Westover's Bird Hazard Working Group: Actively Managing Risk at Westover Air Reserve Base, MA

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Team Members

Westover's Bird Hazard Working Group is the centerpiece of Westover's BASH Plan. The function of BHWG is to collect, compile and review all data on bird strikes at and near Westover. The BHWG then uses this data to reduce airfield BASH risks. It does this by ensuring all members understand and agree on the validity of the data. It then uses this data to recommend changes to operational procedures, inform users, and actively manage the airfield environment. In addition, the BHWG is the point of contact for off base BASH issues. Westover BHWG closely works with many off base risk sources including all three area landfill operators, two golf courses, an adjacent state park, and nearby land owners. All are members and are always invited to every meeting.

BASH Processes

Westover uses many written procedures and process in order to capture and determine risks. One such example is Westover's Phase II Implementation worksheet. Since Westover has been allowed to implement Phase to by NOTAM, it aids the COS/FSO in determining when to implement PHASE II procedures, by capturing both historical data, recent trends, BAM and airport operator data.

PHASE II MIGRATORY BIRD HAZARD ORM WORKSHEET

1-7 SEP 05

Directions: To be filled out by COS/FSO using bird strike running log, Base operations BASH log, and phone calls to the appropriate agencies. Worksheet and accompanying excel charts on activity and strikes will then be reviewed for Phase II consideration by the BHWG Chairman or his designated representative. File a copy in the BASH Binder.

1. Using the bird activity spreadsheet, has there been an increase in bird responses by base operations?
Average Weekly Baseline Last 3 years ___6___
Last Week Activity ___6___
Week to Week Increase ___0___
1-5 = 10 points
6-10 = 20 points
>11 = 40 _____0_____
Average Monthly Baseline Last 3 years ___24___
Last Month Activity ___24___
Month to Month Increase ___0___
1-10 = 10 points
>11 = 20 points _____0_____

2. Are the bird responses to large flocks of birds or large single birds?
Yes =20 points _____20____

3. Using the bird strike log, has there been an increase in bird strikes?
Average Weekly Baseline Last 3 years ___2___
Last Week Activity ___6___
Week to Week Increase ___4___
1-2 = 20 points
3-4 = 30 points
>4 = 40 _____40_____
Average Monthly Baseline Last 3 years ___5___
Last Month Activity ___16___
Month to Month difference ___11___
1-4 = 20 points
5-7 = 40 points
>7 = 60 _____60_____
Total this side _____120_____

4. Using the bird strike log, have any of the strikes been from multiple birds or large birds?
Yes = 20 points _____20_____

5. Is the BAM model moderate or greater?
Dawn 10 points _____0_____
Day 5 points _____0_____
Dusk 20 points _____0_____
If severe, add 40 points _____0_____

6. After calling base operations, does the airfield manager or his representative report greater than normal bird activity?
If yes, add 10 points _____10_____

7. After calling the tower chief or personnel, do they report greater than normal bird activity?
If yes, add 5 points _____5_____

8. After calling the USDA representative, do they report greater than normal bird activity?
If yes, add 10 points _____10_____

9. Does the COS/FSO report a greater than usual threat of bird activity?
If yes, add 5 points _____5_____
Total from above _____50_____
Total from 1st page _____120_____
Combined Total for Both pages
_____170_____

Index
0-100 Normal Operations, risk is normal
101-150 Heightened awareness needed, risk is increasing
151-160 Demonstrated Increased Threat, consider Implementing Phase II
>161 or > Implement Phase II

Acknowledgements

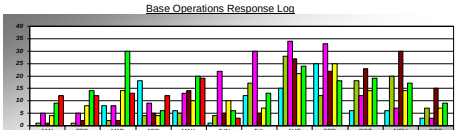
Although not inclusive, Westover Safety would like to thank those responsible for our successes. First, I'd like to say Godspeed and a safe journey to Pete Winslier in his final flight. He has been a good friend and provided tremendous assistance to the BHWG and our mowing plan. Special thanks to the Smithsonian, Carla Dove and all of her associates in their help in identifying all of the samples we have sent. Thanks to all of the members of the BHWG, especially those from off base, including New England Waste Services, Waste Management, Chicopee Country Club and Westover Golf Course. Honorable mentions also include David T (for terrific) Moore, of CTI, Lt Col Laura Feltman, our outstanding JAG who has recently left to catch bigger birds, and all of our dedicated friends from USDA/APHIS/Wildlife Services, including Michelle Cozine, Adam Markishtin, and Brian Washburn. Thanks again to our key Westover members, including Drew Milcoy, Jack Moriarty, Mark Tarti, Maj Mike Pirrone, Ciel LaCasse and all our other team members. Lastly, I'd like to thank Westover's senior leaders. Their support and enthusiasm for the program has been instrumental in our ability to move the program forward, properly fund programs, and provide leadership and enthusiasm for the BASH program. Lastly, we acknowledge the tremendous debt of those that started the BASH program and have left, knowing that we are only building upon their contributions and successes.

DATA

A primary premise of our BASH program is that you can't prevent bird strikes without knowing what's out there and what you are hitting. Westover uses multiple data sources to determine what is actually occurring in our environment. Westover reports every bird strike that occurs. We do this through a robust, inclusive process that includes maintenance, operations, aircrew, USDA and civilian operators. Each area mentioned has a unique checklist in order to capture all relevant data. Critical to the success of the process is proper education and motivation. All users are briefed on what their part is in the data collection process, and, more importantly, that the data collected directly influences decisions by the BHWG to protect both their aircrews and their aircraft. We believe that the ownership issue is key to our success in collecting and reporting.

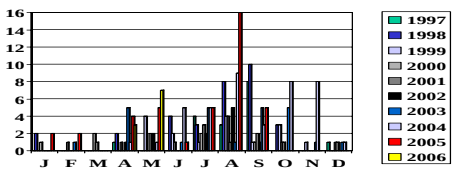
On the operations side of the house, Westover has been collecting data since 1997. In that time frame, Westover, with the help of the Smithsonian Institute, has reported 262 bird strikes. Data is collected and used on species, time of day, location of strike, weight, and flight conditions. Base operations has been collecting similar information on responses to animal and birds since 1999. These two data pieces, along with surveys and other environmental inputs, allows the BHWG to better understand the nature of the threats to flight safety and take proper mitigating steps.

Base Operations Response Log



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2000	0	0	8	18	6	1	12	15	25	6	6	3
2001	1	1	2	4	5	4	17	28	12	18	20	7
2002	5	5	8	9	13	22	30	34	33	12	7	3
2003	1	2	2	5	14	5	5	27	22	23	30	15
2004	4	8	14	4	10	10	7	21	25	14	14	7
2005	9	14	30	6	20	6	13	24	18	19	17	9
2006	12	12	13	12	19	3	0	0	0	0	0	0

Bird Strike Running Log



Species We Are Hitting

21	*American Kestrels*	*117 g*
12	*Killdeer*	*95 g*
17	*Swallows*	*13 g*
12	*Mourning Doves*	*120 g*
10	*Eastern Meadowlarks*	*90 g*
4	*Horned Larks*	*32 g*

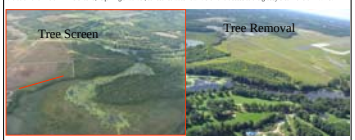
Damaging Bird Strikes

1	*Herring gulls*	*Jan 1991*
1	*Mallard*	*7 March 2000*
1	*Turkey vulture*	*24 Sep 2002*
1	*Herring Gull*	*27 Apr 2003*
1	*Whimbrel*	*9 Sep 2003*
1	*Unknown*	*30 Apr 2004*

Managing Risks

ORM and Bird Screens

Westover is surrounded by many large wetlands and open water features. On the RW 23 approach, a large body of water exists mostly off base. This wetland is an attractant to large migratory waterfowl. Westover's BHWG has left a tall stand of trees, in violation of airfield TERPs criteria, requiring a waiver, to restrict waterfowl vision and access to the grassy clear zone of RW 23.



Grassland Conversion and Stump/Brush Removal

The goal here was to increase the grassland area near the runways and therefore increase the habitat for birds which are not a primary threat to the type of aircraft that operate at Westover. This has the effect of moving the tree line back from the runways and reduces the threat from high BASH risk species, such as deer and wild turkeys. It also has the added benefit of increasing habitat for the Grasshopper Sparrows (Ammodramus Savannarum) and the Upland Sandpiper (Bartramia Longicauda), both state listed species, which are of low BASH threat. In addition, Westover is using little bluestem grass, which, based on test plots, which does not conceal problem species well and is an excellent cover and provides a good habitat for our grassland species.

Prescribed Burning

The use of prescribed burns is an active tool of the BASH team. Westover, assisted by help from the Forest Service, has burned every year that the weather has allowed. In 2002, Westover burned 75 acres, in 2004 it was 105 acres and in 2006 Westover burned 228 acres. Details of Westover's prescribed burning plan are outlined as a part of our BASH plan. Westover allocates a significant monetary amount to the burning, spending approximately $12,000 per year, allowing the removal of intrusive species and reinforcing the homogeneity of the blue stem grassland. In addition, it removes a large source of food and cover in those areas, further reducing risk from animals and birds preying in those areas.

Wetland Relocation

Westover ARB spent approximately 3 years obtain the permits and funds to fill a drainage ditch near the runway. We did this by creating an artificial wetland, away from the runway primary surface area, building it in such a way as to mitigate its use by waterfowl. The cost of the project exceeded $1 million, with the most difficult and expensive part being the permitting process.