



# BLACK DUCK JOINT VENTURE ANNUAL REPORT

FISCAL YEAR  
2007

JANUARY 2008

*The mission of the Black Duck Joint Venture (BDJV) is to implement and coordinate a cooperative population monitoring, research, and communication program to provide information required to manage black ducks and restore the population to the North American Waterfowl Management Plan (NAWMP) goal of 640,000 breeding birds.*

## BDJV NEWS

This year witnessed monumental changes in the membership of the BDJV. The big news of course, was the retirements of Jerry Serie and Steve Wendt. Jerry worked for the U.S. Fish and Wildlife Service (USFWS) since 1971 when he started as a seasonal biological technician. In 1973, Jerry became a waterfowl research biologist stationed at the Northern Prairie Wildlife Research Center. From there, Jerry accepted the Atlantic Flyway Representative position in 1984 which he held until his retirement in January 2007. Jerry served as the Co-Chair of the BDJV Technical Committee since the inception of the JV in 1986. Steve Wendt re-

tired from the Canadian Wildlife Service (CWS) after 31 years of dedication to the conservation of North American wildlife. Steve served as the BDJV Management Board Co-Chair for 5 years. The BDJV extends its thanks to both Jerry and Steve for their years of committed service to the American Black Duck and the BDJV. We wish them happiness and good hunting in their retirements. The BDJV experienced several other personnel changes during the course of the year. Sherry Morgan of the USFWS officially began her tenure as Management Board Co-Chair in November 2007. Sherry is the Northeast Re-

gion's, Assistant Regional Director for Migratory Birds and State Programs. Eleanor Zurbrigg, of CWS-Ontario replaced Steve Wendt as Co-Chair of the BDJV Management Board. Eleanor is the Acting Director of CWS-Ontario and has previously represented CWS-Ontario on the Management Board. Pat Devers of the USFWS came on board as the BDJV Science Coordinator in October 2006. Finally, John Coluccy was appointed to serve as the Ducks Unlimited representative to the BDJV.

In other news, the BDJV took on the task of updating and revising the BDJV Strategic Plan. This is the first update

since the original plan was completed in 1986. The Revised plan is slated to be completed by March 2008 and will provide strategic guidance to the membership over the next five years.

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## PROGRAM REPORTS

### Population Monitoring:

The BDJV Population Monitoring Program consists of the traditional monitoring efforts conducted by the U.S. Fish and Wildlife Service, Canadian Wildlife Service and state and provincial agencies. This program consists of the Mid-Winter Inventory (MWI), Canadian Mid-winter Inventory (CMWI), Breeding Population Survey (BPOP), the Eastern States Breeding Waterfowl Plot Survey (ESBWPS), and pre-season banding. The aerial surveys continue to provide a mixed message about the status and trend of black ducks. The number of black ducks (204,075) observed in the Atlantic and Mississippi Flyways during the MWI decreased by 5%

(Fig. 1) compared to 2006 and was 19% lower than the 10-year average (219,400). In the Mississippi Flyway the 2007 MWI estimate (16,004) was 34% below the 2006 count (24,177) and 52% below the 10-year average (33,100). In contrast, the BPOP survey indicated the black duck breeding population increased 14% in 2007 (569,000) compared to 2006 (499,000) and was 22% above the 1990–2006 average (465,000; Fig. 2). The CMWI indicated black duck numbers have decreased in each of the past two years (Fig. 3). The ESBWPS indicated an increase in breeding black ducks in 2007 (Fig. 4). Data from the 2007 pre-season banding program were not available at time of publication, except a summary from Moosehorn National Wildlife Refuge (Table 1).

Figure 1. Number of black ducks observed during Mid-Winter Inventory (MWI), 2002–2007.

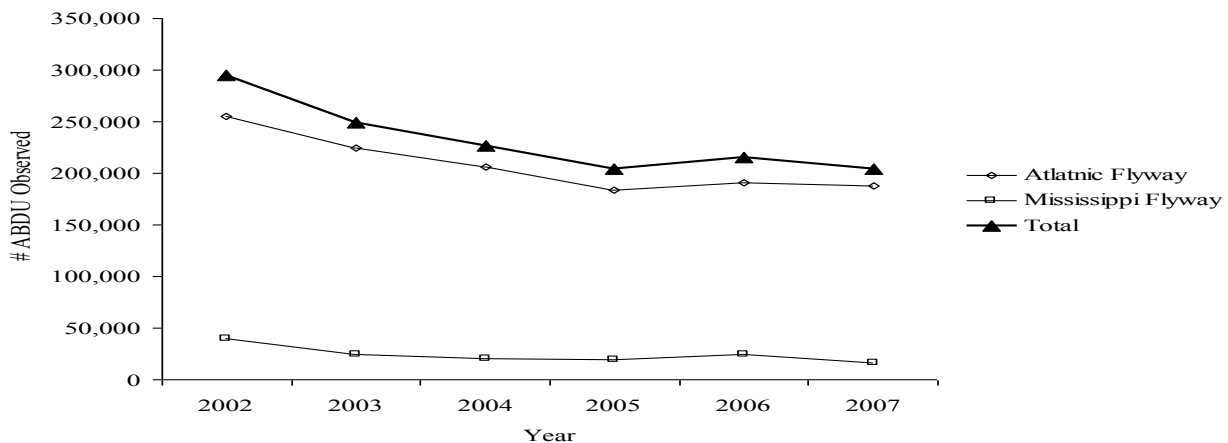


Table 1. Summary of pre-season banding at Moosehorn and Aroostook National Wildlife Refuges, Maine.

Species	L-F	L-M	HY-F	HY-M	AHY-F	AHY-M	UNK-HY	UNK-AHY
ABDU	2	0	154	135	36	15	1	0
MALL	0	0	16	20	2	9	0	0
MBDH	1	1	5	9	3	2	0	0
WODU	0	0	19	40	19	151	0	0
RNDU	0	0	7	15	0	0	0	0
AGWT	0	0	1	0	4	0	0	0
BWTE	0	0	2	0	0	0	0	0

Figure 2. Estimated trend (mean and 95% confidence interval) in black duck breeding population based on the spring integrated survey, 1990–2007.

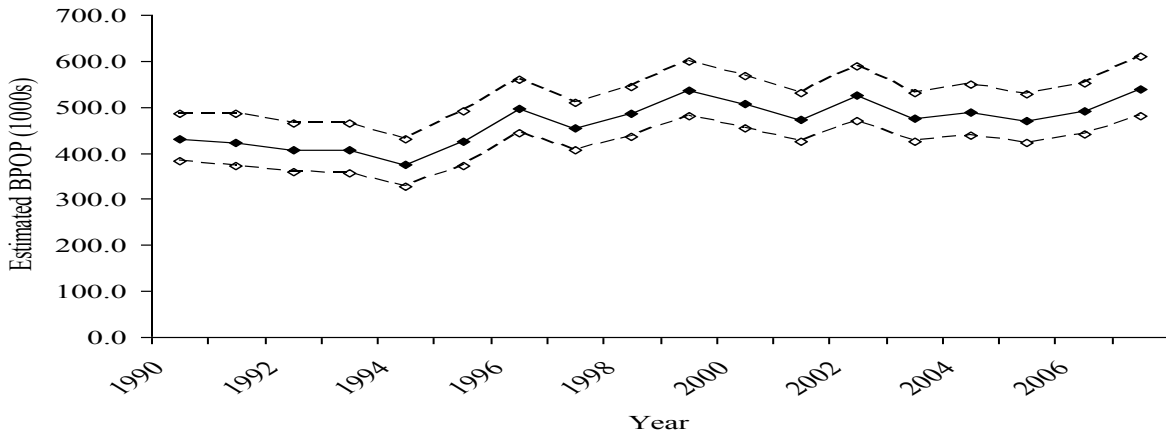


Figure 3. Number of black ducks counted during Canadian Winter Survey, 1984-2006. Survey area includes the north Shore of the St. Lawrence and Lake Ontario to Presqu'île Provincial Park.

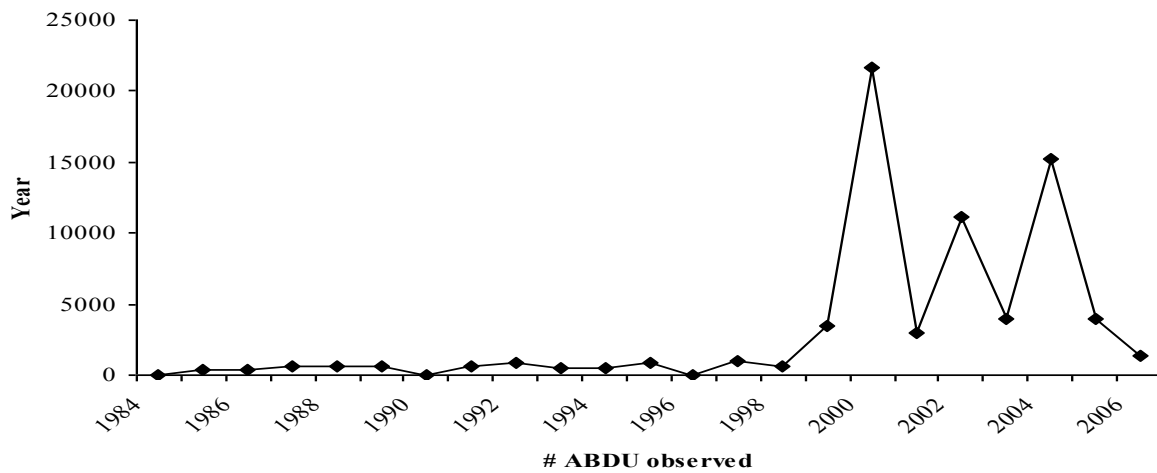
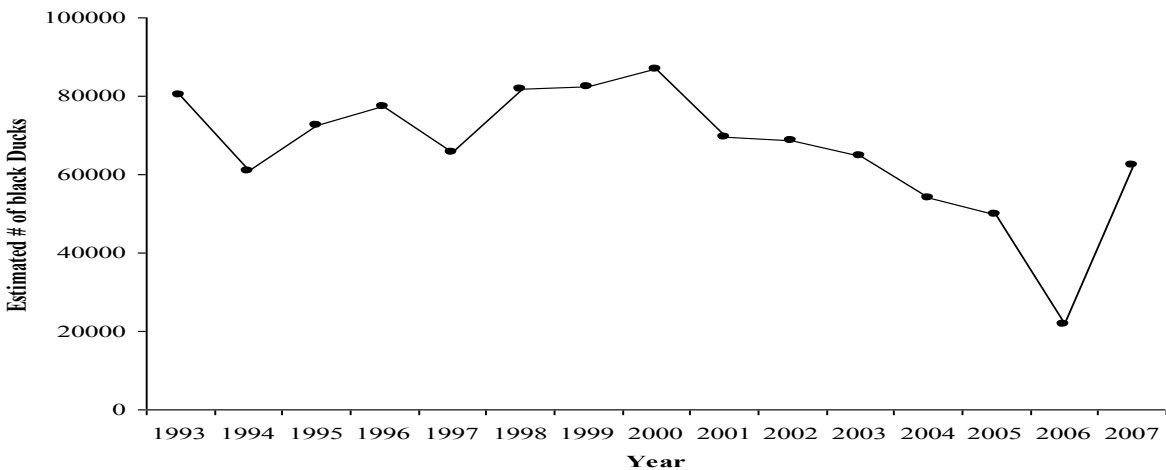


Figure 4. Estimated number of black ducks based on the Eastern States Breeding Waterfowl Plot Survey, 1993-2007.



Research:

The BDJV was very active in supporting a range of research projects to inform black duck management. Research topics ranged from monitoring methodology, to population ecology and habitat ecology. During the past year the BDJV supported 7 research projects, with 6 ongoing projects and 1 completed project. Progress and final reports are currently available through the members-only section of the [BDJV webpage](#). For information on accessing the Members Only section contact [Julie St. Louis](#).

Completed Projects:

**Jobs et al.** *Modeling the relative effects of mallards and local habitat change on the occurrence and abundance of breeding black ducks in southern and central Ontario.*

Goal: To characterize the effects and relative importance of local habitat conditions, habitat change, weather, and mallards on the occurrence and abundance of breeding black ducks in southern and central Ontario.

On-going Projects:

**Darveau et al.** *Effects of wetland landscapes configuration, ecological alteration, and other biophysical factors on the abundance of the American black duck in Québec forest-dominated landscapes.*

Goal: To identify local- and landscape-scale features and processes that affect the abundance of black ducks in Québec and to provide forest management recommendations.

Anticipated Completion: Spring 2009

**Yerkes et al.** *Determining food resource availability and estimating habitat carrying capacity for wintering and spring staging American black ducks in Virginia and southern New Jersey.*

Goal: Determine what type and how many acres of coastal habitat are required to support NAWMP goals of wintering and spring migrating black ducks along the Atlantic Flyway.

Anticipated Completion: Spring 2009

**Conroy, M.** *Technical support for adaptive harvest management for the American black duck.*

Goal: Update biological models developed with MWI population estimates (Conroy et al. 2002) using BPOP estimates.

Anticipated Completion: December 2009

**Fronczak and Raftovich.** *Development of training tool for identification of waterfowl during aerial surveys.*

Goal: Produce a video training aid for the purpose of introducing new observers to aerial waterfowl identification and improve the skills of veteran observers.

Anticipated Completion: Autumn 2008

**Royle et al.** *Analysis of accuracy and bias in eastern waterfowl aerial surveys.*

Goal: Analysis of accuracy and sources of bias in eastern waterfowl aerial surveys.

Anticipated Completion: Winter 2007/2008

**Petrie et al.** *Linking natal and harvest areas of American black ducks using stable isotope analysis.*

Goal: Link natal origins and harvest areas of black ducks harvested in Canada to determine if breeding stocks are spatially and temporally associated to harvest areas.

Anticipated Completion: Spring/Summer 2008

Communications:

The Joint Ventures Communication, Education and Outreach (JVCEO) Team held their inaugural meeting in Burlington, VT in October. The goal of the JVCEO Team is to develop and provide communications, education and outreach guidance, strategies, and products that are common to and support the activities of all JVs. The JVCEO is comprised of communications/education/outreach staff from the various habitat and species JVs. The team plans to meet annually or as needed. A chair-person is elected to a 2-year post and is charged with delegating tasks, ensuring tasks are on time, and serving as a liaison with the JV coordinators, the Divisions of Bird Habitat Conservation and Migratory Bird Management, national and continental bird plan coordinators, and the Association of Joint Venture Management Boards. Examples of JVCEO Team efforts include developing a national JV fact sheet and identifying existing and potential outreach challenges and opportunities common to all JVs and developing joint strategies to address the challenges. Julie St. Louis (USFWS) represented the BDJV at the inaugural meeting.

Evaluations:

No report.

## MEETINGS

The Black Duck Joint venture held its traditional 3 meetings, including the 1 Fall and 2 Winter Meetings. The Fall Technical Committee and Management Board Meeting was held in Quebec City, Quebec in November. In March, the Technical Committee met again in Saratoga Springs, New York and the Management Board met in Portland, Oregon. Minutes from each meeting are posted on the Members Only section of the [BDJV webpage](#).

## UPPER MISSISSIPPI RIVER & GREAT LAKES REGION JOINT VENTURE

The Upper Mississippi River & Great Lakes Joint Venture (UMR&GLRJV) is working on a draft Waterfowl Habitat Conservation Strategy. This plan includes a species account for habitat planning for the American black duck. As part of the plan, the authors estimated the UMR&GLRJV has a breeding population of 7,000 black ducks, which is 1,400 below the stepped-down regional goal of 8,400 breeding black ducks. The authors also estimated the JV has exceeded its goals for duck use days (Table 4). Finally, the plan identifies the need for greater understanding and information about black duck population dynamics on the western edge of their range as a priority research need. Persons interested in obtaining a copy of the draft plan or the final plan should contact Greg Soulliere, U.S. Fish and Wildlife Service.

## EASTERN HABITAT JOINT VENTURE

No report.

## ATLANTIC COAST JOINT VENTURE

The Atlantic Coast Joint Venture recently completed the [New England/Mid-Atlantic Coast Bird Conservation Region Plan \(BCR 30\)](#). The plan identifies the black duck as a “highest priority species” and identifies several proposed management actions to increase the quality and quantity of black duck habitat in the BCR. [The Lower Great Lakes/St. Lawrence Plan \(BCR 13\)](#) plan is also completed. This plan also identifies the black the black duck as a “highest priority species” and provides recommendations for research and management.

### BUDGET

The BDJV receives financial support for program activities from the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), Canadian Wildlife Service, State Wildlife Agencies in the Atlantic and Mississippi Flyways, and provincial governments in Ontario, Québec, and the Atlantic provinces. A review of BDJV operating (1234) funds and expenses is provided in Table 2. Additional USFWS funds included Atlantic Flyway (1231) funds totaling \$250,000. These funds were used to support the Eastern Canada Cooperative Banding Program (\$85,000) and spring BPOP survey (\$165,000). Canadian funds and expenses in support of black duck management are provided in table 3. In addition to the USFWS Funds, USGS provided approximately \$84,000.00 in the form of salaries, travel, and time associated with black duck research and management.

Expenditures by the Atlantic and Mississippi Flyways were not available at time of publication.

## NATIONAL SCIENCE SUPPORT TEAM

The National Science Support Team (NSST) has shown increased activity this year following the publication of the Continental Assessment Report. Current activities include efforts to improve the functionality of the NSST and involvement in scientific efforts that apply across joint ventures. First, an “Accountability Framework” subcommittee was formed to produce a scoping document identifying potential performance metrics and a step down process to aid joint ventures in evaluating progress toward North American Waterfowl Management Plan (NAWMP) goals. A Monitoring and Evaluation Subcommittee was also formed. The goal of this subcommittee is to develop evaluation and monitoring guidelines for the joint ventures. However, this effort is currently on the back burner awaiting the report from the Accountability Framework subcommittee. Finally, the NAWMP Committee and the NSST are working to develop a “Joint-Venture Tri-annual Progress Reporting Procedure”. It is envisioned to be similar to the Continental Assessment process, but less intense and more focused on Joint Ventures.

In terms of scientific efforts, the NSST is involved in several projects. First, a working group was organized to develop a “rapid prototype” model of waterfowl migration. The goal of this effort is to maximize long-term (e.g., 10-year running average) of breeding duck populations to meet NAWMP goals.

Table 2. Review of Black Duck Joint Venture (1234 Funds) Fiscal 2007 budget allocations and realized expenditures.

Resources	Obligated/Spent		
	Projected	As of 10 Dec 2007	Difference
Carry over, FY 2006 <sup>a</sup>	\$122,376.00	\$122,376.00	\$0.00
New funds, FY 2007	\$353,055.00	\$353,055.00	\$0.00
<b>Total available funds</b>	<b>\$475,431.00</b>	<b>\$475,431.00</b>	<b>\$0.00</b>
<sup>a</sup> Must be spent by 30 September 2007			
<b>FY 2006 Funds</b>			
<b>Research:</b>			
Yerkes et al. <sup>1</sup>	\$66,548.00	\$66,548.00	\$0.00
Conroy, M.	\$54,456.00	\$54,456.00	\$0.00
<b>Total</b>	<b>\$121,004.00</b>	<b>\$121,004.00</b>	<b>\$0.00</b>
<b>FY 2006 Balance</b>		<b>\$1,372.00</b>	
<b>FY 2007 Funds</b>			
<b>Monitoring: (Operational surveys and banding)</b>			
NE Cooperative banding fund	\$26,250.00	\$26,250.00	\$0.00
USFWS Banding: Moosehorn NWR	\$6,000.00	\$0.00	\$6,000.00
USFWS aerial survey of staging areas in ME	\$5,000.00	\$0.00	\$5,000.00
<b>Total</b>	<b>\$37,250.00</b>	<b>\$26,250.00</b>	<b>\$11,000.00</b>
<b>Research:</b>			
Double observer study (observers, travel, etc.)	\$25,000.00	\$10,418.00	\$14,582.00
<b>Total</b>	<b>\$25,000.00</b>	<b>\$10,418.00</b>	<b>\$14,582.00</b>
Yerkes et al. <sup>1</sup>	\$33,452.00	\$33,452.00	\$0.00
Darveau et al.	\$35,500.00	\$35,500.00	\$0.00
<b>Total</b>	<b>\$68,952.00</b>	<b>\$68,952.00</b>	<b>\$0.00</b>
<b>Administrative costs:</b>			
USGS research coordination	\$20,000.00	\$20,000.00	\$0.00
<b>Total</b>	<b>\$20,000.00</b>	<b>\$20,000.00</b>	<b>\$0.00</b>
BDJV Science Coordinator			
Salary	\$66,500.00	\$60,958.33	\$5,541.67
Benefits	\$22,000.00	\$20,166.67	\$1,833.33
Travel	\$30,000.00	\$10,690.00	\$19,310.00
Equipment	\$5,000.00	\$1,383.00	\$3,617.00
<b>Total</b>	<b>\$123,500.00</b>	<b>\$93,198.00</b>	<b>\$30,302.00</b>

Table 2. Continued

<b>Resources</b>	<b>Obligated/Spent</b>		
	<b>Projected</b>	<b>As of 27 Sept 2007</b>	<b><i>Difference</i></b>
Support of USFWS travel and meeting attendance			
Region 5	\$15,000.00	\$3,556.00	<i>\$11,444.00</i>
Region 9	\$20,000.00	\$100.00	<i>\$19,900.00</i>
<b>Total</b>	<b>\$35,000.00</b>	<b>\$3,656.00</b>	<b><i>\$31,344.00</i></b>
<b>Communications</b>			
Various outreach efforts and products	\$15,000.00	\$0.00	<i>\$15,000.00</i>
<b>Total</b>	<b>\$15,000.00</b>	<b>\$0.00</b>	<b><i>\$15,000.00</i></b>
<b>Total Expenditures for FY 2007</b>	<b>\$324,702.00</b>	<b>\$222,474.00</b>	<b><i>\$102,228.00</i></b>
<b>Balance of FY 2007 Funds Remaining <sup>b</sup></b>	<b>\$28,353.00</b>	<b>\$127,337.00</b>	

<sup>b</sup> As of 10 December 2007; as Must be obligated by 30 September 2008

<sup>1</sup> Total funding for Yerkes et al. was \$100,000.00



Biologist checking black duck nest in the Chesapeake Bay, Virginia, 2007. Photo courtesy of P. K. Devers



Table 3. Review of Canadian contributed funds to the Black Duck Joint Venture Fiscal Year 2007 budget allocations and realized expenditures.

<b>Category</b>	<b>Projected</b>	<b>Obligated/Spent</b>
<b>Population Monitoring: aerial surveys</b>		
CWS: Ontario	\$65,000.00	\$65,000.00
CWS: Quebec	\$184,000.00	\$184,000.00
CWS: Atlantic	\$121,050.00	\$121,050.00
Ontario (Provincial)	\$0.00	\$0.00
Quebec (Provincial)	\$0.00	\$0.00
Atlantic (Provincial)	\$0.00	\$0.00
<b>Population Monitoring: aerial surveys: pre-season banding *</b>		
CWS: Ontario	\$0.00	\$0.00
CWS: Quebec	\$5,000.00	\$5,000.00
CWS: Atlantic	\$15,000.00	\$15,000.00
Ontario (Provincial)	\$100,000.00	\$100,000.00
Quebec (Provincial)	\$0.00	\$0.00
Atlantic (Provincial)	\$5,000.00	\$5,000.00
<b>Research *</b>		
CWS: Ontario	\$0.00	\$0.00
CWS: Quebec	\$0.00	\$0.00
CWS: Atlantic	\$0.00	\$0.00
Ontario (Provincial)	\$0.00	\$0.00
Quebec (Provincial)	\$0.00	\$0.00
Atlantic (Provincial)	\$0.00	\$0.00
<b>Communications</b>		
CWS: Ontario	\$0.00	\$0.00
CWS: Quebec	\$0.00	\$0.00
CWS: Atlantic	\$0.00	\$0.00
Ontario (Provincial)	\$0.00	\$0.00
Quebec (Provincial)	\$0.00	\$0.00
Atlantic (Provincial)	\$0.00	\$0.00



American black duck.  
Photo: Ducks Unlimited

Table 3. Continued

<b>Category</b>	<b>Projected</b>	<b>Obligated/Spent</b>
<b>Administrative Costs</b>		
CWS: Ontario	\$10,000.00	\$10,000.00
CWS: Quebec	\$4,000.00	\$4,000.00
CWS: Atlantic	\$5,000.00	\$5,000.00
Ontario (Provincial)	\$15,000.00	\$15,000.00
Quebec (Provincial)	\$0.00	\$0.00
Atlantic (Provincial)	\$2,000.00	\$2,000.00
CWS: Headquarters	\$6,000.00	\$6,000.00
Ducks Unlimited Canada	\$2,000.00	\$2,000.00
<b>Total</b>	<b>\$537,050.00</b>	<b>\$537,050.00</b>

*\* Reflects Canadian contributions to the BDJV program; it does not include funds sent to Canada to implement the Cooperative Banding Program.*

Table 4. Upper Mississippi River and Great Lakes Joint Venture non-breeding and migration use-day goals based on NAWMP population goal and harvest estimates.

<b>Season</b>	<b>Goal<sup>a</sup></b>	<b>Use days<sup>b</sup></b>
Spring migration	238,000	3,570,000
Fall migration	309,400	4,641,000
Winter	154,000	13,860,000
<b>Total (all seasons)</b>		<b>22,071,000</b>



The objectives are:

- Evaluate current efforts of migration habitat delivery.
- Evaluate potential for migration habitat to become a limiting factor.
- Form basis of future decision support tools to more effectively guide habitat delivery efforts (JVs, SHC, etc.).
- Form explicit links between wintering and breeding habitat joint ventures (as advocated by JTG Report).

This project was initiated in the spring of 2007 and Pat Devers was invited to participate in summer 2007. The working group is scheduled to meet again in December 2007 or January 2008.

Second, science coordinators from several wintering habitat joint ventures are working together to develop alternative methods to link waterfowl vital rates to habitat characteristics. The purpose of this effort is to develop a method to step down continental population goals to regional habitat goals. This effort is in the earliest stages; so far the group has held an initial brainstorming conference call consisting of representatives from habitat joint ventures only. Pat Devers was asked after the initial conference call to participate in the effort, and agreed to take part. The group will meet in March 2008 to continue the work. Finally, the NSST has been asked to review a Mississippi Flyway Cooperative Proposal to investigate mallard migration ecology using GPS satellite telemetry. The proposal is still being drafted.

## IMPORTANT DATES

Date (mm/dd)	Event
11/5–6	Black Duck AHM Working Group Meeting
11/7–8	Black Duck Joint Venture Meeting
11/27–30	AHM Working Group Meeting
1/23–24	NAWMP Plan Committee Meeting
2/24–29	Mississippi Flyway Technical Section Meeting
2/25–26	Association of Joint Ventures Management Board Meeting
3/2–7	Black Duck Joint Venture Technical Committee Meeting; Atlantic Flyway Technical Section meeting
3/5	Migratory Bird Conservation Commission
3/24–29	National Flyway Council Meeting; Atlantic and Mississippi Flyway Council Meeting; Black Duck Joint Venture Management Board Meeting; Upper Mississippi and Great Lakes Region Management Board Meeting; North American Wildlife and Natural Resources Conference
4/27–30	Northeastern Association of Fish and Wildlife Agencies Conference
7/20–25	ACJV Meeting; Atlantic Flyway Technical Section and Council Meeting
9/8–14	Association of Fish and Wildlife Agencies Meeting
11/10–14	3 <sup>rd</sup> North American Sea Duck Conference

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