
Wilson Hill Wildlife Management Area Hunter Survey: Opinions About Possible Management Options



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EXECUTIVE SUMMARY

In 2008, the Regional Wildlife Manager for the New York State Department of Environmental Conservation's (DEC) Region 6 sought assistance from the Human Dimensions Research Unit (HDRU) at Cornell University for conducting a survey of persons who hunted at the Wilson Hill Wildlife Management Area (WMA) in St. Lawrence County over the last several years. To assist DEC in this effort, we conducted telephone interviews for the purposes of: assessing hunters' opinions about on-going habitat and water-level changes, determining support/opposition toward 7 recently implemented or possible access-related alternatives, and assessing the influence of hunter-perceived changes in hunting-related impacts on their support/opposition toward access alternatives.

DEC staff provided names and addresses of >400 persons who had registered to hunt or trap on Wilson Hill during several recent years. Telephone numbers were found for about 350 of these persons. Telephone interviews were completed with 233 adults.

Hunters using WHWMA expressed a high level of support of DEC's ongoing efforts to enhance habitat quality and the capacity to manipulate waterfowl levels. This includes habitat and other wildlife management practices aimed at improving hunting quality as well as ongoing efforts to develop additional trails and wildlife observation towers – reflecting hunters' interest and willingness to include more opportunity for non-consumptive use of area. Further, survey respondents also expressed their opinion that the amount of DEC staff presence on the WMA is satisfactory – which is an important finding considering its relative remote location and contrary to the opposite belief of a few hunters who have actively voiced their opinions.

Overall, the results indicate that both on-going and planned access-related changes on the area will satisfy most hunters if those changes are aimed at: maintaining high levels of naturalness of game animals, maintaining or reducing levels of interference from other hunters, maintaining or increasing a sense of fairness among hunters, and maintaining or increasing hunting convenience. The following access-related changes can be expected to help achieve these hunter-defined, fundamental ends of interest:

- Allow pheasant hunting to start on October 1st (or the first open WHWMA hunt day thereafter) to be consistent with pheasant season throughout the Region, and not delay it until the opening of waterfowl season.
- Expand pheasant hunting hours from sunrise to sunset while maintaining the 12 noon ending time for waterfowl hunting.
- Restrict waterfowl and small game hunting to four days per week during the first half of the waterfowl season, then expand both to seven days per week thereafter.
- Set hunter entrance and exit times 1 ½ hours before sunrise and 2:00 PM, with the gate remaining open except for waterfowl season opening days.

In addition, good stewardship of the area relative to access would benefit by the continuation of a longstanding management strategy already supported by hunters as a tool to promote quality waterfowl hunting experience:

- Maintenance of a refuge area

Based on the demographic profile established by this survey, key demographic points that will affect future management and use of WHWMA include:

1. High mean age of WHWMA hunters, while similar for waterfowl and deer hunters throughout New York State, is higher than the general population.
2. The area, although very important to local hunters, is also valued by a high percentage of those who travel more than 51 miles to get there.

The high average age of WHWMA hunters is consistent with other recent studies of hunters in the state, and seems to provide some evidence for declining recruitment and retention of younger hunters, which is a major issue throughout the country. Although not expected to affect substantial change anytime soon, this could portend a decline in the interest of hunters and the political, financial, and management support they bring to WHWMA.

Surveys similar to the one conducted for WHWMA could fill an important information gap. This kind of information could be used either for intensive management of an individual WMA, or for coordinated management of WMAs across a Region or the State. Such an effort could form the basis for adaptive management decisions that are relevant for enhancing wildlife populations and public use of WMAs in the 21st century.

ACKNOWLEDGMENTS

We greatly appreciate the assistance of DEC Region 6 staff for their assistance with and input to this study. Several DEC staff reviewed this report and provided helpful comments. DEC also provided the sample names for the study. Staff from Cornell University's Survey Research Institute obtained telephone numbers for the people in the sample, and conducted the telephone interviews of visitors. Finally, we greatly appreciate the information provided by the hundreds of respondents who provided data.

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INTRODUCTION

A Statewide System of Wildlife Management Areas

The New York State Department of Environmental Conservation (DEC) manages >85 Wildlife Management Areas (WMAs) across the state, encompassing approximately 200,000ac (DEC website). WMAs provide a statewide system of public areas accessible by the public for the enjoyment of the state's fish and wildlife resources. The existing system of WMAs has resulted from a long-term effort to establish permanent public access to lands that are managed for the protection and promotion of its fish and wildlife resources.

Because sportsmen fund the maintenance and operation of most of the WMAs through license fees and federal excise taxes on hunting and fishing equipment, the perpetuation and promotion of game species are emphasized. However, most WMAs also provide excellent opportunities to view a diversity of wildlife species, hike, cross-country ski, in some cases, camp, or to just enjoy nature (DEC website). WMAs also are used to conduct research on fish, wildlife, and habitats, and to demonstrate habitat management practices. DEC staffs periodically update management plans for each WMA within their management jurisdiction. This study was conducted to inform an update to the management plan for Wilson Hill WMA in St. Lawrence County (DEC Region 6).

Wilson Hill WMA

Historical and Current Management Activities:

Wilson Hill Wildlife Management Area (WHWMA) encompasses approximately 3,400ac of wetland and upland habitat adjacent to the St. Lawrence River in St. Lawrence County, about 6 miles west of the village of Massena (Figure 1). The area is used by wildlife viewers year-round, by trappers during fall and winter months and by hunters during waterfowl, small game, and archery deer seasons.

WHWMA is managed in 3 public-use categories: refuge, restricted- (or controlled) use, and public use (DEC website 2009). No public access is allowed in the refuge except for limited access by waterfowl hunters to the East Pool's north shore (Zone A), two observation towers over-looking the refuge and a public open house generally occurring the last two weeks of August when the entire area is open to public access for wildlife observation. Public access to the restricted use area is prohibited during the bird nesting and brood-rearing periods from spring through late summer, while wildlife observation, and controlled access hunting and trapping are permissible activities beginning late-August and through the fall and winter. The public use area is open year-round. Detailed rules for use of the area for hunting during a typical year based on 6 NYS Codes, Rules and Regulations – Chapter 1, Parts 51 and 54, can be found in Appendix A.

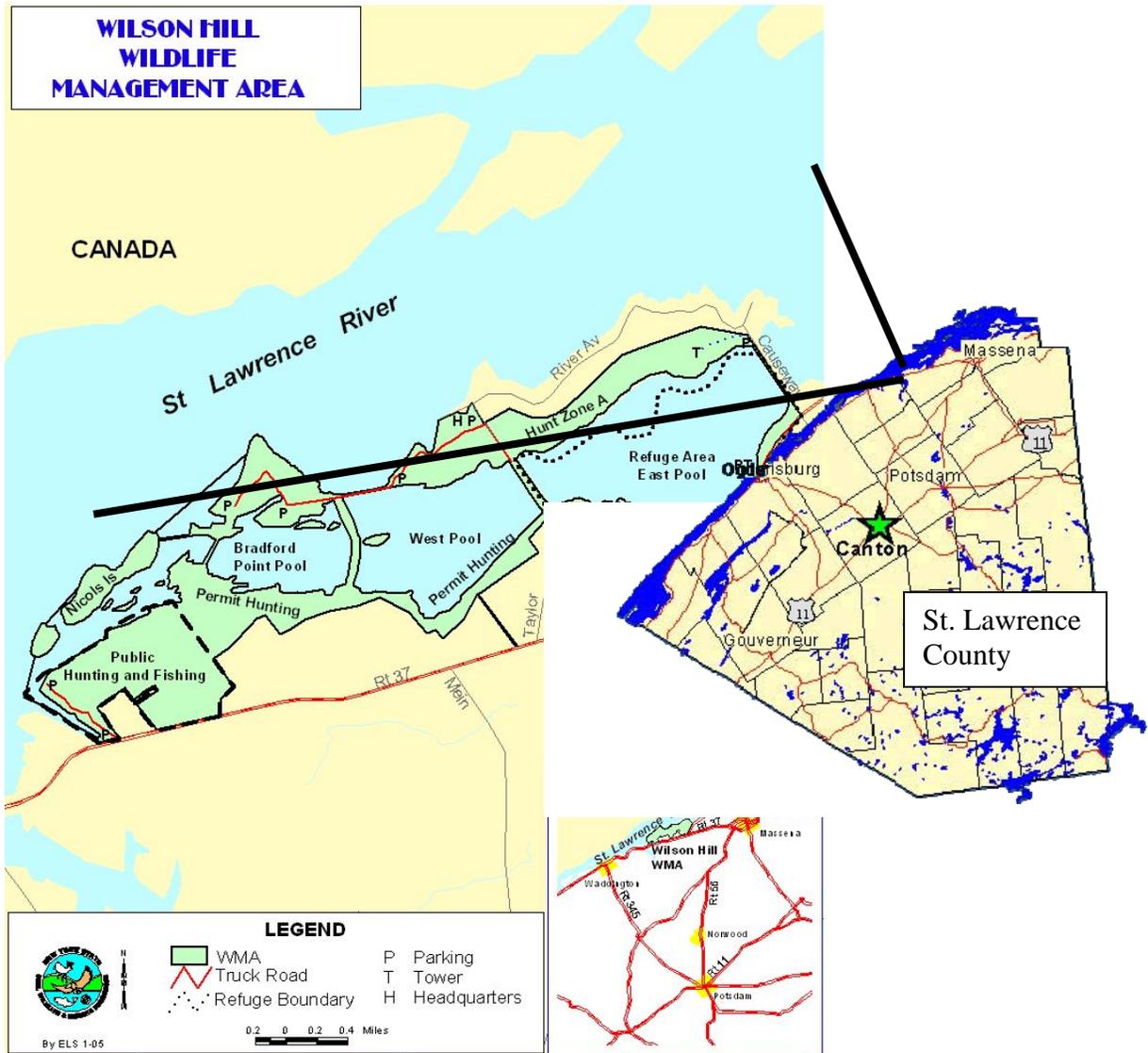


Figure 1. Location of Wilson Hill wildlife management area in St. Lawrence County, within New York State Department of Environmental Conservation’s Region 6 in the northern part of the state. (Map from the DEC website (<http://www.dec.ny.gov/outdoor/41195.html>)).

WHWMA was established in 1958 as the Wilson Hill Game Management Area following initial dike construction in conjunction with the St Lawrence Power-FDR Project's development by the New York Power Authority (NYPA). Within this context lies a unique feature of the WMA in that its care and custody lies with both NYPA, who retains ownership of the lands, and the DEC, charged with wildlife management and recreational aspects of the WMA. This has been accomplished thru an agreement entitled: Development of Waterfowl Impoundments Adjacent to the St Lawrence Power Pool in the vicinity of Wilson Hill (August 1957). At the time this agreement was signed, the goals for the WHWMA were to provide habitat for resident populations of waterfowl, stop-over resting-feeding sites for migrating waterfowl, and opportunity for recreational use of the area and its wildlife, including waterfowl hunting (Wilson and Pasko 1958, Wilson and Adams 1960). As of 2009, management goals largely remain the same, with the addition of providing enhanced opportunities for wildlife viewing through development of nature trails and additional observation towers, to the extent that these opportunities do not adversely interfere with the area's wildlife population management or quality waterfowl hunting opportunities goals. In addition, to reflect the diversity that has always been inherent in the DEC's wildlife management philosophy for the area, provisions in the goals for habitat set-a-sides have been expanded to specifically include "other wildlife species."

Actions to achieve management goals during the WHWMA's early years included manipulating water levels to maximize waterfowl nesting, feeding and migration habitats, waterfowl nest meadow mowing and pot-hole construction, waterfowl population surveys, and controlled hunting and trapping access, aided by the annual stocking of ring-necked pheasants (*Phasianus colchicus torquatus*). More than fifty years later, the DEC's stewardship of the area still includes the management of water levels to maximize benefits for waterfowl, waterfowl population surveys, controlled hunting and trapping, and pheasant stocking. In addition, population surveys and inventories, and habitat protection and enhancement efforts also are directed at several other species of special concern, including black tern (*Chlidonias niger*), osprey (*Pandion haliaetus*), common loon (*Gavia immer*), common tern (*Sterna hirundo*) and Blandings turtle (*Emydoidea blandingii*).

In 2003, the Federal Energy Regulatory commission (FERC) issued NYPA a new license to operate the St Lawrence-FDR Power Project. Relative the WHWMA, the new license includes the extension of the 1957 agreement thru 2053, along with a requirement for NYPA to prepare and implement a land management plan that includes substantial rehabilitation and improvement of the area's conservation and public access features. Specifically the plan calls for rehabilitation of all existing dikes, and construction of one new dike and a pump house, all intended to enhance the area's wetland water level control capabilities. Also, several miles of nature trails, mainly around the perimeter of the wetlands area, and 3-4 wildlife observation towers are to be constructed. Work on these improvements, funded by NYPA, is in-progress.

Controlled hunting access has always been an important part of the DEC's approach to the management of WHWMA. Within this context, "the recreational value of waterfowl in relation to waterfowl hunting on a WMA is dependent upon (1) the extent to which natural conditions prevail; (2) standards of hunter conduct; (3) hunting opportunity based on a seasonal dispersal of waterfowl populations; and (4) the number of waterfowl hunters per unit area"

(Wilson and Perry 1961). It followed then, that it was essential to establish certain standards for public hunting on the WHWMA. These standards (i.e., the area rules and regulations) have been assessed periodically and the approach for public access has been adapted to fit changing circumstances and the needs and desires of hunters.

At WHWMA, the first hunts occurred in 1960. At that time, hunter numbers were limited through the use of mandatory permits, upland small game and waterfowl hunting occurred on alternating days with no hunting on Tuesdays, and both half-day hunting and a designated refuge area were instituted as the principal means for promoting a “high recreational value” quality hunting experience. Circa 1970, the alternating days strategy was adjusted to Tuesday, Thursday, Saturday and Sunday half-day hunting for waterfowl and small game, with no hunting on Monday, Wednesday or Friday. This is how it remains today (Appendix A).

In the 1980’s, archery deer hunting was allowed in the restricted area seven days per week during bow season. Also, non-consumptive access opportunities were created. These included the annual August open house, development of nature trails and observation towers, and promotion of an annual goose drive as both a biological survey and outreach event.

Users and Their Management:

DEC records of WHWMA visitors pertain exclusively to hunters and trappers, as those users are required to sign-in. Since 2000, the WMA has averaged about 700 hunter-days per year for waterfowl hunting, with about 1,500 ducks and geese harvested annually. The most commonly harvested species taken since 2000 are Ring-necked Duck (*Aythya collaris*), Mallard (*Anas platyrhynchos*), Green-winged Teal (*Anas crecca*), and American Wigeon (*Anas americana*). Hunting of Ring-necked Pheasants (*Phasianus colchicus*) remains popular on the area, about 50-60% of birds stocked annually being taken. Use of the area for archery hunting of White-tailed Deer (*Odocoileus virginianus*) has varied widely since 2000, from a low of 119 hunters-days to a high of 360. Deer harvest is low with 3-6 deer harvested each year.

In an effort to better manage use of the area during hunting seasons, DEC operates a check-station on WHWMA and access to the road system is controlled via a gate. Operation of the check-station and access through the gate has changed over the years in response to both staffing cut-backs and passive feedback from visitors. Through the 1970s, DEC operated the check-station daily throughout the waterfowl hunting seasons. Besides issuing permits, this DEC staff presence on the area provided a means for the physical control of the front gate. Prior to the 1970s, hunters were allowed through the gate beginning at 5:00 AM each hunting day. Starting in the 1970’s, hunters were allowed to check-in early, but were generally not allowed access to the area until fifteen minutes before legal shooting time in an effort to maximize waterfowl harvest (by limiting hunter disturbance prior to legal shooting time) during those years when Canada Goose (*Branta canadensis*) was a primary target during the fall waterfowl seasons.

In the 1980’s, check station and gate operation was reduced to just the first half of the waterfowl hunting season. A self-registration system, which included an open gate policy with hunter access times controlled by regulation only (no locked gate), was instituted for the second half of the season (generally starting after November 1). Check station operation was reduced

further, generally down to weekends only, in the 1990s. It was reduced further from 15 days during waterfowl season in 2000, to 5 days in 2003, to only the 2 days of opening weekend since then. The current policy allows for waterfowl hunters to access the WHWMA restricted area one hour before legal shooting time, or 1 ½ hours before sunrise. The gate is generally left open during the entire hunting season, although DEC staffs are usually on site, to operate the gate for any season's opening day.

Another recent regulation change that has been implemented in response to passive feedback relates to the time a hunter is required to be off the area. Waterfowl hunters are allowed by regulation to hunt until 12:00 noon. Through the 2005 hunting season, they were required to leave the area by 1:00 PM. Beginning in 2006, waterfowl hunters had until 2:00 PM to sign out of the area. This change was instituted to allow hunters using the more distant parts of the WHWMA the opportunity to hunt all morning and still sign out by the required exit time.

Access for hunting of small game other than waterfowl has been somewhat complicated because of varying season lengths and dates. For example, pheasant season for northern NY generally opens during the week prior to waterfowl season. At WHWMA, historically, and as recent as 2005, pheasant hunting was prohibited until the start of waterfowl season. Based on passive feedback from pheasant hunters, changes were made for the 2006 season that included opening of the area for pheasant hunting starting October 1st, ahead of the waterfowl hunting season in most years, to be consistent with general small game hunting regulations for northern NY and to provide enhanced pheasant hunting opportunity. Another change allows pheasant hunters to hunt from sunrise to sunset instead of being required to end at noon as is the case for waterfowl hunters. These changes were welcomed by pheasant hunters, but opposed by some waterfowl hunters who expressed concern that the presence of pheasant hunters on the area in the in advance of the waterfowl season and or during the afternoon would disturb ducks and geese and thus detract from their potential for a quality waterfowl hunting experience.

Purpose and Objectives

In 2008, DEC asked staff with the Human Dimensions Research Unit (HDRU) in the Department of Natural Resources at Cornell University to conduct a survey of persons who hunted/trapped on the WHWMA in recent years to help inform decisions related to the management plan. Of particular interest were users' opinions about on-going efforts to improve water-level management strategies and public access on the WHWMA. Of the questionnaire's two main focus points, public access issues, including timing and length of shooting hours during hunting seasons, area gate operation protocol and the enhancement of wildlife observation opportunities, were the most pertinent relative to addressing pending management issues.

To move beyond unsolicited input from visitors to Wilson Hill WMA, our specific objectives for this systematic inquiry were:

1. Obtain general demographic and specific use data from persons who had registered to use the WMA,

2. Assess visitors' opinions about on-going habitat and water-level management capability changes, and the addition of nature trails and wildlife observation towers,
3. Assess the importance of a suite of possible hunting-related impacts for visitors, and
4. Determine how the levels of those impacts likely would be affected by 7 possible changes in access-related regulations, and reasons for visitor support or opposition to those possible changes.

METHODS

DEC staff provided a list of 436 names of persons who had registered to access Wilson Hill WMA sometime since 2006. Although these names were obtained from persons accessing the area to hunt, we expected that some also used the area for other recreational purposes. HDRU staff worked with Cornell University's Survey Research Institute to obtain telephone numbers for 357 names in the sample.

HDRU staff also designed a 15-minute telephone survey that obtained data for 51 specific items (Appendix B). Our survey protocol and interview instrument were approved by Cornell University's Institutional Review Board on 27 March 2009 (Protocol ID # 0903000253). Telephone interviews were initiated on 28 March 2009 and were completed on 20 April 2009. Up to 10 attempts were made to contact persons for whom we had telephone numbers. Because we had no a priori age data for persons in the sample, we screened each person contacted to eliminate minors from the pool.

Survey Questions Used to Meet Objectives

Demographic and Area-use Data:

To assess demographic characteristics, we asked interviewees to indicate their gender and year of birth. We also asked interviewees to indicate about how far they lived from Wilson Hill WMA by checking one of the following categories: (1) ≤ 10 miles, (2) 11-20 miles, (3) 21-30 miles, (4) 31-40 miles, (5) 41-50 miles, or (6) ≥ 51 miles.

We asked 3 sets of questions to better understand each interviewee's use of the WMA. First, we asked how many times they had visited Wilson Hill between 1 October and 31 December 2008. Then we asked interviewees a series of 4 yes-no questions about the types of game animals they pursued: (1) waterfowl, (2) pheasants, (3) deer, or (4) trapping of furbearers. Finally, we asked how many total years each interviewee had hunted or trapped at Wilson Hill.

Opinions About On-going Management Actions:

DEC was particularly interested in visitors' opinions about 3 kinds of management efforts at Wilson Hill: (1) construction of new dikes and a pumping station to draw-down or flood impoundments (2) construction of new access trails and wildlife-viewing platform, and (3) the amount of DEC staff presence on the WMA. For the first 2 of these management efforts, interviewees were asked whether these were a good idea, a bad idea, or whether the interviewee

had no opinion. For the issue of staff presence, we asked whether the current amount of DEC staff presence experienced was too much, just about right, or too little.

Importance of Possible Hunting-related Impacts:

Based on discussions with DEC staff and from previous studies of hunter satisfaction and participation (e.g., Enck and Brown 2008, Enck and van den Berg 2007, Enck et al. 2006b), we asked interviewees how important each of 4 possible, hunting-related impacts were to them when they visited Wilson Hill: (1) hunting at Wilson Hill when it was most convenient to them [convenience], (2) hunting without feeling crowded or “interfered with” by others [interference], (3) having game animals at Wilson Hill follow natural patterns and not be “skittish from being shot at too much” [naturalness], and (4) feeling like there is a “sense of fairness” with respect to hunting opportunity among hunters at Wilson Hill [fairness]. We asked interviewees whether each of these 4 possible impacts was very important, moderately important, slightly important, or not at all important.

Support for or opposition to possible access-related changes. We examined 7 possible changes of interest to DEC: (1) allow waterfowl hunting 7 days a week, (2) allow waterfowl hunting 4 days a week during the first half of the season and then 7 days a week during the second half of the season, (3) allow waterfowl hunters to hunt all day long, (4) allow waterfowl hunters to access the area >60 minutes prior to legal shooting time, (5) prevent waterfowl hunters from accessing the area until <30 minutes prior to legal shooting time, (6) allow small game (pheasant) hunters to hunt all day long, and (7) allow pheasant hunting to start 1 October regardless of when waterfowl season starts.

For each of these 7 possible changes, interviewees first were told the current or typical situation, followed by the possible change. For example, the first statement was, “[t]ypically, waterfowl hunting has been allowed only on Tuesday, Thursday, Saturday, and Sunday. A possible change would be to allow waterfowl hunting 7 days a week during the hunting season.” Next, we asked interviewees what they thought would happen to each of the 4 possible impacts if the access change was enacted. For example, “would your hunting convenience become (1) less convenient, (2) more convenient, or (3) not change. After reading similar questions for the other 3 possible impacts, interviewees were asked whether they would (1) support, (2) oppose, or (3) be neutral toward the possible change. This general approach was used for each of the 7 possible changes.

Data Analysis:

Data were analyzed using SPSS-X version 17.0. Most results are presented as straight descriptive findings (e.g., n’s, %s, and means). To better understand why visitors either supported or opposed any of the possible access changes we examined, we controlled for the level of importance visitors placed on the possible impacts when analyzing interviewees perceptions of how those impacts would increase/decrease if any of the access changes were enacted.

RESULTS AND DISCUSSION

Survey Response

Of the 436 names of visitors we obtained from DEC, we found telephone numbers for 357 (81.8%). However, 57 of these were no longer in service. An additional 3 persons were deceased or too ill to complete the interview, and 5 persons were ineligible to participate because they were <18 years old. Six persons who were contacted refused to participate, and 53 persons could never be contacted. The 233 completed interviews represent 79.8% of persons who potentially could have been interviewed.

Demographic and Area-use Characteristics of Respondents

Most interviewees (97.4%) were male, and averaged 44.6 years of age. Both the high percentage of male visitors and the average age in the mid 40s are similar to other recent studies of waterfowl hunters (e.g., Brown and Enck 2004, Enck et al. 2006b) and deer hunters (e.g., Enck and Brown 2008) in New York. Relatively similar percentages of interviewees were local residents (lived ≤ 10 miles from Wilson Hill; 29.2%), lived 11-50 miles away (37.8%), or were extra-local (≥ 51 miles from Wilson Hill; 33.0%).

Of the 233 interviewees, 68 (29.2%) did not visit Wilson Hill WMA during 1 October to 31 December 2008. About one-half (49.8%) visited 1-5 times during that period, 9.0% visited 6-10 times, 6.4% visited 11-15 times and 5.6% visited ≥ 16 times. Overall, interviewees had hunted or trapped at Wilson Hill for an average of 12.2 years; only 2 of the 233 interviewees said they never hunted or trapped at Wilson Hill. Thus, our results reflect opinions of hunters who recently visited the WMA.

Among the 165 persons who hunted at Wilson Hill during late 2008, more than three-quarters (78.2%) hunted waterfowl, 36.4% had hunted pheasants or other small game, 6.7% had hunted deer, none had trapped furbearers, and 3.0% had visited for non-hunting/trapping purposes. Note that these percentages total more than 100% because some individuals hunted for more than 1 type of game animal. Overall, 20% hunted both waterfowl and pheasants, 3.1% hunted both waterfowl and deer, 1 visitor (0.6%) hunted both pheasants and deer, and another (0.6%) hunted waterfowl, pheasants, and deer. Over one-half (56.9%) hunted only waterfowl, 16.2% hunted only pheasants, and 4 visitors (2.5%) hunted only deer.

Opinions About Habitat Management, Wildlife Observation Opportunity Enhancement, and Staffing Efforts

Hunters generally were favorable toward DEC's on-going management efforts. For example, 69.0% believed the amount of DEC staff presence at Wilson Hill was just about right; 27.1% thought it was too little, and 3.9% said too much. A strong majority (62.2%) believed the construction of new dikes and a water pumping station to allow DEC to flood or draw-down impoundments was a good idea whereas 17.0% said these projects were a bad idea, and 20.9% had no opinion. Slightly more than one-half (51.3%) thought construction of trails and wildlife viewing platforms was a good idea although 38.4% thought these projects were a bad idea, and 10.3% had no opinion.

Importance of the 4 Possible Impacts

All 4 possible impacts examined were “very important” to >60% of hunters (Table 1). Only 6-11% said any of the 4 possible impacts was slightly or not at all important. These findings confirm that fairness, convenience, and naturalness are positive impacts of hunting-related interactions for most recent hunters at of Wilson Hill WMA, and interference is a negative impact for most (e.g., see Riley et al. 2003, Enck et al. 2006a). These positive and negative impacts are at least some of the fundamental ends that hunters want to experience at desirable or tolerable levels when they hunt at Wilson Hill. In planning, these can be considered candidates for objectives of management.

Table 1. Level of importance placed on 4 possible, hunting-related impacts by hunters on the Wilson Hill wildlife management area in northern New York State, based on a 2009 telephone survey of hunters.

<u>Possible impacts examined</u>	<u>n</u>	<u>Amount of importance placed on each possible impact</u>			
		<u>Very</u> <u>%</u>	<u>Moderately</u> <u>%</u>	<u>Slightly</u> <u>%</u>	<u>Not at all</u> <u>%</u>
Experiencing FAIRNESS among hunters on the WMA	228	76.3	17.5	3.5	2.6
Hunting without sensing INTERFERENCE from other hunters	233	71.2	18.0	6.0	4.7
Hunting when it is most CONVENIENT to me	232	64.2	23.7	7.3	4.7
Game animals showing NATURALNESS in their behavior patterns and not being “skittish” from being shot at too much	233	60.9	27.9	5.2	6.0

Support For or Opposition To Possible Changes in Access

Three possible changes in access regulations were supported by a majority of hunters (Table 2). The change with the highest percentage of support (58.4%) – allowing pheasant and small game hunters to hunt all day long – actually is a change recently enacted. The other possible changes with majority support were allowing waterfowl hunters to hunt 7 days a week during the second half of the waterfowl season (56.7%) and allowing pheasant hunting to start on 1 October regardless of the opening date for waterfowl (53.2%).

The possible change of permitting waterfowl hunters access to the area only 30 minutes prior to legal shooting time instead of an hour before was opposed by a strong majority (75.1%). All 3 of the other possible changes elicited mixed opinions with 38-48% supporting each possible change and 38-48% opposing each change. The latter two changes also met with substantial opposition (25.35 and 28.8%, respectively), suggesting that their implementation may be met with further resistance.

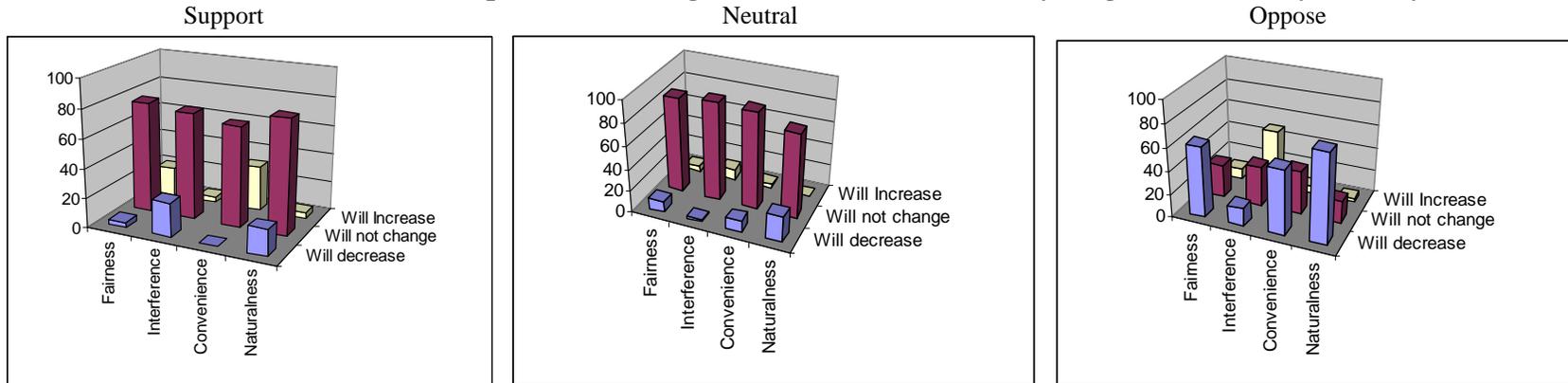
Table 2. Percentages of hunters who supported or opposed each of 7 possible changes in access regulations for the Wilson Hill wildlife management area (WMA) in northern New York State, based on a 2009 telephone survey of hunters.

<u>Possible changes in access to WMA</u>	<u>n</u>	<u>Support %</u>	<u>Neutral %</u>	<u>Oppose %</u>
Allow small game hunters (but not waterfowl) to hunt all day long instead of half days	231	58.4	27.3	14.3
Maintain current 4 day/week access for waterfowl hunting during the first half of the season, but then allow 7/days a week during the second half	233	56.7	18.0	25.3
Allow pheasant hunting to start on 1 October regardless of when waterfowl season opens instead of opening those seasons concurrently	233	53.2	18.0	28.8
Allow waterfowl hunters to hunt all day long instead of having to stop hunting at noon	231	48.5	13.4	38.1
Allow waterfowl hunters to access the area any time before legal shooting hours instead of the current access starting an hour before legal time	233	47.2	11.2	41.6
Allow waterfowl hunting 7 days a week instead of the current Tuesday, Thursday, weekend	232	38.4	14.7	47.0
Allow waterfowl hunters to access the area just 30 minutes before legal shooting time instead of the current hour before legal shooting time	233	15.0	9.9	75.1

Relationship of Hunters' Support For or Opposition To Possible Access Alternatives With Expected Changes in Levels of Impacts

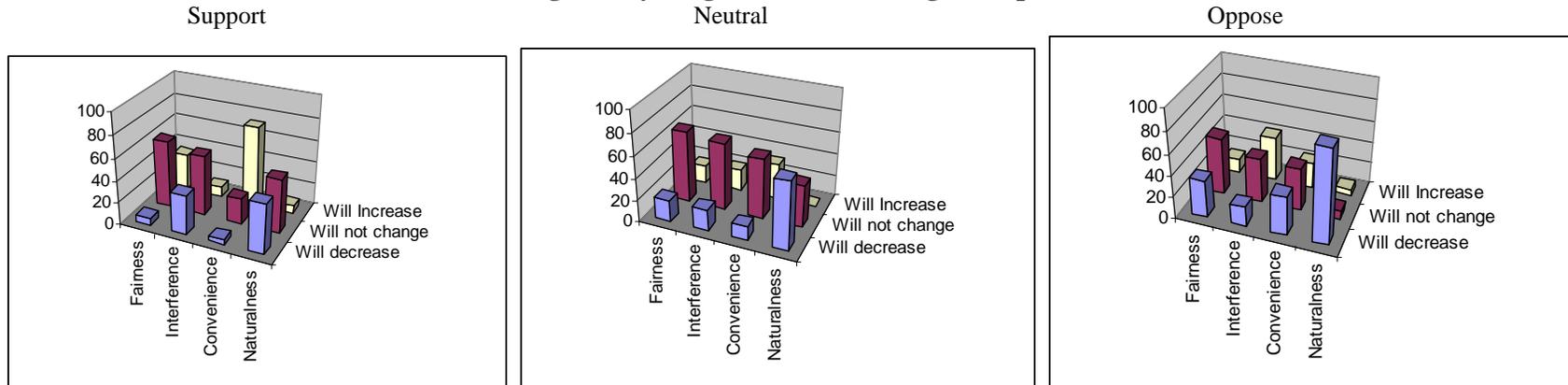
Conceptually, whether interviewees supported or opposed any of the possible access changes examined should be explained in large part by their perceptions of increases or decreases in the 4 hunting-related impacts. The data verified these expected relationships. Consider for example, supporters of continuing to allow pheasant/small game hunters to hunt all day long instead of only half days were far more likely than opposers to believe that fairness and convenience would increase and that interference would decrease (Figure 2). On the other hand, opposers were far more likely than supporters to believe that all 4 impacts would change in detrimental ways. Those who were neutral about maintaining all day pheasant hunting were likely to believe that levels of the 4 impacts would not change.

Access alternative: Continue to allow pheasant/small game hunters to hunt all day long instead of only half days



Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 81.448$, Interference $X^2 = 68.063$, Convenience $X^2 = 105.634$, Naturalness $X^2 = 48.129$.

Access alternative: Allow waterfowl hunting all day long instead of having to stop at noon

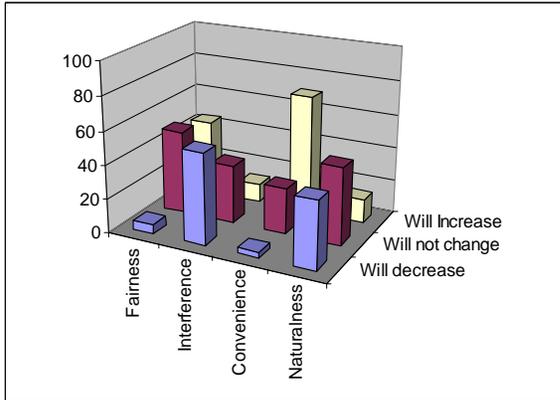


Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 31.137$, Interference $X^2 = 30.028$, Convenience $X^2 = 63.248$, Naturalness $X^2 = 44.086$.

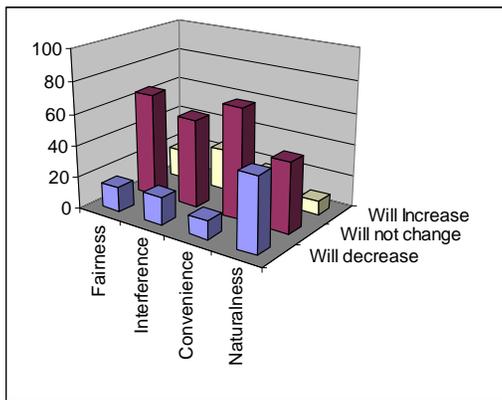
Figure 2. Differences in anticipated levels of hunting-related impacts among those who supported, were neutral toward, or opposed various changes in access regulations for the Wilson Hill wildlife management area in northern New York State, from a 2009 telephone survey of hunters.

Access alternative: Allow waterfowl hunting 7 days/week instead of only Tuesday, Thursday, Saturday, and Sunday

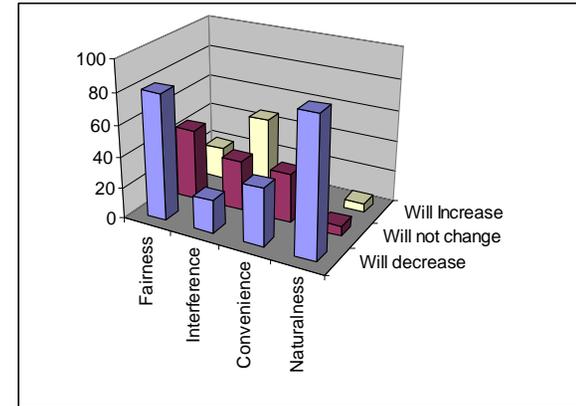
Support



Neutral



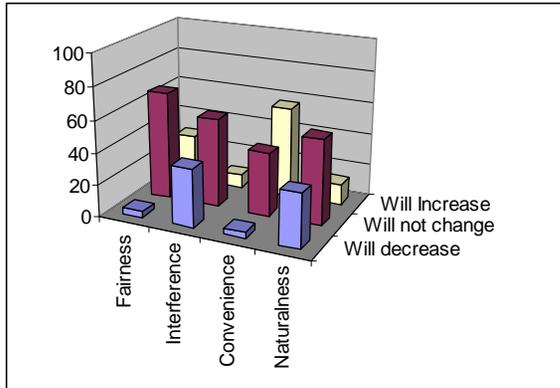
Oppose



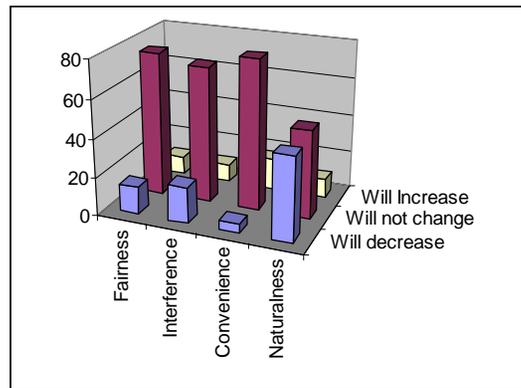
Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 47.662$, Interference $X^2 = 43.645$, Convenience $X^2 = 66.028$, Naturalness $X^2 = 54.582$.

Access alternative: Maintain waterfowl hunting 4 days/week 1st half of season, then 7 days/week 2nd half of season

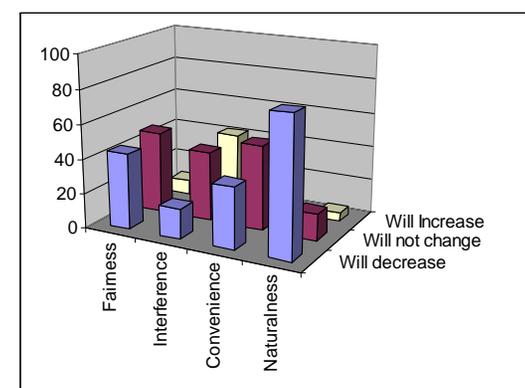
Support



Neutral



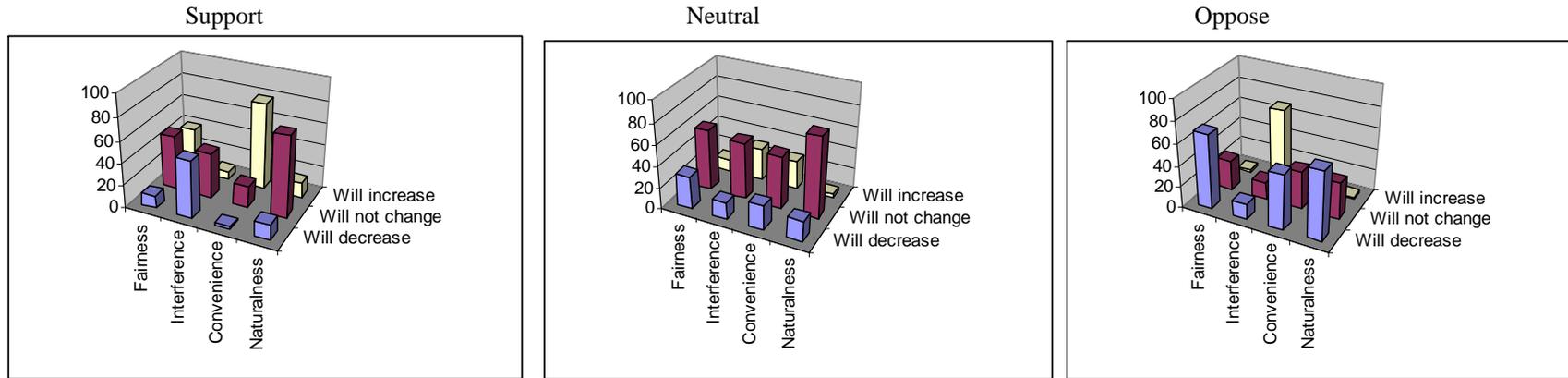
Oppose



Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 54.839$, Interference $X^2 = 39.419$, Convenience $X^2 = 71.176$, Naturalness $X^2 = 34.795$.

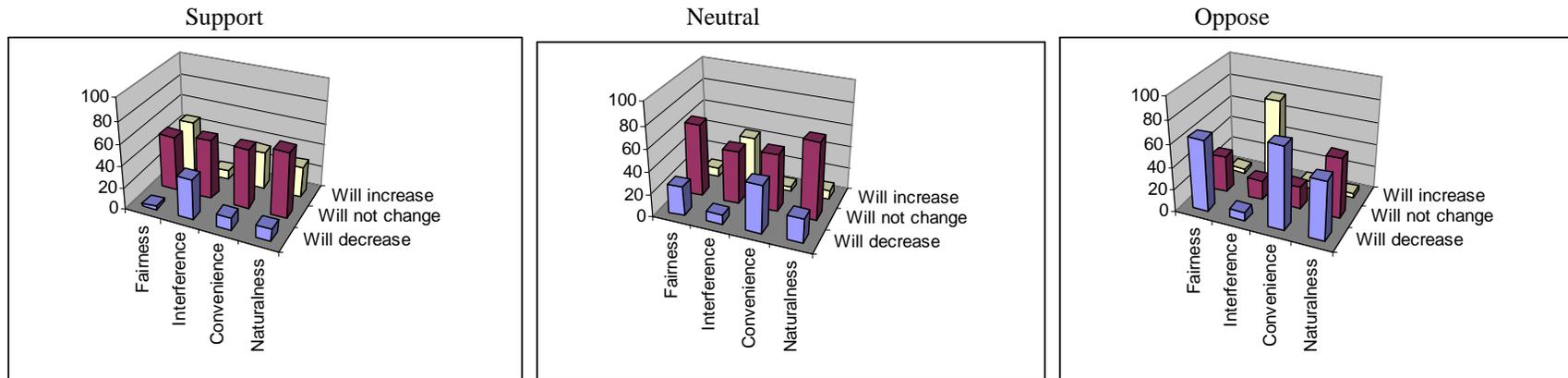
Figure 2. Continued.

Access alternative: Allow waterfowl hunters to access the gated area >60 minutes prior to legal shooting time instead of the current 60 minutes



Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 90.168$, Interference $X^2 = 93.293$, Convenience $X^2 = 109.814$, Naturalness $X^2 = 63.141$.

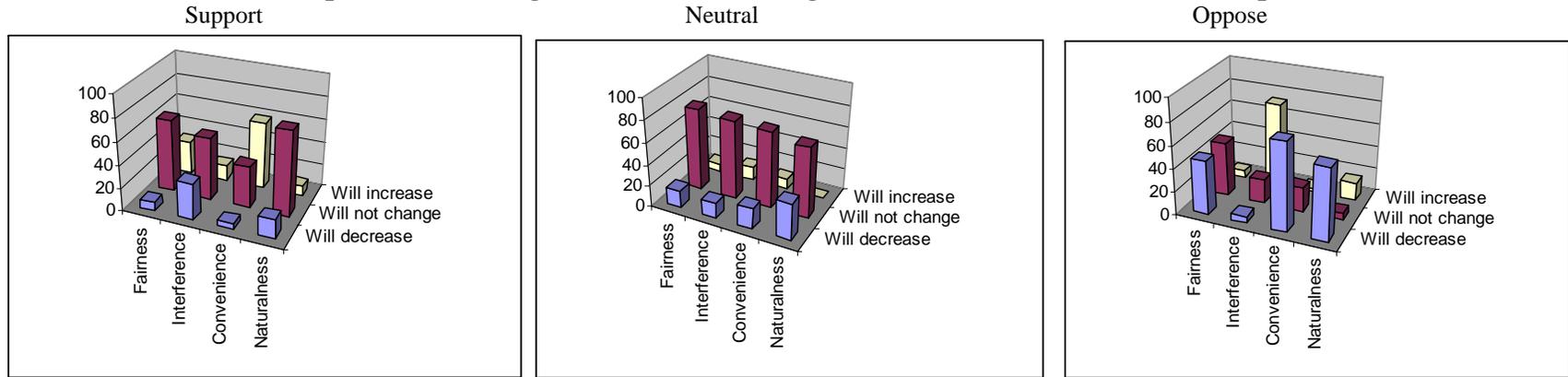
Access alternative: Allow waterfowl hunters to access the gated area no more than 30 minutes prior to legal shooting time instead of the current 60 minutes



Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 63.254$, Interference $X^2 = 119.829$, Convenience $X^2 = 31.791$, Naturalness $X^2 = 80.383$.

Figure 2. Continued.

Access alternative: Allow pheasant hunting to start 1 October regardless of when waterfowl season opens



Beliefs about anticipated changes in impacts differed among support/neutral/oppose this access alternative. For each impact, $df = 4$ and $p < 0.001$. Fairness $X^2 = 53.564$, Interference $X^2 = 86.503$, Convenience $X^2 = 147.223$, Naturalness $X^2 = 92.297$.

Figure 2. Continued.

The general pattern of these relationships hold for all 7 of the access alternatives we examined, as shown in the graphs in Figure 2. For all the alternatives, supporters were much more likely than opposers to believe that fairness and convenience would increase, and opposers were much more likely than supporters to believe that interference would increase. Supporters generally were split about whether naturalness of game animal movements would stay the same or decrease whereas opposers generally believed that naturalness would decrease.

Trade-offs And Weighting Of Impacts

The graphs in Figure 2 also reveal some insights about how visitors trade-off and weight the various impacts. For supporters, anticipated decreases in naturalness of game animal movements seemed to be traded-off against anticipated increases in fairness and convenience and a decrease in interference. Opposers did not seem to be making any trade-offs among impacts. They generally believed that levels of the 4 impacts would change in detrimental ways under all of the possible access alternatives.

CONCLUSIONS AND IMPLICATIONS

Specific To WHWMA

Based on the demographic profile established by this survey, key demographic points that will affect future management and use of WHWMA include:

1. High mean age of WHWMA hunters, while similar for waterfowl and deer hunters throughout New York State, is higher than the general population.
2. The area, although very important to local hunters, is also valued by a high percentage of those who travel more than 51 miles to get there – 38% of the sample.

The high average age of WHWMA hunters is consistent with other recent studies of hunters in the state (e.g., Brown and Enck 2004, Enck and Brown 2006b, Enck and Brown 2008), and seems to provide some evidence for declining recruitment and retention of younger hunters, which is a major issue throughout the country (D.J. Case Associates 2006). This could portend a decline in the interest of hunters and the political, financial, and management support they bring to WHWMA. This is not anticipated to affect noticeable change anytime soon however, as hunters remain the high majority of WHWMA stakeholders. The second finding above substantiates this conclusion by reflecting the continuing value of WHWMA to hunters and suggesting that the area's management strategies are still providing for one of the area's longstanding goals - quality waterfowl hunting experience.

Hunters using WHWMA expressed a high level of support of DEC's ongoing efforts to enhance habitat quality and the capacity to manipulate waterfowl levels. This includes habitat and other wildlife management practices aimed at improving hunting quality. Hunters also

expressed support for ongoing efforts to develop additional trails and wildlife observation towers. This affirmation reflects a detectable level of hunter interest and willingness to include more opportunity for non-consumptive use of area. All of this support for area improvements is not a change from the early days when sportsmen were considered “staunch supporters in working out a management plan for the area” (Wilson and Adams 1960), and reflects well unsolicited feedback expressing sportsmen’s support and their demonstrated willingness to assist with the annual WHWMA goose drive. On the other hand, a strong level of opposition (>25%) was also expressed towards the efforts to develop additional trails and wildlife observation towers, suggesting that WHWMA hunters are concerned that adding non-consumptive uses to the area might detract from their opportunities for quality waterfowl hunting. This conflict is expected to be resolved by designing trail layouts and the rules for their use so as to minimize impacts to waterfowl hunting. Further, survey respondents also expressed their opinion that the amount of DEC staff presence on the WMA is satisfactory – which is an important finding considering its relative remote location and contrary to the opposite belief of a few hunters who have actively voiced their opinions.

Overall, the results indicate that both on-going and planned access-related changes on the area of much interest to hunters. In particular, these changes are expected to be viewed a positive by the majority of hunters who placed high importance on naturalness of game animals, maintaining or reducing levels of interference from other hunters, and maintaining or increasing a sense of fairness among hunters – three basic conditions for a quality hunt. Hunters also want to maintain or increase hunting convenience, which generally can be equated with increasing opportunity. Survey results revealed that many hunters thought that several of the access-related alternatives we examined could achieve these desired outcomes.

The following access-related changes, some already applied, can be expected to help achieve these hunter-defined, fundamental ends of interest:

- Allow pheasant hunting to start on October 1st (or the first open WHWMA hunt day thereafter) to be consistent with pheasant season throughout the Region, and not delay it until the opening of waterfowl season. Already in place, this change goes to expanding convenience or opportunity to hunt; and reducing interference as hunters are more spread out over time.
- Expand pheasant hunting hours from sunrise to sunset while maintaining the 12 noon ending time for waterfowl hunting. Already in place, this change for pheasant hunting goes to expanding convenience or opportunity to hunt; reducing interference as hunters are more spread out over time; and promoting fairness, as pheasant hunters who may not be able to hunt during the morning due to work or, in the case of youth hunters, school obligations, are offered an afternoon hunt. The no-change 12 noon ending time for waterfowl hunting is important for maintaining quality waterfowl hunting.

- Restrict waterfowl and small game hunting to four days per week during the first half of the waterfowl season, and then expand both to seven days per week thereafter. This adjustment, which would require an official NYS regulation change, goes to expanding convenience or opportunity to hunt; and reducing interference as hunters are more spread out over time. Since waterfowl hunter numbers during late season at WHWMA are typically very low in comparison to the first couple weeks of the season, this change is not expected to interfere with the “naturalness of game animals”.
- Set waterfowl hunter entrance and exit times 1 ½ hours before sunrise and 2:00 PM, with the gate remaining open except for waterfowl season opening days. This change is also in place and goes to expanding convenience to hunt through providing more time to come and go; and reducing interference as hunters have more time to spread out before the hunt day begins.

In addition, good stewardship of the area relative to access would benefit by the continuation of a longstanding management strategy already supported by hunters as a tool to promote both naturalness and a quality waterfowl hunting experience: Maintenance of a refuge area.

Implications for the Statewide System of WMAs

Hunting remains an important recreational activity on New York’s WMAs. Interest has been growing – within DEC and among stakeholders – to manage for a broader diversity of wildlife species on WMAs than those that are hunted. Therefore, DEC could benefit substantially from understanding the needs and collective desires of these stakeholders for WMA-related recreation.

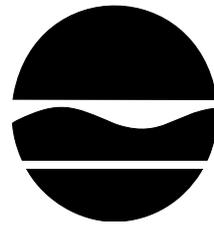
Surveys similar to the one conducted for WHWMA could fill an important information gap. This kind of information could be used either for intensive management of an individual WMA, or for coordinated management of WMAs across a Region or the State. Such an effort could form the basis for adaptive management decisions that are relevant for enhancing wildlife populations and public use of WMAs in the 21st century.

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Denise
M. Sheehan
Commissioner

Appendix A:

Regulations for use of Wilson Hill wildlife management area prior to the 2009 telephone survey

New York State Department of Environmental Conservation

WILSON HILL WILDLIFE MANAGEMENT AREA WETLANDS-RESTRICTED AREA REGULATIONS* 2006-07 HUNTING SEASON

HIGHLIGHTS OF CHANGE!

- Small game hunting opens on area October 1
- Small game hunting allowed on area sunrise to sunset
- Waterfowl hunters must be off the area by 2:00 PM
- Archery hunters may access all parking lots by motor vehicle

1. **WATERFOWL HUNTING BY DAILY PERMIT** on Tuesdays, Thursdays, Saturdays, and Sundays of the September goose season and the Northeastern Zone duck season.
2. **SPECIAL EARLY GOOSE SEASON.** Hunters must sign in at the registration box at the permit station. Hunting hours are from one-half hour before sunrise to 12:00 P.M. Hunters may enter the area 1 hour before legal hunting hours and must leave the area by 2:00 P.M.
3. **WATERFOWL HUNTING HOURS, ENTRY AND CHECK OUT TIMES:**
 - A. Waterfowl hunting hours during the Northeastern duck season are from one-half hour before sunrise to 12:00 P.M. Hunters may begin entering the marsh after permit issuance. If the permit station is closed by posted notice, hunters must sign in at the registration box at the permit station and may enter the area no earlier than 1 hour before legal hunting hours. Hunters must check out or leave the area by 2:00 P.M.

4. **ARCHERY HUNTERS** must register at the permit station no earlier than one hour before legal hunting hours each day of any hunting season and may enter the area after registration. Archers must leave the area one hour after sunset. Archery hunting is allowed on those portions posted as "Wetland Restricted - Permit Required". Statewide regulations apply.
5. **SMALL GAME HUNTING** begins October 1, with hunting on Tuesday, Thursday, Saturday, and Sunday. Small game hunting hours are from sunrise to sunset. Hunters must register at the permit station no earlier than one hour before legal hunting hours. If the permit station is closed by posted notice, hunters must sign in at the registration box at the permit station and may enter the area no earlier than 1 hour before legal hunting hours. Hunters must check out or leave the area by one hour after sunset. Statewide regulations apply.**
6. **RULES AND REGULATIONS.** It is the responsibility of the permittee to know and abide by all regulations. Rules and regulations are available at the waterfowl permit station and the Bureau of Wildlife's office in Potsdam and Watertown during normal business hours.
7. **HUNTERS MUST SUBMIT** their game for examination before leaving the area when the permit station is open or sign out when the check station is closed and area is on self - registration.
8. **YOU MAY LOSE YOUR PERMIT PRIVILEGES** for violating the terms of a permit or for any violation of the conservation law or other law.

*As per regulations in Title 6 NYCRR Part 54, Amended Regulations to Wilson Hill Wildlife Management Area are posted at the check station.

**Number of upland hunters may be restricted during waterfowl season by posted notice.

The next few questions ask for your opinion about some of the habitat and management changes occurring on the area.

4. New dikes and a pumping station will allow DEC to either flood or draw down the water level in more of the impoundments.

Do you think that being able to manipulate the water levels in more of the impoundments is
a good idea, a bad idea, or do you have no opinion?

5. New trails and viewing platforms will be constructed to provide more opportunities for people to view wildlife on the area?

Do you think the construction of trails and viewing platforms is
a good idea, a bad idea, or do you have no opinion?

6. What is your opinion of the amount of DEC staff presence at Wilson Hill?
Do you think there is too much staff presence, just about the right amount, or too little?

The next few questions deal with things that may affect your satisfaction when you visit Wilson Hill. I am going to read through a short list of possible factors and I want you to tell me how important each of these is to your satisfaction when using Wilson Hill.

7. How important to your satisfaction is being able to hunt at Wilson Hill when it is most convenient for you? Would you say very important, moderately important, slightly important, or not at all important?

Very Moderately Slightly Not at all

8. How important to your satisfaction is to be able to hunt without feeling crowded or “interfered with” by others who are using Wilson Hill? Would you say very important, moderately important, slightly important, or not at all important?

Very Moderately Slightly Not at all

9. How important to your satisfaction is it that the game animals you hunt at Wilson Hill follow natural behavior patterns and don’t become skittish from being shot at too much? Would you say very important, moderately important, slightly important, or not at all important?

Very Moderately Slightly Not at all

10. How important to your satisfaction is the idea that there is a sense of fairness among hunters on the Wilson Hill area? Would you say, very important, moderately important, slightly important, or not at all important?

Very Moderately Slightly Not at all

My next few questions are about possible changes in regulations about when and how you might be able to use Wilson Hill in the future.

11. Typically, waterfowl hunting has been allowed only on Tuesday, Thursday, Saturday, and Sunday. A possible change would be to allow waterfowl hunting 7 days a week during the season.
- a. If a change was made to allow waterfowl hunting 7 days a week, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Would you support, oppose, or be neutral towards a possible change to allow waterfowl hunting 7 days a week at Wilson Hill during the waterfowl hunting season?

Support Neutral Oppose

12. A different alternative would be to keep the typical system of allowing waterfowl hunting only on Tuesday, Thursday, Saturday, and Sunday during the first half of the waterfowl season, but to then allow waterfowl hunting 7 days a week during the second half of the waterfowl hunting season.

- a. If the typical system was maintained for the first half of the waterfowl season and then a change was made to allow waterfowl hunting 7 days a week for the second half of the season, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Would you support, oppose, or be neutral towards a possible alternative to allow waterfowl hunting 7 days a week at Wilson Hill during the second half of the waterfowl hunting season?

Support Neutral Oppose

13. Typically, waterfowl hunting at Wilson Hill has been restricted to half days. A possible change would to allow waterfowl hunters to hunt all day long.

- a. If a change was made to allow waterfowl hunters to hunt all day long, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Would you support, oppose, or be neutral towards a possible alternative to allow waterfowl hunting all day long at Wilson Hill?

Support Neutral Oppose

14. Currently, waterfowl hunters cannot enter the area until one hour before legal shooting time. A possible change would be to eliminate this regulation and allow access to waterfowl hunters more than one hour before legal shooting time.

- a. If a change was made to allow waterfowl hunters to access the area more than one hour before legal shooting time, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Would you support, oppose, or be neutral towards a possible alternative to allow waterfowl hunters to access the area more than one hour before legal shooting time?

Support Neutral Oppose

15. A different possible change would be prevent waterfowl hunters from entering the area until one-half hour before legal shooting time.

- a. If a change was made to allow prevent waterfowl hunters from accessing the area until one-half hour before legal shooting time, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Would you support, oppose, or be neutral towards a possible alternative to prevent waterfowl hunters from accessing the area until one-half hour before legal shooting time?

Support Neutral Oppose

16. Recently, a change was made to allow small game (but not waterfowl) hunters to hunt all day long instead of only half days.

- a. How has this change to allow small game hunters to hunt all day long affected:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

- b. Do you support, oppose, or are you neutral towards allowing small game hunters to hunt all day long at Wilson Hill?

Support Neutral Oppose

17. Here is the last possible alternative I want to ask you about.

Currently at Wilson Hill, hunting for pheasants is not allowed until the first day of waterfowl season – usually the first Saturday in October. However, pheasants can be hunted in other parts of northern New York starting on October 1st. A possible change would be to allow pheasant hunting on Wilson Hill starting on October 1st rather than waiting until the start of the waterfowl season.

a. If a change was made to allow pheasant hunting starting on October 1st, what do you think would happen to:

your hunting convenience

less convenient no change more convenient

interference you experience from other users

less interference no change more interference

behavior patterns of game animals you hunt

less natural no change more natural

your sense of fairness among hunters

less fairness no change more fairness

b. Would you support, oppose, or be neutral towards a possible alternative to allow pheasant hunting starting October 1st?

Support Neutral Oppose

Now I want to end our survey with a few questions about you.

18. In what year were you born? 19 __ __

19. About how many miles away from Wilson Hill do you live?
(Do not read, just select category)

≤ 10 miles 11-20 miles 21-30 miles

31-40 miles 41-50 miles ≥ 51 miles

20. What is your gender? F M

Those are all the questions I have for you. Thank you very much for your cooperation.