

**APPENDIX B: BLACK DUCK JOINT VENTURE RESEARCH PROGRAM IMPLEMENTATION PLAN,
2008**

Introduction

The mission of the BDJV is to support scientific research on black duck ecology to inform management actions. The goals of the research program are to facilitate the exchange of ideas and data among cooperators and stakeholders, coordinate and support research, and serve as a 1-stop clearinghouse of current scientific knowledge of black duck ecology and management. To fulfill these goals the BDJV, led by the Research Working Group (RWG), is committed to completing the following objectives during the 5 year planning horizon of this strategic plan:

- I. Identify and prioritizing research and information needs;
- II. Administer a competitive grant program;
- III. Produce annual reports
- IV. Engage in outreach activities

The Research Working Group (RWG) is a sub-committee of the BDJV Technical Committee and is responsible for spearheading efforts by the Technical Committee to accomplish the goals and objectives of the BDJV research program. Recommendations and products of the RWG are presented to the Technical Committee for review and approval and forwarded on to the Management Board for final approval and implementation. This Working Group will meet as required, but no less than once a year.

Research and Information Needs

The RWG is responsible for leading the efforts to identify and prioritize research and information needs (Table B1.) to guide the BDJV competitive grant program. The list is to be up-dated every 5 years as part of strategic plan revision process, or more often if needed. The list is to be developed with input from BDJV cooperators and stakeholders including the Atlantic and Mississippi Flyway Councils, Canadian Wildlife Service, U.S. Fish and Wildlife Service, state and provincial wildlife management agencies, and associated habitat joint ventures. The prioritized research is to be accessible on [BDJV website](#).

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Table B1. Description and categorization of priority research needs for the American black duck as identified by the Black Duck Joint Venture during the 5-year planning horizon, 2008-2013.

Category	Issue	Priority w/in Category	Overall Priority
Population Monitoring	Identify sources of and quantify heterogeneity in band reporting rates.	1 ^a	3 ^a
	Evaluate genetic methods to monitor changes in black duck population size and structure.	2	9
	Quantify and identify sources of variation and bias in estimates of fall age ratios.	3	15
	Quantify effect of “availability” bias in aerial surveys	4	16
	Evaluate and quantify influence of behavioral responses of black ducks to survey related disturbances.	5	17
	Integration of ground breeding population surveys with aerial surveys.	6	18
	Development of post-season banding and aging techniques.	7	19
Population Ecology	Development of Adaptive Harvest Management models.	1 ^a	2 ^a
	Quantify the rate and identify causes of apparent decline in black duck productivity.	2	4
	Quantify regional differences in and factors influencing black duck productivity.	3	5
	Evaluate and quantify population structure and sub-units.	4	10
	Test hypotheses of range contraction versus population decline.	5	13
Habitat Ecology	Quantify regional nutritional carrying capacity on seasonal ranges.	1 ^a	1 ^a

^a Research needs currently being addressed with on-going research projects.

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Table B1. Continued.

Category	Issue	Priority w/in Category	Overall Priority
Integration of population dynamics and habitat.	Evaluate and quantify influence of habitat patch size and human disturbance (e.g., road density, perforation, fragmentation, and recreation) on black duck habitat selection, use and quality.	2	6
	Identify and quantify habitat factors influencing productivity.	3	8
	Evaluate the quality and availability of healthy coastal marshes and other large (>10 ha) marsh/open water complexes during winter and spring.	4	14
	Develop synthetic models integrating black duck habitat and population dynamics as recommended by the Joint Task Group.	1	7
	Develop synthetic models predicting the effects of climate change of black duck population dynamics and habitat use.	2	11
	Identify migration routes and factors influencing time budgets and distribution during migration.	3	12

^a Research needs currently being addressed with on-going research projects.

Competitive Grant Program

The BDJV has limited funds available to support directed research. Further, the amount of funds is variable from year to year. Consequently, the BDJV will support priority research contingent

upon available funds. Proposed studies should address ≥ 1 of the priority research and information needs as identified by the BDJV (Table B1.) Studies should be well designed, comprehensive, and integrated where possible to minimize conflicts involving overlap with on-going research, maximize resources, and broaden the application of the results.

To advance the development of research projects, interested parties are encouraged to contact the BDJV Science Coordinator or any member of the Technical Committee to confirm current research priorities, anticipated funds, and progress of on-going projects.

Proposal format

1. **Cover page:** project title, principal investigator name(s) and affiliation, date, current cooperators and funding partners.
2. **Problem/issue statement:** what is the problem or issue addressed by the proposed work, specifically what issue identified by the BDJV 5-year strategic plan is it addressing? (50 words).
3. **Justification:** complete and concise review of the issue and why it is important to management.
4. **Objectives or hypotheses:** Clearly and explicitly stated research objectives or hypotheses (i.e., null and alternative hypotheses).
5. **Scope and location:** Provide a description of the proposed study area(s) and the temporal and spatial bounds of the project.

6. **Study design:** Described the proposed methods including statistical treatments, experimental or observational units, replications, and sample size(s), and anticipated analyses. If the project is an observational study, describe the a priori model sets and associated variables in model development or selection.
7. **Anticipated output:** Provide a descriptive list of anticipated products and data sets.
8. **Management implications:** Describe how the results of this project may inform management activities.
9. **Relationship to other projects:** Describe the relationship of the proposed work to other projects in terms of shared resources, complementary scientific objectives or direct collaboration.
10. **Literature cited:** as appropriate.
11. **Personnel:** Provide a brief description of key personnel including background and experience, role and responsibilities on the project. Append curriculum vitae for the principle investigator(s).
12. **Schedule:** Provide the beginning and end dates, anticipated completion dates for various milestones, and dates for submitting interim report(s).
13. **Budget:** Include personnel requirements, operating expenses, capital costs, and administrative or overhead charges. Summarize annual costs and total project costs. List all funds currently secured for the project, funds applied for, and cooperators.
14. **Schedule**

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The BDJV competitive grant program will be administered annually (contingent upon available funds) following the timeline below:

- November: BDJV Technical Committee and Management Board meeting – Technical Committee will review available funds to support on-going and new research projects and priority research needs. The Technical Committee will recommend funding levels and priority research needs to the Management Board for approval. Management Board makes final determination about research funding levels and priorities and determines if a request for proposal will be announced.
- December: Request for Proposals announced through www.grants.gov, the [BDJV webpage](#), and through various email list-serves.
- February: Proposals due to the BDJV Science Coordinator by 1 February. Proposals forwarded to the Technical Committee and Management Board.
- March: Research Working Group completes review and initial rankings. Full Technical Committee reviews rankings by the research working group and makes recommendations to management board during winter technical meeting. Management Board makes final selection during winter meeting.
- April: Selected recipients informed of selection for funding; grant paperwork completed.

Evaluation of research proposals

The BDJV Technical Committee will review all research proposals and make recommendations for funding to the Management Board. The final decision on funding will be made by the

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Table B2. Evaluation form for proposals submitted to the Black Duck Joint Venture.

Research Proposal – FY			
Proposal (assigned #):	_____		
Res. Category (e.g., population ecology):	_____		
Proposal Title:	_____		
Principal Investigators:	_____		
Reviewer:	_____		
Does the study address a BDJV information priority for American black ducks? (i.e., appropriate for funding as part of NAWMP?)	Yes	No	
Scoring Criteria: Range of 1 to 5 where 1= weak - meets few criteria in Evaluation Category; 3= average - meets most criteria in Evaluation Category, but exceptional in few of them; 5= strong - meets all criteria at consistently high level			
EVALUATION CATEGORY	Score for category	Relative Weight of Category	Score x Relative Weight For Category
Management/Conservation Considerations		5	
What information need(s) will this study address?	_____		_____
Does the proposal address a part of the population with a conservation concern (i.e., declining segment in western areas of range)	_____		_____
Do clear management implications exist that will result from the study and broadly applicable?	_____		_____
Will the study provide information necessary or useful for improving monitoring or management of the black duck population?	_____		_____
Methodology and Approach		4	
Is the approach appropriate and as presented, justified, and logical?	_____		_____
Are the methods appropriate?	_____		_____
Are sample sizes adequate?	_____		_____
Is the timing and data collection schedule realistic?	_____		_____
Are objectives clear and realistically achievable?	_____		_____
Is the study being conducted in an appropriate location?	_____		_____
Is the proposal adequately documented and relevant literature cited?	_____		_____
Proposal (assigned #):	_____		

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Table B2. Continued.

EVALUATION CATEGORY	Score for category	Relative Weight of Category	Score x Relative Weight For Category
Funding and Partnership Considerations		3	
Total cost of the proposed project?	_____		_____
Is the study cost efficient / logistically efficient (e.g., is logistical infrastructure in place that will make efficient use of BDJV contributions?)	_____		_____
Is there a substantial match of contributions, particularly from non-US-federal sources?	_____		_____
Are the requested budget items appropriate for BDJV and are cost estimates reasonable?	_____		_____
If requesting multi-year funding, are final products/results worth the risks of failure, the potential for inadequate funding in future years to achieve objectives, and the lost opportunity to fund other studies? (consider total costs over all years to the value of expected end products)	_____		_____
Does the study involve multiple partners?	_____		_____
Will this study bring on new partners to the BDJV?	_____		_____
Other Considerations		2	
Does the study significantly complement other ongoing studies (i.e., is there added value to the study?)	_____		_____
Do PIs have a proven track record of successful investigations?	_____		_____
Will results be communicated effectively and in a timely manner?	_____		_____
Is this a ONE-TIME opportunity that the BDJV shouldn't pass up?	_____		_____
Does study integrate multiple research categories? (see above)	_____		_____
Comments on Proposal			

Management Board. The Technical Committee will evaluate each proposal based on several criteria including management/conservation considerations, methodology, funding and partnership considerations (Table B2). Additionally, on-going projects will be reviewed to evaluate progress towards stated goals and efficient use of BDJV funds.

Progress and final reports

Annual progress and a final report are required for all projects supported by the BDJV. Reports should be sent to the BDJV Science Coordinator by 30 September. Annual and final reports should be complete and concise, but ≤5 and ≤25 pages, respectively. If a project is on-going, the report should describe accomplishments to date (including publications), confirm the need for continued support, and detail changes in project objectives or methods. Reports should be completed in MS WORD or compatible program using the following format.

Project title:

Principal investigator(s): name, affiliation, phone, and email address

Duration: provide the start and end dates of the project. For multi-year projects, indicate it was Year-x of Y-year project.

Partners: list all organizations and individuals that provide some kind of support.

Project description: identify issue being addressed, objectives, hypotheses, study area, and general methods.

Results: provide concise review and summary and preliminary or final results.

Project status: identify which objectives were completed; describe unexpected obstacles and changes in methodology, and objectives for remainder of the project.

Project funding sources (US\$). Provide information about previous year's expenditures.

BDJV	Other US	US non-federal	Canadian	Canadian non-	
Contribution	federal	contributions	federal	federal contributions	Other
	contributions		contributions		

Total cost: provide total cost of project.

Total BDJV funds: provide total amount supported by BDJV during the life of the project.

Reporting

The RWG will produce an annual report summarizing the status and results of on-going and completed research projects, revisions or changes to the prioritized list of research and information list, or competitive grant program. The RWG report will be incorporated in the annual BDJV report compiled by the communications working group (CWG). The annual report is due to the CWG by 1 October. The purpose of the annual report is to facilitate internal communication among the Technical Committee and Management Board, external communication with BDJV cooperators and stakeholders, and evaluation of progress towards BDJV and NAWMP goals.

Outreach

A critical component of the BDJV research program is to serve as a 1-stop clearinghouse of information and resources related black duck research and conservation. To accomplish this objective, the BDJV will pursue several outreach strategies, including hosting the “Second American Black Duck Symposium: evaluation, management, and research” and producing an electronic book “Black Duck Ecology and Management: State of the Art 2008-2013”.

The Second Black Duck symposium will provide a forum for researchers and managers to exchange ideas and strategies for black duck conservation based on the best available science. The symposium, to be held between 2009 and 2011, will serve as a foundation for the revision of the BDJV strategic plan due in 2013. The RWG, in coordination with the CWG, is responsible for organizing the symposium.

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In concert with the Second Black Duck conference, the RWG and CWG will produce an e-book reviewing the current state of the art in black duck ecology, research and management. This book will review current knowledge, hypotheses, and leading paradigms in black duck population dynamics, habitat ecology, survey methods, and management recommendations. The e-book will also include a complete bibliography of black duck literature. The e-book will be accessible through the [BDJV webpage](#) and will be revised every 5 years, or as needed, to reflect the most current paradigms, status, and management of the American black duck.

For more information about the BDJV Research Program contact:

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