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Hunters and Anglers at West Point: Their Experiences and Opinions on Management

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EXECUTIVE SUMMARY

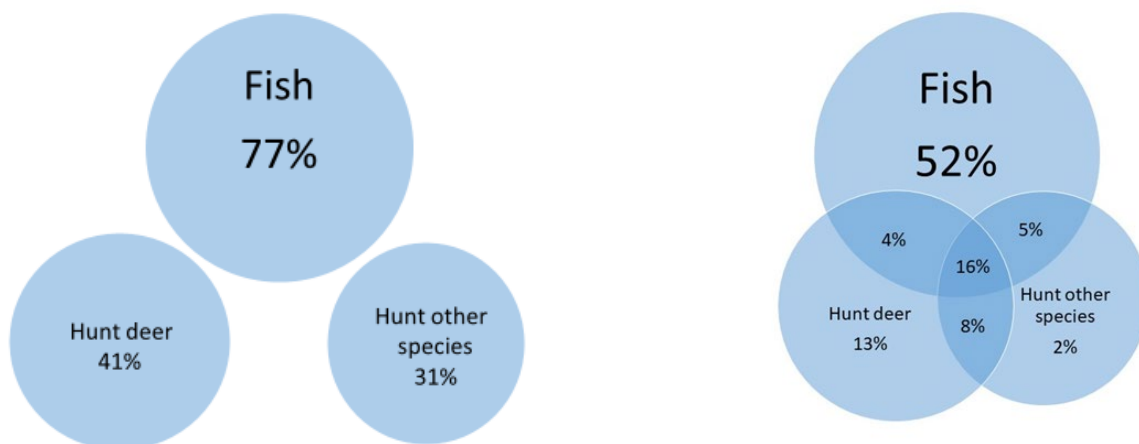
The U.S. Military Academy at West Point, New York offers recreational hunting and fishing opportunities to military personnel and civilian staff. West Point natural resource managers wanted to maximize recreational benefits while sustainably managing fish and wildlife populations. To understand how well the hunting and fishing programs are meeting participants' needs, the Center for Conservation Social Sciences (CCSS; <https://ccss.dnr.cals.cornell.edu/>) at Cornell University conducted a study of West Point hunting and fishing permit holders to understand their (1) participation, experiences, motivations, and satisfactions with hunting and fishing; (2) perceptions and attitudes toward specific wildlife management regulations—current and potential; and (3) views on how deer hunting has changed over time. We also compare motivations and satisfactions of West Point deer hunters to those elsewhere in New York State.

The study was conducted in two stages. First, a focus group conducted with hunters and anglers provided in-depth insights into motivations and satisfactions with their West Point experiences. Information from the focus group was used to inform the design of a quantitative survey of all active hunters and anglers at West Point. This survey was conducted via the internet and asked about hunting and fishing experiences and satisfaction, and potential changes to management programs.

The focus group was conducted by CCSS staff in October 2020 via a Zoom meeting. It included eight participants, represented a broad range of recreationists, including cadets, active duty military personnel, civilian employees, and retirees. The discussion revealed the diversity of the recreational stakeholder base, but there were a few key points of agreement. West Point represents a special opportunity: being able to hunt at West Point was considered a military benefit. Probably in part due to both the military connection, social connections are also seen as strong at West Point. Also emphasized was the convenient location, and good access. The “iSportsman” sign-in procedure both provides information about the presence of other hunters and a feeling of safety/security. Finally, participants commended the quality of the resource; West Point has abundant fish and game, attributed to, at least in part, by the quality of its management. Participants noted several changes in deer hunting over time. One felt the overall area available for hunting had decreased. Several mentioned a decrease in the number of deer seen, but an increase in the quality of those that were seen; potentially linked to changes in management practices/regulations. We specifically engaged participants' views of current and prospective hunting regulations. Several asked for clarifications about the use of crossbows and man-made blinds for waterfowl hunting. Others suggested increasing enforcement, particularly related to access, while at the same time acknowledging the difficulty of doing that in more remote areas. Some see the “3 points to a side” antler point restriction regulation as a “trophy management tool” and are concerned about negative impacts on hunters who are more

motivated by hunting for food, while others appreciate the increased potential for harvesting a large antlered animal. Cadets were mentioned as one key population of interest (we had a cadet participate in the focus group, so this may have affected the conversation). The health and well-being of cadets, as the next generation of military personnel, is of great interest to West Point managers. Several participants suggested that perhaps the antler point restriction could be lifted for cadets to help enable their participation and success, setting aside an area or a day for cadet-only activities, and including mentorship programs. In sum, the focus group revealed a range of motivations for hunters and anglers using West Point, and the types of issues or concerns they might have.

The second phase of the research was an email-based survey sent to the entire list of permit holders 18 years and older who had an active hunting or fishing permit in 2020. West Point managers emailed permit holders a few days before the survey was implemented to encourage participation; CCSS staff then sent out the initial email with individual links to the survey in early January, 2021. Up to three follow-up emails were sent to non-respondents. From the initial list of names (N=965), 24 emails were returned as undeliverable, and 427 people responded, for a response rate of 45%. A non-respondent telephone follow-up was conducted to assess differences between respondents and non-respondents (very few differences were found). Of those who responded, 44 had not hunted or fished at West Point in 2020. Among the remaining respondents (n=383), 52% fished but did not hunt at West Point in 2020, 41% hunted deer, but only 13% exclusively hunted deer, and 31% hunted species other than deer (ES Figure 1).



ES Figure 1. Percentage of respondents who hunted and/or fished at West Point in 2020.

We explore two main categories of results: (1) those specific to deer hunting (these are the most detailed analyses); and (2) those related to hunting for species other than deer; and those related to fishing.

Findings Related to Deer Hunting

Deer Hunter Attributes and Experience

We divided deer hunting respondents by three different groupings: (1) military (65%) versus civilian (35%); (2) avid deer hunter (31%) versus non-avid (69%); and (3) those who only hunted deer during the regular gun season (38%) versus those who hunted deer in other seasons (62%). The results of these comparisons across key variables of interest are presented in the main body of the report. West Point deer hunters averaged 45 years old, almost all were male, and most lived at or within 40 miles of West Point. One-third had some type of graduate or professional degree. Deer hunters were experienced, averaging over 22 years in the field. Most (83%) had hunted deer at West Point. These hunters had done so for an average of 10 years. West Point is a very important deer hunting location: almost half (48%) indicated they typically spend all or almost all their deer hunting time at West Point. The regular gun season was most popular, with 76% of deer hunters indicating they typically hunt during the gun season at West Point. West Point deer hunters averaged 12 days of hunting at West Point, compared to 6 days elsewhere in NYS. Of those that hunted at West Point in 2020, over 90% saw deer while hunting (the average number seen was 15, across all seasons). About one in four hunters harvested an antlered deer, and one in five harvested an antlerless deer.

Motivations and Satisfactions

We focused our motivation statements on reasons why people might choose West Point specifically over other potential deer hunting locations. We used factor analysis to identify groups of motivations. A majority of deer hunters emphasized the good access, convenience, and familiar surroundings as important reasons they chose to hunt deer at West Point. The second most important motivation (“a secure hunting experience”) included aspects of the hunting experience that are very unique to West Point – access to hunting areas is controlled by the iSportsman system. Most hunters indicated that knowing how many other hunters were out at the same time, not feeling crowded, and feeling safer because other people knew where they were hunting were very important reasons to hunt at West Point. The third factor, “military connection”, was moderately to very important for half or more of hunters: they feel safer knowing that other hunters have military connections. “Harvest motivations” included items related specifically to the quality of wildlife management: the quality habitat increases their chance to harvest a deer. Again, over half of respondents indicated these items were

moderately to very important reasons for hunting at West Point. The last factor was related to maintaining a “social connection” through hunting. While about two-thirds of hunters saw this as at least slightly important, a sizable minority did not see it as important at all.

What do West Point deer hunters find satisfying about their experience? Three factors that were somewhat similar to the motivations described above were identified: (1) hunting access and experience; (2) well-organized rules and procedures; and (3) harvest-related satisfactions. Most hunters were satisfied with hunting access and aspects of their deer hunting experience at West Point in 2020; very few (10% or less) were dissatisfied. Most hunters were also satisfied with management (i.e., clarity of regulations, administration procedures, and enforcement of regulations). Regarding harvest-related satisfactions, about half (51%) were satisfied with their chances of harvesting a deer, but fewer (38%) were satisfied with the chance of harvesting a large buck.

We also asked deer hunters how their satisfaction had changed since they first began hunting at West Point. A majority of hunters said their satisfaction across all elements was about the same as when they first started hunting at West Point. The remaining were more likely to indicate those aspects had improved rather than worsened. We also explored how specific management practices to reduce hunting pressure (e.g., reducing the number of public hunting permits) that were put into place starting in 2010 were perceived by hunters. Newer hunters were less likely to have experienced anything other than the current management practices compared to long-term hunters. We see that long-term hunters were more likely to perceive that rules and procedures had changed for the better, but were also less likely to be satisfied with harvest-related factors, suggesting a perception that harvest has declined over time.

Deer hunters were also asked to compare West Point to other areas where they hunt in NYS. Overall satisfaction with the deer hunting experience at West Point in 2020 was high, with 67% of deer hunters satisfied to some degree, (33% were greatly satisfied). Only 21% were dissatisfied. Hunters were less satisfied with their deer hunting experience elsewhere in NYS: only 57% were satisfied and only 13% were greatly satisfied. In particular, elements such as not feeling crowded, feeling safe, and ease of access were perceived as much better at West Point than in other areas of NYS. Harvest-related elements were more mixed: the opportunity to harvest a deer and deer habitat were each seen as much better. Only the opportunity to harvest a large buck was seen as about the same at West Point versus other areas of NYS.

Comparisons Over Time and Across Space

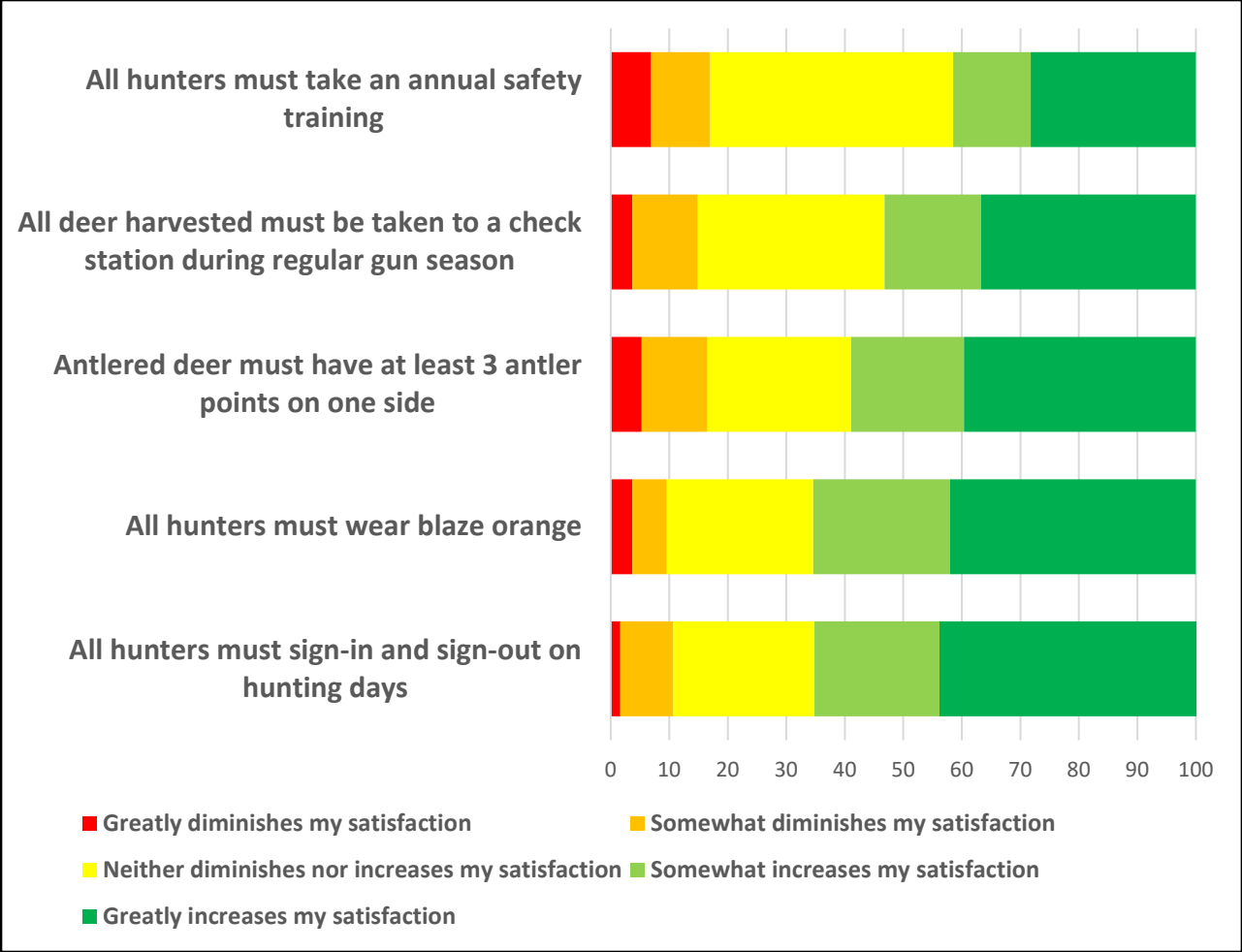
We compared these results to a previous study conducted in 2000. Aside from a small uptick in female hunters, the demographic profile of West Point deer hunters has remained stable over the past 20 years. So too have motivations for hunting at West Point: in 2000 deer hunters

most frequently mentioned feeling less crowded and feeling safer compared to other places (these reasons were mentioned most frequently as being better at West Point in our current study as well). The quality of the deer habitat, opportunity to harvest a deer, and the opportunity to harvest a large buck were seen as more important reasons for hunting at West Point in 2021 compared with 2000. Interestingly, overall satisfaction with the deer hunting experience, measured on the same scale across the two studies, was substantively lower in 2021 than in 2000. (We note that satisfaction with deer hunting experiences elsewhere in NYS also declined over the 20 year period, suggesting that declines in deer hunter satisfaction were not limited to experiences at West Point, but part of a larger trend.)

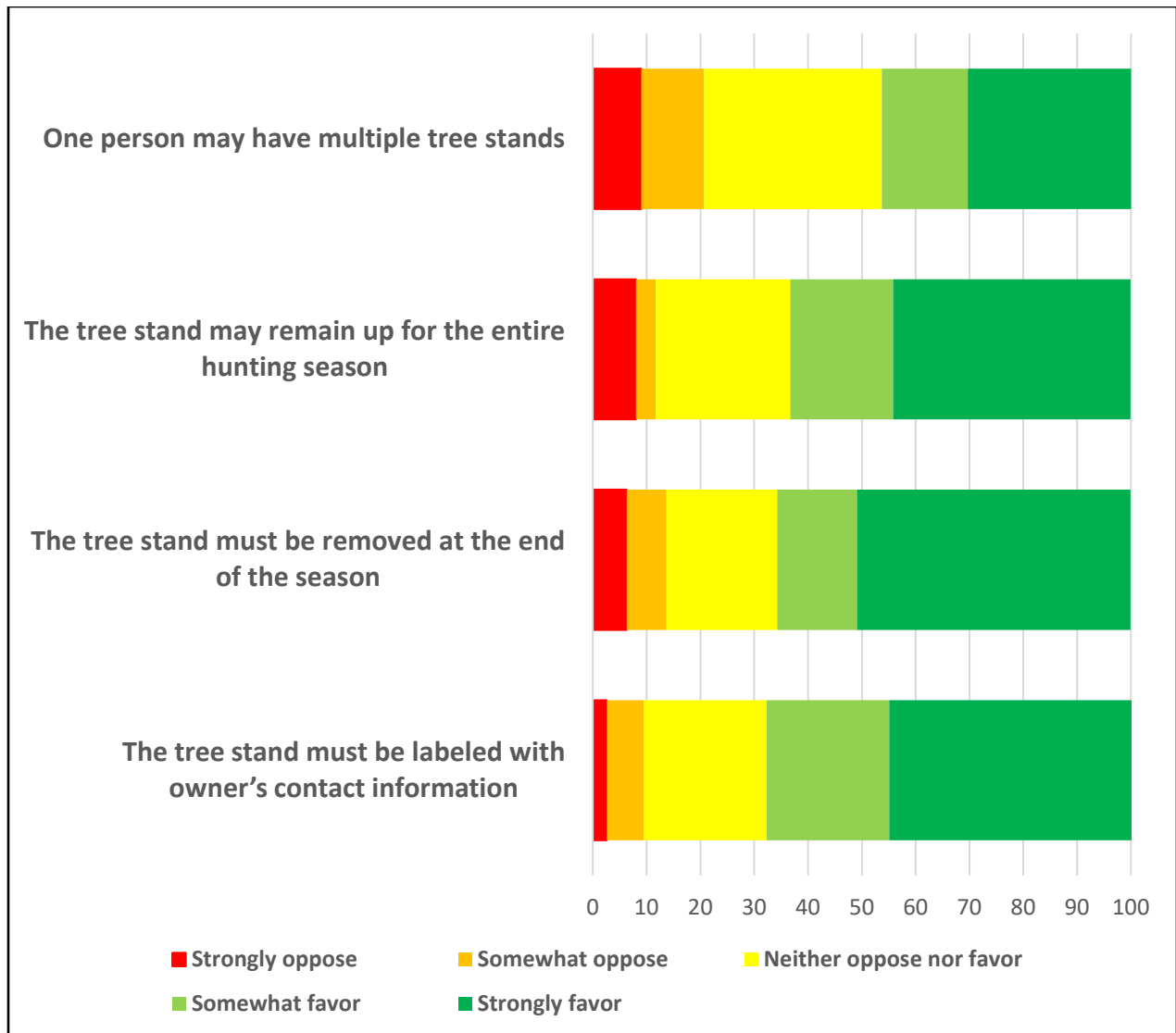
We compared—where possible—our West Point results to those obtained from other studies conducted elsewhere in New York State. West Point hunters were younger and had hunted deer for fewer years. This difference almost certainly reflects the substantial presence of cadets among West Point’s deer hunters. West Point deer hunters were even more likely to be male than the state averages. West Point hunters are more likely to be dissatisfied with their chances of harvesting a deer than results obtained in other studies that asked about a favorite WMU, but West Point hunters expressed only slightly less satisfaction about their chance of harvesting a large buck.

Views on Regulation and Management

We explored deer hunter reactions to actual and proposed management actions. Two-thirds of hunters indicated that the requirements to sign-in and sign-out and to wear blaze orange increased their hunting satisfaction; only about 10% or less felt these requirements diminished their satisfaction (ES Figure 2). The rule that antlered deer must have at least 3 antler points on one side to be eligible for harvest was also popular; increasing satisfaction for a majority (59%) of hunters, while decreasing it for few (16%). In a similar vein, few hunters (~15%) felt the requirements to take an annual safety training, and take harvested deer to a check station during the regular gun season decreased their satisfaction. Approximately two-thirds of deer hunters favored requiring tree stand to be labeled with the owner’s contact information (68%), allowing it to remain up for the entire season (63%), and requiring that it be removed at the end of the season (66%) (ES Figure 3). Almost half (46%) favored allowing one person to have multiple tree stands; 21% opposed that rule.



ES Figure 2. Impact of existing special requirements on deer hunter satisfaction.



ES Figure 3. Deer hunter attitudes on tree stand rules.

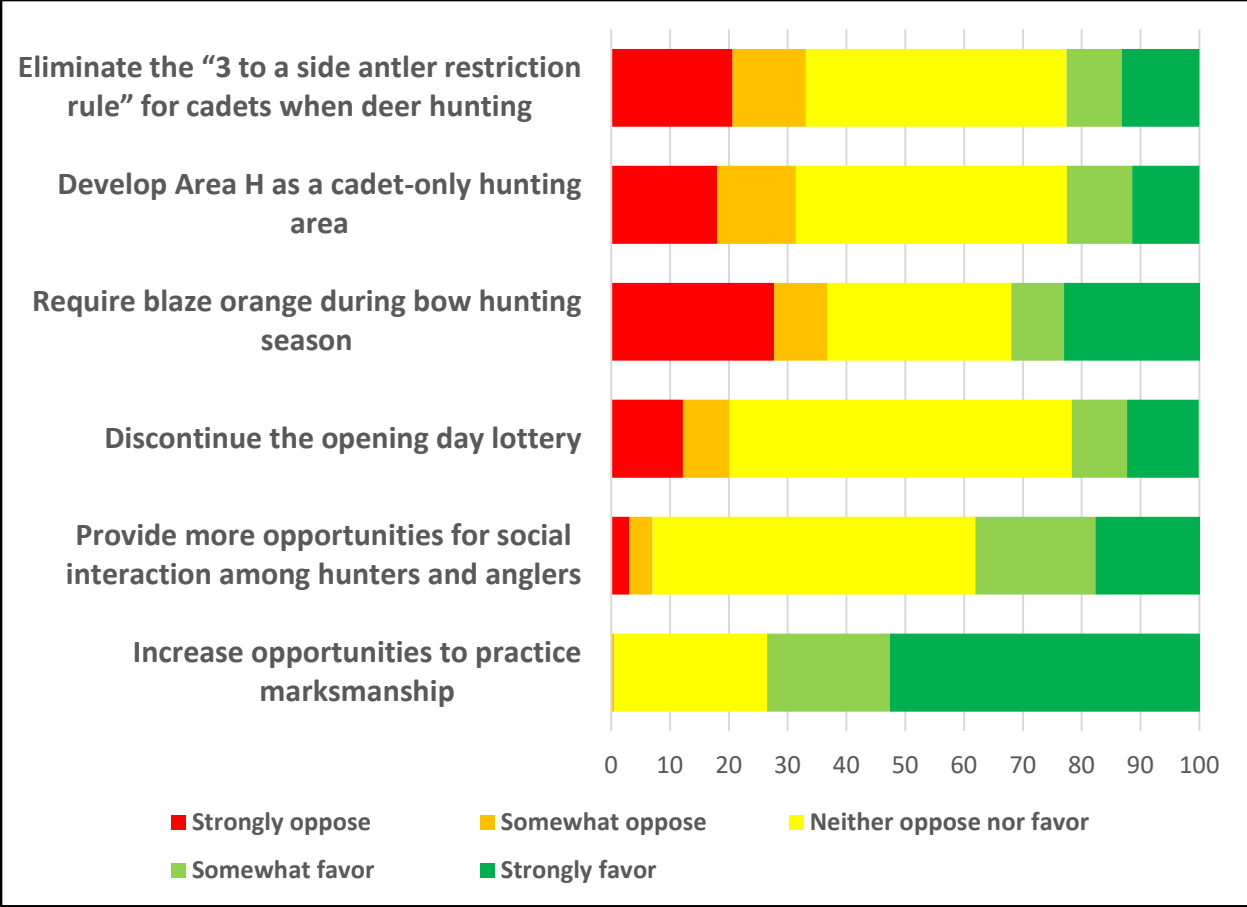
Findings Related to Other Types of Hunting and Fishing

Although much of our study focused specifically on deer hunting, about one-third (31%) of respondents hunted for game species other than deer. Turkey and pheasant were the most popular species hunted, with 21% and 19% respectively hunting these species at West Point in the past five years. Bear and other small game were hunted by about 15% of respondents; waterfowl by less than 10%. West Point appears to be comparatively a less important site for hunting species other than for deer: in a typical year, about two-thirds of those who hunted for species other than deer spent half or less than half of their time hunting for those species at West Point; this contrasts with the many deer hunters who spend a great majority of their time hunting at West Point. Overall, about half of these hunters were satisfied with their

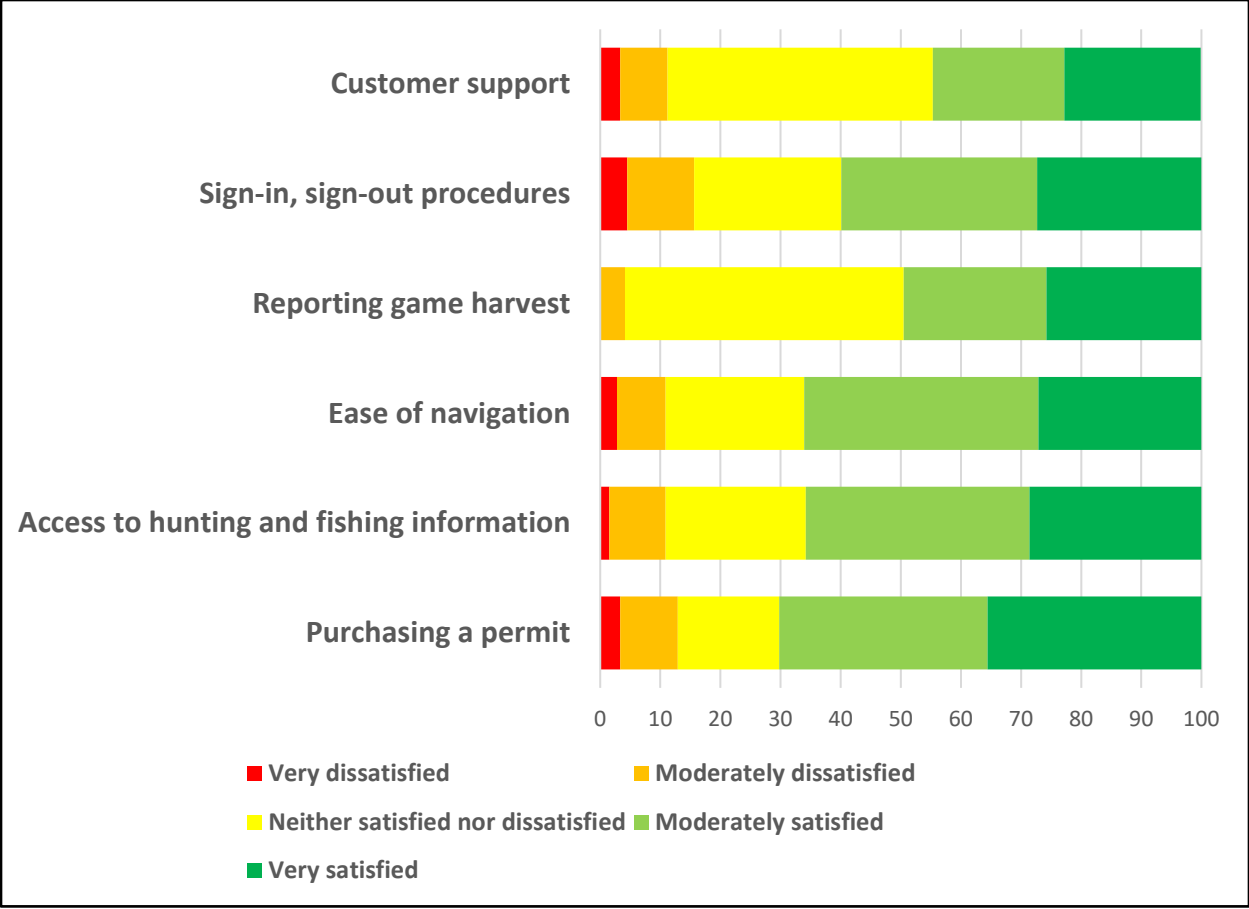
experiences at West Point in 2020. Most hunters were at satisfied with their hunting for turkey, pheasant, and waterfowl, but satisfaction was lower for bear hunters and small game hunters.

Fishing is a very important recreational activity at West Point: three-quarters of respondents had fished at West Point in the past 5 years. Bass (fished for by 67% of respondents) and trout (58%) were the most popular species that anglers fished for at West Point in the past five years. Other species, such as panfish, walleye and tiger muskie, were targeted by a little less than half the anglers over the past five years; catfish were targeted by only one quarter of anglers. Over half of the anglers (59%) fished at both non-recreation areas and recreation areas, but non-recreational areas overall received more use; anglers fished an average of 14 days in 2020 at non-recreation areas and 7 days at recreation areas. Similar to deer hunting, and in contrast to other types of hunting, anglers depend heavily on West Point facilities; 40% indicated they typically spend all or almost all their fishing time at West Point and about three-quarters spend at least half or more of their fishing time at West Point. Over half of the anglers, with some variation by species, detailed in the main report, were satisfied with their fishing experiences at West Point in 2020. Although dissatisfaction was generally low, it was highest among trout anglers (21% dissatisfied).

All respondents were asked how strongly they supported or opposed a variety of more general potential management actions (i.e., not solely focused on deer hunting). The action favored by the largest percentage of respondents (74%) was to increase opportunities to practice marksmanship (ES Figure 4). Other suggestions (providing more opportunities for social interactions, discontinuing the opening day lottery, requiring blaze orange during bow hunting season, developing specific places at West Point as cadet-only hunting areas; eliminating the “3 to a side antler restriction rule” for cadets), were much more mixed, with both robust support and opposition. Finally, we sought feedback on the ISportsman system and found that respondents were quite satisfied with the system, including ease of navigation and reporting game harvest (ES Figure 5). Although few respondents were dissatisfied with any of the aspects of the iSportsman system, the highest dissatisfaction was with the sign-in, sign-out procedures among anglers (18%).



ES Figure 4. Support or opposition to potential management actions.



ES Figure 5. Satisfaction with aspects of the iSportsman system.

ACKNOWLEDGMENTS

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INTRODUCTION

The U.S. Military Academy at West Point, New York (hereafter referred to simply as West Point) offers recreational hunting and fishing opportunities to military personnel and civilian staff. Natural resource managers at West Point wanted to maximize the benefits to those using the area, while at the same time managing fish and wildlife populations in a sustainable way. One key informational need for maximizing these recreational benefits is to understand how well the hunting and fishing programs are meeting participants' needs. West Point natural resource managers contracted with the Center for Conservation Social Sciences (CCSS; <https://ccss.dnr.cals.cornell.edu/>) at Cornell University to conduct a study of hunting and fishing permit holders to understand their experiences, motivations, and satisfactions with their hunting and fishing at West Point. Additionally, they wanted to assess users' views of current regulations, potential management changes, and—where possible—perceptions of change over time.

The study undertaken by CCSS builds on previous research conducted by the group (then the Human Dimensions Research Unit) 20 years ago (Enck and Brown, 2001). The earlier study focused solely on deer hunting and concluded that West Point was—at the time--underutilized by hunters. It explored mechanisms by which additional antlerless deer might be harvested, by a broader population including hunters not officially affiliated with West Point, to help achieve management goals. The current situation at West Point is quite different and includes new management goals, with harvest restrictions on young antlered deer. Thus, the study reported on herein evaluates these new goals, but allows comparisons in deer hunting participation between the two time periods. The current study is also broader in scope, encompassing hunting for other species and fishing.

The specific objectives of the current study are:

- To generate qualitative and quantitative understanding of participation, experiences, motivations, and satisfactions with hunting and fishing among current participants at West Point.
- To understand perceptions and attitudes toward specific wildlife management regulations—current and potential—and how these regulations affect participation and satisfaction.
- To compare differences in deer hunting experiences, to the degree possible, between the current study and the previous study (Enck and Brown, 2001), to understand how deer hunting has changed over time.
- To the degree possible, compare motivations and satisfactions of West Point deer hunters to those elsewhere in New York State, thus better understanding what is unique about hunting at West Point.

The study was conducted in two stages. First, a focus group—a group interview with multiple participants at once that addresses a targeted set of topics—was conducted with current users to explore the range of hunter and angler motivations and satisfactions with their West Point experiences, and to assess their perceptions of potential changes to the West Point natural resources management program. Information from the focus group was then used to inform the design of the second part of the study – a quantitative survey of all active hunters and anglers at West Point. This survey was conducted via the internet and asked about hunting and fishing experiences and satisfaction, and potential changes to management programs. A large portion of the survey focused on deer hunting motivations, satisfactions, and preferences for management actions.

This report is divided into two sections focusing on each aspect of the study – focus group and internet survey. It concludes with a summary, which integrates findings from both study elements, and points out key findings that may have special relevance to managers.

FOCUS GROUP

Our West Point contacts recruited a diverse group of hunters and anglers to participate in the initial focus group. Twelve people agreed to participate, with eight ultimately doing so. Participants included both men and women, and represented a broad range of recreationists, including cadets, active-duty military personnel, civilian employees, and retirees.

The focus group was conducted by CCSS staff in October 2020 via a Zoom meeting with video and telephone connections. West Point managers attended the meeting but did not participate in the discussion. The focus group lasted two hours. After receiving participants' permission, we audio-recorded and transcribed the focus group.

The focus group consisted of a semi-structured conversation guided by a series of open-ended questions (Appendix A). The questions were designed to explore hunter and angler participation at West Point, and their motivations and satisfactions with their West Point experiences. The questions also focused on participants' responses to regulations, and their perceptions of potential changes to the West Point natural resources management program. Information from the focus group was used to inform the design of the subsequent internet survey conducted with active hunters and anglers at West Point.

We conducted a content analysis of the focus group transcript using ATLAS.ti (Version 9.0.18), a qualitative data analysis program. We reviewed the transcript, divided sections of the transcript into segments (ranging in length from one sentence to one paragraph), and marked these segments with codes we developed to characterize their content. The codes highlight themes that emerged from the focus group and help outline our summary of results.

Results and Discussion

We present our findings from the focus group by topic areas. Within each topic area, we summarize our findings and illustrate most of our findings with relevant quotes (indented and in italics).

Diverse Hunting and Fishing Experience

Focus group participants hunted for a variety of species (deer, bear, waterfowl, turkey, pheasant and other small game), and used a variety of implements (rifle, bow, and muzzleloader). Some had hunted at West Point for 40 to 50 years, while others were new, having hunted only a year or two. Participants most frequently mentioned fishing for trout and bass. They mentioned fishing in both streams and ponds at West Point. Several enjoyed fly fishing. As such, West Point managers have a diverse recreational stakeholder base to work with, which may present challenges if their preferences do not align.

Motivations and Satisfaction

We asked participants why they chose to hunt and fish at West Point and asked how satisfied they were with their experiences. Highlighted below are some of the reasons mentioned, and expressions of the general level of satisfaction with their hunting and fishing experiences.

Being able to hunt at West Point was considered a military benefit by many of our focus group participants. For example:

I consider West Point one of the greatest benefits I have of military service.

I spent my entire life in the Army, having the opportunity to hunt and fish on an installation for me is an earned benefit.

Also emphasized, especially by those who were stationed at West Point was the convenient location, and the extra access that is created by special management for other purposes (e.g., fire breaks):

I fish ... close by lakes on the reservation just because they're so close. They're convenient.

The fire breaks are phenomenal. I've drug plenty of deer down to get to my truck and they're super beneficial.

Some of the other things that make it attractive to me are the fire breaks, it's usually pretty easy to get a deer out. It's easy to get to many areas because of these fire breaks.

Hunting at West Point consists of a special daily “sign in” procedure through the “iSportsman” application. Compared to hunting in other areas with open access, this provides information about the presence of other hunters and a feeling of safety/security. The sign in and out process to access designated areas provides several benefits. One is the ability to choose an area without other hunters. Another is the feeling of safety, knowing that someone will look for them if they do not sign out.

The fact that we have iSportsman ... I'd choose a separate area where nobody's in... It's part of what's nice, I am cognizant of who's in my surrounding area.

[I] Like ... how it's divided into the separate areas and a certain amount of people are only permitted to hunt at a time on that certain area.

It's controlled to the point that I feel safe. I know that if I go into the woods alone, I've signed out, if ... an accident should befall me, I know that somebody's going to eventually come looking for me. My family doesn't have to worry.

Probably in part due to both the military connection and the information provided by the sign in procedure, social connections are strong at West Point:

I think the camaraderie here is very strong.

I have family members, my whole family hunts and they love coming out here.

Focus group participants commented favorably on the quality of the resource; West Point has abundant fish and game.

West Point is a phenomenal resource for hunting.

Almost every time out you're going to hear a turkey during turkey season.

West Point is probably by far the best ... I've ever fished. It's so diverse. I mean you can go to any lake and catch bluegills. We have great trout-stocked lakes from rainbow trout to brown trout. We've even seen a bunch of tiger trout around here. I've caught the biggest bass of my life in Long Pond.

The quality of the resource is attributed to, at least in part by the quality of its management:

The resource here, I think, is managed really well.

It's a strong program.

Changes Over Time

Participants noted several changes over time at West Point, primarily related to deer hunting. One felt the overall area available for hunting had decreased. Several mentioned a decrease in the number of deer seen, but an increase in the quality of those that were seen; potentially linked to changes in management practices:

When I used to hunt in the '60's, early '70's you could go out and jump a group of 20, 25 deer.

We are getting some decent deer ... while there's not as many of them out there, there's a better chance of seeing a good, good buck.

Some participants also noted changes in the social aspects of hunting, that the camaraderie of hunting as an "event" had decreased over time. For example:

At the sign out place ... back in the '60's, early '70's the Boy Scouts or the Girl Scouts would be there. They'd sell candy bars, soda, hot coffee, hot chocolate, sandwiches.

Hunting Regulations

We specifically engaged participants' views of current and prospective hunting regulations. Several participants asked for clarifications to be made in the regulations regarding the use of crossbows and man-made blinds for waterfowl hunting. Several participants suggested increasing enforcement, particularly related to access, while at the same time acknowledging the difficulty of doing that in more remote areas.

There was some discussion of the current "3 points to a side" antler point restriction regulation, with several participants suggesting that exemptions to the rule might be made for youth, cadets, and seniors. Some see the restriction as a "trophy management tool" and are concerned about negative impacts on hunters who are more motivated by food: i.e., hunting to "put meat on the table for their family." Others feel—correctly or not—that the regulation works to increase their opportunity to get "a nice deer with big antlers." Because hunters are diverse with regards to their motivations, regulations that enhance the experience for some may diminish it for others.

Potential Hunting-related Improvements

Other changes were discussed that were not limited to specific regulations. As mentioned above, some hunters felt that more might be done to enhance the social element of the hunt, which was perceived to have declined over the years. Some specifically suggested social gatherings, like BBQs or town halls.

Maybe get a town hall, something of this sort together before the season, or after the season ... just to kind of get to know [each other].

Several safety issues were raised by participants that potentially could be addressed by managers. These included removal of dangerous obstacles left in the training areas, such as concertina wire, and eliminating overlapping hunting seasons or zones that could result in potential injury to hunters.

We need to keep in mind that we have bird hunters out in the woods. At the same time, we've got deer hunters during archery season.

The suggestion was also made that iSportsman could be modified so that hunters could enter the type of hunting they were going to do when they register, so that hunters who were planning a different type of hunting could choose another area.

Potential Fishing-related Improvements

Several people mentioned a desire to see boating access improved, especially for older people and those with disabilities. There was also interest in additional fish stocking, especially for trout, and extending the season for catch and release fishing to increase the overall recreational benefits created by trout stocking (note that after the research was conducted, in March, the NYSDEC changed the NY stream trout regulations statewide to include a year-round season. In response, West Point changed their stream trout regulations to include an 11 month season).

Increasing Opportunities for Cadets

Cadets were mentioned by several participants as one key population of interest (we had a cadet participate in the focus group, so this may have affected the conversation). The health and well-being of cadets, as the next generation of military personnel, is of great interest to West Point managers. Hunting and fishing provide opportunities for cadets to bond with each other, with more senior personnel, and learn and engage in stress relieving activities.

Get them into something that you know can, in their line of work in a few years they will need some stress relievers, and this can be a lifetime stress reliever.

It was pointed out by participants that cadets have limited time—less so than other participants-- to recreate. Several participants suggested that perhaps the antler point restriction could be lifted for cadets to help enable their participation and success.

The antler point restriction and how that applies to cadets when their time and their opportunities to get a deer within sight is usually pretty constrained ... I think it's something we should look into perhaps lifting [it] on cadets to give them more opportunities to develop as hunters and stewards of the outdoors.

In a similar vein, several participants suggested setting aside an area or a day for cadet-only activities.

Maybe we could potentially look at a cadet-only day during rifle season or something along those lines.

Mentorship programs were also suggested.

I don't know that it's wise to just shut down an area, with the cadets going out there 'cause they're not going to know where to go. A better approach would be a mentorship-type set up. ... you can put them in some areas where they're going to see deer. ... It's really easy to push deer here. There's a lot of fences and things, terrain that you can use to channel them.

The proximity and the resources are awesome and there are plenty of fishing resources ... to take cadets to who have never fished before and get them hooked into fishing.

Views on iSportsman

The West Point iSportsman website and system (hereafter referred to as iSportsman) is the website and online system used at West Point to manage hunting and fishing. iSportsman allows users to purchase permits; check area availability and check in/out as required when going afield and returning; access hunting, fishing, and safety notices, regulations and maps, and meet harvest reporting requirements. It provides benefits to both users and managers in helping to organize and track access, users, and harvest; to enhance safety and opportunity; and prevents interference with the military training. As alluded to above, it provides benefits such as helping to organize where people are recreating, enhance safety, and additional information. Hunter focus group participants were enthusiastic about the tool and its use.

iSportsman ... it's the best thing we've ever had in terms of sign in and sign out, [it] is so effective.

I love the app, I absolutely do, it's phenomenal. I know how many slots are open, how many people are in there, and it's great.

I think the, the reporting system we have here and the annual reports that come out and also the stocking information is really useful for individuals looking at what the trends are as far as harvest numbers and also what areas are seeing the largest harvest.

iSportman was not as universally popular, however, with anglers.

A lose for the fishermen because they have to take that extra step to go into iSportsman and sign out. For those fishermen that just want to go ... and just fish, they just don't want to do the iSportsman. ... but you've got to understand too that range control [is] always closing an area. It's nice to know who's out there, who they need to contact, and say 'hey, there's live fire going on, we need to get you pulled out of that lake.'

In summary, the primary purpose of the focus group was to provide us with information about the range of motivations for hunters and anglers using West Point, and the types of issues or concerns they might have. The information we gathered on these topics was very useful as we developed the next stage in our research – a quantitative survey of hunters and anglers who recreated at West Point during 2020.

INTERNET SURVEY

The internet survey was intended to provide quantitative information from current hunters and anglers using West Point. It was designed by combining questions from the previous survey (Enck and Brown, 2001), information gathered from the focus group, and the interests of West Point managers.

The specific objectives of the survey are:

- To generate a quantitative understanding of participation, experiences, motivations, and satisfactions with hunting and fishing among current users at West Point.
- To understand perceptions and attitudes toward specific wildlife management regulations—current and potential—and how these regulations affect participation and satisfaction.
- To compare differences in deer hunting experiences, to the degree possible, between (a) the current study and the previous study (Enck and Brown, 2001), to understand how deer hunting has changed over time; and (b) between result obtained from West Point deer hunters and results obtained from previous studies of deer hunters conducted elsewhere in New York State.

Methods

The topics covered in the questionnaire included hunter and angler behavior, motivations, satisfactions, responses to management regulations, and preferences for future natural resource-related activities. Skip rules were used in the questionnaire programming such that respondents were only asked questions that were applicable to them (e.g., people who indicated they did not fish were not asked the fishing-related questions). A copy of the full questionnaire can be found in Appendix B. Information available from the hunting and fishing permit database included age, permit type, and status (e.g., active military, retired, cadet, etc.).

The population for the internet survey was comprised of the entire list of permit holders 18 years and older who had an active hunting or fishing permit in 2020 (N=965). As such, results from the survey are broadly representative of the West Point hunting and fishing population. Email addresses from the list were used to invite people to participate in the survey. In a few cases several individuals (i.e., spouses) shared the same email address. Efforts were made to identify alternate email addresses as only one response per email address was allowed by the computer software. The one response per email address restriction is intended to prevent those who are not part of the population being studied from participating in the survey.

West Point natural resource managers sent an email a few days before the survey was implemented explaining the survey and encouraging participation. CCSS staff sent out the initial email with individual links to the survey in early January, 2021. Up to three follow-up emails were sent to non-respondents over the course of the following month as recommended by Dillman et al. (2014). This repeated contact method yields a higher response rate, and thus, a more representative sample of the population being studied (Stedman et al., 2019). West Point natural resource managers also sent another encouraging email toward the end of survey implementation thanking those who had participated, and encouraging those who had not yet done so to complete the questionnaire.

A non-respondent telephone follow-up was conducted with 75 people to assess differences between those who responded to the internet survey and those who did not. The interview included a subset of key questions on participation, satisfaction, and opinions on management regulations from the internet survey. (The full text can be found in Appendix C.)

Data analysis was done using SPSS (a statistical package for use with social science data). Factor analysis (principal components with varimax rotation) was used to create summed motivation and satisfaction scales comprised of similar items. The reliability of the scales was tested using Cronbach's alpha. T-tests and chi-square tests were used to test for statistically significant differences between key groups of interest to West Point natural resource managers.

Results and Discussion

Response Rate and Non-respondent Comparisons

From the initial list of names (N=965), 24 emails were returned as undeliverable, and 427 people responded to the survey. The response rate, adjusted for undeliverable emails, was 45%. Of those who responded, 44 had not hunted or fished at West Point in 2020. Among the remaining respondents (n=383), 77% fished, 41% hunted deer, and 31% hunted species other than deer (Figure 1). When looking at overlap between these activities, 52% fished but did not hunt, and only 13% exclusively hunted deer—i.e., did not fish or hunt for any other species. Of the 31% who hunted species other than deer, all but 2% of them also hunted deer and/or fished.



Figure 1. Percentage of respondents who hunted and/or fished at West Point in 2020.

Because we have background information on West Point hunting and fishing permit holders, we were able to easily compare respondents and non-respondents on these dimensions. Respondents were older on average than the population of permit holders (45.6 vs. 41.7 years old). Similarly, they included more retired/seniors and fewer active duty military or cadets than the population in general (Table 1). Respondents included a larger proportion of sportsman permit holders (i.e., a permit that allows hunting and fishing) and fewer fishing-only permit holders than the population in total. This suggests that those with more diverse involvement in activities at West Point were more likely to respond to the survey.

Table 1. Characteristics of the 2020 West Point permit holder population compared to respondents.

Characteristics	Percent	
	Population	Respondents
Status*		
Active duty military	35.3	28.8
West Point civilian	19.5	21.3
Retired (under 65) or Senior (65+)	16.1	21.8
Cadet	13.8	10.3
Dependent	7.7	7.2
100% service disabled veteran	3.8	4.4
General public	3.7	5.9
Permit type*		
Fishing	51.2	41.6
Sportsman	31.3	39.8
Hunting	12.2	12.2
General public hunting	3.5	5.6
Monthly, weekly, or daily hunt/fish	1.1	0.0
Cadet six-month angler	0.5	0.5
		Mean
Age**	41.7	45.6

* Statistically significant difference between the population and respondents using chi-square goodness of fit test for observed counts at P<0.01.

** Statistically significant difference between the population and respondents using a one-sample t-test at P<0.01.

We also sought to assess non-response bias (i.e., determine whether respondents were systematically different from non-respondents in important ways that would affect our interpretation of the results). Respondents were remarkably similar to the non-respondents we contacted by telephone (Tables 2 and 3). Deer hunters did not differ in the number who hunted in 2020, the number of days they hunted, deer harvested, satisfaction with their deer hunting experience, or their view on the impact of the 3-point rule on their hunting satisfaction. Respondents and non-respondents were generally similar in the proportion who hunted other species and fished for various species at West Point in 2020. Non-respondents were slightly more satisfied with their fishing experiences than respondents, however this might be due to the different methods used (telephone versus internet/read) to ask the question. Since so few differences were found between respondents and non-respondents, no adjustments to the data presented in this report will be made for non-response bias.

Table 2. Tests for non-response bias in hunting-related questions and respondent attributes.

Questions	Percent	
	Respondents	Non-respondents
Hunted deer in the past (NS*)	58.5	56.0
Hunted deer at West Point in 2020 (NS)	36.8	35.7
Hunted bear at West Point in 2020 (NS)	12.9	8.0
Hunted turkey at West Point in 2020 ($\chi^2=4.6$, $df=1$, $p=.03$)	18.0	8.0
Hunted pheasants at West Point in 2020 (NS)	14.9	6.7
Hunted waterfowl at West Point in 2020 (NS)	7.1	2.7
Hunted other game (e.g., rabbits, squirrels, grouse) at West Point in 2020 (NS)	11.4	5.3
Gender (NS)		
Male	94.1	94.6
Female	5.9	5.4
	Means Comparisons	
# years hunted deer (NS)	22.2	17.9
# days hunted deer at West Point in 2020 (NS)	14.1	13.5
# days hunted deer outside West Point in 2020 (NS)	15.1	12.9
# deer seen while hunting at West Point in 2020 (NS)	15.5	12.9
# antlered deer harvested at West Point in 2020 (NS)	0.3	0.1
# antlerless deer harvested at West Point in 2020 (NS)	0.2	0.0
Impact of 3-point rule on satisfaction^a (NS)	3.8	3.4
Overall satisfaction with deer hunting experience at West Point in 2020^b (NS)	5.2	5.7

*NS=not significant

^aSatisfaction was measured on a scale from 1=greatly diminishes my satisfaction to 5=greatly increases my satisfaction.

^bSatisfaction was measured on a scale from 1=greatly dissatisfied to 7=greatly satisfied.

Table 3. Tests for non-response bias in fishing-related questions.

Questions	Percent	
	Respondents	Non-respondents
Fish for trout at West Point in 2020 (NS*)	56.2	57.3
Fish for bass at West Point in 2020 (NS)	64.3	73.3
Fish for catfish at West Point in 2020 ($X^2=7.9$, $df=1$, $p<.01$)	21.0	36.0
Fish for other species (e.g., panfish, walleye, tiger muskie) at West Point in 2020 (NS)	43.3	48.0
	Means Comparisons	
# days fished for trout at West Point in 2020 (NS)	14.6	15.3
# days fished for bass at West Point in 2020 (NS)	19.6	26.4
# days fished for catfish at West Point in 2020 ($t=2.7$, $df=108$, $p<.01$)	9.5	21.4
# days fished for other species (e.g., panfish, walleye, tiger muskie) at West Point in 2020 (NS)	17.2	26.8
Overall satisfaction with trout fishing experience at West Point in 2020^a ($t=3.9$, $df=262$, $p<.01$)	3.6	4.4
Overall satisfaction with bass fishing experience at West Point in 2020^a ($t=2.7$, $df=306$, $p<.01$)	3.9	4.3
Overall satisfaction with catfish fishing experience at West Point in 2020^a ($t=3.0$, $df=108$, $p<.01$)	3.5	4.2
Overall satisfaction with your experience fishing for other species (e.g., panfish, walleye, tiger muskie) at West Point in 2020^a (NS)	3.9	4.2

*NS=not significant

^aSatisfaction was measured on a scale from 1=greatly dissatisfied to 5=greatly satisfied.

Key Groupings for Analysis

Managers were interested in how results differed by key groupings of recreationists. Accordingly, we divided deer respondents by three different groupings: (1) military versus civilian; (2) avid deer hunter versus non-avid; and (3) those who only hunted deer during the regular gun season versus those who hunted deer in other seasons.

Military and civilians. We created a variable grouping military personnel (i.e., active duty military, retired, senior, cadet, and 100% service disabled veteran) into one category (65%) and civilians (i.e., West point civilians, dependent, and general public) into another (35%) and compared most of the survey results by these two groups.

Avid and less avid. To assess how motivations and satisfactions differed between the most avid and less avid hunters, respondents were divided into two groups – those who indicated hunting was their most important recreational activity (31%) and all others who responded to the question (69%). Subsequent results on motivations, satisfactions, and management preferences were compared based on this grouping.

Deer hunting during regular gun season only versus other seasons. A new variable was created for those who typically hunt at West Point – those who typically hunt *only* during the regular gun season (38%) versus those who hunt other seasons (e.g., bow, muzzleloader), whether instead of, or in addition to, regular gun season (62%). Motivations, satisfactions, and management preferences were compared across these two types of hunters.

Hunting Experience and Importance (Avidity)

Two-thirds of respondents (65%) had hunted in the past. They had hunted at West Point or elsewhere for an average of 17 years. Among respondents who had hunted in the past, over two-thirds (71%) indicated hunting was more important than many of their other recreational activities; 31% said it was their most important activity (Table 4). Few respondents (~13%) indicated it was less important or one of their least important recreational activities. No difference was found between military personnel and civilians.

Table 4. Importance of hunting as a recreational activity.

Importance of hunting	Percent
It is my most important recreational activity	31.3
It is more important than many of my recreational activities	39.6
It is no more important than my other recreational activities	15.5
It is less important than many of my recreational activities	8.3
It is one of my least important recreational activities	5.4

Deer Hunting

Deer Hunter Characteristics

Of respondents who had hunted, most (90%) had hunted for deer. The average age of deer hunters was 45. Almost all were male (96%) and most lived at or within 40 miles of West Point (88%) (Table 5). All hunters had at least a high school diploma and one-third (33%) had some type of graduate or professional degree. More than half of the hunters (59%) had a sportsman permit—which allows fishing *and* hunting--in 2020; fewer had a hunting only permit (18%) or were members of the general public with a fall deer hunting permit (9%). A few (14%) had a fishing only permit for 2020 suggesting that they had hunted in the past and/or did not hunt at West Point in 2020.

Table 5. Characteristics of deer hunters.

Characteristics	Percent
Gender	
Male	95.6
Female	3.5
Self-describe or prefer not to say	0.9
Education	
High school diploma / G.E. D.	8.8
Some college or technical school	24.7
Associate's (2 year) degree	10.1
College undergraduate degree (e.g., B.A., B.S.)	23.8
Graduate or professional degree (e.g., M.S., Ph.D., M.D., J.D.)	32.6
Distance from West Point to home	
Live at West Point	30.0
Live within 10 miles	27.8
Live between 10 and 40 miles	30.4
Live more than 40 miles away	11.9
Status	
Active duty military	27.8
West Point civilian	21.7
Retired (under 65) or Senior (65+)	21.3
Cadet	10.0
Dependent	6.0
100% service disabled veteran	3.6
General public	9.6
Permit type	
Fishing	13.6
Sportsman	59.0
Hunting	18.2
General public hunting	9.2

Deer Hunting Experience

Those who hunted deer were experienced hunters with an average of 22.2 years in the field. Most had hunted deer at West Point (83%). Those who had hunted at West Point had done so for an average of 9.7 years. Among those who had hunted at West Point, almost half (48%) indicated they typically spend all or almost all their deer hunting time at West Point (Table 6). Three-quarters (76%) spend half or more of their deer hunting time at West Point. Military personnel were more likely to spend all or almost all of their deer hunting time at West Point compared to civilians (55% vs. 37%). No difference was found between avid and less avid hunters (Appendix Table D-1).

Table 6. Proportion of deer hunting done at West Point in a typical year.

Proportion of deer hunting done at West Point	Percent
All/almost all	48.3
More than half	15.9
About half	11.9
Less than half	13.4
None/hardly any	10.4

As might be expected, the most popular season to hunt deer was the regular gun season, with 76% of deer hunters indicating they typically hunt during the gun season at West Point (Table 7). We also asked respondents about their hunting behavior in areas outside of West Point: the regular gun season was also the most popular of the seasons at areas outside West Point. Early bow and late bow/muzzleloader seasons were less popular than regular gun season, but more popular than the crossbow season.

Table 7. Percentage of deer hunters who typically hunt deer during each season at or outside West Point.

Hunting seasons	Percent		
	At West Point	In NYS, but outside of West Point	Outside NYS
Early bow	40.0	27.7	11.4
Crossbow	15.9	15.9	4.1
Regular gun	75.9	37.1	29.4
Late bow / Muzzleloader	35.9	27.3	13.5

Deer Hunting Experiences in 2020

Of those who had hunted deer at some point in their life, 78% hunted deer in 2020. Of those who hunted in 2020, 82% hunted at West Point, 44% hunted in NYS, but outside of West Point, and 20% hunted outside NYS. These hunters went afield an average of 11.5 days at West Point, 6.2 days in NYS, but outside of West Point, and 2.3 days outside NYS (Table 8). The greatest number of days at each location occurred during the regular gun season, but the early bow season at West Point and in other parts of NYS was a close second. Military personnel spent more days on average hunting there than civilians (13.7 vs. 8.2 days). Avid hunters spent more days on average hunting there than less avid hunters (17.2 vs. 7.7 days). Gun only hunters were less likely than those using other implements to hunt at West Point in 2020 (89% vs. 97%), and hunted fewer days (4.7 vs. 18.7). See Appendix Table D-2 for all of these comparisons.

Table 8. Average days hunted by location and season for all those hunting in 2020.

Days hunted in 2020	Mean		
	In NYS, but outside of		
	At West Point	West Point	Outside NYS
Early bow	4.1	2.2	0.5
Crossbow	0.5	0.9	0.2
Regular gun	5.5	2.3	1.1
Late bow / Muzzleloader	1.3	0.7	0.5
TOTAL	11.5	6.2	2.3

Of those that hunted at West Point in 2020, most saw deer while hunting (92%) (Table 9). The average number seen was 15, but a few said they saw over 100 deer. About one in four (27%) hunters harvested an antlered deer, and 19% harvested an antlerless deer. Military personnel were no more likely to see deer while hunting than civilians, but they were much more likely to harvest an antlerless deer (28% vs. 7%). Avid hunters were not more likely to see deer while hunting than less avid hunters, but they were much more likely to harvest an antlered deer (37% vs. 20%) and an antlerless deer (29% vs. 13%). Gun only hunters were less likely to see deer while hunting than hunters hunting in other seasons (82% vs. 98%), but not less likely to harvest a deer than other hunters (Appendix Table D-3). Hunters indicated they were more successful at harvesting deer in an average year than in 2020 (Table 9). We note here that these numbers only reflect hunters' deer encounters and should not be used to infer overall deer population levels/densities. The difference between gun only hunters and those using other implements was quite striking, with 17% of gun only hunters harvesting an antlered deer versus 56% of other implement users, and 17% of gun only hunters harvesting an antlerless deer versus 44% of other implement users (Appendix Table D-3).

Table 9. Among those who deer hunted at West Point in 2020, the number of deer seen and harvested per hunter in 2020 and in an average year.

	In 2020		In an average year	
	% seeing or harvesting	Mean seen / harvested	% seeing or harvesting	Mean seen / harvested
Deer seen	92.2	15.5	67.8	18.3
Antlered deer harvested	26.7	0.31	41.9	0.54
Antlerless deer harvested	19.3	0.23	33.8	0.46

The Effects of EHD

Epizootic Hemorrhagic Disease (EHD) is an infectious viral disease found in deer transmitted by direct bite from an infected fly called a midge. It cannot be spread directly from one deer to another nor spread in any way to people. In the northeastern U.S. the disease has historically been limited to outbreaks in hotter, drier years from late summer and early fall through the first frost. In such acute outbreaks EHD is typically fatal to infected deer within a few days and can have a serious short-term impact on local deer populations. EHD was first detected in New York State in 2007, and in the Hudson Valley region in 2011. The disease re-emerged in 2020 in West Point where it claimed more than two dozen deer. In response, the West Point Natural Resources Branch disseminated a notice on the iSportsman website alerting hunters to the situation and to seek reports from hunters on any dead deer encountered at West Point while afield. In this study, we sought to understand how the recent emergence of EHD affected deer hunting at West Point. Among those who had hunted deer, 72% had heard of the presence of the disease at West Point, but only 22% of these respondents indicated it affected their hunting decisions in 2020. We asked about several ways their decision could have been affected – 28% indicated they hunted fewer days in 2020, 25% hunted more days outside West Point, and 17% decided not to hunt at West Point at all in 2020. Only 3% of all deer hunters decided not to hunt at West Point in 2020 because of EHD. Several respondents offered other decisions besides options listed in the survey. These included deciding not to harvest does, and harvesting fewer deer. There were no differences between military personnel and civilians, nor avid versus less avid hunters in terms of awareness of EHD or its impact on their hunting decisions (Appendix Table D-4). Those who typically hunted at West Point only during the regular gun season did not differ from other deer hunters in their awareness of EHD, but were less likely to have EHD affect their hunting decisions (11% vs. 28%).

Deer Hunting Motivations

We asked deer hunters why they hunted at West Point. We focused our motivation statements on reasons why people might choose West Point specifically over other potential locations rather than on more general motivations for deer hunting, such as a sense of achievement or appreciation of nature. We used factor analysis to identify groups of reasons reflecting these motivations. The five factors we found explained 65% of the variance. We named each general motivation, based on the individual items that comprise them, and present them in Table 10 in order from most important to least important to hunters. Over half to three-quarters of deer hunters (58-72%) thought access-familiarity related motivations were very important reasons they chose to hunt deer at West Point. The access motivation includes both access and familiarity within West Point and distance traveled to get to West Point. Gun only hunters felt access-related motivations were less important than hunters who used other implements

Table 10. Reasons for hunting deer at West Point in 2020.

Reasons for hunting deer at West Point in 2020	Percent				Mean*
	Not at all important	Slightly important	Moderately important	Very important	
Familiarity/Access (alpha=0.481)					3.5
Access is good	0.7	4.1	23.1	72.1	3.7
It is near where I live	6.0	7.3	20.7	66.0	3.5
I am familiar with the area	3.4	9.4	29.5	57.7	3.4
A secure hunting experience (alpha=0.866)					3.3
Hunting in a place where I know I won't be crowded by other hunters	3.3	5.3	22.7	68.7	3.6
Knowing how many other hunters are out at the same time as me	11.3	10.7	26.7	51.3	3.2
Feeling safer because people know where I am hunting	12.8	15.4	23.5	48.3	3.1
Military connection (alpha=0.815)					2.5
I trust military personnel as hunters	18.0	18.7	28.0	35.3	2.8
I feel safer because it is a military facility	24.3	18.9	22.3	34.5	2.7
It reinforces my military connections	46.3	16.1	19.5	18.1	2.1
Harvest (alpha=0.788)					2.6
Opportunity to bring home meat for my family	8.7	11.4	30.9	49.0	3.2
High quality of the deer habitat	13.3	18.7	38.0	30.0	2.8
High chance of harvesting a deer	13.4	20.8	41.6	24.2	2.8
Helping to control the deer population there	18.1	24.2	36.2	21.5	2.6
High chance of harvesting a large buck	24.2	27.5	26.8	21.5	2.5
Helping reduce the damage to native plants caused by deer	39.6	30.9	18.8	10.7	2.0
Social connection (alpha=0.396)					2.3
I have a long history of hunting there	32.0	19.3	16.0	32.7	2.5
I know many of the other hunters	36.2	26.8	25.5	11.4	2.1

*Measured on a 4-point scale where 1=not at all important to 4=very important.

(mean 3.4 vs. 3.6). The second most important motivation (“a secure hunting experience”) included aspects of the hunting experience that are unique to West Point – access to hunting areas is controlled and limited by the iSportsman system. Half to two-thirds of deer hunters (48-69%) indicated that knowing how many other hunters were out at the same time, not feeling crowded, and feeling safer because other people knew where they were hunting were very important reasons to hunt at West Point. The third factor, “military connection”, was moderately to very important for many people (57-63%) in terms of feeling safer while hunting, but reinforcing their military connections was a less important consideration. “Harvest motivations” included items related specifically to the quality of wildlife management: having a chance to harvest a deer and bring home meat for the family but also items related to producing deer such as quality habitat. Approximately half to four-fifths of hunters (48-80%) indicated these items were moderately to very important reasons for hunting at West Point. Far fewer hunters (29%) thought helping reduce the damage to native plants caused by deer was a moderately or very important reason to hunt at West Point. The last factor was related to maintaining a “social connection” through hunting. Two-thirds of hunters (64-68%) saw this as at least slightly important, but one-third (32-36%) did not see it as important at all.

Differences in Motivations Between Key Groups

We see a number of differences in motivations across groups of hunters. More avid hunters were highest on access-related motivations: more avid hunters likely put more time in and are advantaged by a nearby location. Access-related motivations were also more important to those who do not hunt only the regular gun seasons. Bowhunters (for example) often spend more time patterning deer movements; a well-accessed location is advantageous to them. Civilians—somewhat paradoxically—were more motivated by the uniqueness of the West Point hunting regulations than were military hunters; connection to military background is—quite reasonably—more important to military personnel than civilians. Interestingly, more avid hunters were also more motivated by this. Military hunters were less motivated than civilian hunters both by harvest-related motivations and social connections (see Appendix Table D-5 for all comparisons).

Deer Hunter Satisfaction

Three factors that were somewhat similar to those identified as motivations for hunting at West Point were identified by factor analysis as factors for satisfaction with deer hunting at West Point. These three factors explained 64% of the variance. The created factors include (1) hunting access and experience; (2) well-organized rules and procedures; and (3) harvest-related satisfactions. A single social connection satisfaction item did not load on any of these 3 factors and is included separately. Hunting access and experience were important elements for most

hunters and most hunters were satisfied (71-86%) with those aspects of their deer hunting experience at West Point in 2020; very few were dissatisfied (4-12%) (Table 11). Most hunters were also satisfied (69-78%) with management of hunting at West Point (i.e., clarity of regulations, administration procedures, and enforcement of regulations). A majority of hunters (51%) were satisfied with the social aspects of the hunting experience. Most of the remaining hunters were neither satisfied nor dissatisfied, likely reflecting the fact that this reason for hunting at West Point was not a strong motivation for hunting there. About half of the hunters (51%) were satisfied with their chances of harvesting a deer; fewer were satisfied with the

Table 11. Satisfaction with deer hunting experience at West Point in 2020.

West Point-related satisfactions	Percent					Mean*
	Very dissatisfied	Moderately dissatisfied	Neither satisfied nor dissatisfied	Moderately satisfied	Very satisfied	
Hunting access and experience (alpha=0.747)						4.1
Feeling safe while hunting	2.1	2.1	9.6	24.0	62.3	4.4
Feeling informed about harvest data	1.4	2.7	14.4	30.8	50.7	4.2
Not feeling crowded by other hunters	2.7	8.9	10.3	32.2	45.9	4.1
Ease of access	2.7	6.8	11.6	39.7	39.0	4.1
Quality of the deer habitat	4.1	3.4	21.2	43.2	28.1	3.9
Well-organized rules and procedures (alpha=0.747)						4.1
Clarity of regulations	1.4	4.1	16.4	30.8	47.3	4.2
Administration procedures (e.g., buying a permit, check-in check-out)	2.7	4.8	13.6	34.0	44.9	4.2
Enforcement of regulations	3.4	5.5	22.1	28.3	40.7	4.0
Harvest (alpha=0.796)						3.3
Chance of harvesting a deer	8.8	19.0	21.1	25.9	25.2	3.4
Chance of harvesting a large buck	6.8	25.3	29.5	24.0	14.4	3.1
Social connection						3.7
Camaraderie, knowing other hunters	0.7	2.8	45.8	29.9	21.5	3.7

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

chance of harvesting a large buck (38%). One quarter to one-third (28-32%) were dissatisfied. Unlike differences in motivations, we found very few differences in satisfaction elements across groups; no differences were found in level of satisfaction between military personnel and civilians, nor between avid and less avid hunters. Gun only hunters were more satisfied with the hunting access and experience factor than hunters who used other implements (Appendix Table D-6).

Satisfaction Over Time

We asked hunters how their satisfaction with specific elements of the hunting experience at West Point had changed since they first began hunting at West Point (Table 12). A majority of hunters said the hunting access and experience aspect of hunting at West Point was about the same as when they first started hunting there. The remaining hunters were more likely to indicate those aspects had improved rather than worsened. Similar findings were seen for management and social aspects. Administration procedures and feeling informed about harvest data stand out as areas in particular where more hunters thought things were better now than when they first started hunting at West Point. The chance of harvesting a deer or large buck was seen by about half the hunters (48-51%) as about the same now as when they first started hunting at West Point. One quarter to one-third (25-33%) thought their chances were worse now.

In comparing these responses across our key groupings, civilians were more positive about perceived changes in access and the hunting experience over time than were military personnel (although it should be noted that all groups perceived change as more positive than negative). Those hunting gun only seasons were also more positive about these perceived changes over time. The same relationships were found for satisfaction with rules and procedures (civilians and gun-only hunters perceived changes in rules and regulations more positively than did military personnel and those hunting seasons other than the regular gun season). See Appendix Table D-7 for all comparisons.

Table 12. Changes in deer hunting at West Point since respondent first began hunting there.

Changes in deer hunting at West Point	Percent					Mean*
	Much worse	Somewhat worse	About the same	Somewhat better	Much better	
Hunting access and experience						3.4
Feeling safe while hunting	0.6	1.7	68.2	14.5	15.1	3.4
Feeling informed about harvest data	0.0	2.8	49.4	23.9	23.9	3.7
Not feeling crowded by other hunters	2.8	7.8	57.8	17.2	14.4	3.3
Ease of access	5.0	7.8	60.0	15.6	11.7	3.2
Quality of the deer habitat	1.7	7.2	71.1	13.9	6.1	3.2
Well-organized rules and procedures						3.4
Clarity of regulations	1.1	3.9	69.3	16.2	9.5	3.3
Administration procedures (e.g., buying a permit, check-in check-out)	0.6	5.0	45.0	28.3	21.1	3.6
Enforcement of regulations	1.7	4.4	71.1	15.0	7.8	3.2
Harvest						2.9
Chance of harvesting a deer	14.3	18.7	48.4	13.7	4.9	2.8
Chance of harvesting a large buck	7.3	17.3	51.4	19.6	4.5	3.0
Social connection						3.2
Camaraderie, knowing other hunters	2.8	4.4	68.3	17.8	6.7	3.2

*Measured on a 5-point scale where 1=much worse to 5=much better.

We explored how specific regulation and management practices to reduce hunting pressure (e.g., reducing the number of public hunting permits) that were put into place starting in 2010 were perceived by hunters. Here, we divided hunters into two groups – those who hunted 11 years or less at West Point (70%) and were therefore less likely to have experienced anything other than the current management practices, and those who had hunted 12 years or more (30%) who likely hunted before and after the changes were put in place (Table 13). We see that long-term hunters were more likely to perceive that rules and procedures had changed for the better, suggesting greater clarity and effectiveness, but less likely to be satisfied with harvest-related factors, suggesting a perception that harvest has declined over the longer term.

Table 13. Changes in deer hunting over time, overall and by years hunted.

Changes in deer hunting at West Point	Mean*		
	Overall	Hunted 11 years or less	Hunted 12 years or more
Hunting access and experience	3.4	3.3	3.4
Well-organized rules and procedures	3.4	3.3 ^a	3.5
Harvest	2.9	3.0 ^a	2.7
Social connection	3.2	3.2	3.2

*Measured on a 5-point scale where 1=much worse to 5=much better.

^aStatistically significant difference between deer hunters who hunted 11 years or less at West Point and those who hunted 12 years or more at P<0.05 using t-test.

Deer Hunting at West Point Compared to Other Areas

We asked deer hunters to directly compare West Point to other areas where they may hunt in NYS. Our findings that many hunters emphasized not feeling crowded by other hunters, feeling safe while hunting and ease of access were confirmed by their assessment that these aspects of the hunting experience were largely perceived as better at West Point than in other areas of NYS (Table 14). Hunters were much more likely to rate West Point as better than other areas for not feeling crowded by other hunters (73% rating it as better versus 6% rating it as worse); feeling safe while hunting (71% vs 2%); ease of access (51% vs 12%); opportunity to harvest a deer (37% vs 11%); and deer habitat (37% vs 6%). Only the opportunity to harvest a large buck was seen as about the same at West Point versus other areas of NYS: about half the hunters believed this, with the remainder relatively evenly split between better and worse at West Point. No differences in these assessments were found in any of our comparison groups, with a single exception: less avid hunters were more likely than more avid hunters to rate access related issues as better at West Point (Appendix Table D-8).

Table 14. Comparison of deer hunting at West Point with other areas of NYS.

	Percent		
	Worse at West Point	About the same	Better at West Point
Not feeling crowded by other hunters	5.5	22.0	72.5
Feeling safe while hunting	2.2	27.1	70.7
Ease of access	11.5	37.4	51.1
Opportunity to harvest a deer	11.4	51.6	37.0
Habitat for deer	6.1	57.5	36.5
Opportunity to harvest a large buck	23.0	50.3	26.8

Overall satisfaction with the deer hunting experience at West Point in 2020 was high, with two-thirds of deer hunters satisfied (67%, 33% were greatly satisfied) (Table 15). Twenty-one percent were dissatisfied to some degree; the remaining 12% were neither satisfied nor dissatisfied. Outside West Point but within NYS, the percentage of hunters who were satisfied with their deer hunting experience in 2020 was somewhat lower (57% vs 67%). Only 13% were greatly satisfied with their hunting elsewhere in NYS (compared to 33% at West Point). We found no differences in overall satisfaction inside or outside West Point between any of our key grouping variables (Appendix Table D-9).

Table 15. Overall satisfaction with deer hunting at West Point and in NYS, but outside of West Point in 2020.

Overall satisfaction	Percent	
	At West Point	In NYS, but outside of West Point
Greatly dissatisfied	4.5	3.3
Moderately dissatisfied	9.1	6.6
Slightly dissatisfied	7.1	5.0
Neither dissatisfied nor satisfied	12.3	28.1
Slightly satisfied	12.3	15.7
Moderately satisfied	21.4	28.1
Greatly satisfied	33.1	13.2
	Mean*	
	5.1	4.8

* Measured on a 7-point scale where 1=greatly dissatisfied to 7=greatly satisfied.

We asked deer hunters to consider how important being at West Point (the place) was to their hunting experience. We found hunters were almost equally divided among the range of answer choices we provided (Table 16). At one end of the spectrum, 24% felt being at West Point was the most important part of a deer hunting trip, at the other end 22% felt that where they deer hunted didn't really matter, the deer hunting itself was most important. In between 31% felt being at West Point was important but there were a few other places where they deer hunt, and 23% felt being at West Point was pleasant, but they could enjoy deer hunting in many other places. Civilians were more likely than military personnel to feel being at West Point was important but there were a few other places where they deer hunt (Appendix Table D-10). Military personnel were three times as likely than civilians to feel being at West Point was pleasant, but they could enjoy deer hunting in many other places. Perhaps this is because military personnel move more frequently than civilians so have less opportunity to develop feelings of attachment to a place like West Point. There were no differences in our other key grouping variables.

Table 16. Importance of West Point as a place for deer hunting.

Importance of West Point	Percent
Very Important: Being at West Point is the most important part of a deer hunting trip	24.0
Somewhat Important: Being at West Point is important but there are a few other places where I deer hunt	31.1
Somewhat unimportant: Being at West Point is pleasant, but I could enjoy deer hunting in many other places	23.0
Very unimportant: Where I deer hunt doesn't really matter; the deer hunting itself is most important	21.9

Comparisons with Previous West Point study

In the previous study conducted with deer hunters in 2000, the sample was divided into military personnel and civilian staff versus general public hunters (Enck and Brown, 2001). Twenty years ago, the goals of wildlife management at West Point focused more on reducing an over abundant deer herd, therefore, the general public had a larger role in deer hunting. The goals have changed in 20 years; because so few respondents in the current study were general public hunters (<10%), comparisons are made with the previous study's military/civilian component. In 2000, 100% of deer hunters were male, had an average age of 42.8, and 34% had some type of graduate or professional degree. In 2021, there were a few female hunters (4%), the average age was a little older (45.1), reflecting national patterns, and a similar percentage had a graduate or professional degree (33%). Each cohort had hunted deer for a similar number of years on average (21 years for the 2000 group, 22 years for the 2021 group). Therefore, aside from a small uptick in female hunters, the demographic profile of West Point deer hunters has remained quite stable over the past 20 years.

In 2000 deer hunters were asked why they hunted at West Point. The reasons mentioned most frequently were "I feel less crowded there compared to other places" (62%) and "I feel safer there compared to other places" (59%). These were the same two reasons hunters in 2021 mentioned most frequently as being better at West Point than elsewhere – 73% less crowded and 71% feeling safer. The quality of the deer habitat, opportunity to harvest a deer, and the opportunity to harvest a large buck were seen as more important reasons for hunting at West Point in 2021 compared with 2000 for more hunters – deer habitat (37% in 2021 vs. 30% in 2000), harvest a deer (37% in 2021 vs. 31% in 2000), and harvest a large buck (27% in 2021 vs. 14% in 2000).

Overall satisfaction with the deer hunting experience was high, on average, at West Point but substantively lower in 2021 than in 2000 (5.2 in 2021 vs. 6.2 in 2000, as measured on a 7-point scale where 1 = greatly dissatisfied and 7 = greatly satisfied). Overall satisfaction with deer

hunting experiences in NYS, but outside West Point was also lower than for experiences at West Point both in 2021 and 2000 (4.8 in 2021 and 5.2 in 2000, as measured on a 7-point scale where 1 = greatly dissatisfied and 7 = greatly satisfied). Again, satisfaction was lower in 2021 than in 2000. This suggests that declines in deer hunter satisfaction were not limited to experiences at West Point, but part of a larger trend, although we do note that the decline in satisfaction was steeper at West Point than in NYS overall.

Hunting for Other Species at West Point

Although much of our study focused specifically on deer hunting, about one-third (31%) of those who utilized West Point facilities in 2020 hunted for game species other than deer (e.g., turkey, pheasant, bear). Three-quarters of these respondents (77%) also hunted for deer at West Point in 2020; 59% of deer hunters hunted for other game species.

Besides deer, turkey and pheasant were the most popular game species hunted, with 21% and 19% respectively hunting these species at West Point in the past five years (Table 17). Bear and other small game were hunted by about 15% of respondents; waterfowl by less than 10%. No differences were found between military personnel and civilians in the proportion hunting any of these other game species (note that we no longer are engaging our other comparison groups, as each of these comparisons requires that the participant hunt deer). Of those who had hunted a particular species in the past five years, most had also hunted that species in 2020 (70-86%), suggesting some consistency in year-to-year hunting. The average number of days hunted in 2020 for each species was in the 6-8 day range.

Table 17. Participation in hunting for species other than deer at West Point in the past 5 years, in 2020, and mean days hunted in 2020 by species hunted.

Species other than deer hunted	Percent who hunted in past 5 years	Of those who hunted species in past 5 years, percent who hunted in 2020	Of those who hunted for species in 2020, mean days hunted
Turkey	20.8	80.7	7.3
Pheasant	18.5	75.6	6.4
Bear	13.8	86.4	7.3
Waterfowl	9.4	70.0	7.9
Other small game (e.g., rabbits, squirrels, grouse)	14.8	73.8	5.8

In a typical year, about two-thirds (69%) of those who hunted for species other than deer spent half or less than half of their time hunting for those species at West Point (Table 18). This suggests that many hunters do most of this type of hunting in areas outside of West Point, and

that West Point supplements opportunities they have elsewhere. This stands in contrast to the deer hunting, as many hunters emphasized their West Point opportunities more than other locales.

Table 18. In a typical year the proportion of hunting for species other than deer done at West Point.

Proportion of hunting for species other than deer done at West Point	Percent
All/almost all	21.7
More than half	9.4
About half	21.7
Less than half	31.9
None/hardly any	15.2

Over half of the hunters who hunted for species other than deer, with the exception of bear hunters, were satisfied with their experiences at West Point in 2020 (Table 19). Most hunters (63-76%) were at least somewhat satisfied with their hunting for turkey and pheasant at West Point in 2020; 14-15% were dissatisfied to some extent. Satisfaction was lower for bear hunters: only 35% were at least somewhat satisfied, half (51%) were neither satisfied nor dissatisfied, and only 15% were satisfied. Two-thirds of waterfowl hunters were satisfied to some extent, but 25% were dissatisfied. Half of those hunting for other small game such as rabbits, squirrels and grouse (51%) were satisfied with their experience in 2020; 33% were neither satisfied nor dissatisfied.

Table 19. Satisfaction with hunting for species other than deer at West Point in 2020 by species hunted.

Species other than deer hunted	Percent					Mean*
	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	
Turkey	2.8	12.7	21.1	36.6	26.8	3.7
Pheasant	3.4	10.2	10.2	42.4	33.9	3.9
Bear	2.0	11.8	51.0	23.5	11.8	3.3
Waterfowl	14.3	10.7	10.7	60.7	3.6	3.3
Other small game (e.g., rabbits, squirrels, grouse)	0.0	15.6	33.3	31.1	20.0	3.6

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

Fishing at West Point

Three-quarters of respondents (76%) had fished at West Point in the past 5 years. Among those who utilized West Point facilities in 2020, 77% went fishing. West Point anglers (those who had fished in the past 5 years) were demographically similar to hunters, averaging 46.2 years old. Almost all were male (92%) and most lived at or within 40 miles of West Point (89%) (Table 20). All anglers had at least a high school diploma and over one-third (37%) had some type of graduate or professional degree. Half of the anglers (53%) had a fishing only permit in 2020; 40% had a sportsman permit, enabling hunting. A few had a hunting only permit for 2020 (6%) suggesting that they had fished in the past at West Point but not in 2020.

Table 20. Characteristics of those who have fished at West Point in the last 5 years.

Characteristics	Percent
Gender	
Male	92.0
Female	7.0
Self-describe or prefer not to say	0.9
Education	
High school diploma / G.E. D.	11.1
Some college or technical school	21.9
Associate's (2 year) degree	9.5
College undergraduate degree (e.g., B.A., B.S.)	20.3
Graduate or professional degree (e.g., M.S., Ph.D., M.D., J.D.)	37.1
Distance from West Point to home	
Live at West Point	34.0
Live within 10 miles	27.0
Live between 10 and 40 miles	28.6
Live more than 40 miles away	10.5
Status	
Active duty military	31.5
West Point civilian	23.5
Retired (under 65) or Senior (65+)	24.1
Cadet	9.1
Dependent	7.5
100% service disabled veteran	4.3
Permit type	
Fishing	53.4
Sportsman	39.8
Hunting	6.1
Cadet six-month angler	0.6

Bass (67%) and trout (58%) were the most popular species that anglers fished for at West Point in the past five years (Table 21). Other species, such as panfish, walleye and tiger muskie, were targeted by a little less than half the anglers (47%) over the past five years; catfish were targeted by 24% of anglers. No differences were found between military personnel and civilians in their species selection. Of those who had fished a particular species in the past five years, most had fished for that species in 2020 (81-90%), suggesting consistency in year-to-year fishing. The average number of days fished in 2020 for each species was in the 13-17 day range, with fewer days on average for catfish (9 days). Over half of the anglers (59%) fished at both non-recreation areas, like Stilwell Lakes, and recreation areas, such as Round Pond in 2020, with the remainder evenly split between non-recreation areas (21%) and recreation areas (20%). Anglers fished an average of 14 days in 2020 at non-recreation areas and 7 days at recreation areas.

Table 21. Participation in fishing at West Point in the past 5 years, in 2020, and mean days fished in 2020 by fish species.

Fish species	Percent who fished in past 5 years	Of those who fished for species in past 5 years, percent who fished in 2020	Of those who fished for species in 2020, mean days fished
Bass	66.5	89.8	17.4
Trout	57.8	89.9	13.3
Catfish	24.4	81.4	9.5
Other species (e.g., panfish, walleye, tiger muskie)	46.6	86.8	15.6

In contrast to hunting species other than deer, anglers depend heavily on West Point facilities for their angling; among those who had fished at West Point, 40% indicated they typically spend all or almost all their fishing time at West Point (Table 22), and about three-quarters (73%) spend half or more of their fishing time at West Point.

Table 22. The proportion of fishing done at West Point in a typical year.

Proportion of fishing done at West Point	Percent
All/almost all	39.8
More than half	18.8
About half	14.4
Less than half	20.1
None/hardly any	6.9

Over half of the anglers (52-73%) were satisfied with their fishing experiences at West Point in 2020 (Table 23). Dissatisfaction was generally low, in the 11% to 16% range. Dissatisfaction was highest among trout anglers (21%).

Table 23. Satisfaction with fishing at West Point in 2020 by fish species.

Fish species	Percent					Mean*
	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	
Bass	2.4	11.0	14.6	39.8	32.3	3.9
Trout	4.1	16.7	18.0	36.0	25.2	3.6
Catfish	3.6	12.0	32.5	32.5	19.3	3.5
Other species (e.g., panfish, walleye, tiger muskie)	1.2	9.4	16.5	42.9	30.0	3.9

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

West Point managers were interested specifically in angling effort and success for walleye and tiger muskies. Walleye were historically stocked in Popolopen and Stilwell Lakes. Although this stocking was later discontinued, West Point managers are interested in holdover walleye. Walleye stocking was replaced by the annual state stocking of tiger muskie in Popolopen Lake. Some of those stocked tiger muskie have made their way downstream into Mine Lake and Lake Stilwell, and managers are interested in learning whether they are being targeted by anglers. Of those who fished at West Point in 2020, 10% caught walleye and 8% caught tiger muskie. Among those who caught walleye, the average catch was 3.4 fish in 2020 (range=1-15 fish). Those catching tiger muskie averaged catch was 3.0 fish (range=1-10).

Among those who fished at West Point in 2020, about one-third (32%) were satisfied with boating facilities (e.g., docks, ramps) at West Point and one-quarter (26%) were dissatisfied; the remainder (42%) were neither satisfied nor dissatisfied. We are unable to compare satisfaction levels between recreation and non-recreation areas, as respondents only provided aggregate satisfaction levels.

Management Preferences

We asked respondents for their views on a number of regulations, potential management actions and activities that could be undertaken at West Point, as well as their evaluation of the iSportsman system. Some questions were only relevant to deer hunters and will be discussed first. The remaining questions were asked of all respondents, with results reported for everyone

and then broken down for questions with statistically significant differences between those who had hunted in 2020 and those who only fished in 2020. Similar to previous sections, the tables with all comparisons between our three groups of interest can be found in the appendix; only significant differences will be discussed in the text. Where direct comparisons about satisfaction with regulations exist between the current study and the 2001 study, we present those findings as well.

Management Actions Specific to Deer Hunting

Deer hunters were asked about the impact of special requirements on their hunting satisfaction (Table 24). Two-thirds of hunters (65%) indicated that the requirements to sign-in and sign-out and wear blaze orange increased their hunting satisfaction; only about 10% or less felt these requirements diminished their satisfaction. Of particular interest to West Point managers were hunters views on the “3-point” rule (i.e., antlered deer must have at least 3 antler points on one side to be eligible for harvest). This rule increased the satisfaction for a majority (59%) of hunters, while decreasing it for only 16% of hunters. West Point managers were especially interested in whether different types of hunters (i.e., more avid versus less avid; long term versus newer hunters; gun only versus those hunting with other implements, etc.) varied in their support of the 3 point rule. We conducted these analyses and found only one significant difference: long-term hunters (those who had hunted for more than 10 years) were significantly more likely to say that the rule increases their satisfaction than those who had hunted for 10 or fewer years (mean=4.0 vs. 3.3). We found no other differences across hunter types. Few hunters (~15%) felt the requirements to take an annual safety training, and take harvested deer to a check station during the regular gun season decreased their satisfaction. No differences were found between military personnel and civilians on satisfaction with any of the regulations; more avid hunters were more satisfied with the ‘sign in/sign out’ regulation than less avid hunters, and regular gun season only hunters were more satisfied with the hunter training requirements (Appendix Table D-11).

In 2000, Enck and Brown (2001) asked about some of the same regulations and found similar results – 59% indicated that the requirement to sign-in and sign-out increased their hunting satisfaction, and 68% indicated that the requirement to wear blaze orange increased their hunting satisfaction. Somewhat more hunters (63%) indicated in 2001 that the requirement to take their deer to a check station increased their hunting satisfaction compared to hunters in 2021 (53%).

Table 24. Impact of existing special requirements on deer hunter satisfaction.

Existing special requirements	Percent					Mean*
	Greatly diminishes my satisfaction	Somewhat diminishes my satisfaction	Neither diminishes nor increases my satisfaction	Somewhat increases my satisfaction	Greatly increases my satisfaction	
All hunters must sign-in and sign-out on hunting days	1.6	9.1	24.1	21.4	43.9	4.0
All hunters must wear blaze orange	3.7	5.9	25.0	23.4	42.0	3.9
Antlered deer must have at least 3 antler points on one side^a	5.3	11.2	24.6	19.3	39.6	3.7
All deer harvested must be taken to a check station during regular gun season	3.7	11.2	31.9	16.5	36.7	3.7
All hunters must take an annual safety training	6.9	10.1	41.5	13.3	28.2	3.5

*Measured on a 5-point scale where 1=greatly diminishes my satisfaction to 5=greatly increases my satisfaction.

^aStatistically significant difference based on number of years hunted deer at P<0.05 using t-test.

Managers were also interested in learning more about the attitudes of hunters regarding the rules of tree stand use. Approximately two-thirds of deer hunters favored requiring the tree stand to be labeled with the owner’s contact information (68%), allowing it to remain up for the entire season (63%), and be removed at the end of the season (66%) (Table 25). Fewer hunters (46%) favored allowing one person to have multiple tree stands; 21% opposed that rule. Military personnel were more likely than civilians to allow a single hunter to have multiple tree stands, as were deer hunters who hunted seasons other than the regular gun deer season (Appendix Table D-12). In contrast, deer hunters who only hunted the regular gun deer season were more likely to support a requirement that tree stands be removed at the end of the season.

Table 25. Deer hunter attitudes on tree stand rules.

Tree stand regulations	Percent					Mean*
	Strongly oppose	Somewhat oppose	Neither oppose nor favor	Somewhat favor	Strongly favor	
The tree stand must be labeled with owner’s contact information	2.6	6.9	22.8	22.8	45.0	4.0
The tree stand must be removed at the end of the season	6.3	7.4	20.6	14.8	50.8	4.0
The tree stand may remain up for the entire hunting season	8.0	3.7	25.0	19.1	44.1	3.9
One person may have multiple tree stands	9.0	11.7	33.0	16.0	30.3	3.5

*Measured on a 5-point scale where 1=strongly oppose to 5=strongly favor.

Management Actions Relevant to All Users

Respondents were asked how strongly they supported or opposed a variety of more general potential management actions (i.e., not solely focused on deer hunting). The action favored by the largest percentage of respondents (74%) was to increase opportunities to practice marksmanship (Table 26). This action was favored to some degree by 85% of those who hunted in 2020, and strongly favored by 65% of hunters. Thirty-eight percent of respondents favored providing more opportunities for social interactions among hunters and anglers, but the majority (55%) neither favor nor opposed this idea. The majority (58%) also neither favored nor opposed the idea of discontinuing the opening day lottery. (The Opening Day Lottery is a traditional Opening Day procedure whereby a few weeks before Regular Gun Season, a lottery is held for people to reserve a spot to hunt in a preferred, specific hunting area on Opening Day. To accommodate this process, the iSportsman check in/out system is shut down on Opening Day and all check in/out is done in-person at Hunt Control. Individuals who have reserved a spot through the Opening Day Lottery can early check-In to these areas the day before so that they can immediately go out to hunt on opening day. Twenty percent wanted to keep the opening day lottery; a similar percentage (22%) wanted to see it discontinued. Half of the hunters (51%) strongly opposed requiring blaze orange during bow hunting season; few hunters favored it (18%). A plurality of hunters (42%) opposed developing a specific part of West Point (Area H) as a cadet-only hunting area; fewer (26%) favored doing so. Also related to cadet deer hunting, 33% of hunters opposed eliminating the “3 to a side antler restriction rule” for cadets when deer hunting. A plurality of hunters (44%) neither favor nor opposed this

Table 26. Support or opposition to potential management actions for all respondents, and by those who hunted in 2020 versus those who only fished.

Potential management actions	Percent					Mean*
	Strongly oppose	Somewhat oppose	Neither oppose nor favor	Somewhat favor	Strongly favor	
Increase opportunities to practice marksmanship^a	0.0	0.5	26.0	20.9	52.7	4.3
Hunted in 2020	0.0	0.6	15.0	19.8	64.7	4.5
Fishing only in 2020	0.0	0.5	34.9	20.3	44.3	4.1
Provide more opportunities for social interaction among hunters and anglers	3.1	3.9	54.9	20.4	17.8	3.5
Hunted in 2020	7.4	3.7	47.9	20.2	20.9	3.4
Fishing only in 2020	0.0	3.6	57.8	21.9	16.7	3.5
Discontinue the opening day lottery	12.2	7.9	58.2	9.4	12.2	3.0
Hunted in 2020	22.2	9.0	40.1	10.8	18.0	2.9
Fishing only in 2020	4.7	6.8	73.4	6.8	8.3	3.1
Require blaze orange during bow hunting season^a	27.7	9.0	31.3	9.0	23.1	2.9
Hunted in 2020	51.2	12.0	18.7	6.6	11.4	2.1
Fishing only in 2020	9.9	5.8	43.5	11.0	29.8	3.4
Develop Area H as a cadet-only hunting area^a	18.0	13.4	46.1	11.1	11.4	2.8
Hunted in 2020	28.0	13.7	32.1	14.3	11.9	2.7
Fishing only in 2020	10.4	13.5	55.4	8.8	11.9	3.0
Eliminate the “3 to a side antler restriction rule” for cadets when deer hunting	20.6	12.5	44.3	9.4	13.2	2.8
Hunted in 2020	31.7	15.6	23.4	10.2	19.2	2.7
Fishing only in 2020	13.0	8.8	61.1	7.3	9.8	2.9

* Measured on a 5-point scale where 1=strongly oppose to 5=strongly support.

^aStatistically significant difference between hunters and those who only fished in 2020 at P<0.05 using t-test.

potential change; 23% supported it. There were no differences between military personnel and civilians for any of these potential management actions (Appendix Table D-13).

Respondents, particularly hunters and civilians, were quite satisfied with the iSportsman system (Table 27). For example, 70% of all respondents, 81% of those who hunted in 2020, and 77% of civilians were satisfied with using iSportsman to purchase a permit. Two-thirds of respondents (66%) and 75% of those who hunted were satisfied with the ease of navigation. Three-quarters of hunters were satisfied with using iSportsman to report game harvest; very few were dissatisfied (5%). Civilians and those over 50 were more likely to be satisfied with customer support than their counterparts, who were more likely to be neither satisfied nor dissatisfied. Few respondents were dissatisfied with any of the aspects of the iSportsman system we asked about. The aspect with the highest dissatisfaction rate was sign-in, sign-out procedures among those who only fished (18% dissatisfied) (Appendix Table D-14).

Table 27. Satisfaction with aspects of the iSportsman system for all respondents, and by those who hunted in 2020 versus those who only fished, and those aged 18-50 versus over 50.

Aspects of the iSportsman system	Percent					Mean*
	Very dissatisfied	Moderately dissatisfied	Neither	Moderately satisfied	Very satisfied	
Purchasing a permit^{a,b}	3.3	9.6	16.9	34.6	35.6	3.9
Hunted in 2020	3.6	6.0	9.0	37.1	44.3	4.1
Fishing only in 2020	3.1	12.2	23.5	31.6	29.6	3.7
18-50 years old	3.6	8.6	21.3	37.6	29.0	3.8
51+ years old	2.9	10.3	11.5	31.0	44.3	4.0
Access to hunting and fishing information^a	1.5	9.4	23.3	37.2	28.6	3.8
Hunted in 2020	0.6	6.5	17.3	39.3	36.3	4.0
Fishing only in 2020	2.1	11.3	28.4	35.1	23.2	3.7
18-50 years old	0.9	10.0	26.7	36.7	25.8	3.8
51+ years old	2.3	8.1	19.1	38.2	32.4	3.9
Ease of navigation^{a,b}	2.8	8.1	23.0	39.0	27.1	3.8
Hunted in 2020	4.2	6.0	14.9	39.3	35.7	4.0
Fishing only in 2020	1.5	10.3	27.8	38.7	21.6	3.7
18-50 years old	3.2	8.6	26.4	38.6	23.2	3.7
51+ years old	2.3	7.5	18.4	39.7	32.2	3.9
Reporting game harvest^a	0.0	4.1	46.4	23.7	25.8	3.7
Hunted in 2020	0.0	4.8	19.0	33.9	42.3	4.1
Fishing only in 2020	0.0	3.7	67.5	15.2	13.6	3.4
18-50 years old	0.0	5.9	48.4	22.8	22.8	3.6
51+ years old	0.0	1.7	44.2	24.4	29.7	3.8
Sign-in, sign-out procedures^a	4.5	11.1	24.5	32.6	27.3	3.7
Hunted in 2020	4.2	8.9	10.7	36.3	39.9	4.0
Fishing only in 2020	4.6	13.8	33.3	29.7	18.5	3.4
18-50 years old	3.6	12.3	27.3	34.5	22.3	3.6
51+ years old	5.7	9.1	21.1	30.3	33.7	3.8
Customer support^b	3.3	7.9	44.1	21.9	22.7	3.5
Hunted in 2020	4.2	4.8	40.5	24.4	26.2	3.6
Fishing only in 2020	1.0	10.5	47.6	20.4	20.4	3.5
18-50 years old	3.2	7.3	53.4	17.4	18.7	3.4
51+ years old	2.9	8.7	32.6	27.9	27.9	3.7

* Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

^aStatistically significant difference between hunters and those who only fished in 2020 at P<0.05 using t-test.

^bStatistically significant difference between those 18-50 years old and those 51+ years old at P<0.05 using t-test.

Respondents were told in the survey that “Part of the hunting and fishing program is funded by the sale of permits (e.g., purchase of targets; iSportsman subscription; stocking of pheasants, trout, and other fish species). Annual revenue currently matches expenditures. Within five years, it is expected that expenditures will exceed revenue.” They were then asked for their views on how the program and fees should be managed in the future. They were provided with four options, shown in Table 28. A plurality of all respondents (45%) and a majority of respondents with an opinion (52%) thought fees should be increased to maintain current program support. Approximately one-quarter thought fees should be increased more substantially to provide for additional program support. No differences were found between those who hunted in 2020 and those who only fished, nor between military personnel and civilians (Appendix Table D-15).

Table 28. Respondents’ attitudes towards the level of future funding and program support for all respondents and for those with an opinion.

Options for future programs and funding	Percent	
	All respondents	Those with an opinion
Keep fees at current rates, resulting in less stocking and facility maintenance	17.4	20.3
Increase fees to <u>maintain</u> current program support	44.7	52.2
Increase fees <u>more substantially</u> to provide additional program support beyond current levels	23.5	27.4
No opinion	14.4	

Respondents were asked how interested they would be in participating in a series of activities if they were made available at West Point. Interest was greatest in participating in “how to” seminars, with 71% of respondents indicating some level of interest (Table 29). Hunters were more likely to have a greater level of interest than those who only fished in 2020. About half of the respondents expressed some level of interest in the remaining activities. Almost half of the hunters were moderately or very interested in mentoring new hunters (48%) and renting duck blinds (46%). There were no differences between military personnel and civilians for any of these potential activities (Appendix Table D-16).

Table 29. Level of interest in potential activities at West Point for all respondents, and by those who hunted in 2020 versus those who only fished.

Potential activities at West Point	Percent				Mean*
	Not at all interested	Somewhat interested	Moderately interested	Very interested	
Participating in “how to” seminars^a	28.9	29.2	22.0	19.9	2.3
Hunted in 2020	24.1	28.3	19.9	27.7	2.5
Fishing only in 2020	32.5	27.7	25.1	14.7	2.2
Mentoring new anglers	42.5	22.9	19.3	15.2	2.1
Hunted in 2020	44.8	18.8	19.4	17.0	2.1
Fishing only in 2020	37.4	26.3	21.6	14.7	2.1
Berry picking	45.4	20.0	17.9	16.7	2.1
Hunted in 2020	45.8	19.9	19.3	15.1	2.0
Fishing only in 2020	43.7	18.9	18.9	18.4	2.1
Campfire events	40.5	27.8	18.4	13.2	2.0
Hunted in 2020	38.2	26.7	19.4	15.8	2.1
Fishing only in 2020	41.9	28.5	18.8	10.8	2.0
Mentoring new hunters^a	50.5	19.3	15.4	14.8	1.9
Hunted in 2020	25.3	26.5	24.7	23.5	2.5
Fishing only in 2020	69.6	13.6	8.2	8.7	1.6
Gathering mushrooms	54.1	15.3	13.2	17.4	1.9
Hunted in 2020	48.5	18.2	13.9	19.4	2.0
Fishing only in 2020	59.4	11.2	12.8	16.6	1.9
Going on a guided nature hike	47.2	25.8	14.4	12.6	1.9
Hunted in 2020	53.6	21.1	13.3	12.0	1.8
Fishing only in 2020	44.1	28.2	13.8	13.8	2.0
Duck blind rental^a	55.9	14.4	14.4	15.2	1.9
Hunted in 2020	37.7	16.8	21.0	24.6	2.3
Fishing only in 2020	70.6	12.8	8.6	8.0	1.5

* Measured on a 4-point scale where 1=not at all interested to 4=very interested.

^aStatistically significant difference between hunters and those who only fished in 2020 at P<0.05 using t-test.

Comparing West Point Results with Other Studies

We thought it useful to attempt to put our West Point deer hunter study results into broader context, by comparing deer hunter attributes, satisfaction, and—where comparable—views on regulations with results obtained from other studies conducted throughout New York State,

and in the southeast region of NY (where West Point is located) in particular. In terms of deer hunter attributes, West Point hunters were younger (average age 45 years) than in other statewide studies (53 years in Enck et al. 2011, and 55 years in Siemer et al. 2015), and had hunted deer for fewer years (22 years on average) than in Enck et al. 2011 (31 years) or Siemer et al. 2015 (32 years). This difference may reflect the presence of cadets among West Point's deer hunters. Even though deer hunting is a male-dominated activity, West Point deer hunters were even more likely to be male than the state averages. In the 2010 statewide deer hunter survey (Enck et al. 2011), statewide 91% of respondents were male (in our study, this figure was 96%). This difference is especially interesting, given that the Enck study was conducted a decade ago and female hunting participation has been trending upward in recent years.

We also sought to compare hunter satisfaction at West Point with results obtained via other CCSS studies (note that we do not compare motivations, as the motivation items we asked in the current study were specifically targeted towards elements of the West Point hunting experience, and therefore not comparable with previous work). Siemer et al. (2015) asked about harvest-related satisfactions with hunting in the Wildlife Management Unit (WMU, these are the spatial units that DEC uses to manage wildlife, especially deer populations and harvest levels via the allocation of permits to harvest antlerless deer) the particular hunter hunted most often (Table 30). In comparing these results, West Point hunters are more likely to be dissatisfied with their chances of harvesting a deer (mean=3.4, 28% dissatisfied) than the hunters in Siemer et al. (2015), with mean= 3.9 and 15% dissatisfied. West Point hunters expressed only slightly less satisfaction to the hunters in Siemer et al. (2015) about their chance of harvesting a large buck (mean = 3.1 vs 3.2; 38% satisfied vs 46% satisfied). It is reasonable to assume that the lower levels of satisfaction at West Point is at least in part tied to the fact that Siemer et al. (2015) asked hunters about their satisfaction with the WMU they hunted most often. Presumably, a hunter would hunt a WMU most often because it was more satisfying for them to hunt there than other, WMUs. In contrast, we know that many of our West Point deer hunters also hunt elsewhere.

Table 30. Satisfaction with deer hunting experience at West Point in 2020 compared with NYS Wildlife Management Unit (WMU) hunted most often in 2012 (Siemer et al. 2015).

Satisfaction with deer hunting experience	Percent					Mean*
	Very dissatisfied	Moderately dissatisfied	Neither satisfied nor dissatisfied	Moderately satisfied	Very satisfied	
Chance of harvesting a deer^a						
West Point (2020)	8.8	19.0	21.1	25.9	25.2	3.4
NYS WMU hunted most often (2012)	7.3	7.6	17.8	26.0	41.2	3.9
Chance of harvesting a large buck^b						
West Point (2020)	6.8	25.3	29.5	24.0	14.4	3.1
NYS WMU hunted most often (2012)	10.2	15.0	33.6	28.8	17.4	3.2

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

^aWording in 2012 was “Opportunity to take at least 1 deer (any kind).”

^bWording in 2012 was “Opportunity to take a big-antlered deer.”

We are aware that the “3 to a side” rule at West Point has been of particular interest and also is relevant to efforts to reduce the harvest of smaller bucks, especially in the SE part of the state. Although not completely parallel, the results in Siemer et al. (2015) present some reasonable comparisons for our West Point results. They asked (Table 31) about hunter willingness to accept some limitations to achieve a reduction in harvest of young bucks and found that over half were willing to accept some limitations on buck hunting opportunity (56%) and limitations on freedom to take any buck they chose (54%), indicating some support for efforts to protect younger deer in the interest of growing bigger bucks, even if these efforts curtailed their choices when it came to what deer they were permitted to harvest.

Table 31. Hunter willingness to accept some limitations to achieve a reduction in harvest of young bucks for hunters who indicated they hunted most often in Southeastern NYS in 2012 (Siemer et al. 2015).

Limitations to achieve a reduction in harvest of young buck	Percent					
	Not willing (0)	1	2	3	Very willing (4)	Unsure
Some limitations on buck hunting opportunity	19.1	8.5	12.2	20.3	35.7	4.2
Some limitations on freedom to take any buck	21.4	8.3	12.5	20.1	33.9	3.8

By point of comparison, recall that West Point deer hunters were much more likely to indicate that the regulation “Antlered deer must have at least 3 antler points on one side” increased their hunting satisfaction (60%) than decreased it (17%). These numbers are quite similar to the support expressed elsewhere about protection of smaller deer.

Similarly, the Enck et al. (2011) study explored regulation changes that hunters were asked to rate as a good idea or a bad idea. Some of these findings are potentially related to the 3-side rule, including setting mandatory antler restrictions to reduce harvest of yearling bucks during all deer seasons (with youth hunters exempt). Over half (57%) of respondents thought this a good idea, 34% thought it was a bad idea. An alternative proposal, which would set mandatory antler restrictions to reduce harvest of yearling bucks, but only for part of the hunting season was less popular (41% rated it as a good idea, 45% as a bad idea. Finally, in an evaluation of the pilot antler restrictions DEC put in place in WMUs north and west of West Point, Enck and Decker (2011) found that antler restrictions had no influence on deer-hunting participation in the pilot WMUs for more than 70% of respondents from the two panels and for 60% of non-local hunters. Most respondents hunted in the pilot WMUs every year since antler restrictions started (concern had been expressed that perhaps the antler restrictions might shift hunting participation to locations without these restrictions. In terms of satisfaction with these pilot programs, about half (45-51%, depending on WMU) were satisfied with their overall deer-hunting experiences during the 2010 hunting season, and 29-35% were dissatisfied. Overall, respondents were favorable in their assessments of how the pilot implementation had affected their satisfaction: about half (40-56%) reported that their buck-hunting satisfaction had increased since the pilot was implemented; 21-36% indicated that their buck-hunting satisfaction had decreased. On balance, respondents wanted to see the pilot antler restriction program continue: continuing the pilot program as it currently operates is “very acceptable” or “moderately acceptable” to 62%-80% of respondents. The idea of discontinuing antler restrictions and emphasizing voluntary restraint against shooting younger bucks is “not at all acceptable” to 47%- 61% of respondents. Overall, majorities in both panels expressed a

preference for continuing the program “as is.” These findings are quite consistent with, although perhaps slightly more positive than, support for the “three to a side” rule in place at West Point.

SUMMARY AND KEY FINDINGS

Effective management is enhanced by a thorough understanding of the needs of key participants. The Center for Conservation Social Sciences at Cornell University conducted a study of West Point hunting and fishing permit holders to understand their participation, experiences, motivations, and satisfactions with hunting and fishing (and how they have changed and compare to elsewhere) and their views of regulations, both current and proposed. A focus group conducted with hunters and anglers provided in-depth insights into these areas and provided the basis for a quantitative internet-based survey of all active hunters and anglers at West Point. We focused the greater part of the survey on deer hunting, as there were many aspects of deer hunting of special interest to managers.

Among the key themes and insights that emerged from the analysis are the following:

Despite the emphasis on deer hunting in the survey, fishing is by far the most popular recreational activity at West Point, and satisfaction levels are generally high: 77% of respondents fished, while 41% hunted deer, and 31% hunted other species. A large proportion of respondents who fished described West Point as a very important site for their fishing activities; three-fourths of respondents listed West Point as the place for half or more of their total fishing. Although satisfaction levels are generally quite high (with over 70% of anglers being satisfied with their bass and other warmwater species fishing; only about 15% were dissatisfied), we did observe differences in satisfaction among species targeted. Ironically, given the resources allocated to it, trout angling showed the lowest levels of satisfaction (over half were satisfied, and about 20% dissatisfied). Because satisfaction is strongly affected by expectations (whether tied to expected harvest success or other elements of the recreation experience), it may certainly be the case that a stocked trout fishery raises expectations of harvest to unrealistic levels. Further, a general point that is tied to all questions about satisfaction, we must recall that providing recreational opportunities is not—by definition—the highest priority at West Point: inevitably, there will be instances where mission and/or operations critical activities will interfere with hunting and fishing access, potentially frustrating these recreationists and reducing satisfaction. Unlike for deer hunting, we did not do a deep dive into factors affecting satisfaction with fishing experiences: i.e., whether particular locations (i.e., recreational or non-recreational) were especially satisfying or unsatisfying, and what sorts of elements contribute to satisfaction (catch rates, facilities quality, regulations, iSportsman,

etc.). More attention could be paid to understanding elements that may enhance fishing opportunities and satisfaction, and developing programs accordingly.

West Point is a very important place for deer hunting; it is potentially less so for other types of hunting. West Point deer hunters depend heavily on West Point as a place to hunt; much more so than other game hunters, for whom it is one of a number of choices. About half of the deer hunters indicated they typically spend all or almost all their deer hunting time at West Point, compared to hunters targeting other species: about two-thirds of those who hunted for species other than deer spent half or less than half of their time hunting for those species at West Point. Because deer hunters depend more heavily on West Point to provide their hunting needs, it could be argued that managers may want to emphasize their needs.

Deer hunters are diverse; there are no simple ‘magic bullet’ regulations that will be universally welcomed. We observed a fairly even split on reactions to many management questions. Respondent satisfaction is mostly enhanced by current regulations such as needing to check in and out; wearing blaze orange; the 3 to a side rule, and others. We also saw fairly strong support for tree stand regulations. We see relatively even splits among hunters for some proposed regulations, including eliminating the 3 to a side rule for cadets, developing special cadet hunting areas, requiring blaze orange during bow seasons, and discontinuing the opening day lottery. We also note, however, the large proportion of hunters saying they ‘neither opposed nor favored’ such actions, suggesting that these sorts of strategies are not particularly important to many respondents.

That said, it does appear that current management and regulations are working: most deer hunters are motivated by unique elements of the West Point hunting experience and are satisfied with their overall hunting experience at West Point. Satisfaction with the 2020 season reached 67% (and 33% were greatly satisfied). These figures compare favorably to those achieved in other studies. Related, for hunters who also hunt deer elsewhere, satisfaction with their hunting in those places was lower than it was for West Point: only 57% were satisfied and (a more notable difference) only 13% were greatly satisfied. This satisfaction appears to be tied both to issues related to harvest (deer seen/killed and habitat quality), but perhaps more significantly, the nature of the West Point hunting experience itself. Hunters placed special emphasis on those elements that were unique to West Point: the good access, convenience, and familiar surroundings as important motivations, as were controlled access. Most hunters indicated that knowing how many other hunters were out at the same time, not feeling crowded, and feeling safer because other people knew where they were hunting were very important reasons to hunt at West Point. Military connections were also important in that hunters felt safer knowing that other hunters have military connections.

The APR ('3 to a side') rule is popular. The APR overall is very popular, increasing satisfaction for a nearly 60% hunters than, while decreasing it for only 16% of hunters. This view did not differ across hunter types: there were no differences between more avid versus less avid hunters; civilian versus military; gun only hunters versus those hunting with other implements. We found only one significant difference: long-term hunters (those who had hunted for more than 10 years) were significantly more likely to say that the rule increases their satisfaction than those who had hunted for 10 or fewer years (mean=4.0 vs. 3.3). We found no other differences across hunter types. Presumably, those with a longer time horizon at West Point have a better basis of comparison and can better compare their hunting experience now to before the rule was implemented. Further, the flexibility in the APR regulations may increase satisfaction: hunters seeking to avoid the constraints of the APR has the choice of hunting in APR exempt areas. Finally, APR implementation often coincides with the deer control efforts—i.e., they are done so in concert with or in order to increase harvest of antlerless deer. One thing we did not ask in the survey—but could be assessed in future work—is how views on the APR intersect with willingness to harvest antlerless deer. We did not ask this latter question on the survey.

Changes in satisfaction are difficult to understand: evidence is mixed across studies. A previous study conducted by members of our team 20 years ago asked an identical satisfaction question. Comparing those results to those of the current study, we see that satisfaction has declined significantly for military/civilian personnel over 20 years—a full point on a 7 point scale. Studies conducted elsewhere in New York also reveal declining hunter satisfaction. While we do not have the data to speak conclusively to 'why' these trends are occurring, a number of possibilities exist, including difficulty getting permits, unrealistic expectations created by social media and/or hunt industry media. We note that although West Point is part of these trends, the declines at West Point were steeper than those observed elsewhere. Again, we lack data to answer definitively the question of why the declines at West Point are steeper. We do note that deer hunting at West Point is a very different phenomenon than it was two decades ago, when overpopulations of deer contributed to large numbers of antlerless deer permits being distributed, as well as more hunters from the local community being allowed to hunt at West Point). These opportunities are very important: the region in which West Point is located is relatively lacking in private and public land hunting opportunities. A previous study (Stedman et al. 2008) conducted in Pennsylvania showed that satisfaction was significantly higher for deer hunters who had access to private land opportunities. It is reasonable to surmise that high satisfaction levels in 2000 were based -- at least in part-- on these factors. Support for this idea is garnered by additional analysis of the current study: when we asked *current* hunters about how their satisfaction has changed over time, a majority said their satisfaction across all elements was about the same as when they first started hunting at West Point. The remaining were more likely to indicate those aspects had *improved rather than*

worsened. Long-term hunters (who had hunted at West Point for 10 years or more) were more likely to perceive that rules and procedures had changed for the better, but were also less likely to be satisfied with harvest-related factors, suggesting a perception that harvest has declined over time. The change in the number of deer and decline in harvest satisfaction could be the driving factors in the decline in overall satisfaction at West Point.

The uniqueness of West Point to military hunters. Somewhat related to above, West Point holds a special meaning for military personnel, and this is reflected in the survey findings. Military personnel are more likely than civilian hunters to spend more of their deer hunting time at West Point, spend more total days hunting there, and harvest more antlerless deer per hunter. They are also more likely to emphasize the importance of the West Point facility itself as important to their deer hunting experience than civilian hunters, and they are more likely to emphasize their military connection as a reason for hunting West Point. They did not differ, however, from civilian hunters in their satisfaction with their experience. Interestingly, however, military hunters were more likely than civilians to think that hunting quality had declined over time at West Point. They also were less satisfied with multiple elements of the ISportsman system. Although this may initially seem paradoxical (higher use and dependence, yet less satisfied with some elements), one potential explanation, consistent with above, is that civilian hunters may view West Point hunting as a greater privilege than do military-connected hunters, and may thus be less concerned about some elements of hunting there.

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APPENDIX A: FOCUS GROUP OPEN-ENDED QUESTIONS

(1) Introducing themselves and their hunting at West Point

We'd like to start with everyone introducing themselves. I'll go around my screen calling on people in the order I see them.

- Please tell us your name, your connection to West Point.
- How long have you been hunting and fishing at West Point, and what types of hunting and fishing have you participated in here? What type do you do the most?

(2) Why do you hunt and fish at West Point?

- Do you only hunt and fish here, or do you hunt and fish other places as well?
- What are your main motivations for hunting here?

(3) How satisfied are you with your experiences at West Point?

- What aspects of your experience do you find most satisfying?
- What aspects are you least happy with? How do you think they might be improved?
 - Probes: facilities, access, regulations/enforcement, safety?
- (How) do you use the "I Sportsman" website? Is it useful/easy to navigate? What improvements would you like to see?

(4) Is hunting and fishing here "different" than in other places you hunt/fish? If so, how?

- What do you like best about hunting/fishing here?
 - Probes: habitat quality, likelihood of success, lack of interference from other hunters/anglers?
- Are there things about hunting/fishing at West Point that could be improved? What elements of hunting/fishing here would you most like to see changed?
- Are there current specific rules and regulations that you especially like?
- Are there current specific rules and regulations that you would like to see changed? Why? How would these changes affect your hunting/fishing experience?
- Are there regulations not currently in place that they would like to see?

(5) Has hunting and fishing at West Point changed over time?

APPENDIX B: INTERNET QUESTIONNAIRE

Introductory Questions - Hunting Participation and Experiences

1. Approximately how many years have you hunted at West Point or elsewhere? *(Enter zero, if you have never hunted.)*
 - a. _____ years (If none, skip to Q23.)

2. How important is hunting to you? *(Check one.)*
 - a. _____ It is my **most important** recreational activity.
 - b. _____ It's **more** important than many of my recreational activities.
 - c. _____ It's no more important than my other recreational activities.
 - d. _____ It's **less** important than many of my recreational activities.
 - e. _____ It's one of my **least important** recreational activities.

Deer Hunting-Related Questions

Participation and Experiences

3. How many years have you hunted deer?
 - a. _____ years (If zero, skip to Q19)

4. Approximately how many years in total have you hunted deer **at West Point**? *(Enter zero, if you have never hunted deer at West Point.)*
 - a. _____ Years at West Point

Did you hunt deer at West Point in 2020? ___ No ___ Yes

5. What seasons do you typically hunt deer...? *(Check all that apply.)*

	At West Point	In NYS, but outside of West Point	Outside NYS
Early Bow			
Crossbow			
Regular Gun			
Late Bow/Muzzleloader			

6. Prior to this survey had you heard of the disease EHD (Epizootic Hemorrhagic Disease) affecting deer at West Point?
- ___ No (Skip to Q8)
 - ___ Yes
7. Did the presence of EHD at West Point affect your hunting decisions in 2020?
- ___ No
 - ___ Yes -> In any of the following ways? *(Check all that apply.)*
 - ___ I decided not hunt at West Point at all in 2020
 - ___ I hunted fewer days at West Point
 - ___ I hunted more days outside of West Point
 - ___ Other: __ (Allow for open-ended response here) __
8. About **how many days** did you hunt deer **in 2020...**

	At West Point	In NYS, but outside of West Point	Outside of NYS
Early Bow			
Crossbow			
Regular Gun			
Late Bow/Muzzleloader			

(If they did not hunt at WP in 2020, skip to Q10.)

9. About how many deer did you see while hunting at West Point, and how many did you harvest?

	In 2020	In an average year
# deer seen		
# antlered deer harvested		
# antlerless deer harvested		

10. In a typical year, about what % of your deer hunting do you do at West Point? *(Check one.)*
- ___ All/almost all
 - ___ More than half
 - ___ About half
 - ___ Less than half
 - ___ None/hardly any

(If they did not hunt deer at WP in 2020 but have in the past, skip to Q12. If they have never hunted deer at WP but have hunted other places, skip to Q16.)

Motivations

11. Questions in this section will help us understand why you wanted to hunt deer at West Point last year. Each person has their own personal reasons to participate in deer hunting at West Point. Please indicate how important each of the following reasons is to you. *(Check one response for each statement.)*

Possible reasons for hunting deer **at West Point**:

	Not at all important	Slightly important	Moderately important	Very important
It is near where I live				
Access is good				
I have a long history of hunting there				
It reinforces my military connections				
I know many of the other hunters				
High chance of harvesting a deer				
High chance of harvesting a large buck				
Helping to control the deer population there				
High quality of the deer habitat				
Helping reduce the damage to native plants caused by deer				
Knowing how many other hunters are out at the same time as me				
Feeling safer because people know where I am hunting				
Hunting in a place where I know I won't be crowded by other hunters				
Opportunity to bring home meat for my family				
I am familiar with the area				
I feel safer because it is a military facility				
I trust military personnel as hunters				

12. How does deer hunting at West Point compare to hunting in other areas of New York State? (Check one response for each statement.)

	Better at West Point	About the same	Worse at West Point
Opportunity to harvest a deer			
Opportunity to harvest a large buck			
Feeling safe while hunting			
Not feeling crowded by other hunters			
Habitat for deer			
Ease of access			

(If they did not hunt deer at WP in 2020, skip to Q14.)

Satisfactions

13. How satisfied or dissatisfied were you with each of the following aspects of your deer hunting experience at West Point in 2020: *(Check one response for each statement.)*

	Very dissatisfied	Moderately dissatisfied	Neither satisfied nor dissatisfied	Moderately satisfied	Very satisfied
Chance of harvesting a deer					
Chance of harvesting a large buck					
Not feeling crowded by other hunters					
Feeling safe while hunting					
Camaraderie, knowing other hunters					
Ease of access					
Quality of the deer habitat					
Enforcement of regulations					
Clarity of regulations					
Administration procedures (e.g., buying a permit, check-in check-out)					
Feeling informed about harvest data					

14. How does each of the following **existing** special requirements at West Point affect your hunting satisfaction? (Check one response for each statement.)

Requirement that...	Greatly diminishes my satisfaction	Somewhat diminishes my satisfaction	Neither diminishes nor increases	Somewhat increases my satisfaction	Greatly increases my satisfaction
All hunters must sign-in and sign-out on hunting days					
All hunters must wear blaze orange					
Antlered deer must have at least 3 antler points on one side					
All deer harvested must be taken to a check station during regular gun season					
All hunters must take an annual safety training					

15. How strongly do you favor or oppose the following current regulations relating to the use of tree stands? (Check one response for each statement.)

	Strongly oppose	Somewhat oppose	Neither oppose nor favor	Somewhat favor	Strongly favor
The tree stand must be labeled with owner's contact information					
One person may have multiple tree stands					
The tree stand may remain up for the entire deer hunting season					
The tree stand must be removed at the end of the season					

16. How would you describe your overall satisfaction with your deer hunting experiences in 2020? *(Check one response for each column.)*

	At West Point	In NYS, but outside of West Point
Greatly dissatisfied		
Moderately dissatisfied		
Slightly dissatisfied		
Neither dissatisfied nor satisfied		
Slightly satisfied		
Moderately satisfied		
Greatly satisfied		

(If they have never hunted deer at WP, skip to Q19.)

17. How has hunting changed at West Point since you first began hunting deer there? *(Check one response for each statement.)*

	Much worse	Somewhat worse	About the same	Somewhat better	Much better
Chance of harvesting a deer					
Chance of harvesting a large buck					
Not feeling crowded by other hunters					
Feeling safe while hunting					
Camaraderie, knowing other hunters					
Ease of access					
Quality of the deer habitat					
Enforcement of regulations					
Clarity of regulations					
Administration procedures (e.g., buying a permit, check-in check-out)					
Feeling informed about harvest data					

18. For some deer hunters, being at West Point may be the most important part of hunting. Others may deer hunt in different areas on different occasions. Please read all the responses and then check the single response below that best indicates your feelings about West Point. (*Check one.*)

- a. For me, being at West Point is the most important part of a deer hunting trip.
- b. For me, being at West Point is important but there are a few other places where I deer hunt.
- c. For me, being at West Point is pleasant, but I could enjoy deer hunting in many other places.
- d. For me, where I deer hunt doesn't really matter; the deer hunting itself is most important.

Other Hunting at West Point

19. Have you hunted any of the following at West Point in the last 5 years? (*Check all that apply.*)

- a. Bear
- b. Turkey
- c. Pheasants
- d. Waterfowl
- e. Other small game (e.g., rabbits, squirrels, grouse)

(If they did not check any, skip to Q23.)

20. About how many days did you hunt each of the following in 2020 at West Point?

of DAYS

- a. Bear
- b. Turkey
- c. Pheasants
- d. Waterfowl
- e. Other small game (e.g., rabbits, squirrels, grouse)

(If they said zero days for all species, skip to Q22.)

21. How would you describe your overall satisfaction with your hunting experiences at **West Point** for the following in 2020: *(Check one response for each species.)*

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied
Bear					
Turkey					
Pheasants					
Waterfowl					
Other small game (e.g., rabbits, squirrels)					

22. In a typical year, about what % of your hunting for species **other than deer** do you do at West Point? *(Check one.)*

- a. _____ All/almost all
- b. _____ More than half
- c. _____ About half
- d. _____ Less than half
- e. _____ None/hardly any

Fishing Experiences

23. Have you gone fishing for any of the following at West Point in the last 5 years? *(Check all that apply.)*

- a. _____ Trout
- b. _____ Bass
- c. _____ Catfish
- d. _____ Other species (e.g., panfish, walleye, tiger muskie)

(If they zero to all species above, skip to Q29.)

24. About how many days did you fish for each of the following in 2020 at West Point

of DAYS

- a. _____ Trout
- b. _____ Bass
- c. _____ Catfish
- d. _____ Other species (e.g., panfish, walleye, tiger muskie)

25. Approximately, how many walleye or tiger muskie did you catch in 2020?

- a. _____ Approximate # of walleye
- b. _____ Approximate # of tiger muskie

(If they said zero days for all species, skip to Q28.)

26. How many days did you go fishing in 2020 at West Point recreation areas versus non-recreation areas?

- a. _____ Days at recreation areas (e.g., Round Pond)
- b. _____ Days at non-recreation areas (e.g., Stilwell Lake)

27. How would you describe your overall satisfaction with your fishing experiences at West Point for the following in 2020: *(Check one response for each species.)*

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied
Trout					
Bass					
Catfish					
Other species (e.g., panfish, walleye, tiger muskie)					

28. How would you describe your overall satisfaction with boating facilities at West Point in 2020: *(Check one.)*

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied
Boating facilities (e.g., docks, ramps)					

29. In a typical year, about what % of your fishing do you do at West Point? *(Check one.)*

- a. _____ All/almost all
- b. _____ More than half
- c. _____ About half
- d. _____ Less than half
- e. _____ None/hardly any

Management Preferences

30. Please indicate how strongly you support or oppose each of the following potential management actions at West Point, regardless of whether you would be affected:
(Check one response for each statement.)

	Strongly oppose	Somewhat oppose	Neither support nor oppose	Somewhat support	Strongly support
Develop Area H as a cadet-only hunting area					
Eliminate the "3 to a side antler restriction rule" for cadets when deer hunting					
Discontinue the opening day lottery					
Require blaze orange during bow hunting season					
Provide more opportunities for social interaction among hunters and anglers					
Increase opportunities to practice marksmanship					

Opinions about iSPORTSMAN

31. How satisfied are you with the following aspects of the iSPORTSMAN system? (Check one response for each statement.)

	Very dissatisfied	Moderately dissatisfied	Neither satisfied nor dissatisfied	Moderately satisfied	Very satisfied
Ease of navigation					
Sign in, sign out procedures					
Purchasing a permit					
Access to hunting and fishing information					
Reporting game harvest					
Customer support					

32. How interested would you be in participating the following activities, if they were made available at West Point? (Check one response for each statement.)

	Not at all interested	Somewhat interested	Moderately interested	Very interested
Mentoring new hunters				
Mentoring new anglers				
Campfire events				
Berry picking				
Gathering mushrooms				
Participating in "how to" seminars				
Going on a guided nature hike				
Duck blind rental				

33. Part of the hunting and fishing program is funded by the sale of permits (e.g., purchase of targets; iSPORTSMAN subscription; stocking of pheasants, trout, and other fish species). Annual revenue currently matches expenditures. Within five years, it is expected that expenditures will exceed revenue. How do you think the program and fees should be managed in the future? (Check one.)

- a. ___ Keep fees at current rates, resulting in less stocking and facility maintenance
- b. ___ Increase fees to maintain current program support
- c. ___ Increase fees more substantially to provide additional program support beyond current levels
- d. ___ No opinion

Background Characteristics

34. How far do you live from West point? (Check one.)

- a. ___ live at West Point
- b. ___ live within 10 miles
- c. ___ live between 10 and 40 miles
- d. ___ live more than 40 miles away

35. What is your gender?

- a. ___ Male
- b. ___ Female
- c. ___ Prefer not to say
- d. ___ Prefer to self-describe: ___(allow for open-ended response here)___

36. What is the highest level of education you have completed? (*Check one.*)

- a. Less than high school
- b. High school diploma / G.E.D.
- c. Some college or technical school
- d. Associate's (2 year) degree
- e. College undergraduate degree (e.g., B.A., B.S.)
- f. Graduate or professional degree (e.g., M.S., Ph.D., M.D., J.D.)

Thank you for your time and effort.

Please use the space below for any additional comments you'd like to make about hunting and fishing at West Point, iSPORTSMAN, etc.



APPENDIX C: NON-RESPONDENT TELEPHONE FOLLOW-UP

1. How many years have you hunted deer?
 - b. _____ years (*If zero, skip to Q10*)
2. Did you hunt deer at West Point in 2020? ___ No ___ Yes (*If no, skip to Q4.*)
3. About how many days did you hunt deer in 2020 at West Point?
 - a. _____ # of days
4. About how many days did you hunt deer in 2020 in areas outside West Point?
 - a. _____ # of days (*If no to Q2, skip to Q10.*)
5. About how many deer did you see while hunting at West Point in 2020?
 - a. _____ # of deer seen
6. About how many antlered deer did you harvest?
 - a. _____ # of antlered deer harvested
7. About how many antlerless deer did you harvest?
 - a. _____ # of antlerless deer harvested
8. How does the following requirement at West Point affect your hunting satisfaction?
Antlered deer must have at least 3 antler points on one side. It:
 - a. _____ Greatly diminishes my satisfaction
 - b. _____ Somewhat diminishes my satisfaction
 - c. _____ Neither diminishes nor increases
 - d. _____ Somewhat increases my satisfaction
 - e. _____ Greatly increases my satisfaction
9. How would you describe your overall satisfaction with your deer hunting experiences in 2020 at West Point?
 - a. _____ Greatly dissatisfied
 - b. _____ Moderately dissatisfied
 - c. _____ Slightly dissatisfied
 - d. _____ Neither dissatisfied nor satisfied
 - e. _____ Slightly satisfied
 - f. _____ Moderately satisfied
 - g. _____ Greatly satisfied
10. About how many days did you hunt each of the following in 2020 at West Point?
 - a. _____ Bear
 - b. _____ Turkey
 - c. _____ Pheasants
 - d. _____ Waterfowl
 - e. _____ Other small game (e.g., rabbits, squirrels, grouse)

11. For each species above with days greater than 0, ask: How would you describe your overall satisfaction with your ____ hunting experiences at West Point in 2020?
- a. ____ Very dissatisfied
 - b. ____ Somewhat dissatisfied
 - c. ____ Neither satisfied nor dissatisfied
 - d. ____ Somewhat satisfied
 - e. ____ Very satisfied
12. About how many days did you fish for each of the following in 2020 at West Point?
- a. ____ Trout
 - b. ____ Bass
 - c. ____ Catfish
 - d. ____ Other species (e.g., panfish, walleye, tiger muskie)
13. For each species above with days greater than 0, ask: How would you describe your overall satisfaction with your ____ fishing experiences at West Point in 2020?
- a. ____ Very dissatisfied
 - b. ____ Somewhat dissatisfied
 - c. ____ Neither satisfied nor dissatisfied
 - d. ____ Somewhat satisfied
 - e. ____ Very satisfied

That is all the questions I have for you. Thank you for taking the time to speak with me today.

END INTERVIEW

Record Gender: ____ Male ____ Female

APPENDIX D: SUPPLEMENTAL TABLES

Table D-1. In a typical year the proportion of deer hunting done at West Point - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Proportion of deer hunting done at West Point	Percent						
	Overall	Military personnel*	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
All/almost all	48.3	54.9	37.2	52.0	46.0	47.2	52.5
More than half	15.9	13.9	19.2	16.0	15.9	11.1	20.0
About half	11.9	12.3	11.5	10.7	12.7	12.5	12.5
Less than half	13.4	9.8	19.2	16.0	11.9	20.8	10.0
None/hardly any	10.4	9.0	12.8	5.3	13.5	8.3	5.0

*Statistically significant difference between military personnel and civilians at P<0.05 using chi-square test.

Table D-2. Percent of those hunting in 2020 who hunted at West Point and mean days hunted - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Deer hunting at West Point in 2020	Percent						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Percent hunting	82.0	83.2	79.7	85.9	79.1	89.2 ^a	97.1
Mean days hunted	11.5	13.7 ^b	8.2	17.2 ^c	7.7	4.7 ^d	18.7

^aStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using chi-square test.

^bStatistically significant difference between military personnel and civilians at P<0.05 using t-test.

^cStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

^dStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-3. Among those who hunted at West Point in 2020, the percent who saw and harvested deer in 2020 and in an average year - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

	Percent						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
In 2020							
Deer seen	92.2	92.3	91.8	95.5	89.7	81.8 ^c	98.0
Antlered deer harvested	26.7	30.3	20.0	36.5 ^b	19.5	20.0	30.5
Antlerless deer harvested	19.3	28.1 ^a	6.7	28.6 ^b	12.6	14.5	22.1
In an average year							
Deer seen	67.8	70.3	63.3	72.3	64.4	50.0 ^c	77.6
Antlered deer harvested	41.9	42.5	40.0	54.0 ^b	33.0	16.7 ^c	56.4
Antlerless deer harvested	33.8	37.2	29.5	41.3	28.3	16.7 ^c	43.7

^aStatistically significant difference between military personnel and civilians at P<0.05 using chi-square test.

^bStatistically significant difference between avid and less avid hunters at P<0.05 using chi-square test.

^cStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using chi-square test.

Table D-4. Percent aware of EHD and of those the percent whose hunting decisions at West Point in 2020 were affected by EHD - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Awareness of EHD and impact on hunting decisions	Percent						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Aware of EHD	71.5	67.8	77.4	76.5	68.9	73.7	78.7
Hunting decisions impacted	22.3	22.6	22.2	29.2	18.4	10.5 ^a	27.8

^aStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using chi-square test.

Table D-5. General motivations for hunting deer at West Point in 2020 - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Reasons for hunting deer at West Point in 2020	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Hunting access	3.5	3.5	3.5	3.6 ^b	3.4	3.4 ^c	3.6
Secure hunting experience	3.3	3.1 ^a	3.5	3.4	3.2	3.3	3.3
Military connection	2.5	2.7 ^a	2.3	2.8 ^b	2.3	2.6	2.5
Harvest	2.6	2.5 ^a	2.8	2.7	2.6	2.6	2.7
Social connection	2.3	2.1 ^a	2.5	2.5 ^b	2.1	2.4	2.3

*Measured on a 4-point scale where 1=not at all important to 4=very important.

^aStatistically significant difference between military personnel and civilians at P<0.05 using t-test.

^bStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

^cStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-6. General satisfaction with deer hunting experiences at West Point in 2020 - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

West Point-related satisfactions	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Hunting access and experience	4.1	4.1	4.2	4.0	4.2	4.3 ^a	4.0
Well-organized rules and procedures	4.1	4.1	4.1	4.0	4.1	4.1	4.1
Harvest	3.3	3.3	3.2	3.3	3.2	3.2	3.3
Social connection	3.7	3.7	3.7	3.7	3.7	3.8	3.7

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

^aStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-7. Changes in deer hunting at West Point over time - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Change in aspects of deer hunting at West Point	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Hunting access and experience	3.4	3.3 ^a	3.5	3.4	3.3	3.6 ^b	3.2
Well-organized rules and procedures	3.4	3.3 ^a	3.6	3.5	3.3	3.5 ^b	3.3
Harvest	2.9	2.9	2.8	3.0	2.8	2.9	2.8
Social connection	3.2	3.2	3.2	3.3	3.2	3.3	3.2

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

^aStatistically significant difference between military personnel and civilians at P<0.05 using t-test.

^bStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-8. Percent indicating better at West Point compared with other areas of NYS - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

	Percent						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Not feeling crowded by other hunters	72.5	71.0	74.3	70.8	73.6	82.1	67.3
Feeling safe while hunting	70.7	67.3	75.3	72.2	69.7	74.2	68.2
Ease of access	51.1	51.4	50.0	43.1 ^a	56.4	57.6	48.2
Opportunity to harvest a deer	37.0	39.8	32.0	38.9	35.7	40.9	35.7
Habitat for deer	36.5	38.3	32.9	37.5	35.8	33.8	36.4
Opportunity to harvest a large buck	26.8	23.1	31.1	31.9	23.4	31.8	22.5

^aStatistically significant difference between avid and less avid hunters at P<0.05 using chi-square test.

Table D-9. Overall satisfaction with deer hunting in 2020 at West Point and in NYS, but outside of West Point - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Overall satisfaction	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
At West Point	5.1	5.1	5.1	5.1	5.2	5.3	5.1
In NYS, but outside of West Point	4.8	4.8	4.9	5.0	4.7	5.0	4.6

*Measured on a 7-point scale where 1=greatly dissatisfied to 7=greatly satisfied.

Table D-10. Importance of West Point as a place for deer hunting - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

	Percent						
	Overall	Military personnel ^a	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Being at West Point is the most important part of a deer hunting trip	24.0	27.3	18.1	32.9	18.6	30.2	20.9
Being at West Point is important but there are a few other places where I deer hunt	31.1	20.9	47.2	25.7	34.5	31.7	32.2
Being at West Point is pleasant, but I could enjoy deer hunting in many other places	23.0	21.8	25.0	18.6	25.7	17.5	25.2
Where I deer hunt doesn't really matter; the deer hunting itself is most important	21.9	30.0	9.7	22.9	21.2	20.6	21.7

^aStatistically significant difference between military personnel and civilians at P<0.05 using chi-square test.

Table D-11. Impact of existing special requirements on deer hunter satisfaction - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Existing special requirements	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
All hunters must sign-in and sign-out on hunting days	4.0	4.0	3.9	4.2 ^a	3.8	4.0	4.0
All hunters must wear blaze orange	3.9	3.8	4.1	3.9	3.9	4.1	3.9
Antlered deer must have at least 3 antler points on one side	3.7	3.8	3.8	3.9	3.7	3.6	3.8
All deer harvested must be taken to a check station during regular gun season	3.7	3.6	3.8	3.8	3.7	3.9	3.6
All hunters must take an annual safety training	3.5	3.4	3.6	3.5	3.4	3.8 ^b	3.3

*Measured on a 4-point scale where 1=greatly diminishes my satisfaction to 5=greatly increases my satisfaction.

^aStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

^bStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-12. Deer hunter attitudes on tree stand rules - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Tree stand regulations	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
The tree stand must be labeled with owner's contact information	4.0	4.0	4.0	4.0	4.0	4.2	3.9
The tree stand must be removed at the end of the season	4.0	3.9	4.0	3.9	4.0	4.3 ^c	3.8
The tree stand may remain up for the entire hunting season	3.9	4.1	3.8	4.1	3.8	3.8	3.9
One person may have multiple tree stands	3.5	3.8 ^a	3.3	3.8 ^b	3.3	3.2 ^c	3.7

*Measured on a 5-point scale where 1=strongly oppose to 5=strongly favor.

^aStatistically significant difference between military personnel and civilians at P<0.05 using t-test.

^bStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

^cStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-13. Support or opposition to potential management actions - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Potential management actions	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Increase opportunities to practice marksmanship	4.3	4.3	4.2	4.5	4.5	4.2 ^b	4.6
Provide more opportunities for social interaction among hunters and anglers	3.5	3.4	3.5	3.5	3.5	3.5	3.3
Discontinue the opening day lottery	3.0	3.0	3.1	3.0	3.0	3.0	2.9
Require blaze orange during bow hunting season	2.9	2.8	3.0	1.8 ^a	2.8	2.9 ^b	2.0
Develop Area H as a cadet-only hunting area	2.8	2.9	2.8	2.5 ^a	2.9	3.2 ^b	2.4
Eliminate the “3 to a side antler restriction rule” for cadets when deer hunting	2.8	2.9	2.7	2.7	2.7	2.9	2.5

*Measured on a 5-point scale where 1=strongly oppose to 5=strongly support.

^aStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

^bStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using t-test.

Table D-14. Satisfaction with aspects of the iSportsman system - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Aspects of the iSportsman system	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Purchasing a permit	3.9	3.8 ^a	4.1	4.1	4.0	4.0	4.1
Access to hunting and fishing information	3.8	3.7 ^a	4.0	4.0	3.9	4.1	4.0
Ease of navigation	3.8	3.7	3.9	4.1 ^b	3.8	3.9	3.9
Reporting game harvest	3.7	3.7	3.7	4.1 ^b	3.8	4.1	4.1
Sign-in, sign-out procedures	3.7	3.6	3.8	3.9	3.8	3.9	3.9
Customer support	3.5	3.5 ^a	3.7	3.6	3.6	3.7	3.6

*Measured on a 5-point scale where 1=very dissatisfied to 5=very satisfied.

^aStatistically significant difference between military personnel and civilians at P<0.05 using t-test.

^bStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.

Table D-15. Respondents' attitudes towards the level of future funding and program support - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Options for future programs and funding	Percent						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only ^a	Hunted other seasons
Keep fees at current rates, resulting in less stocking and facility maintenance	17.4	17.4	16.9	22.8	16.6	19.4	21.7
Increase fees to <u>maintain</u> current program support	44.7	46.3	41.9	40.5	42.3	50.7	37.4
Increase fees <u>more substantially</u> to provide additional program support beyond current levels	23.5	23.2	24.3	26.6	24.6	11.9	30.4
No opinion	14.4	13.1	16.9	10.1	16.6	17.9	10.4

^aStatistically significant difference between those who hunted regular gun season only and those who hunted other seasons at P<0.05 using chi-square test.

Table D-16. Level of interest in potential activities at West Point - overall and by military, civilian, avid, less avid, those who hunted the regular gun season only, and those who hunted other seasons.

Potential activities at West Point	Mean*						
	Overall	Military personnel	Civilians	Avid hunters	Less avid hunters	Hunted regular gun season only	Hunted other seasons
Participating in "how to" seminars	2.3	2.3	2.4	2.7 ^a	2.3	2.3	2.5
Mentoring new anglers	2.1	2.1	2.0	2.4 ^a	1.9	1.8	2.1
Berry picking	2.1	2.1	2.0	2.1	2.0	1.9	2.1
Campfire events	2.0	2.0	2.1	2.4 ^a	2.0	2.1	2.1
Mentoring new hunters	1.9	2.0	1.9	2.9 ^a	1.9	2.3	2.4
Gathering mushrooms	1.9	1.9	1.9	2.1	1.9	1.8	2.1
Going on a guided nature hike	1.9	1.9	2.0	1.9	1.8	1.9	1.8
Duck blind rental	1.9	1.9	1.9	2.6 ^a	1.9	2.1	2.2

*Measured on a 4-point scale where 1=not at all interested to 4=very interested.

^aStatistically significant difference between avid and less avid hunters at P<0.05 using t-test.