	3	3	3	3	1
253	3	2	3	2	4	4	2
254	4	3	4	4	5	5	1
255	4	5	4	4	4	4	3
256	3	3	3	3	4	4	2
257	3	2	4	3	3	3	1
258	5	3	3	1	3	3	3
259	3	2	4	4	3	3	4
260	3	3	5	4	5	5	3
261	5	3	3	5	5	5	5
262	3	3	3	5	5	3	1
263	3	3	1	1	3	3	5
264	3	3	4	2	3	4	4
265	4	4	4	4	4	4	5
266	3	3	2	2	2	3	4
267	3	3	3	2	3	4	3
268	4	4	5	3	3	4	5
269	2	2	5	1	1	1	5
270	5	5	4	4	5	5	5
271	2	5	5	2	5	5	5
272	4	4	3	4	4	4	4
273	4	3	5	3	4	5	5
274	1	4	4	3	5	5	5
275	5	4	3	4	5	4	4
276	2	2	4	3	2	3	5
277	5	5	1	1	5	5	5
278	3	4	4	4	5	4	5
279	5	5	5	5	4	5	5
280	3	3	5	1	4	4	3
281	4	4	5	1	4	5	5
282	4	4	3	3	2	2	3
283	4	3	4	3	1	4	3
284	4	4	4	4	5	4	5
285	5	5	3	1	4	4	5
286	1	3	3	3	3	2	3
287	4	4	4	3	4	4	5

Case Summaries

	NTRE
247	1
248	2
249	3
250	1
251	1
252	1
253	2
254	1
255	3
256	1
257	1
258	4
259	2
260	3
261	5
262	1
263	5
264	4
265	5
266	4
267	3
268	5
269	5
270	5
271	5
272	4
273	5
274	5
275	4
276	5
277	5
278	5
279	5
280	3
281	5
282	3
283	3
284	5
285	5
286	2
287	5

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
288	389	3	5	3	2	3	3
289	390	5	5	5	1	5	3
290	391	3	4	4	3	3	4
291	392	3	4	4	3	3	4
292	393	4	4	4	3	3	3
293	394	3	3	2	1	3	1
294	395	3	4	4	3	3	4
295	396	3	4	3	2	3	2
296	397	5	5	5	2	4	3
297	398	4	5	5	2	4	3
298	399	1	4	3	2	2	2
299	400	5	5	4	1	3	2
300	401	5	5	4	3	3	3
301	402	1	3	3	3	3	2
302	403	3	4	4	5	4	4
303	404	2	5	3	4	3	1
304	405	5	5	3	3	4	3
305	406	5	5	2	1	1	2
306	407	4	5	5	3	5	3
307	408	4	5	5	3	3	4
308	409	4	4	4	3	4	4
309	410	5	5	5	3	3	3
310	411	3	4	3	2	2	2
311	412	5	5	5	5	5	4
312	413	4	4	4	2	3	3
313	414	4	5	3	4	4	2
314	415	3	5	5	1	4	3
315	416	5	5	5	3	4	4
316	417	5	5	3	3	4	4
317	418	5	5	4	5	5	5
318	419	5	5	3	3	3	3
319	420	2	5	3	3	3	2
320	421	4	4	3	2	2	2
321	422	3	4	2	1	1	2
322	423	5	5	4	1	4	4
323	424	5	5	5	4	4	4
324	425	4	4	2	1	2	2
325	426	3	5	5	3	3	4
326	428	3	4	3	1	3	2
327	429	4	4	4	5	5	3
328	430	4	4	3	2	4	2

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
288	3	4	3	1	1	1	2
289	3	3	2	1	1	1	1
290	4	4	1	1	1	1	1
291	4	4	1	1	1	1	1
292	5	4	2	3	3	3	3
293	4	5	1	1	1	1	3
294	4	4	3	1	2	2	3
295	4	4	1	1	1	1	4
296	5	3	1	1	1	1	4
297	4	4	1	1	1	1	2
298	3	2	1	1	1	1	1
299	3	1	1	1	1	1	2
300	3	3	1	1	1	1	1
301	2	2	1	1	1	1	3
302	4	4	1	1	1	1	3
303	3	4	1	1	1	1	3
304	5	4	1	1	1	1	5
305	2	2	5	1	1	1	3
306	4	3	1	1	1	1	4
307	5	4	5	3	1	1	3
308	4	3	1	1	1	1	4
309	5	5	1	1	1	1	1
310	3	2	1	1	1	1	2
311	4	4	4	5	1	1	1
312	4	3	1	2	2	1	3
313	3	3	1	1	1	1	4
314	4	3	1	3	3	3	1
315	4	3	1	1	1	1	4
316	4	3	1	1	1	1	1
317	5	5	3	3	3	3	3
318	3	4	3	4	5	5	4
319	3	3	1	1	1	1	4
320	2	4	1	1	1	1	2
321	4	3	1	1	1	1	3
322	4	4	1	1	1	1	1
323	4	3	1	1	1	1	3
324	3	1	2	2	2	1	4
325	4	3	1	1	1	1	3
326	2	2	1	1	1	1	4
327	5	5	1	1	1	1	4
328	3	4	2	1	1	1	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
288	1	1	1	5	4	4	3
289	1	1	1	3	3	3	4
290	1	1	1	2	3	3	4
291	1	1	1	2	3	3	4
292	3	3	4	3	3	3	3
293	3	2	2	3	2	4	3
294	3	3	3	3	4	4	2
295	1	1	1	3	2	4	3
296	3	3	3	3	2	5	4
297	2	2	2	3	4	4	4
298	1	1	1	4	2	5	5
299	1	1	1	3	4	1	3
300	1	1	1	4	2	3	3
301	3	3	3	3	3	4	3
302	3	3	3	4	4	4	3
303	4	4	4	4	2	5	4
304	5	5	4	3	4	5	5
305	3	3	4	3	5	5	4
306	2	2	2	4	5	3	3
307	3	2	2	4	4	5	5
308	4	4	3	3	2	4	3
309	1	1	1	5	5	4	4
310	2	2	2	4	2	4	4
311	1	1	1	5	5	4	5
312	2	2	1	2	3	5	4
313	3	3	3	4	3	2	3
314	1	1	2	2	3	5	5
315	4	4	3	3	4	4	3
316	1	1	1	4	2	2	4
317	4	4	4	2	4	2	5
318	4	4	4	2	5	3	4
319	5	5	3	4	5	3	4
320	1	1	1	3	3	4	4
321	2	1	1	3	4	3	3
322	1	1	1	4	1	4	3
323	3	3	3	4	3	4	3
324	4	4	2	3	3	1	3
325	3	3	2	4	3	4	4
326	4	4	1	3	2	4	3
327	4	4	4	3	3	1	4
328	3	3	4	4	4	2	4

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
288	5	4	4	3	5	4	5
289	5	5	3	3	5	4	2
290	4	3	4	4	3	4	5
291	4	3	4	4	3	4	5
292	3	3	3	3	4	3	3
293	4	2	3	3	1	3	4
294	5	5	5	4	5	5	4
295	4	3	3	3	4	4	4
296	4	4	5	3	3	3	5
297	4	4	3	3	4	4	4
298	5	5	3	3	5	4	5
299	4	3	4	4	5	5	5
300	4	3	3	2	2	4	1
301	3	3	3	3	3	4	4
302	3	4	4	4	4	4	4
303	4	4	4	4	4	5	5
304	5	5	4	5	5	5	5
305	5	4	4	3	4	4	5
306	3	4	3	2	4	4	5
307	5	5	5	5	5	5	5
308	3	3	3	2	3	4	4
309	5	5	5	5	5	5	5
310	4	4	5	5	5	3	5
311	5	5	5	5	5	5	5
312	4	4	3	4	4	3	5
313	4	4	3	3	4	4	4
314	5	5	4	3	4	5	3
315	3	4	3	4	4	4	4
316	4	4	4	4	5	2	5
317	5	5	5	5	5	5	5
318	4	4	4	4	4	4	4
319	4	4	4	3	4	4	4
320	4	4	4	4	4	4	4
321	1	3	4	3	4	4	4
322	2	5	4	2	5	4	5
323	3	4	4	4	4	4	5
324	4	3	3	3	3	4	4
325	4	4	4	4	4	5	5
326	2	3	3	2	3	2	4
327	4	4	3	3	2	2	3
328	4	3	5	3	4	2	5

Case Summaries

	NTRE
288	5
289	2
290	5
291	5
292	3
293	4
294	4
295	4
296	5
297	4
298	5
299	5
300	1
301	4
302	4
303	5
304	5
305	5
306	5
307	5
308	4
309	5
310	5
311	5
312	5
313	4
314	3
315	4
316	5
317	5
318	4
319	4
320	4
321	3
322	5
323	5
324	4
325	5
326	4
327	3
328	5

Case Summaries								
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT	
329	431	4	3	4	3	3	4	
330	432	4	4	3	3	3	3	
331	433	3	4	2	1	2	1	
332	434	3	3	3	1	1	2	
333	435	3	4	3	2	3	3	
334	436	3	5	5	2	4	4	
335	437	5	5	4	2	2	3	
336	438	2	3	2	2	4	2	
337	439	5	5	3	5	4	3	
338	440	4	3	3	3	4	4	
339	441	5	5	5	2	5	3	
340	442	2	5	3	1	3	3	
341	443	5	5	3	3	4	4	
342	444	4	4	5	5	4	4	
343	445	5	3	2	1	5	2	
344	446	4	4	4	5	4	4	
345	447	5	5	2	2	2	2	
346	448	3	5	5	2	3	3	
347	449	5	5	5	5	4	5	
Total	N	347	347	347	347	347	347	

Case Summaries								
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT	
329	5	4	2	3	2	1	3	
330	4	4	1	1	2	1	4	
331	4	3	1	1	1	1	2	
332	2	2	1	1	1	1	1	
333	3	3	1	2	2	1	2	
334	4	2	1	1	1	1	1	
335	4	3	1	1	1	1	3	
336	3	2	1	1	1	1	4	
337	5	4	1	1	1	1	5	
338	4	5	1	1	1	1	4	
339	3	1	1	1	1	1	1	
340	3	2	1	1	1	1	1	
341	4	3	1	1	1	1	3	
342	5	4	1	1	1	1	5	
343	3	2	1	2	2	2	5	
344	4	3	4	3	3	4	4	
345	4	4	1	1	1	1	1	
346	3	2	1	1	1	1	2	
347	5	3	5	1	1	1	1	
Total	N	347	347	347	347	347	347	347

Case Summaries

	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
329	3	2	1	3	4	4	3
330	3	3	2	4	3	4	4
331	3	3	3	3	3	2	3
332	1	1	1	3	3	2	3
333	2	2	2	1	2	2	4
334	1	1	3	3	4	3	4
335	3	3	3	3	2	5	3
336	4	5	2	4	2	4	2
337	5	5	5	5	5	5	5
338	5	5	4	3	3	4	3
339	1	1	1	5	5	3	5
340	1	1	1	1	1	5	5
341	3	2	2	4	4	5	4
342	5	5	5	4	4	4	4
343	5	5	1	4	2	2	3
344	4	4	4	5	4	4	3
345	1	1	1	4	2	1	3
346	1	1	1	2	3	4	4
347	1	1	1	4	4	4	4
Total N	347	347	347	347	347	347	347

Appendix 12: continued.

Case Summaries								
		INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
329		3	4	4	3	4	3	4
330		3	4	5	3	3	2	4
331		4	3	3	2	4	3	5
332		3	3	3	3	3	3	4
333		4	4	3	3	5	2	5
334		4	5	5	5	5	4	5
335		4	4	4	3	3	3	5
336		2	3	5	4	4	4	5
337		5	5	4	4	5	5	5
338		4	4	3	2	4	3	4
339		5	5	5	5	5	5	3
340		5	3	4	1	1	1	5
341		3	5	4	4	5	5	5
342		3	5	5	5	5	4	5
343		5	3	3	5	3	5	5
344		4	4	4	4	5	3	4
345		5	4	5	2	5	5	5
346		4	4	4	3	3	3	4
347		4	5	3	3	4	5	4
Total	N	347	347	347	347	347	347	347

Appendix 12: continued.

Case Summaries

	NTRE
329	4
330	4
331	5
332	4
333	5
334	5
335	5
336	5
337	5
338	4
339	3
340	5
341	5
342	5
343	5
344	4
345	5
346	4
347	4
Total	N 347

**Appendix 13: Season-level raw data for outcomes relative to expectations for
snaggers.**

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
1	2	3	4	4	3	3	3
2	4	2	2	2	1	4	1
3	6	1	1	1	1	1	1
4	8	3	3	3	3	3	3
5	9	3	3	3	3	3	3
6	10	2	3	1	3	3	2
7	11	3	2	2	2	2	2
8	12	3	2	3	2	3	2
9	14	4	5	2	1	3	1
10	15	1	1	1	1	1	1
11	16	3	3	4	2	3	3
12	17	2	3	2	2	3	1
13	19	2	2	2	2	2	2
14	20	3	3	3	2	3	3
15	21	3	3	2	3	2	2
16	22	2	2	2	3	2	2
17	23	3	3	2	2	2	2
18	24	3	3	3	3	3	3
19	25	3	3	3	2	2	3
20	26	1	1	2	1	1	2
21	28	3	4	1	2	2	3
22	29	3	3	3	2	1	3
23	30	3	5	2	3	3	2
24	31	2	3	3	3	2	2
25	33	2	1	1	1	1	1
26	34	3	3	3	3	3	3
27	35	1	1	1	1	1	1
28	37	3	3	2	2	2	2
29	38	3	3	2	3	3	2
30	39	2	2	2	1	2	1
31	40	2	2	3	3	3	3
32	41	2	2	3	3	3	3
33	42	1	1	1	1	1	1
34	44	3	3	3	3	3	3
35	45	3	2	1	1	1	1
36	46	2	3	2	2	3	2
37	47	1	2	1	1	1	1
38	49	2	3	2	2	3	2
39	50	2	3	2	2	3	2
40	51	2	2	1	1	1	1
41	53	1	1	1	1	1	1

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
1	3	3	5	5	3	3	3
2	4	2	5	5	5	3	1
3	1	1	5	5	5	5	3
4	3	3	4	3	3	3	3
5	3	3	3	3	3	3	2
6	2	2	3	3	3	3	3
7	4	4	3	3	3	3	2
8	3	3	3	3	3	3	3
9	1	3	5	1	1	1	3
10	1	1	5	5	5	5	3
11	3	3	3	3	3	3	3
12	1	1	4	3	3	2	2
13	3	4	1	1	1	1	1
14	3	3	4	4	3	3	3
15	2	3	3	3	3	3	3
16	2	2	5	5	5	5	3
17	2	3	4	4	4	4	2
18	3	3	3	3	3	3	3
19	3	3	3	3	3	3	3
20	3	3	4	3	3	3	2
21	3	3	3	2	2	2	2
22	3	3	3	2	2	2	2
23	2	4	5	5	5	5	3
24	3	2	5	5	5	4	3
25	1	1	1	1	1	1	1
26	3	3	3	3	3	3	3
27	1	1	3	3	3	3	3
28	2	3	3	3	2	2	3
29	2	3	4	4	5	3	2
30	3	3	5	5	5	4	2
31	3	3	3	3	3	3	3
32	3	3	3	3	3	3	3
33	1	1	2	2	2	1	1
34	3	3	3	3	3	3	3
35	3	3	2	2	2	2	2
36	3	2	5	3	3	3	3
37	1	1	3	1	1	1	3
38	3	2	5	3	3	3	3
39	3	2	5	3	3	3	3
40	1	1	5	5	5	5	1
41	1	3	5	5	5	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
1	3	3	3	3	3	3	2
2	1	1	1	5	3	1	5
3	3	3	3	1	1	1	2
4	3	3	3	3	3	2	2
5	2	2	2	3	3	3	3
6	3	3	3	2	3	3	2
7	2	2	2	2	4	3	3
8	3	3	3	3	3	4	3
9	2	2	1	3	1	5	3
10	3	3	3	1	1	1	2
11	3	3	3	3	3	3	2
12	2	2	2	2	3	2	3
13	1	1	1	3	3	2	3
14	3	3	3	3	3	1	3
15	3	3	3	3	3	3	3
16	3	3	3	3	3	3	3
17	3	3	4	4	3	2	1
18	3	3	3	3	3	3	3
19	2	2	3	3	4	3	3
20	2	3	2	2	3	1	3
21	3	3	1	2	3	2	2
22	2	2	2	4	3	2	2
23	3	2	1	5	4	1	3
24	3	3	3	2	3	2	2
25	1	1	1	3	2	1	1
26	3	3	3	3	3	3	3
27	3	3	3	1	3	2	1
28	3	3	3	3	3	3	3
29	3	3	4	3	4	3	3
30	2	2	1	2	3	1	3
31	3	3	3	3	3	3	4
32	3	3	3	2	3	3	3
33	1	1	1	3	3	2	3
34	3	3	3	3	3	3	4
35	2	2	2	3	3	2	3
36	3	3	3	2	3	2	3
37	3	3	3	3	3	3	3
38	3	3	3	2	3	2	3
39	3	3	3	2	3	2	3
40	1	1	1	3	3	5	5
41	3	3	3	1	3	1	1

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
1	2	3	3	4	3	5	3
2	1	5	5	5	5	3	3
3	2	2	3	5	4	3	3
4	2	3	3	3	3	3	5
5	3	3	3	3	3	3	3
6	3	3	3	2	4	3	3
7	3	2	2	2	2	3	3
8	3	3	2	4	3	5	4
9	3	3	5	3	3	4	5
10	2	2	3	5	4	3	3
11	2	3	4	4	3	3	4
12	2	2	4	4	3	2	3
13	3	3	2	3	2	3	4
14	3	3	2	3	3	3	3
15	3	3	3	3	3	3	3
16	3	3	3	3	3	3	3
17	2	2	4	5	3	3	3
18	3	3	3	3	3	3	3
19	3	3	3	2	3	3	3
20	3	3	2	1	3	3	3
21	2	3	4	4	3	4	4
22	1	2	1	4	3	4	4
23	1	2	5	3	5	5	5
24	1	2	3	5	3	3	4
25	1	1	1	1	1	1	1
26	3	3	3	3	3	3	3
27	1	1	2	3	2	3	2
28	3	3	3	3	3	3	3
29	3	4	4	3	4	4	5
30	2	3	3	2	2	2	4
31	4	4	3	2	4	4	4
32	3	3	3	3	3	3	4
33	4	4	5	5	3	3	3
34	4	3	3	3	3	3	3
35	3	3	3	3	3	4	3
36	3	2	2	3	4	2	4
37	3	3	3	1	3	5	5
38	3	2	2	3	4	2	4
39	3	2	2	3	4	2	4
40	5	5	5	5	5	5	5
41	1	1	3	3	1	5	5

Case Summaries

	NTRE	Satisfaction
1	3	4
2	3	2
3	3	1
4	5	4
5	3	4
6	3	2
7	3	3
8	4	4
9	5	5
10	3	1
11	4	4
12	3	2
13	4	2
14	3	4
15	3	3
16	3	3
17	3	4
18	3	4
19	3	5
20	3	1
21	4	3
22	4	3
23	5	4
24	4	1
25	1	1
26	3	5
27	1	1
28	3	4
29	5	4
30	4	2
31	4	4
32	4	3
33	3	1
34	3	5
35	3	3
36	4	3
37	5	1
38	4	3
39	4	3
40	5	2
41	5	2

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
42	54	3	3	3	3	2	3
43	55	1	3	1	1	1	1
44	56	1	1	1	1	1	1
45	57	3	3	2	2	2	2
46	58	3	2	2	1	1	1
47	59	2	2	2	2	2	2
48	60	3	3	2	2	3	3
49	61	3	3	3	3	3	3
50	63	1	1	1	1	1	1
51	64	3	3	2	1	1	2
52	65	4	4	4	2	4	3
53	66	1	1	1	1	1	1
54	67	3	3	3	3	3	3
55	68	2	3	2	3	3	1
56	69	3	4	2	2	2	3
57	71	3	3	2	2	2	2
58	72	3	3	1	1	3	1
59	73	3	3	3	4	4	2
60	74	4	3	5	5	5	4
61	75	1	2	2	2	2	2
62	76	3	3	3	3	3	3
63	77	1	1	2	1	1	1
64	78	2	3	2	3	2	2
65	79	4	4	4	2	2	2
66	80	3	3	2	2	2	2
67	81	3	3	3	3	3	3
68	82	3	2	2	2	2	2
69	83	4	5	2	2	4	1
70	84	3	3	3	3	3	3
71	85	2	1	1	1	1	1
72	86	3	4	4	2	3	3
73	87	3	4	4	1	2	3
74	88	4	4	2	2	3	3
75	90	1	4	1	1	1	1
76	92	1	2	1	1	3	1
77	93	3	3	2	3	3	2
78	95	5	5	3	2	3	3
79	96	3	3	2	2	3	2
80	97	3	4	2	2	3	3
81	98	2	1	2	1	2	3
82	99	1	1	1	1	1	1

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
42	3	3	3	3	3	3	3
43	1	1	4	3	3	3	4
44	1	3	5	5	5	3	3
45	3	3	5	5	5	5	3
46	3	3	3	3	3	3	3
47	2	2	2	2	2	2	2
48	3	3	3	3	3	3	3
49	3	3	3	3	3	3	3
50	1	1	3	3	3	3	3
51	3	3	3	4	3	2	3
52	4	4	1	1	1	1	3
53	1	1	3	3	3	3	3
54	3	3	5	4	3	2	3
55	1	1	4	5	3	3	2
56	3	3	1	1	1	1	1
57	2	3	5	2	2	5	2
58	1	3	3	3	1	1	1
59	2	3	3	3	3	3	3
60	4	4	3	3	3	3	2
61	3	3	3	3	3	3	3
62	3	3	3	3	3	3	3
63	3	3	4	4	4	3	1
64	2	3	3	3	3	3	3
65	2	2	1	1	1	1	4
66	3	1	2	2	2	2	3
67	3	3	5	5	5	5	3
68	3	3	4	4	4	3	3
69	1	4	1	1	1	1	1
70	3	3	2	2	2	2	2
71	1	1	5	1	1	1	1
72	3	4	3	3	3	2	2
73	3	2	4	4	4	5	4
74	4	4	3	3	3	3	3
75	1	3	5	5	5	5	1
76	1	2	5	5	5	5	2
77	3	3	3	3	3	3	3
78	3	3	4	3	3	3	3
79	2	2	2	2	2	2	2
80	3	4	2	2	2	2	3
81	3	3	2	1	1	1	1
82	1	1	1	1	1	1	1

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
42	3	3	3	3	3	3	2
43	3	3	3	1	3	2	1
44	3	3	3	1	3	1	1
45	2	2	1	3	3	3	3
46	3	3	3	1	3	1	2
47	2	2	2	2	2	3	3
48	3	3	3	3	3	2	3
49	3	3	3	4	4	4	4
50	3	3	3	3	1	3	3
51	3	3	3	4	4	3	1
52	2	3	2	3	4	4	3
53	4	4	4	2	3	1	1
54	3	3	3	4	4	2	1
55	3	3	3	2	3	3	1
56	1	2	2	2	3	3	2
57	2	2	2	2	3	1	3
58	1	1	3	3	3	3	3
59	3	3	3	3	3	3	2
60	2	2	2	3	4	2	3
61	3	3	3	3	3	3	2
62	2	2	2	3	3	3	3
63	1	1	3	1	3	2	1
64	3	3	3	3	4	3	3
65	4	4	3	4	4	4	4
66	3	3	3	4	4	2	1
67	3	3	3	3	3	3	3
68	3	3	3	3	4	3	3
69	1	1	1	5	4	2	3
70	2	2	2	3	3	3	3
71	1	1	1	2	3	1	2
72	2	2	2	3	3	3	3
73	3	3	2	3	3	4	4
74	4	4	3	4	3	3	3
75	1	1	1	2	3	1	4
76	1	1	4	2	1	1	2
77	3	3	3	3	3	2	2
78	3	3	3	3	3	3	3
79	2	2	2	3	3	3	3
80	3	3	2	4	3	3	3
81	1	1	1	2	2	3	4
82	1	1	1	1	2	4	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
42	3	3	3	3	3	5	4
43	1	1	3	2	1	5	5
44	1	1	3	3	1	5	5
45	3	3	3	2	3	3	5
46	2	3	3	2	3	3	2
47	2	3	3	3	3	3	3
48	3	3	3	3	3	3	3
49	4	4	4	4	4	4	4
50	3	3	3	3	1	3	3
51	1	2	3	2	3	5	5
52	4	4	4	3	4	4	4
53	1	3	3	2	3	3	2
54	1	3	3	3	3	3	3
55	2	3	2	3	3	3	3
56	1	4	3	3	4	4	3
57	3	5	1	3	3	5	5
58	4	3	3	2	3	3	4
59	3	3	3	3	3	3	3
60	3	3	3	3	4	4	4
61	2	2	3	2	3	3	3
62	3	3	3	3	3	3	3
63	1	1	3	3	1	3	3
64	3	3	3	2	3	4	4
65	4	4	4	4	4	4	4
66	2	2	3	3	4	3	3
67	2	3	3	3	3	3	3
68	3	3	2	3	3	3	3
69	4	4	4	4	4	5	5
70	3	3	3	3	3	3	3
71	2	2	3	3	3	3	3
72	3	3	3	4	3	3	3
73	3	3	4	3	3	4	3
74	2	3	4	3	3	4	4
75	4	4	3	1	3	3	4
76	3	1	3	5	1	3	5
77	2	3	3	4	4	4	3
78	3	3	3	3	3	3	3
79	3	3	3	3	3	3	3
80	3	3	3	3	3	3	4
81	4	3	3	1	3	3	3
82	2	2	2	1	2	4	5

Case Summaries

	NTRE	Satisfaction
42	4	4
43	5	2
44	5	2
45	5	3
46	5	4
47	3	2
48	3	3
49	4	4
50	3	1
51	5	3
52	4	5
53	2	1
54	4	4
55	3	1
56	3	3
57	5	3
58	4	3
59	3	5
60	4	5
61	3	3
62	3	5
63	3	1
64	4	4
65	4	4
66	3	3
67	3	4
68	3	4
69	5	5
70	3	5
71	3	5
72	3	5
73	3	5
74	4	5
75	4	1
76	5	2
77	3	4
78	3	4
79	3	4
80	4	4
81	3	2
82	5	2

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
83	100	3	3	3	3	3	3
84	101	2	3	3	3	3	3
85	102	3	2	3	3	3	4
86	103	3	1	1	1	1	1
87	105	4	4	4	3	3	3
88	106	3	3	3	3	3	3
89	107	3	3	2	2	2	3
90	108	3	4	1	1	1	1
91	109	2	2	2	1	2	1
92	110	3	3	3	1	1	1
93	111	2	3	1	1	1	1
94	112	2	4	1	1	2	1
95	113	3	3	3	4	4	3
96	114	4	4	3	1	3	2
97	116	3	3	2	3	3	3
98	117	2	2	2	1	1	2
99	118	2	4	1	3	3	1
100	119	3	3	2	3	3	2
101	120	2	2	1	3	1	3
102	121	3	3	3	2	2	3
103	122	2	2	2	2	2	2
104	123	3	3	4	3	3	3
105	124	1	1	1	2	1	1
106	125	2	2	2	2	2	2
107	126	3	3	3	2	3	3
108	127	4	5	3	3	2	1
109	128	3	3	4	3	3	3
110	129	3	3	3	2	2	2
111	130	1	2	2	1	2	1
112	131	2	4	2	2	2	2
113	132	2	2	2	2	2	2
114	133	3	4	3	3	3	3
115	134	2	2	3	2	3	3
116	136	2	1	1	1	1	1
117	138	3	3	3	1	1	1
118	139	4	2	3	3	3	3
119	141	4	5	5	3	4	3
120	142	2	2	1	1	1	1
121	143	4	4	4	4	4	4
122	145	4	4	2	2	2	2
123	146	3	3	3	3	3	3

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
83	3	1	3	3	3	3	3
84	3	3	3	3	3	3	3
85	3	3	4	5	5	4	4
86	1	1	3	3	3	3	3
87	3	4	3	3	3	3	3
88	3	3	3	1	1	1	3
89	3	3	4	4	4	3	3
90	1	1	3	4	3	3	2
91	1	2	3	3	1	1	1
92	1	1	3	3	3	1	3
93	1	2	3	3	3	3	3
94	1	2	5	5	5	5	3
95	3	3	3	3	3	3	3
96	5	3	4	4	3	4	2
97	4	3	4	4	4	3	3
98	2	3	4	3	5	3	2
99	1	1	5	5	1	5	5
100	3	3	3	3	3	3	3
101	3	3	4	3	3	3	3
102	3	2	3	3	3	3	3
103	2	2	2	2	2	2	2
104	3	3	3	3	3	3	3
105	1	3	3	3	3	3	3
106	2	2	4	4	4	3	3
107	3	3	4	3	3	3	3
108	1	5	1	5	5	5	1
109	3	3	3	3	3	3	3
110	4	3	5	5	5	5	1
111	2	1	4	1	1	1	2
112	2	2	3	1	1	1	1
113	2	2	5	5	5	5	2
114	3	2	3	3	3	3	3
115	3	2	3	3	3	2	2
116	1	1	4	4	4	2	2
117	3	3	4	4	4	4	3
118	3	3	3	3	3	3	3
119	3	3	3	3	3	3	3
120	1	1	1	1	1	1	1
121	4	4	3	4	4	3	3
122	3	3	2	3	3	3	3
123	3	3	3	3	3	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
83	3	3	3	3	3	2	2
84	3	3	3	3	3	3	3
85	3	3	3	3	4	3	2
86	3	3	3	3	3	3	3
87	3	3	3	5	5	3	3
88	1	1	1	3	3	2	3
89	3	3	3	3	3	3	2
90	2	2	2	4	5	3	2
91	1	1	1	2	3	3	2
92	3	3	3	1	3	3	3
93	3	3	3	2	3	3	3
94	3	2	2	3	3	2	3
95	3	3	2	3	3	3	3
96	2	2	2	4	4	2	2
97	3	3	3	3	3	3	3
98	2	2	2	1	3	2	3
99	5	5	5	2	3	3	3
100	3	3	3	3	3	2	2
101	3	3	3	3	4	3	2
102	3	3	3	3	3	1	3
103	2	2	2	2	3	3	3
104	3	3	3	2	4	1	2
105	3	3	3	2	3	3	2
106	3	3	3	3	3	3	3
107	3	3	3	3	3	3	4
108	1	1	1	4	5	3	2
109	3	3	3	3	3	3	3
110	1	1	1	3	3	1	2
111	2	2	2	2	4	1	2
112	2	1	1	3	4	3	3
113	2	2	2	2	3	2	3
114	3	3	3	3	3	3	2
115	2	2	2	2	3	2	1
116	2	2	1	2	4	2	3
117	3	3	3	3	3	2	3
118	3	3	3	4	3	3	2
119	3	3	3	3	5	3	3
120	1	1	1	2	3	3	1
121	2	2	2	4	4	4	4
122	3	3	3	3	4	2	3
123	3	3	3	2	3	3	2

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
83	1	3	3	3	3	3	3
84	3	3	3	3	4	1	5
85	2	2	3	3	3	4	3
86	3	3	5	5	4	4	4
87	3	3	3	3	3	3	3
88	2	3	3	3	3	4	4
89	2	2	3	3	3	3	3
90	4	3	4	5	3	3	4
91	1	2	2	2	3	3	3
92	3	3	3	1	3	3	3
93	3	3	3	3	3	3	4
94	2	3	4	4	3	3	3
95	3	3	4	3	3	3	3
96	2	3	3	3	3	3	3
97	2	3	3	4	3	3	3
98	3	3	2	3	3	3	3
99	3	3	3	3	3	3	3
100	2	3	3	4	4	4	3
101	2	3	2	3	3	3	3
102	3	3	2	3	3	3	3
103	3	3	3	3	3	4	4
104	3	3	3	3	3	4	4
105	3	3	3	3	3	3	3
106	3	3	3	2	3	3	3
107	3	3	3	4	3	3	3
108	2	3	5	5	5	5	5
109	3	3	3	3	3	3	3
110	3	3	3	3	3	3	4
111	3	3	2	3	3	3	3
112	3	3	4	4	2	3	4
113	3	3	5	5	3	3	5
114	2	3	4	3	3	3	4
115	1	4	3	2	3	3	3
116	3	2	4	1	2	5	5
117	3	3	3	3	3	3	4
118	2	2	3	3	3	3	3
119	4	5	3	5	3	3	3
120	1	1	1	1	4	3	3
121	3	3	3	3	3	3	4
122	3	4	4	3	3	4	4
123	2	3	3	3	3	3	3

Case Summaries

	NTRE	Satisfaction
83	3	2
84	5	3
85	3	4
86	4	1
87	3	5
88	4	5
89	3	4
90	4	3
91	2	2
92	3	1
93	4	1
94	3	2
95	3	4
96	3	5
97	3	4
98	3	1
99	3	2
100	3	4
101	3	2
102	3	4
103	4	2
104	3	4
105	3	3
106	3	3
107	3	2
108	5	5
109	3	4
110	4	4
111	3	2
112	4	4
113	5	1
114	4	5
115	3	2
116	5	2
117	4	4
118	3	3
119	3	5
120	3	1
121	4	5
122	4	4
123	3	4

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
124	147	4	4	3	3	4	4
125	148	2	3	1	1	2	3
126	149	4	4	4	4	4	4
127	150	2	5	1	1	1	1
128	151	2	2	2	2	2	2
129	152	4	4	3	3	3	3
130	153	4	3	3	3	3	3
131	154	3	2	2	2	3	3
132	155	3	3	2	1	2	1
133	156	4	4	2	2	2	2
134	157	3	3	4	3	3	2
135	158	5	5	1	1	1	1
136	159	4	4	4	3	4	3
137	160	4	4	3	2	2	2
138	161	2	3	3	3	3	3
139	162	4	3	4	3	2	3
140	163	3	3	3	2	2	3
141	164	3	3	4	4	4	4
142	165	2	2	2	1	2	2
143	166	5	5	4	4	5	3
144	167	4	4	4	4	3	3
145	168	4	4	3	3	3	2
146	169	3	3	3	3	3	2
147	170	1	3	1	1	1	1
148	171	1	2	1	1	2	2
149	172	2	3	1	1	1	1
150	174	3	3	3	3	3	3
151	175	3	3	4	4	4	4
152	177	3	3	3	2	2	3
153	180	2	2	2	2	2	2
154	181	4	4	5	3	3	3
155	182	4	4	4	3	3	3
156	183	3	3	3	2	3	3
157	185	3	3	3	2	2	3
158	186	1	1	1	1	1	1
159	188	3	2	2	1	2	2
160	189	4	5	5	5	5	1
161	191	3	3	2	3	3	2
162	192	3	2	3	4	4	4
163	193	2	2	2	1	2	2
164	194	3	3	3	3	3	2

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
124	3	2	4	4	2	1	3
125	3	3	3	4	4	3	3
126	4	3	3	3	3	3	3
127	1	1	1	1	1	1	1
128	2	3	1	1	1	1	1
129	3	3	5	5	3	5	3
130	3	3	3	3	3	3	3
131	3	2	4	3	3	3	2
132	1	1	3	3	3	3	3
133	3	3	4	4	4	2	3
134	3	1	3	3	3	3	3
135	1	1	1	1	1	1	1
136	4	4	3	3	3	3	3
137	2	3	3	3	2	2	2
138	3	3	3	3	3	3	3
139	2	3	3	3	3	3	3
140	3	4	2	2	2	2	2
141	4	4	3	3	3	3	2
142	3	3	4	3	3	2	3
143	5	5	1	1	1	1	1
144	3	3	1	1	1	1	1
145	2	3	3	3	3	3	3
146	2	2	3	3	3	2	3
147	1	4	3	3	3	3	3
148	3	3	3	3	3	2	2
149	1	1	4	4	3	3	3
150	3	3	1	1	1	1	3
151	4	4	2	2	2	2	2
152	3	3	3	3	3	3	3
153	3	3	2	2	2	1	2
154	3	4	4	3	3	3	3
155	3	3	3	3	3	3	3
156	3	3	3	3	3	3	3
157	3	3	4	3	3	3	2
158	1	1	5	5	5	5	1
159	3	2	4	4	4	3	3
160	3	4	3	3	3	2	3
161	2	3	2	2	3	3	3
162	3	3	5	5	5	5	2
163	2	3	4	4	4	2	2
164	3	3	3	3	3	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
124	3	3	3	4	3	3	3
125	3	3	3	2	3	3	3
126	3	3	3	4	4	3	3
127	1	1	1	2	3	3	1
128	1	1	1	2	3	2	2
129	3	3	3	2	4	2	3
130	3	3	3	4	4	3	3
131	2	2	2	3	2	1	4
132	3	3	3	3	3	2	1
133	3	3	3	4	4	2	3
134	3	3	3	2	4	3	3
135	1	1	1	5	4	5	4
136	3	3	3	4	4	3	3
137	2	2	2	4	4	3	2
138	3	3	3	3	3	3	3
139	3	4	3	4	3	2	3
140	3	3	3	3	3	3	3
141	2	2	2	3	3	3	3
142	3	3	3	2	4	3	3
143	1	1	1	5	3	1	3
144	1	1	1	4	4	3	3
145	3	3	3	4	4	3	3
146	3	3	2	3	2	2	3
147	3	3	3	2	3	2	3
148	2	2	2	1	2	3	1
149	3	3	3	2	3	3	3
150	3	3	3	3	3	2	3
151	3	3	3	3	3	3	3
152	3	3	3	3	4	3	2
153	1	1	1	1	3	3	3
154	3	3	3	5	5	5	2
155	3	3	3	4	4	4	3
156	3	3	3	3	3	3	3
157	2	2	2	3	4	2	3
158	1	1	1	2	3	1	1
159	2	2	2	3	3	2	3
160	3	3	3	3	3	3	3
161	3	3	3	3	4	3	2
162	2	2	1	3	2	1	2
163	2	2	2	5	3	5	2
164	3	3	3	3	3	3	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
124	2	3	4	3	3	4	4
125	3	4	3	3	3	5	5
126	3	3	3	3	4	3	4
127	3	3	3	3	3	3	3
128	2	2	3	1	3	3	3
129	4	3	3	5	4	4	5
130	3	3	2	4	3	3	4
131	4	4	3	3	2	3	4
132	1	2	3	1	3	4	3
133	3	3	3	3	3	4	4
134	3	3	2	2	3	3	3
135	4	5	5	4	3	4	5
136	2	3	3	3	3	4	4
137	3	2	4	4	4	4	4
138	3	3	3	3	3	3	3
139	3	2	3	3	3	2	4
140	3	3	3	3	4	4	4
141	3	3	3	3	3	3	4
142	3	2	3	1	3	4	4
143	3	5	5	3	4	1	5
144	3	3	4	4	3	4	5
145	3	4	4	4	4	4	5
146	3	3	2	2	2	3	3
147	3	3	3	5	3	3	3
148	1	1	3	2	3	3	3
149	3	3	2	3	3	3	3
150	3	3	3	3	3	3	5
151	3	3	4	4	3	3	4
152	2	3	3	3	3	3	4
153	3	3	3	2	3	4	4
154	2	5	5	3	5	5	5
155	3	3	3	3	3	3	3
156	3	3	3	3	3	4	3
157	3	3	3	3	4	3	3
158	1	1	2	1	1	3	3
159	3	3	3	3	3	3	3
160	3	4	4	4	4	4	4
161	2	3	3	2	3	4	4
162	3	2	4	4	3	2	3
163	3	1	1	2	3	2	3
164	3	3	3	4	3	3	3

Case Summaries

	NTRE	Satisfaction
124	5	5
125	5	3
126	4	5
127	3	4
128	3	2
129	5	5
130	4	3
131	4	3
132	3	4
133	4	4
134	3	5
135	5	5
136	4	5
137	4	5
138	3	3
139	3	5
140	4	4
141	4	4
142	4	2
143	5	5
144	5	4
145	5	5
146	3	4
147	3	1
148	3	2
149	3	2
150	5	4
151	4	5
152	4	4
153	4	2
154	5	5
155	3	5
156	3	5
157	3	4
158	3	1
159	3	3
160	4	5
161	4	4
162	3	4
163	3	2
164	3	5

Appendix 13: continued.

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
165	195	2	3	2	3	3	3
166	196	3	3	3	2	3	3
167	197	3	4	3	3	3	3
168	198	3	3	3	2	2	3
169	199	2	2	2	1	1	1
170	200	1	3	2	2	2	2
171	201	2	1	1	1	1	1
172	202	1	1	1	1	1	1
173	204	3	2	3	3	3	3
174	205	3	3	5	3	3	3
175	206	4	4	2	3	1	1
176	207	4	4	3	4	4	3
177	209	2	2	2	2	2	1
178	211	3	3	3	3	3	3
179	212	2	2	2	3	3	3
180	213	2	2	3	3	3	3
181	215	2	2	3	3	3	3
182	219	4	4	4	2	1	1
183	220	2	2	1	1	1	1
184	222	3	3	1	1	1	1
185	223	3	4	4	4	4	4
186	224	5	5	4	2	3	1
187	225	4	4	3	3	3	3
188	226	3	2	2	2	1	2
189	227	3	3	3	2	3	3
190	229	2	3	2	2	2	3
191	230	2	3	3	3	3	3
192	231	2	3	3	3	2	3
193	232	3	3	3	2	3	3
194	235	2	3	3	1	2	3
195	236	4	4	4	3	3	3
196	237	5	5	2	2	2	2
197	238	2	3	1	2	1	1
198	239	1	1	1	1	1	1
199	240	3	4	4	3	3	3
200	241	3	3	3	3	2	1
201	243	1	1	1	3	3	3
202	244	3	2	1	1	1	1
203	245	2	2	2	2	2	2
204	246	3	4	3	3	3	3
205	248	3	3	3	3	3	3

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Appendix 13: continued.

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
165	3	3	3	3	3	3	3
166	3	3	3	3	3	3	2
167	3	3	3	3	3	3	3
168	3	3	4	4	4	4	3
169	3	3	5	5	5	3	2
170	3	2	3	3	3	3	3
171	1	3	1	5	5	5	5
172	1	3	3	1	5	5	3
173	3	4	5	5	5	5	1
174	3	2	1	1	1	1	1
175	1	1	3	3	3	3	2
176	5	3	2	1	1	1	3
177	1	1	5	4	4	4	4
178	3	3	3	3	3	3	3
179	3	4	3	4	4	3	3
180	4	2	3	3	3	3	2
181	3	3	2	2	2	1	3
182	1	1	1	1	1	1	1
183	1	3	1	1	1	1	2
184	1	3	1	1	1	1	1
185	4	4	3	3	3	3	3
186	1	2	1	1	1	1	1
187	3	4	1	1	1	1	3
188	3	3	3	3	3	3	3
189	2	2	5	3	3	3	3
190	3	3	4	3	3	3	2
191	3	3	2	3	3	3	3
192	3	2	3	3	1	3	3
193	4	3	3	3	3	2	3
194	3	3	3	5	5	4	3
195	3	4	2	2	2	2	3
196	2	3	1	1	1	1	1
197	1	1	3	2	2	5	3
198	1	1	5	5	5	5	3
199	3	1	1	1	1	1	4
200	1	1	3	3	3	3	3
201	3	3	5	3	3	3	3
202	1	1	5	1	1	1	1
203	2	3	3	3	3	3	3
204	3	3	3	3	3	3	3
205	3	3	3	3	3	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
165	3	3	3	3	3	3	2
166	3	3	3	3	3	3	3
167	3	3	3	4	4	3	2
168	3	3	3	3	3	3	3
169	2	2	2	3	3	1	2
170	3	3	3	1	4	3	3
171	5	5	5	3	3	3	2
172	5	5	5	3	3	3	2
173	1	1	1	4	3	1	1
174	1	1	1	3	3	3	3
175	2	2	2	3	3	2	3
176	4	4	4	3	3	3	4
177	4	4	4	2	3	1	3
178	3	3	3	3	3	3	3
179	3	3	3	3	3	2	1
180	2	2	2	3	3	2	2
181	3	3	3	2	4	4	3
182	1	1	1	3	3	2	3
183	2	2	2	1	3	1	2
184	1	1	1	3	1	2	2
185	3	3	3	3	4	3	4
186	1	1	1	4	4	4	3
187	3	3	3	4	4	3	2
188	3	3	3	2	3	3	2
189	3	3	3	3	3	1	2
190	2	2	3	3	3	2	3
191	3	3	3	3	3	3	3
192	3	3	3	2	2	3	4
193	3	3	3	3	3	3	3
194	3	3	1	2	3	2	1
195	3	3	3	4	5	4	3
196	1	1	1	3	5	3	3
197	3	5	5	2	4	3	3
198	3	3	1	2	3	1	1
199	5	5	5	3	3	5	4
200	3	3	3	3	3	3	3
201	3	3	3	1	3	1	1
202	1	1	1	3	4	3	3
203	3	3	3	2	3	3	3
204	3	3	3	3	3	3	3
205	3	3	3	3	3	3	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
165	2	2	2	3	2	4	3
166	3	3	3	3	3	3	3
167	2	3	2	3	5	5	5
168	3	3	2	3	3	3	3
169	3	2	5	5	3	3	3
170	3	3	3	1	3	4	3
171	2	3	3	1	3	3	4
172	2	3	3	2	3	3	4
173	1	1	3	4	3	3	3
174	3	3	4	5	3	3	3
175	2	4	3	3	4	3	4
176	4	4	3	3	4	5	5
177	4	3	2	3	3	3	3
178	3	3	3	3	3	3	5
179	1	1	2	2	3	3	3
180	2	3	3	3	3	3	2
181	2	3	3	3	3	3	3
182	3	3	3	3	2	3	3
183	3	1	3	4	3	3	3
184	2	4	3	4	4	4	4
185	4	3	4	4	3	4	3
186	3	3	5	1	4	5	3
187	2	3	3	3	4	3	4
188	3	3	3	2	3	2	3
189	2	3	3	3	3	3	4
190	3	3	3	2	3	3	4
191	3	3	3	3	3	3	3
192	3	3	4	1	3	4	5
193	3	3	3	3	3	3	3
194	2	3	3	4	3	4	5
195	4	4	4	4	5	5	5
196	3	3	4	4	3	5	5
197	4	3	2	4	3	3	4
198	1	1	3	5	5	5	5
199	4	5	4	4	5	4	4
200	5	3	4	5	4	5	5
201	1	1	1	1	1	1	5
202	4	5	3	5	5	5	5
203	3	3	3	1	3	4	4
204	3	3	3	3	3	3	3
205	3	3	3	3	3	3	3

Case Summaries

	NTRE	Satisfaction
165	3	4
166	3	5
167	5	4
168	3	3
169	3	2
170	3	2
171	4	1
172	4	1
173	3	3
174	3	3
175	4	3
176	5	3
177	3	4
178	5	5
179	3	2
180	1	4
181	3	3
182	3	3
183	3	1
184	4	4
185	3	5
186	3	4
187	4	5
188	3	2
189	4	4
190	4	3
191	3	5
192	5	4
193	3	5
194	5	3
195	5	5
196	5	5
197	4	2
198	5	1
199	4	2
200	5	5
201	5	1
202	5	3
203	4	2
204	3	5
205	3	5

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNLT	LBMT
206	249	4	4	3	5	4	3
207	250	3	4	2	2	2	3
208	251	3	1	3	2	3	3
209	252	2	3	2	2	2	2
210	253	3	3	3	2	2	2
211	254	3	3	3	3	2	3
212	255	3	4	3	3	3	3
213	256	4	5	3	1	3	2
214	257	2	2	3	2	2	3
215	258	2	3	1	1	1	1
216	259	3	3	2	1	3	2
217	260	3	3	2	2	3	4
218	261	3	3	3	3	3	3
219	262	3	3	3	2	3	3
220	263	4	4	5	3	4	3
221	264	3	3	3	3	3	3
222	265	4	4	4	3	3	3
223	266	2	2	3	3	3	3
224	267	3	3	3	2	3	3
225	268	2	3	2	1	2	2
226	269	3	3	3	2	3	3
227	270	3	3	2	1	2	2
228	272	3	2	1	2	1	1
229	274	2	3	3	2	2	2
230	275	2	3	2	2	2	2
231	276	2	1	1	2	1	1
232	277	4	4	4	1	4	4
233	279	3	2	2	2	3	3
234	280	1	1	1	1	1	1
235	281	4	4	2	2	3	3
236	282	4	4	2	2	2	2
237	283	3	2	3	3	2	2
238	285	3	3	2	2	2	2
239	287	3	3	1	4	3	1
240	289	3	3	4	2	2	2
241	290	3	3	3	3	3	3
242	291	3	3	3	3	3	3
243	292	1	2	2	3	2	2
244	293	2	3	2	2	2	2
245	294	4	4	3	3	3	2
246	295	3	3	2	3	2	2

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
206	3	5	3	3	2	1	3
207	3	3	4	4	4	2	2
208	3	3	5	3	5	3	3
209	2	3	4	3	3	3	3
210	3	2	1	1	1	1	1
211	3	4	2	2	2	2	2
212	4	4	1	1	1	1	3
213	3	4	1	1	1	1	2
214	3	3	1	3	3	3	3
215	1	1	1	1	1	1	1
216	3	3	4	4	3	1	3
217	4	1	3	1	1	1	3
218	3	3	4	4	3	3	3
219	3	3	3	3	2	2	2
220	3	3	1	1	1	1	3
221	2	3	3	3	3	3	3
222	3	4	3	3	3	3	3
223	3	3	4	4	3	3	3
224	3	3	3	3	3	3	3
225	2	3	4	4	4	3	2
226	3	3	5	5	5	5	2
227	2	2	3	3	3	3	3
228	1	1	4	4	3	5	3
229	4	4	3	4	4	4	4
230	2	2	5	5	5	5	3
231	1	3	3	3	3	3	3
232	4	4	4	1	1	1	2
233	3	2	3	4	4	4	3
234	1	1	1	4	4	4	1
235	4	2	3	3	3	3	3
236	2	2	2	2	2	2	4
237	3	3	3	3	3	3	2
238	2	2	4	4	4	3	3
239	1	1	1	1	1	1	1
240	3	3	3	3	3	3	3
241	3	3	3	3	3	3	3
242	3	3	3	3	3	3	3
243	2	3	4	4	3	3	2
244	2	3	5	5	5	5	2
245	3	3	3	3	3	3	2
246	3	3	4	4	2	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
206	3	3	3	3	3	3	5
207	2	2	2	3	4	2	1
208	3	3	3	3	4	3	2
209	3	3	3	5	4	2	1
210	1	1	1	3	4	3	3
211	4	4	2	4	4	3	3
212	3	2	2	3	3	4	4
213	2	2	1	3	3	3	3
214	3	2	2	3	3	2	2
215	1	1	1	2	3	3	2
216	1	1	1	4	4	3	4
217	1	1	1	3	3	4	3
218	3	3	3	3	3	3	3
219	1	1	1	3	4	3	3
220	3	1	1	1	3	3	3
221	3	3	3	3	3	3	3
222	3	3	3	5	5	3	3
223	3	3	3	2	2	3	2
224	3	3	3	3	3	2	3
225	4	3	2	2	3	4	3
226	1	2	1	4	3	3	2
227	3	3	3	3	4	3	3
228	3	3	3	3	3	3	1
229	4	3	2	2	4	2	1
230	3	3	3	3	3	3	3
231	3	3	3	2	3	2	2
232	2	2	2	4	4	2	3
233	3	3	3	3	4	3	2
234	1	1	1	1	3	3	1
235	3	3	3	3	4	2	3
236	3	3	3	4	3	3	3
237	2	2	2	3	3	3	3
238	3	3	3	3	3	3	3
239	1	1	1	2	4	4	2
240	3	3	3	3	4	2	3
241	3	3	3	3	3	3	3
242	3	3	3	3	3	3	3
243	2	3	3	1	3	2	3
244	2	2	2	3	3	3	3
245	1	1	3	3	4	1	2
246	3	2	2	3	4	2	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
206	5	5	5	3	4	3	5
207	2	2	3	2	3	4	4
208	3	4	3	3	2	3	5
209	1	1	2	3	3	3	4
210	3	3	3	3	2	4	5
211	3	4	4	4	4	5	5
212	4	4	3	3	4	3	3
213	4	3	2	2	4	3	4
214	2	3	3	3	3	3	3
215	2	2	3	3	3	3	3
216	3	4	4	3	4	4	4
217	3	4	4	3	4	1	5
218	3	3	3	3	3	3	3
219	3	2	3	3	3	3	4
220	3	3	3	3	3	3	3
221	3	3	3	3	3	3	3
222	3	4	4	4	4	5	5
223	3	3	3	4	3	3	4
224	3	3	3	3	3	3	4
225	3	2	3	4	3	3	3
226	2	3	3	3	3	4	4
227	3	3	3	3	3	4	3
228	2	1	2	2	3	3	3
229	1	2	2	3	4	4	3
230	3	3	3	5	3	3	3
231	2	2	3	2	3	3	3
232	3	2	4	3	2	4	4
233	2	3	4	4	3	3	3
234	1	1	2	5	2	3	3
235	3	2	3	3	4	4	4
236	3	3	3	4	3	3	4
237	3	3	3	2	3	3	3
238	3	4	4	4	3	3	4
239	3	3	4	1	2	4	4
240	3	3	3	3	3	3	3
241	3	3	3	3	3	3	3
242	3	3	3	3	3	3	3
243	2	3	3	4	3	3	3
244	3	3	3	3	3	3	3
245	2	3	3	3	3	3	5
246	3	3	3	3	3	3	4

Case Summaries

	NTRE	Satisfaction
206	5	5
207	4	4
208	5	4
209	3	4
210	5	5
211	5	4
212	3	2
213	5	5
214	3	2
215	3	2
216	4	5
217	5	3
218	3	3
219	4	4
220	3	1
221	3	4
222	5	5
223	4	4
224	4	4
225	3	2
226	4	4
227	3	2
228	3	2
229	3	4
230	3	2
231	3	2
232	4	4
233	3	4
234	3	1
235	4	4
236	4	5
237	3	2
238	4	2
239	4	4
240	3	5
241	3	5
242	3	5
243	3	1
244	3	4
245	5	5
246	4	5

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
247	297	3	4	2	3	2	1
248	298	2	2	2	2	2	3
249	299	2	2	2	2	2	2
250	300	2	3	2	2	2	2
251	301	4	3	3	3	3	3
252	302	3	3	3	2	3	3
253	303	3	2	2	2	2	1
254	304	3	3	2	1	3	3
255	305	2	2	3	4	2	3
256	306	4	3	3	3	3	3
257	308	3	3	3	1	2	1
258	309	1	2	1	1	1	1
259	310	3	3	4	3	3	3
260	311	4	4	4	3	3	3
261	312	1	1	1	1	1	1
262	313	3	4	2	2	1	2
263	361	2	3	3	3	3	1
264	362	3	3	3	2	3	3
265	363	3	4	3	3	3	3
266	364	2	3	2	2	2	2
267	365	2	3	3	3	3	3
268	366	2	2	2	2	2	2
269	367	1	1	1	1	1	1
270	368	3	4	4	2	4	3
271	370	3	2	3	1	1	2
272	371	1	1	1	1	1	1
273	372	3	3	3	2	3	3
274	373	2	2	1	3	3	3
275	376	3	4	4	4	4	3
276	377	2	2	2	3	2	2
277	378	5	5	5	1	5	1
278	379	3	2	2	2	1	1
279	380	4	5	4	4	4	4
280	381	5	3	3	3	3	3
281	382	1	1	1	1	1	1
282	383	3	2	2	2	2	2
283	384	1	2	2	1	2	3
284	385	2	3	3	2	2	1
285	386	1	1	1	1	1	1
286	387	2	3	2	2	3	2
287	388	2	2	3	3	3	3

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
247	1	3	3	3	3	3	3
248	3	3	5	3	3	2	3
249	2	2	2	2	2	2	2
250	2	3	4	4	4	4	3
251	3	4	3	3	3	3	3
252	3	3	4	4	4	3	3
253	1	1	5	5	5	3	3
254	3	3	4	1	1	1	3
255	3	3	5	4	4	3	3
256	3	4	2	2	2	3	2
257	1	1	1	1	1	1	1
258	1	1	1	1	1	1	1
259	4	4	4	4	3	3	2
260	3	3	1	1	1	1	2
261	1	1	5	5	5	3	1
262	4	3	3	3	3	3	3
263	3	1	5	5	5	4	1
264	4	3	2	2	3	3	2
265	3	3	3	3	3	3	3
266	3	3	5	5	5	5	2
267	3	3	3	3	3	3	2
268	2	2	4	4	3	3	3
269	1	1	1	5	1	1	1
270	3	3	4	3	3	3	1
271	5	1	5	5	5	5	5
272	1	1	1	1	1	1	1
273	3	4	3	2	3	3	2
274	3	3	3	3	3	3	3
275	4	4	3	1	1	1	3
276	3	3	5	5	5	4	4
277	4	5	1	1	1	1	5
278	3	2	3	3	3	3	2
279	4	4	5	5	5	5	4
280	3	3	3	3	3	3	3
281	1	1	1	1	1	1	2
282	2	3	1	3	3	3	3
283	3	3	4	4	4	4	3
284	1	3	3	3	3	3	3
285	3	3	5	5	5	5	3
286	2	1	3	3	3	3	3
287	3	2	4	1	1	1	1

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
247	3	3	3	3	4	3	2
248	3	3	2	4	3	2	3
249	4	4	2	3	1	3	3
250	2	2	2	3	3	2	2
251	3	3	3	4	3	3	3
252	3	1	1	3	4	1	3
253	3	3	3	2	3	3	3
254	2	2	2	3	3	2	3
255	3	3	3	3	3	2	3
256	3	3	3	3	3	2	3
257	1	1	1	3	3	4	2
258	1	1	1	1	3	1	1
259	2	2	2	3	3	2	3
260	3	3	2	5	1	3	3
261	1	1	1	2	3	2	2
262	3	3	3	4	3	3	2
263	1	1	1	2	3	1	3
264	2	3	3	3	5	2	3
265	3	3	3	3	4	4	2
266	2	3	3	2	3	3	3
267	2	2	2	3	3	3	2
268	3	3	3	3	3	3	3
269	1	1	1	1	5	1	4
270	1	1	1	3	3	3	1
271	5	5	5	1	5	3	3
272	1	1	1	2	2	3	2
273	2	2	2	3	4	3	2
274	3	3	3	2	3	3	3
275	3	1	1	3	5	2	2
276	3	3	3	2	3	1	3
277	5	5	5	5	5	5	5
278	2	2	2	2	3	3	3
279	4	4	4	4	4	4	3
280	3	3	3	4	5	3	3
281	1	1	1	2	3	3	4
282	3	3	3	3	2	3	2
283	2	3	2	1	3	2	3
284	3	3	3	3	4	3	4
285	3	3	3	1	3	3	2
286	3	3	3	3	3	3	3
287	2	2	2	3	3	2	2

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
247	2	3	3	3	3	3	3
248	3	3	3	3	3	3	3
249	3	2	3	3	3	3	3
250	3	3	3	3	3	3	3
251	3	3	3	3	3	3	3
252	3	3	4	3	3	4	3
253	3	3	2	3	3	3	3
254	3	3	2	2	3	3	5
255	4	4	5	5	4	5	5
256	3	3	3	4	3	4	4
257	2	3	3	1	4	3	3
258	1	1	3	1	3	1	3
259	3	2	3	3	3	3	3
260	4	5	4	4	4	3	5
261	2	2	2	3	4	5	3
262	2	2	4	4	3	4	3
263	3	3	3	5	3	3	5
264	3	2	4	3	4	3	4
265	2	2	3	3	3	3	3
266	3	3	3	3	3	3	3
267	2	3	3	3	3	3	3
268	3	2	4	3	3	4	4
269	4	4	5	1	5	1	5
270	1	1	3	3	4	4	4
271	3	2	4	3	2	5	5
272	2	2	3	2	2	3	4
273	4	2	3	4	4	3	3
274	3	4	4	5	3	3	3
275	1	3	3	3	4	3	4
276	3	3	3	3	3	4	5
277	5	5	2	5	5	5	5
278	2	3	3	1	3	3	4
279	3	3	4	4	4	4	4
280	2	3	5	5	4	5	3
281	4	4	5	1	4	5	5
282	3	3	3	3	3	3	3
283	4	3	3	2	3	3	3
284	4	4	3	3	3	3	4
285	2	2	3	5	3	3	3
286	3	3	3	5	3	3	3
287	3	3	4	3	3	3	4

Case Summaries

	NTRE	Satisfaction
247	3	4
248	3	5
249	3	2
250	3	2
251	3	5
252	3	4
253	3	2
254	5	4
255	5	5
256	4	5
257	3	3
258	3	1
259	3	4
260	5	3
261	3	1
262	3	2
263	5	4
264	4	5
265	3	4
266	3	3
267	3	3
268	4	3
269	5	1
270	4	3
271	5	5
272	4	2
273	3	4
274	3	4
275	4	4
276	5	4
277	5	1
278	4	2
279	4	5
280	3	5
281	5	5
282	3	4
283	3	2
284	4	4
285	3	1
286	3	2
287	4	4

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
288	389	3	3	2	3	2	3
289	390	3	3	3	3	3	2
290	391	2	3	1	2	1	1
291	392	2	3	1	2	1	1
292	393	2	2	3	2	3	3
293	394	2	3	2	1	2	2
294	395	3	3	3	3	3	2
295	396	2	3	3	2	3	3
296	397	3	3	3	2	2	3
297	398	2	2	3	3	3	3
298	399	3	1	3	3	3	3
299	400	3	3	3	3	4	3
300	401	1	1	1	1	1	1
301	402	2	3	2	3	2	3
302	403	3	4	4	2	3	2
303	404	2	3	2	2	2	3
304	405	3	3	2	1	3	3
305	406	5	5	2	2	3	2
306	407	4	5	5	3	5	3
307	408	3	3	2	2	2	2
308	409	3	3	3	2	3	3
309	410	3	5	5	3	3	3
310	411	3	2	4	4	4	4
311	412	2	4	4	4	4	3
312	413	3	3	4	2	3	3
313	414	4	3	3	2	3	3
314	415	3	3	3	3	2	3
315	416	3	3	3	3	3	3
316	417	2	2	2	1	3	3
317	418	3	3	2	1	2	4
318	419	5	5	5	5	5	5
319	420	3	3	3	3	3	3
320	421	2	1	1	1	1	1
321	422	2	3	2	3	2	3
322	423	3	3	3	3	3	3
323	424	3	3	3	3	2	2
324	425	3	3	3	3	3	1
325	426	2	2	2	1	3	2
326	428	2	3	2	3	2	2
327	429	3	4	3	2	2	3
328	430	3	4	3	2	3	3

Case Summaries							
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT
288	3	3	3	3	3	3	3
289	2	3	5	3	3	3	1
290	1	1	3	3	3	3	3
291	1	1	3	3	3	3	3
292	3	3	3	3	3	3	3
293	1	1	2	1	1	1	2
294	3	2	2	3	3	3	3
295	3	2	4	4	4	2	3
296	4	3	4	4	4	4	3
297	3	3	1	1	1	1	3
298	3	3	4	5	3	3	3
299	3	3	3	3	3	3	3
300	1	1	3	3	3	3	3
301	3	3	4	4	4	4	4
302	2	3	4	4	4	4	3
303	3	2	3	3	3	3	3
304	3	3	3	3	3	3	3
305	3	3	4	4	4	4	3
306	4	3	1	1	1	1	2
307	3	2	4	5	5	4	2
308	3	3	3	3	3	3	2
309	3	3	3	3	3	3	3
310	3	4	3	3	3	3	3
311	3	4	1	1	1	1	1
312	3	4	5	4	4	3	3
313	3	3	1	1	1	1	3
314	3	3	3	3	3	3	3
315	3	3	3	1	1	1	3
316	3	2	3	3	3	3	3
317	4	3	3	3	3	3	2
318	5	1	3	3	3	3	3
319	3	3	2	2	2	2	4
320	1	1	3	3	3	3	2
321	3	3	2	2	2	2	3
322	3	4	5	5	5	5	3
323	3	3	3	3	3	3	3
324	1	1	3	3	1	1	1
325	3	4	4	3	3	3	2
326	2	2	3	3	3	3	2
327	3	2	3	3	3	3	3
328	3	3	3	4	4	3	3

Case Summaries							
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR
288	3	3	3	3	3	4	4
289	1	1	1	3	3	1	3
290	3	3	3	1	2	3	2
291	3	3	3	1	2	3	2
292	3	2	2	3	3	3	3
293	2	2	2	2	3	2	2
294	3	3	3	3	3	3	4
295	2	2	2	2	3	2	3
296	3	3	3	3	3	3	2
297	1	1	1	3	3	4	2
298	3	3	3	1	3	3	3
299	3	3	3	3	3	3	2
300	3	3	3	1	3	3	3
301	4	4	4	3	3	3	3
302	3	3	3	4	4	3	3
303	3	3	3	2	3	3	3
304	2	3	2	3	3	1	3
305	3	3	3	5	5	5	2
306	2	2	2	4	5	3	3
307	2	2	2	5	3	1	1
308	2	2	2	3	3	3	3
309	3	3	3	4	5	3	4
310	3	3	3	2	3	3	3
311	1	1	1	4	4	1	3
312	3	3	3	3	3	4	4
313	3	3	3	4	4	3	3
314	3	3	3	3	3	3	4
315	3	3	3	3	3	2	3
316	3	3	3	2	4	3	3
317	2	2	2	3	4	3	1
318	3	3	3	3	5	4	3
319	3	3	2	3	5	3	3
320	2	2	2	1	3	2	2
321	2	3	3	4	3	4	4
322	3	3	3	4	4	3	4
323	3	3	3	3	3	2	3
324	1	1	1	3	3	3	3
325	2	2	2	2	4	1	3
326	2	2	2	3	3	2	3
327	3	3	3	3	3	1	2
328	3	3	3	3	4	3	3

Case Summaries							
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR
288	4	4	3	3	3	3	4
289	3	3	3	3	3	3	3
290	2	2	3	1	3	2	3
291	2	2	3	1	3	2	3
292	4	3	3	4	3	3	3
293	2	2	3	4	3	3	3
294	1	3	3	3	3	4	4
295	2	3	3	3	3	4	4
296	2	2	3	3	3	3	4
297	2	2	2	5	3	3	4
298	3	3	3	4	3	3	3
299	2	2	4	4	3	4	3
300	4	3	3	1	3	3	3
301	3	3	3	3	3	4	4
302	3	3	4	3	3	3	4
303	3	3	3	1	3	3	3
304	3	3	3	3	3	4	3
305	3	3	3	3	3	4	4
306	3	4	3	2	4	4	5
307	1	3	3	5	3	5	5
308	3	3	3	3	3	3	3
309	4	4	5	5	5	5	5
310	3	3	4	4	3	2	4
311	2	3	3	4	4	4	4
312	4	5	4	4	4	5	5
313	3	3	2	3	4	4	4
314	4	3	3	3	3	4	3
315	3	3	3	3	3	4	4
316	3	2	3	2	3	3	3
317	1	1	3	2	4	3	4
318	3	3	3	5	3	3	3
319	2	2	5	3	3	4	4
320	4	4	4	1	3	3	3
321	4	4	3	4	3	3	3
322	4	3	3	3	3	3	3
323	3	3	3	3	3	3	5
324	3	3	2	3	3	3	3
325	3	4	3	3	4	5	5
326	3	3	3	3	3	3	4
327	3	3	4	4	3	3	3
328	3	3	3	3	4	3	3

Case Summaries

	NTRE	Satisfaction
288	4	5
289	3	5
290	3	1
291	3	1
292	3	2
293	4	1
294	4	4
295	4	3
296	4	4
297	4	1
298	3	2
299	3	4
300	3	1
301	4	3
302	4	4
303	3	2
304	3	3
305	4	4
306	5	5
307	5	2
308	3	5
309	5	5
310	4	4
311	4	4
312	5	5
313	4	5
314	3	4
315	4	5
316	3	2
317	4	5
318	3	5
319	3	5
320	3	1
321	3	4
322	3	5
323	5	4
324	3	4
325	5	2
326	4	4
327	3	5
328	3	5

Appendix 13: continued.

Case Summaries							
	UID	SEFF	SNPF	HVPF	TRPF	LNGT	LBMT
329	431	3	2	2	3	3	2
330	432	2	2	3	3	3	3
331	433	2	3	2	3	2	2
332	434	4	4	4	3	3	3
333	435	3	2	3	2	3	3
334	436	1	1	1	1	1	1
335	437	1	1	2	2	2	3
336	438	1	3	1	3	3	3
337	439	2	3	2	1	2	2
338	440	2	2	1	3	3	3
339	441	5	5	5	2	5	5
340	442	1	1	1	1	1	1
341	443	2	2	2	3	1	1
342	444	2	3	3	2	2	2
343	445	2	2	3	3	3	3
344	446	4	4	4	5	4	3
345	447	3	3	3	3	3	3
346	448	2	3	3	2	2	2
347	449	2	3	2	2	2	2
Total	N	347	347	347	347	347	347

Appendix 13: continued.

Case Summaries								
	QLMT	CNDN	SEBH	SNBH	HVBH	TRBH	SEOT	
329	2	3	2	1	2	1	2	
330	3	3	4	3	3	3	3	
331	2	3	3	3	3	3	2	
332	3	3	3	3	3	3	3	
333	3	3	3	3	3	3	2	
334	1	3	1	1	1	1	1	
335	4	3	5	5	5	4	2	
336	3	3	5	5	4	3	2	
337	3	3	3	3	3	3	2	
338	3	4	2	1	2	1	4	
339	3	1	1	1	1	1	1	
340	1	1	5	5	5	5	3	
341	1	1	3	3	3	4	2	
342	2	3	4	3	3	3	2	
343	3	3	3	3	3	2	4	
344	4	4	4	4	4	4	4	
345	3	3	3	3	3	3	3	
346	3	3	4	2	2	2	2	
347	2	1	5	5	1	1	1	
Total	N	347	347	347	347	347	347	347

Case Summaries								
	SNOT	HVOT	TROT	PLHV	WTHR	AISF	UNCR	
329	3	3	2	3	3	4	2	
330	3	3	3	2	3	3	3	
331	3	3	3	2	2	3	4	
332	3	3	3	1	3	3	1	
333	2	2	2	4	3	2	1	
334	1	1	3	1	3	1	1	
335	2	2	2	2	5	1	2	
336	2	2	2	1	3	3	3	
337	2	2	2	2	3	1	3	
338	4	4	3	2	3	3	3	
339	1	1	1	1	1	1	1	
340	1	1	1	3	5	1	4	
341	2	2	2	2	3	2	2	
342	2	2	2	2	3	2	3	
343	4	5	3	2	4	3	2	
344	4	4	5	4	5	4	4	
345	3	3	3	3	3	3	2	
346	2	2	2	3	2	3	4	
347	1	1	1	4	3	2	3	
Total	N	347	347	347	347	347	347	347

Case Summaries								
	INTF	ACFS	TIME	EFFT	ACWB	SOCL	OTDR	
329	2	3	3	2	2	4	4	
330	3	3	3	4	3	3	3	
331	4	4	3	4	3	3	3	
332	1	3	3	3	3	3	3	
333	3	2	3	3	2	3	4	
334	1	1	3	1	3	1	3	
335	3	3	4	1	5	5	5	
336	3	3	3	3	3	4	5	
337	3	3	3	3	3	3	3	
338	3	4	3	3	4	4	4	
339	5	5	5	5	1	1	1	
340	4	5	2	2	5	1	4	
341	3	3	4	3	3	4	4	
342	3	3	2	3	3	3	4	
343	3	3	5	5	3	3	3	
344	4	4	4	4	5	3	4	
345	1	3	3	3	3	3	3	
346	4	4	4	4	3	3	3	
347	3	2	2	5	3	3	3	
Total	N	347	347	347	347	347	347	347

Case Summaries

	NTRE	Satisfaction
329	4	4
330	3	3
331	3	2
332	3	5
333	4	4
334	3	1
335	5	2
336	5	3
337	3	3
338	4	4
339	1	1
340	4	1
341	4	4
342	4	3
343	3	2
344	4	5
345	3	5
346	3	2
347	3	2
Total N	347	347

Appendix 14: Day-level raw data for importance for snaggers.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
1	64	4	4	3	1	1	1
2	63	5	4	3	5	1	1
3	66	5	5	5	2	1	1
4	73	5	3	3	2	1	1
5	74	5	5	5	5	1	1
6	71	5	3	3	3	3	3
7	72	3	3	3	3	1	1
8	67	3	4	5	1	1	1
9	70	5	5	5	3	1	1
10	73	5	3	3	3	2	1
11	73	4	5	5	5	1	1
12	98	5	1	1	4	1	1
13	94	5	5	5	3	1	1
14	93	5	5	4	3	1	1
15	97	3	3	1	1	1	1
16	96	1	5	5	1	1	1
17	105	5	5	5	5	2	2
18	98	5	4	1	3	1	1
19	106	5	5	1	1	1	1
20	103	5	4	4	3	2	2
21	104	5	5	3	5	1	1
22	101	4	3	3	2	2	1
23	102	1	1	4	1	1	1
24	112	5	5	4	2	1	1
25	114	1	3	5	2	3	3
26	129	4	5	5	3	1	1
27	127	5	5	5	5	1	3
28	128	3	3	4	3	3	5
29	126	5	5	3	1	1	1
30	123	4	4	5	5	3	2
31	118	5	5	4	3	1	1
32	119	4	4	5	1	1	1
33	116	5	5	5	5	3	4
34	117	4	4	5	3	1	1
35	115	5	5	5	2	2	1
36	131	5	5	5	5	1	1
37	35	3	4	3	3	1	1
38	33	4	5	5	3	1	1
39	36	4	5	3	2	1	1
40	130	5	5	5	2	1	1
41	42	4	4	3	2	1	1

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Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
1	1	1	3	3	4	4	4
2	1	5	5	5	5	5	5
3	1	3	1	4	5	5	3
4	1	3	4	5	4	3	3
5	1	5	5	1	4	3	4
6	3	3	4	4	5	5	5
7	1	3	3	2	2	2	3
8	1	3	5	4	4	5	5
9	1	5	5	5	4	3	5
10	1	4	3	4	4	4	4
11	1	3	5	5	5	3	5
12	1	1	3	3	4	4	4
13	1	4	3	3	4	4	4
14	1	4	4	4	4	4	4
15	1	5	5	3	3	3	5
16	1	1	3	3	3	4	5
17	2	3	4	3	4	5	5
18	1	4	5	4	5	4	5
19	1	3	5	5	5	5	5
20	2	2	3	5	4	4	4
21	1	4	4	4	4	4	5
22	1	2	4	3	5	5	5
23	1	1	4	1	3	4	5
24	1	2	5	2	4	4	3
25	3	3	5	5	5	3	5
26	1	3	5	5	5	5	5
27	3	5	5	5	4	5	5
28	5	4	2	5	5	5	5
29	1	3	1	4	3	3	5
30	2	3	5	4	3	4	3
31	1	5	5	5	3	5	3
32	1	3	3	5	3	2	3
33	4	5	5	3	5	5	5
34	1	4	5	4	4	5	5
35	1	1	3	3	2	4	3
36	1	5	5	5	5	5	5
37	1	2	5	2	1	1	3
38	1	4	1	2	3	3	5
39	1	3	4	3	3	4	3
40	1	3	4	5	5	5	5
41	1	3	4	4	5	5	5

Case Summaries				
	TIME	EFFT	ACWB	SOCL
1	3	3	4	4
2	4	1	5	3
3	5	1	5	1
4	1	1	4	4
5	5	4	5	5
6	5	3	4	4
7	3	3	3	3
8	5	4	5	5
9	3	3	5	5
10	4	3	5	4
11	4	1	5	5
12	4	3	4	4
13	3	1	5	2
14	2	3	4	4
15	5	3	5	5
16	5	1	5	5
17	4	4	5	5
18	5	5	5	5
19	3	5	5	5
20	4	3	5	5
21	5	3	5	4
22	4	4	5	4
23	2	1	4	3
24	4	3	3	5
25	3	3	5	3
26	5	3	5	5
27	5	5	5	5
28	5	4	5	5
29	3	3	5	1
30	3	3	4	4
31	3	3	5	5
32	3	1	5	5
33	5	3	5	5
34	4	3	5	5
35	4	4	5	5
36	4	4	5	5
37	3	2	4	5
38	3	1	5	5
39	3	4	3	3
40	5	1	5	5
41	4	1	5	4

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
42	21	2	5	3	1	1	1
43	20	3	4	4	2	1	1
44	19	3	3	3	2	3	3
45	16	5	5	5	3	1	1
46	18	5	5	4	4	5	2
47	17	4	5	5	4	4	3
48	1	5	5	5	2	1	1
49	6	5	3	3	5	1	1
50	11	5	5	5	5	1	1
51	10	2	2	4	5	3	3
52	49	5	5	5	1	1	2
53	23	5	2	4	2	1	1
54	22	5	3	3	3	1	1
55	25	5	3	3	3	1	1
56	24	2	1	1	1	1	1
57	55	4	2	2	1	1	1
58	65	2	5	3	5	1	1
59	93	4	2	1	1	2	1
60	90	5	5	5	5	5	4
61	89	1	5	3	1	5	1
62	99	4	5	5	3	1	1
63	97	5	5	2	1	1	1
64	95	5	3	3	2	1	1
65	128	5	2	1	4	1	1
66	121	5	3	3	2	1	1
67	119	3	5	5	1	4	3
68	120	5	5	3	1	1	1
69	112	5	5	5	5	1	1
70	115	3	3	3	2	1	1
71	113	5	5	5	5	1	1
72	111	5	1	5	1	1	1
73	108	5	5	5	1	1	1
74	108	5	5	4	4	1	1
75	40	5	3	4	5	1	1
76	43	5	4	5	1	1	1
77	47	5	5	5	3	1	1
78	45	4	5	5	5	3	3
79	29	5	1	1	1	1	2
80	30	4	4	1	1	1	1
81	27	5	4	4	1	1	1
82	44	5	4	5	2	2	3

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
42	1	1	5	4	2	3	3
43	1	3	3	1	3	2	4
44	1	3	4	3	4	4	4
45	1	3	4	5	5	5	5
46	5	3	3	3	4	5	4
47	3	4	4	4	3	3	4
48	1	5	5	5	5	5	5
49	1	3	3	2	4	4	5
50	1	5	5	5	5	5	5
51	3	5	3	5	3	3	5
52	2	3	2	1	2	3	3
53	1	1	5	3	5	5	5
54	1	3	4	3	5	3	3
55	1	3	3	3	3	3	3
56	1	1	4	1	2	2	3
57	1	2	5	1	4	4	3
58	1	3	5	5	5	5	5
59	1	2	3	2	2	3	3
60	4	5	5	5	5	5	5
61	1	5	5	1	5	5	5
62	1	4	4	3	4	5	5
63	1	1	3	2	3	4	3
64	1	1	4	1	3	3	4
65	1	3	5	4	4	4	5
66	1	3	4	3	3	4	4
67	3	5	2	2	4	5	4
68	1	5	5	5	3	3	1
69	1	5	5	2	3	3	3
70	1	3	3	4	3	3	3
71	1	2	5	5	4	4	4
72	1	5	3	4	5	5	5
73	1	5	5	5	5	5	5
74	1	3	4	3	4	4	4
75	1	4	5	5	5	5	5
76	1	3	3	3	3	4	3
77	1	2	4	5	4	5	5
78	3	4	4	3	4	3	3
79	1	1	3	5	4	4	4
80	1	4	4	4	4	4	3
81	1	3	3	4	3	3	4
82	3	3	5	4	5	5	4

Case Summaries				
	TIME	EFFT	ACWB	SOCL
42	1	1	4	4
43	4	4	4	3
44	3	4	4	4
45	5	5	5	5
46	3	1	5	5
47	3	4	5	5
48	3	2	5	5
49	1	3	5	5
50	5	3	5	5
51	5	4	5	5
52	4	3	4	4
53	4	2	5	5
54	4	4	5	5
55	4	3	5	5
56	2	1	3	2
57	3	2	4	4
58	5	2	5	5
59	1	1	2	3
60	5	4	5	5
61	5	3	5	5
62	4	3	5	5
63	5	2	4	4
64	3	4	5	5
65	5	3	5	5
66	3	1	4	4
67	5	4	5	5
68	5	5	5	5
69	5	4	5	5
70	5	3	5	4
71	3	3	5	3
72	4	2	5	5
73	1	1	5	4
74	4	4	4	5
75	1	1	5	5
76	3	4	5	5
77	4	4	5	3
78	3	5	5	5
79	1	4	5	5
80	4	2	4	4
81	3	4	4	5
82	2	1	5	5

Case Summaries

	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
83	48	4	3	5	4	2	1
84	41	4	4	4	2	1	1
85	50	2	4	4	1	1	1
86	39	5	5	2	2	1	1
87	2	4	4	5	3	1	1
88	3	5	5	5	1	1	1
89	14	5	5	5	1	1	1
90	4	5	5	5	1	5	5
91	9	5	3	3	3	1	1
92	32	5	3	5	2	1	2
93	37	2	3	1	1	1	1
94	133	3	3	4	4	3	3
95	84	4	5	5	5	1	1
96	83	3	3	3	2	2	1
97	79	5	5	5	3	1	1
98	80	5	5	5	5	1	3
99	81	5	4	5	1	1	1
100	78	4	4	5	2	1	1
101	91	5	5	5	5	1	1
102	88	5	5	5	5	3	1
103	92	1	1	1	1	1	1
104	59	5	3	3	3	1	1
105	64	3	4	3	4	2	1
106	61	5	5	4	2	1	1
107	57	4	5	5	3	1	1
108	62	4	2	2	1	1	1
109	58	5	5	1	1	5	1
110	54	5	5	5	3	1	1
111	82	5	5	3	1	1	1
112	1	4	2	2	4	1	1
113	2	5	5	5	5	5	2
114	4	5	5	5	3	1	1
115	5	4	5	5	4	1	1
116	7	5	3	1	3	1	1
117	8	5	3	4	2	1	1
118	9	5	5	5	4	2	4
119	11	1	5	5	1	1	1
120	12	5	4	5	4	1	1
121	13	3	3	3	3	1	1
122	14	4	4	2	5	3	1
123	15	4	5	5	5	4	3

Appendix 14: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
83	1	3	4	4	4	4	3
84	1	4	5	5	3	3	5
85	1	3	5	1	4	1	1
86	1	5	2	5	4	5	3
87	1	2	4	2	3	5	4
88	1	3	5	5	5	3	3
89	1	5	1	1	5	1	5
90	5	1	3	3	5	5	1
91	1	3	4	4	4	4	4
92	1	4	5	3	4	5	5
93	1	2	1	4	2	3	4
94	3	3	4	3	3	3	3
95	1	5	5	1	2	5	5
96	1	5	3	3	3	4	3
97	1	2	3	3	3	4	4
98	3	4	3	5	4	4	4
99	1	3	1	3	3	4	4
100	1	3	1	4	2	5	4
101	1	1	3	1	5	5	3
102	1	5	5	3	3	3	3
103	1	3	1	1	3	3	3
104	1	2	2	2	3	3	3
105	1	1	4	2	4	4	4
106	1	3	3	3	4	3	4
107	1	3	4	4	4	4	5
108	1	4	3	4	4	4	3
109	1	1	2	5	4	3	3
110	1	3	5	3	5	5	5
111	1	3	3	4	3	4	5
112	1	1	5	2	5	5	5
113	2	4	5	4	3	2	4
114	1	5	5	5	5	3	5
115	1	4	5	4	3	4	3
116	1	2	4	4	5	5	4
117	1	2	3	2	5	4	5
118	4	5	4	3	4	4	3
119	1	1	4	3	4	2	4
120	1	1	1	4	4	4	4
121	1	1	3	4	4	3	3
122	1	2	2	5	3	3	4
123	2	4	5	5	5	5	5

Appendix 14: continued.

	Case Summaries			
	TIME	EFFT	ACWB	SOCL
83	3	3	5	4
84	4	2	5	5
85	1	1	5	5
86	5	3	5	5
87	4	3	4	3
88	2	1	5	5
89	5	3	5	5
90	3	1	5	5
91	2	2	5	4
92	3	3	5	5
93	3	1	4	5
94	3	3	3	4
95	5	5	5	3
96	5	3	5	4
97	4	4	5	3
98	4	3	5	5
99	3	3	3	3
100	2	2	5	5
101	5	3	4	4
102	5	3	5	5
103	3	3	3	3
104	2	1	4	4
105	3	3	4	4
106	3	4	5	5
107	3	1	4	3
108	2	3	5	5
109	3	5	3	3
110	4	5	5	5
111	4	3	5	4
112	4	3	5	5
113	4	3	4	5
114	2	3	5	5
115	2	2	5	5
116	1	2	5	5
117	4	1	5	4
118	4	5	4	5
119	4	4	4	4
120	2	3	5	4
121	4	3	4	4
122	4	1	5	5
123	5	5	5	5

Appendix 14: continued.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
124	16	2	4	3	2	5	1
125	17	5	4	4	5	1	1
126	18	3	3	3	1	1	1
127	20	1	1	1	5	1	1
128	22	2	4	4	2	1	1
129	23	5	3	3	1	1	1
130	24	3	2	4	1	1	1
131	26	4	1	3	3	1	4
132	27	4	3	3	1	1	2
133	31	3	3	5	2	5	2
134	32	4	4	4	1	1	1
135	35	4	5	5	3	1	1
136	38	5	5	5	3	1	5
137	39	3	3	2	2	1	2
138	40	4	3	4	5	4	3
139	41	1	2	2	1	1	1
140	44	4	5	5	2	1	1
141	45	5	5	5	2	2	2
142	48	3	2	2	2	1	1
143	51	5	5	5	5	2	2
144	52	5	5	5	5	3	3
145	53	5	5	3	4	1	2
146	54	4	5	5	1	1	1
147	56	3	4	5	5	1	1
148	57	4	5	2	5	1	1
149	58	3	3	1	4	1	1
150	60	5	5	5	5	1	1
151	62	5	5	3	1	1	1
152	63	5	5	3	2	1	1
153	66	3	4	5	2	1	1
154	68	3	5	5	5	2	2
155	70	4	3	4	4	1	1
156	71	5	1	1	1	1	1
157	72	4	4	3	3	1	1
158	80	3	3	5	1	5	5
159	83	5	5	5	5	1	1
160	84	2	4	1	4	1	1
161	85	4	5	5	5	1	1
162	87	4	2	2	1	1	1
163	89	3	4	5	2	1	1
164	90	1	3	2	1	1	1

Appendix 14: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
124	1	1	4	1	3	4	4
125	1	3	4	3	4	3	3
126	1	4	3	3	5	3	4
127	1	5	5	3	3	3	3
128	1	5	4	4	3	3	3
129	1	3	2	4	5	3	4
130	1	3	3	1	4	4	4
131	4	4	4	3	4	4	4
132	2	3	2	1	2	2	2
133	2	2	4	2	4	4	4
134	1	3	5	5	4	3	3
135	1	3	4	3	3	3	4
136	5	3	5	5	5	5	3
137	3	4	3	4	3	3	4
138	1	3	4	3	5	5	4
139	1	2	1	5	3	5	2
140	1	3	5	5	3	5	3
141	2	5	5	5	5	5	5
142	1	2	4	2	4	4	2
143	2	4	5	5	5	4	5
144	3	4	5	5	5	5	5
145	2	3	3	2	2	3	3
146	1	5	5	5	5	3	5
147	1	3	3	1	4	3	3
148	1	3	4	3	3	5	4
149	1	3	2	2	4	3	3
150	1	5	1	4	4	5	2
151	1	1	1	1	3	3	2
152	1	1	3	4	5	5	5
153	1	4	4	4	5	5	5
154	2	4	5	5	5	4	4
155	1	1	2	2	2	2	2
156	1	1	4	3	5	5	5
157	1	3	4	4	4	3	3
158	5	3	5	5	5	5	4
159	1	3	3	3	3	5	5
160	1	5	1	5	1	1	1
161	1	4	5	4	5	5	5
162	1	5	3	1	3	2	5
163	1	3	3	3	4	3	3
164	1	2	2	4	5	4	3

Appendix 14: continued.

	Case Summaries			
	TIME	EFFT	ACWB	SOCL
124	3	1	4	4
125	3	2	4	5
126	3	4	5	4
127	1	1	5	5
128	1	1	5	4
129	2	3	5	5
130	3	3	4	3
131	5	4	4	4
132	2	3	3	4
133	4	3	4	5
134	1	3	4	4
135	2	3	4	4
136	3	3	5	5
137	4	2	4	5
138	4	4	4	4
139	5	1	4	3
140	4	2	4	5
141	5	5	5	5
142	2	2	3	4
143	3	5	5	5
144	5	5	5	5
145	3	3	5	5
146	5	1	5	5
147	3	2	3	4
148	3	3	4	4
149	2	2	5	5
150	1	4	5	4
151	2	2	5	4
152	5	2	5	5
153	4	4	4	4
154	5	4	5	5
155	3	3	3	4
156	1	4	5	5
157	2	3	4	4
158	2	1	3	5
159	5	5	5	5
160	1	1	5	5
161	4	3	4	5
162	3	2	5	4
163	3	4	5	5
164	1	2	5	3

Appendix 14: continued.

Case Summaries

	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
165	95	3	5	5	5	1	1
166	96	2	5	5	5	1	1
167	98	5	5	5	5	1	1
168	101	5	5	1	2	1	1
169	104	4	4	5	3	1	1
170	105	5	5	5	1	1	1
171	106	5	5	5	3	1	1
172	107	5	3	5	1	1	1
173	110	5	5	3	1	1	2
174	111	5	3	1	3	1	1
175	112	3	3	5	5	5	1
176	113	2	2	2	1	1	1
177	114	5	4	5	3	1	1
178	118	4	5	2	1	1	2
179	119	5	3	5	2	1	1
180	120	3	5	5	3	1	1
181	122	4	3	4	3	1	1
182	123	4	5	5	2	1	1
183	125	4	2	4	2	1	1
184	126	5	5	5	5	1	1
185	127	5	5	5	5	1	1
186	129	5	4	1	3	1	1
187	131	3	5	5	5	1	1
188	132	2	5	5	5	2	2
189	133	3	4	3	4	1	1
190	135	1	1	1	1	1	1
191	137	5	5	5	3	1	1
192	138	5	2	2	1	1	1
193	139	5	5	4	4	1	1
194	140	3	4	4	2	1	1
195	141	4	5	5	5	1	1
196	142	5	5	5	5	1	1
197	144	5	5	5	5	5	1
198	145	3	4	4	5	1	1
199	146	5	3	3	2	1	1
200	147	5	5	5	1	1	1
201	150	3	4	4	4	1	1
202	151	5	5	5	3	1	1
203	152	3	3	5	5	3	3
204	153	3	5	5	2	1	1
205	154	3	1	1	1	1	1

Appendix 14: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
165	1	5	5	3	4	3	5
166	1	5	5	5	5	4	3
167	1	5	5	5	5	5	5
168	1	5	1	4	5	3	3
169	1	3	3	3	5	5	4
170	5	5	5	5	5	5	5
171	1	4	5	5	5	4	5
172	1	3	3	2	5	4	5
173	3	3	5	3	4	3	4
174	1	2	4	3	4	3	3
175	1	5	3	5	3	3	4
176	1	3	1	5	2	2	3
177	1	1	3	1	4	5	5
178	2	4	1	1	1	1	4
179	1	4	3	4	5	4	4
180	1	1	5	5	5	5	5
181	1	1	2	2	4	4	4
182	1	2	2	2	3	3	3
183	1	2	2	3	4	4	4
184	1	3	5	5	5	5	5
185	1	5	5	5	5	5	5
186	1	2	5	3	5	5	4
187	1	5	5	5	5	5	5
188	2	5	5	5	5	5	5
189	1	4	5	5	4	4	3
190	1	5	1	4	1	2	1
191	1	5	3	5	5	5	5
192	1	2	4	2	5	5	5
193	1	1	4	4	5	5	5
194	1	4	4	3	2	2	4
195	1	4	4	5	4	4	4
196	1	1	5	5	5	5	5
197	1	1	4	5	5	5	5
198	1	5	2	5	5	5	5
199	1	2	2	2	2	3	3
200	1	3	5	3	3	4	4
201	1	3	4	2	2	4	4
202	1	3	4	1	4	4	4
203	3	5	5	5	5	5	5
204	1	4	5	1	4	5	4
205	1	3	1	5	5	4	3

Appendix 14: continued.

	Case Summaries			
	TIME	EFFT	ACWB	SOCL
165	5	3	3	3
166	5	5	2	5
167	5	5	5	5
168	5	1	5	5
169	3	3	5	4
170	5	5	5	5
171	5	3	5	5
172	3	4	5	5
173	4	2	5	5
174	3	3	5	5
175	3	2	5	5
176	5	2	5	5
177	3	5	5	5
178	3	2	5	4
179	3	3	5	5
180	5	1	5	5
181	3	4	4	4
182	3	3	5	2
183	4	3	4	4
184	5	3	5	5
185	5	5	5	5
186	3	4	5	5
187	5	5	5	5
188	4	4	5	4
189	3	3	4	4
190	1	1	1	4
191	5	5	5	5
192	3	3	4	4
193	4	4	5	3
194	4	4	5	4
195	4	3	4	4
196	5	3	5	4
197	5	3	5	5
198	4	4	5	5
199	2	1	3	3
200	5	3	5	5
201	5	2	5	3
202	3	3	4	4
203	1	3	5	5
204	1	3	5	5
205	2	4	5	5

Appendix 14: continued.

Case Summaries								
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH	
206	155	5	5	3	5	1	1	
207	156	3	3	4	4	3	3	
208	201	2	2	3	2	1	1	
209	202	4	5	3	5	1	1	
210	206	4	5	5	5	1	1	
211	207	5	4	5	3	4	5	
212	209	2	3	3	3	2	3	
213	210	5	5	5	5	1	1	
214	211	4	5	5	2	1	1	
215	212	4	4	4	5	2	2	
216	214	4	4	4	3	1	1	
217	216	3	4	4	2	1	1	
218	217	4	4	4	3	1	1	
219	218	4	5	5	2	1	1	
Total	N	219	219	219	219	219	219	

Case Summaries								
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS	
206	1	5	5	5	5	5	5	
207	1	3	3	4	3	3	3	
208	1	3	4	3	3	3	3	
209	1	3	3	5	3	5	2	
210	1	3	3	4	5	5	5	
211	1	5	5	5	5	4	5	
212	3	2	4	4	4	4	5	
213	1	2	3	2	4	3	5	
214	1	4	4	4	3	2	3	
215	1	3	3	2	3	2	3	
216	1	3	2	3	3	3	2	
217	1	3	4	2	5	5	4	
218	1	3	3	4	3	3	3	
219	1	4	4	5	5	3	5	
Total	N	219	219	219	219	219	219	

Appendix 14: continued.

Case Summaries					
		TIME	EFFT	ACWB	SOCL
206		3	2	5	5
207		4	3	4	4
208		4	3	2	1
209		2	5	5	3
210		5	5	5	5
211		5	5	5	5
212		3	3	4	4
213		5	5	5	5
214		1	4	4	5
215		3	3	3	4
216		3	3	3	3
217		4	4	5	3
218		3	3	4	4
219		5	4	5	5
Total	N	219	219	219	219

Appendix 15: Day-level raw data for outcomes relative to expectations for snaggers.

Case Summaries

	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
1	64	1	1	1	1	5	5
2	63	4	4	1	4	3	3
3	66	2	1	1	1	2	2
4	73	1	1	1	1	1	1
5	74	1	1	1	1	1	1
6	71	1	1	1	1	1	1
7	72	1	1	1	1	3	3
8	67	1	1	1	1	2	2
9	70	3	3	3	3	1	3
10	73	2	2	1	1	3	3
11	73	1	1	1	1	2	2
12	98	1	1	1	1	3	2
13	94	2	3	3	3	3	3
14	93	1	1	1	1	2	2
15	97	1	2	1	1	2	2
16	96	1	1	1	1	3	3
17	105	1	1	1	1	1	1
18	98	1	1	1	1	2	2
19	106	1	1	1	1	1	1
20	103	1	1	1	1	2	2
21	104	2	2	2	2	2	2
22	101	2	2	1	1	5	5
23	102	1	1	1	1	1	1
24	112	1	1	1	1	1	1
25	114	1	1	1	1	1	1
26	129	5	1	1	1	3	3
27	127	5	5	5	5	3	3
28	128	2	3	5	1	5	5
29	126	3	3	3	3	1	1
30	123	3	1	3	3	1	1
31	118	1	1	1	1	1	1
32	119	3	3	3	3	2	2
33	116	1	1	1	1	5	5
34	117	1	1	1	1	1	1
35	115	1	1	1	1	1	1
36	131	5	3	4	1	2	2
37	35	3	2	2	2	3	4
38	33	3	3	3	1	3	3
39	36	1	1	1	1	1	1
40	130	4	3	4	5	4	1
41	42	2	1	1	1	1	1

Appendix 15: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
1	5	1	3	5	2	4	3
2	3	1	5	3	5	3	1
3	2	1	3	5	1	1	4
4	1	1	1	3	1	1	1
5	1	3	3	3	3	2	3
6	1	1	4	1	4	4	4
7	3	1	3	3	3	3	4
8	2	1	1	3	5	5	3
9	3	1	1	3	1	1	1
10	3	2	3	1	3	1	3
11	2	1	3	3	2	4	1
12	2	1	5	4	2	3	2
13	3	2	3	3	3	4	3
14	2	2	2	3	4	4	4
15	2	1	5	4	2	3	4
16	3	1	4	3	3	1	3
17	1	1	5	1	3	5	5
18	2	1	5	1	2	3	3
19	1	1	5	1	2	2	3
20	2	1	5	3	5	5	5
21	2	3	5	3	3	2	4
22	5	2	5	3	4	4	4
23	1	1	5	1	3	3	5
24	1	1	4	1	3	3	1
25	1	1	5	3	3	3	1
26	3	3	4	3	4	4	4
27	3	4	3	3	4	4	4
28	5	4	1	3	5	5	5
29	1	3	4	3	3	1	5
30	1	5	4	3	1	5	5
31	1	1	4	1	2	3	3
32	2	3	4	3	3	4	4
33	5	1	5	3	5	5	5
34	1	1	4	4	3	4	1
35	1	1	5	2	3	5	5
36	2	2	2	3	3	3	4
37	3	3	2	4	3	3	2
38	3	1	2	3	3	3	3
39	1	1	1	3	2	5	1
40	1	5	5	2	4	4	4
41	1	2	5	3	1	1	3

Appendix 15: continued.

Case Summaries					
	TIME	EFFT	ACWB	SOCL	Satisfaction
1	3	5	3	3	3
2	3	3	5	3	1
3	4	3	4	3	2
4	3	4	4	4	3
5	2	3	5	5	1
6	3	5	5	3	2
7	3	3	4	3	3
8	1	5	3	3	1
9	3	3	5	5	3
10	3	3	5	4	2
11	3	5	3	3	2
12	1	3	5	5	2
13	3	3	3	3	5
14	3	5	4	4	4
15	2	5	5	5	2
16	3	3	5	4	3
17	3	3	5	5	1
18	3	2	5	5	1
19	3	5	5	5	5
20	3	3	5	5	3
21	3	3	5	5	4
22	3	3	4	4	3
23	3	3	5	5	2
24	3	4	4	5	1
25	3	3	4	3	2
26	3	3	5	5	5
27	5	1	5	5	5
28	3	3	5	5	5
29	4	3	5	3	3
30	4	4	5	5	4
31	3	4	5	4	3
32	3	3	3	3	4
33	3	5	5	5	3
34	2	4	5	5	2
35	2	2	3	5	2
36	4	3	4	4	4
37	2	3	3	3	4
38	3	3	3	3	3
39	2	3	5	3	3
40	4	3	5	5	5
41	2	1	3	3	2

Appendix 15: continued.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
42	21	5	1	3	1	1	1
43	20	1	1	1	1	1	1
44	19	1	1	1	1	1	1
45	16	1	1	1	1	2	2
46	18	1	1	1	1	1	1
47	17	1	1	1	1	1	1
48	1	2	2	2	2	4	3
49	6	1	1	1	1	2	1
50	11	1	1	1	1	1	1
51	10	1	1	1	1	1	1
52	49	1	1	1	1	3	3
53	23	2	1	1	1	5	4
54	22	2	5	5	5	2	2
55	25	1	1	1	1	3	3
56	24	1	1	1	1	3	3
57	55	3	3	3	3	4	4
58	65	1	1	1	1	1	1
59	93	2	1	2	1	1	1
60	90	1	1	1	1	2	2
61	89	2	2	2	2	3	3
62	99	3	3	2	2	4	3
63	97	2	2	1	1	5	5
64	95	1	1	1	1	4	4
65	128	4	2	3	1	2	1
66	121	1	1	1	1	3	3
67	119	2	2	3	1	3	3
68	120	5	3	5	3	5	3
69	112	3	1	3	2	1	1
70	115	1	1	1	1	3	3
71	113	1	1	1	1	1	1
72	111	3	1	1	1	3	3
73	108	1	1	1	1	3	3
74	108	3	1	4	3	1	1
75	40	1	1	1	1	2	2
76	43	1	1	1	1	2	2
77	47	1	1	1	1	1	1
78	45	1	1	1	1	5	3
79	29	1	1	1	1	1	1
80	30	2	2	2	1	3	2
81	27	2	1	1	1	2	1
82	44	1	1	1	1	2	2

Appendix 15: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
42	1	1	3	1	2	4	3
43	1	1	4	3	4	3	4
44	1	1	3	3	1	3	3
45	2	1	3	3	4	3	1
46	1	1	3	3	3	3	3
47	1	1	4	3	3	3	3
48	2	2	3	3	1	1	1
49	1	1	5	1	3	3	1
50	1	3	3	3	4	3	5
51	1	2	4	3	3	3	3
52	3	3	3	3	3	3	2
53	3	2	3	3	4	4	2
54	2	2	3	1	5	5	4
55	3	1	3	4	5	5	5
56	3	1	3	3	4	4	4
57	4	1	5	4	4	4	3
58	1	2	5	3	3	2	3
59	1	1	5	3	3	3	1
60	2	1	5	2	1	3	2
61	3	2	5	3	4	4	4
62	3	2	4	3	4	3	3
63	5	1	5	3	3	3	4
64	4	1	5	3	4	4	3
65	1	4	2	3	3	3	4
66	3	1	5	3	4	4	4
67	3	2	5	2	5	5	4
68	3	3	5	3	3	4	5
69	1	4	5	3	3	3	4
70	3	1	3	5	5	3	1
71	1	1	5	1	3	5	1
72	3	1	5	3	4	3	3
73	3	3	3	3	3	3	2
74	1	1	5	3	3	5	3
75	2	1	3	2	3	5	3
76	2	2	4	3	2	1	3
77	1	1	5	3	2	1	5
78	3	1	5	1	5	2	3
79	1	1	4	2	5	5	3
80	3	1	3	3	3	4	3
81	1	2	2	1	3	3	3
82	2	1	3	3	4	3	3

Appendix 15: continued.

Case Summaries					
	TIME	EFFT	ACWB	SOCL	Satisfaction
42	2	3	3	3	4
43	4	4	4	3	2
44	1	4	3	3	2
45	1	1	3	3	1
46	3	3	3	3	4
47	3	3	5	5	3
48	2	4	4	5	1
49	2	5	4	5	1
50	1	3	5	5	3
51	4	4	5	4	4
52	2	3	3	3	2
53	2	5	3	5	4
54	3	3	5	5	5
55	3	1	5	5	3
56	3	5	2	3	2
57	3	4	5	5	4
58	3	5	5	5	2
59	3	5	5	5	2
60	3	4	3	3	3
61	3	3	3	4	3
62	3	4	4	4	3
63	3	4	5	5	4
64	2	3	3	5	2
65	4	3	4	5	5
66	4	4	5	5	2
67	2	5	5	5	2
68	3	5	5	5	5
69	2	4	5	5	4
70	4	4	4	4	3
71	2	4	5	5	2
72	3	3	3	3	1
73	2	4	3	3	3
74	2	2	5	5	2
75	3	5	5	5	1
76	3	3	3	4	2
77	1	5	5	4	2
78	3	3	5	3	5
79	3	2	5	5	1
80	3	5	3	3	2
81	2	3	3	3	2
82	2	4	3	3	1

Appendix 15: continued.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
83	48	1	1	1	1	1	1
84	41	1	1	1	1	2	2
85	50	3	3	3	3	3	3
86	39	1	1	1	1	1	1
87	2	1	1	1	1	3	3
88	3	1	1	1	1	3	3
89	14	1	1	1	1	4	2
90	4	1	1	1	1	1	1
91	9	1	1	1	1	3	3
92	32	1	1	1	1	3	1
93	37	1	1	1	1	3	3
94	133	4	2	2	2	5	5
95	84	2	2	1	1	1	1
96	83	2	2	2	1	3	2
97	79	2	2	2	1	2	2
98	80	1	1	1	1	3	2
99	81	4	4	5	2	1	1
100	78	1	1	1	1	5	5
101	91	1	1	1	1	1	1
102	88	2	2	1	1	3	3
103	92	3	1	1	1	3	3
104	59	1	1	1	1	4	4
105	64	1	1	1	1	2	2
106	61	1	3	2	2	3	3
107	57	1	1	1	1	5	3
108	62	1	1	1	1	1	1
109	58	1	1	1	1	3	1
110	54	1	1	1	1	2	1
111	82	1	1	1	1	2	1
112	1	2	2	2	2	3	3
113	2	3	1	1	1	4	4
114	4	3	3	3	3	1	1
115	5	3	4	4	3	2	2
116	7	1	1	1	1	3	3
117	8	3	3	4	1	5	5
118	9	3	4	4	2	3	3
119	11	3	3	3	2	3	3
120	12	2	2	2	1	3	3
121	13	3	3	4	1	5	5
122	14	3	3	3	3	2	2
123	15	5	5	5	5	5	5

Appendix 15: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
83	1	1	4	3	3	3	3
84	2	1	5	3	2	5	3
85	3	1	4	3	3	3	3
86	1	1	4	3	3	2	2
87	3	1	5	3	2	5	1
88	3	1	5	5	5	5	3
89	2	1	5	3	2	4	4
90	1	3	3	4	5	3	2
91	3	1	4	3	3	5	3
92	1	2	1	3	3	3	4
93	3	1	2	3	2	2	5
94	5	3	2	2	5	5	4
95	1	3	3	1	1	2	5
96	2	3	4	3	4	4	3
97	2	1	4	3	2	5	4
98	2	1	4	2	1	3	1
99	1	4	5	4	4	4	5
100	5	2	3	3	3	3	4
101	1	1	5	3	5	5	5
102	3	2	5	5	5	5	5
103	3	1	3	3	3	3	3
104	4	1	5	4	5	5	4
105	2	1	4	4	4	4	4
106	3	1	5	3	4	3	3
107	3	1	4	3	3	3	1
108	1	1	5	2	3	3	2
109	1	1	5	1	3	3	5
110	1	1	3	3	2	2	2
111	1	1	5	4	5	3	1
112	3	2	5	3	3	3	2
113	4	3	5	3	2	2	3
114	1	3	5	3	3	1	2
115	3	3	4	3	3	3	4
116	3	2	4	3	3	3	3
117	3	4	4	3	2	2	2
118	3	4	4	2	3	4	3
119	3	3	4	3	3	3	2
120	3	3	3	3	2	2	2
121	1	5	5	3	1	1	3
122	2	3	4	3	4	3	4
123	5	5	5	5	5	5	5

Appendix 15: continued.

Case Summaries					
	TIME	EFFT	ACWB	SOCL	Satisfaction
83	4	5	4	4	2
84	5	5	5	5	2
85	3	3	4	3	4
86	3	4	3	3	4
87	2	3	3	3	1
88	1	5	5	3	3
89	1	3	5	5	5
90	4	5	4	3	2
91	2	4	4	3	2
92	3	5	5	5	2
93	3	3	3	3	3
94	4	3	3	4	5
95	3	4	3	1	1
96	3	3	5	5	3
97	2	3	5	3	2
98	5	5	3	3	1
99	3	3	5	5	5
100	3	5	5	3	1
101	3	5	5	5	1
102	2	4	5	5	5
103	3	3	3	3	3
104	3	4	4	5	2
105	3	3	3	3	2
106	4	3	4	5	4
107	2	5	3	3	1
108	1	3	3	5	2
109	3	3	5	5	5
110	4	5	3	3	1
111	1	4	5	5	1
112	4	4	5	4	4
113	4	5	3	4	4
114	3	2	2	4	4
115	2	3	3	3	5
116	2	4	3	3	2
117	4	4	3	5	4
118	3	3	3	3	5
119	2	2	2	3	4
120	3	2	3	3	3
121	3	5	3	5	3
122	3	3	3	5	5
123	3	3	5	5	4

Appendix 15: continued.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
124	16	4	5	5	3	2	2
125	17	2	2	2	2	4	4
126	18	4	3	5	3	5	5
127	20	3	3	3	2	5	5
128	22	3	1	3	1	2	3
129	23	5	2	2	2	3	4
130	24	3	3	3	3	4	4
131	26	1	1	1	1	3	3
132	27	1	1	1	1	4	4
133	31	5	5	5	2	5	4
134	32	1	1	1	1	3	3
135	35	2	2	2	2	3	3
136	38	2	2	2	2	2	1
137	39	4	3	3	2	2	2
138	40	3	4	2	1	2	1
139	41	3	2	2	1	1	1
140	44	5	4	3	4	2	1
141	45	4	3	1	1	1	1
142	48	3	3	1	1	2	2
143	51	4	3	5	2	5	5
144	52	5	3	5	3	5	5
145	53	2	2	2	2	3	3
146	54	2	2	2	2	3	3
147	56	3	2	1	1	5	5
148	57	4	2	2	1	5	5
149	58	4	3	3	3	4	4
150	60	4	1	5	1	5	5
151	62	4	4	4	2	1	1
152	63	3	2	2	1	2	2
153	66	2	2	2	3	3	3
154	68	3	3	3	3	2	2
155	70	3	2	3	2	4	4
156	71	4	4	4	4	4	4
157	72	4	3	3	2	5	5
158	80	3	2	2	2	1	1
159	83	3	1	1	1	4	2
160	84	2	2	2	2	4	4
161	85	3	2	2	2	4	4
162	87	2	2	2	1	2	2
163	89	1	1	1	1	3	3
164	90	1	1	1	1	2	1

Appendix 15: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
124	2	5	3	3	4	3	4
125	4	3	5	3	3	4	3
126	1	2	5	3	4	5	4
127	5	2	5	2	3	3	3
128	3	2	5	5	2	2	2
129	4	4	4	4	3	3	4
130	4	3	4	2	2	2	3
131	3	2	4	4	4	4	3
132	4	3	4	3	3	3	3
133	2	5	5	2	3	4	5
134	3	1	5	4	4	5	5
135	3	3	4	3	3	3	3
136	1	2	4	3	3	3	3
137	2	3	4	3	3	3	3
138	1	4	4	3	3	3	2
139	1	3	5	3	3	3	5
140	1	3	4	3	2	1	4
141	1	5	5	5	4	3	4
142	2	2	3	3	4	4	4
143	5	5	4	3	5	5	5
144	5	5	5	5	2	4	5
145	3	2	4	3	3	3	3
146	3	2	5	1	4	4	4
147	5	1	3	3	4	4	4
148	1	3	5	3	4	4	4
149	4	3	3	3	4	5	5
150	5	3	5	3	3	4	3
151	1	5	3	1	4	2	5
152	2	3	4	3	3	3	3
153	3	4	4	2	3	2	3
154	2	2	4	2	3	4	2
155	4	4	4	2	4	4	3
156	4	4	4	3	2	4	4
157	5	4	5	1	4	4	4
158	1	4	4	4	1	5	4
159	2	2	3	3	2	4	3
160	4	3	5	1	3	1	3
161	4	3	3	3	3	3	3
162	2	3	3	2	3	3	2
163	3	3	5	3	3	4	2
164	1	1	2	2	3	2	3

Appendix 15: continued.

Case Summaries					
	TIME	EFFT	ACWB	SOCL	Satisfaction
124	3	4	4	5	4
125	3	4	3	5	2
126	3	3	4	4	5
127	4	3	3	5	5
128	3	3	4	5	5
129	3	3	3	4	4
130	3	3	4	3	3
131	3	3	4	4	3
132	3	3	4	5	3
133	3	4	5	5	5
134	3	5	5	5	1
135	3	4	3	3	4
136	3	4	4	5	4
137	4	3	4	5	5
138	3	4	4	4	5
139	5	2	5	5	5
140	4	5	5	5	4
141	5	5	5	5	2
142	2	4	3	3	4
143	4	4	5	5	5
144	3	3	5	5	5
145	3	3	3	3	3
146	4	4	4	5	1
147	3	3	4	4	3
148	3	3	3	4	4
149	3	3	5	5	5
150	2	3	3	3	5
151	5	4	4	5	5
152	3	3	3	4	4
153	4	5	5	5	4
154	2	4	3	3	3
155	2	3	3	4	5
156	3	3	3	3	4
157	3	3	4	4	5
158	4	4	3	4	4
159	3	4	3	3	4
160	3	4	5	5	3
161	3	4	4	3	3
162	2	5	3	3	3
163	5	5	3	3	3
164	4	5	3	3	3

Appendix 15: continued.

Case Summaries							
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH
165	95	3	3	3	3	5	5
166	96	4	2	1	1	5	5
167	98	5	5	5	5	5	5
168	101	5	5	1	1	5	5
169	104	2	1	1	1	3	3
170	105	3	2	2	2	4	2
171	106	1	1	1	1	4	4
172	107	2	1	1	1	2	2
173	110	3	3	2	1	3	3
174	111	2	1	1	1	1	1
175	112	3	3	3	1	1	1
176	113	3	2	1	1	1	2
177	114	2	2	3	2	2	2
178	118	1	1	1	1	2	2
179	119	4	3	3	2	4	4
180	120	5	5	5	5	1	1
181	122	3	1	3	2	3	3
182	123	5	2	4	3	1	1
183	125	4	1	2	1	2	2
184	126	3	3	2	2	4	4
185	127	3	1	3	4	1	1
186	129	4	3	3	3	4	4
187	131	2	1	1	1	5	5
188	132	2	3	3	1	2	1
189	133	4	1	1	1	3	3
190	135	4	4	4	3	3	3
191	137	5	3	3	3	4	3
192	138	5	5	5	1	4	4
193	139	5	1	1	1	3	1
194	140	3	3	3	3	1	1
195	141	4	2	2	1	5	5
196	142	2	1	1	1	1	1
197	144	3	4	5	2	4	4
198	145	4	3	3	1	2	2
199	146	5	2	5	4	3	3
200	147	5	3	3	1	1	1
201	150	4	2	3	3	2	2
202	151	2	1	1	1	2	2
203	152	4	3	3	3	2	2
204	153	5	1	1	1	3	3
205	154	4	2	2	1	1	1

Appendix 15: continued.

Case Summaries							
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS
165	5	2	3	3	3	3	3
166	5	3	3	1	2	4	3
167	5	1	5	1	3	3	3
168	5	1	5	3	3	1	3
169	3	3	4	3	4	3	3
170	2	3	5	5	5	5	5
171	4	3	4	1	2	4	3
172	2	2	4	3	3	3	3
173	3	4	5	3	4	4	5
174	1	2	5	3	3	5	4
175	1	3	3	2	3	4	5
176	2	1	2	3	3	4	4
177	2	3	1	2	3	5	4
178	2	1	1	1	3	5	5
179	4	5	3	3	4	4	3
180	1	3	5	5	5	3	3
181	3	3	1	3	1	2	2
182	1	3	3	3	3	4	3
183	2	4	4	4	4	5	3
184	4	3	3	2	3	3	2
185	1	3	4	3	3	5	3
186	4	5	3	3	2	3	3
187	5	2	4	2	4	3	3
188	1	3	1	2	2	2	3
189	3	4	2	2	3	4	4
190	3	3	4	1	4	4	3
191	3	3	5	3	3	3	3
192	4	3	5	2	3	4	5
193	1	3	4	3	4	3	5
194	1	1	3	3	3	3	4
195	1	3	5	3	3	2	4
196	1	2	4	3	3	3	3
197	4	4	3	3	4	4	3
198	2	3	5	5	1	1	3
199	3	4	5	3	2	2	3
200	1	5	5	3	3	3	4
201	2	3	4	3	3	4	3
202	2	2	5	3	3	3	3
203	2	5	5	5	4	4	5
204	3	3	5	3	3	5	3
205	1	1	5	3	3	4	3

Appendix 15: continued.

Case Summaries					
	TIME	EFFT	ACWB	SOCL	Satisfaction
165	3	5	3	3	2
166	2	5	4	4	4
167	5	5	5	5	5
168	3	5	5	5	2
169	5	5	3	3	2
170	2	3	5	5	5
171	2	1	4	5	2
172	3	5	3	3	5
173	3	5	5	5	4
174	4	5	5	5	4
175	3	2	5	4	4
176	2	3	3	5	5
177	3	5	4	5	4
178	3	3	5	5	3
179	4	5	3	4	4
180	5	5	5	5	5
181	3	4	3	5	2
182	4	3	4	4	5
183	2	3	4	4	4
184	3	3	4	5	4
185	3	3	3	5	5
186	4	3	5	5	4
187	3	4	3	5	1
188	2	2	5	5	5
189	3	4	4	4	4
190	2	3	3	4	5
191	3	3	5	5	5
192	3	3	4	4	4
193	3	5	4	4	4
194	2	3	3	4	4
195	4	4	5	5	5
196	4	5	3	3	2
197	2	4	3	3	4
198	2	3	2	3	4
199	3	3	3	3	5
200	5	5	5	5	4
201	3	4	3	3	5
202	3	4	3	3	2
203	4	3	5	5	4
204	3	3	5	5	4
205	1	1	4	3	4

Appendix 15: continued.

Case Summaries								
	UID	SNPF	SNKP	HVPF	TRPF	SEBH	SNBH	
206	155	5	4	4	2	4	3	
207	156	5	3	3	3	2	2	
208	201	3	3	3	3	3	3	
209	202	3	1	3	1	4	4	
210	206	3	3	1	1	3	3	
211	207	5	5	1	4	5	4	
212	209	2	2	1	1	3	3	
213	210	5	2	3	1	3	3	
214	211	2	3	3	1	5	1	
215	212	4	3	4	3	3	3	
216	214	1	2	1	1	3	3	
217	216	1	1	1	1	3	2	
218	217	3	2	2	1	2	1	
219	218	4	4	5	3	3	3	
Total	N	219	219	219	219	219	219	

Case Summaries								
	HVBH	PLHV	WTHR	AISF	UNCR	INTF	ACFS	
206	3	3	5	3	3	4	5	
207	2	3	3	3	3	3	3	
208	3	3	3	3	3	3	3	
209	3	2	5	2	5	5	5	
210	3	2	5	4	3	3	3	
211	1	4	3	4	4	5	4	
212	2	3	5	2	4	4	4	
213	1	2	5	4	4	4	4	
214	3	1	5	2	5	5	5	
215	3	3	3	3	3	3	4	
216	5	2	5	1	2	3	4	
217	3	3	5	3	3	4	3	
218	1	2	5	3	3	4	4	
219	3	3	3	3	4	3	3	
Total	N	219	219	219	219	219	219	

Appendix 15: continued.

Case Summaries

		TIME	EFFT	ACWB	SOCL	Satisfaction
206		3	3	3	3	5
207		3	2	3	3	5
208		3	3	3	3	3
209		3	3	5	3	3
210		5	3	3	5	4
211		5	4	5	5	3
212		3	2	4	5	3
213		3	3	2	2	5
214		2	3	5	4	5
215		4	3	4	4	5
216		3	2	5	3	1
217		3	4	4	3	3
218		3	2	5	5	2
219		3	4	3	3	4
Total	N	219	219	219	219	219