HB

202

<TARGET><BILL>HB 202</BILL><SUBJECT>HB 202</SUBJECT><COMM>HRES28</COMM></TARGET>

HOUSE COMMITTEE REPORT

(9)
Date Referred to Committee: April 10, 2013 **FURTHER REFERRALS: Finance**

Date of Committee Action: 3/14/14

The RESOURCES Committee considered: **HB 202**

HOUSE BILL NO. 202
"An Act raising the application fee for a drawing permit for the hunting of bison to $20; requiring the game management plan for bison in the Delta Junction Bison Range Area to include mitigation of bison damage to farm crops and farm and personal property; and authorizing the commissioner of natural resources to make grants to mitigate or prevent damage caused by bison."

HB 202 BISON DRAWING PERMIT FEES

Recommends it be replaced with [ ] HCS *or* [X] CS *for* HB 202 (RES)
For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR_____ **[ ] Same Title [X] New Title**

[ ] attach amendments
[ ] add new referral to _____Committee
[ ] Letter of Intent_____Committee

List of Abbrev for Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
DHS
LWF
LAW
LEG
MVA
DNR
DPS
REV
DOT
UA

***NEW* FISCAL NOTES**
*FN# is assigned by Chief Clerk's Office

*FN#	List by Dept(s):	Fiscal	Indet.	Zero
	DFG	X		
	DNR	X		

***PREVIOUS* FISCAL NOTES**

FN#	List by Dept(s):	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
Paul Kleaton				X	
Olson	Tarr			X	
	Olson			X	
Peggy Wilson	Wilson	X			
Mike Hawker	Hawker			*	
	Ramras				*
Johnson	Johnson			X	
Chair:	Feige	X			
Chair: Jim Seaton	Saddler			X	

ALASKA STATE LEGISLATURE

House District 6
Co-Chair House Resources Committee
Transportation Committee
Fisheries Committee
Joint Armed Services Committee

State Capitol Room 126
Juneau, Alaska 99801-1182
(907) 465-4859
Fax (907) 465-3799
1-888-465-4859

REPRESENTATIVE ERIC A. FEIGE

HB 202 Sponsor Statement

"An Act raising the application fee for a drawing permit for the hunting of bison to $20; requiring the game management plan for bison in the Delta Junction Bison Range Area to include mitigation of bison damage to farm crops and farm and personal property; and authorizing the commissioner of natural resources to make grants to mitigate or prevent damage caused by bison."

The plains bison is a magnificent animal brought to Alaska from North Dakota in 1928 by outdoorsmen in the Fairbanks area as a way to expand big game hunting opportunities in the Interior. As the herd has expanded and the Delta Junction area has developed, conflicts have arisen between the animals and the human population.

The introduction of grain crops in the area in the 1970s created a readily available source of feed for the bison and has resulted in a measureable growth of the herd, which is now over 500 animals.

Hunters have continued to enjoy hunting the animals, wildlife viewers have been able to occasionally see the bison when they emerge from the woody cover in the area, and farmers have experienced crop damage from the animals.

The Delta Bison Working Group was formed to discuss management practices for the herd and how to mitigate the damage caused by the bison. Following a series of meetings, the working group recommended fencing as an option for controlling the animals. The working group also recommended the permit hunting draw fee be increased to help fund herd management and damage mitigation.

House Bill 202 increases this popular draw permit application fee to $20 and gives the commissioner of natural resources the authority to expend money for the purpose of addressing damage caused by the bison.

Rep.Eric.Feige@akleg.gov

28-LS0412\P
Bullard
2/24/14

CS FOR HOUSE BILL NO. 202( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-EIGHTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVE FEIGE

A BILL

FOR AN ACT ENTITLED

"An Act raising the application fee for a drawing permit for the hunting of bison to $20 and relating to the allocation of funds collected for the application fee; requiring the game management plan for bison in the Delta Junction Bison Range Area to include prevention of bison damage to farm crops and farm and personal property; and authorizing the commissioner of natural resources to make grants to soil and water conservation districts to prevent damage caused by bison."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 16.05.346(b) is amended to read:

(b) The application fee for a drawing permit issued by the department for the hunting of bison is $20 [$10].

*** Sec. 2.** AS 16.20.310(b) is amended to read:

(b) The game management plan must include [, BUT IS NOT LIMITED TO]

(1) planting grains for bison and planting other wildlife forage;

(2) altering existing plant cover to create additional range and year-round habitat for bison and other animal species in the area;

(3) tilling to produce forage;

(4) preventing bison damage to farm crops and farm and personal property.

* **Sec. 3.** AS 38.05.020(b) is amended to read:

(b) The commissioner may

(1) establish reasonable procedures and adopt reasonable regulations necessary to carry out this chapter and, whenever necessary, issue directives or orders to the director to carry out specific functions and duties; regulations adopted by the commissioner shall be adopted under AS 44.62 (Administrative Procedure Act); orders by the commissioner classifying land, issued after January 3, 1959, are not required to be adopted under AS 44.62 (Administrative Procedure Act);

(2) enter into agreements considered necessary to carry out the purposes of this chapter, including agreements with federal and state agencies;

(3) review any order or action of the director;

(4) exercise the powers and do the acts necessary to carry out the provisions and objectives of this chapter;

(5) notwithstanding the provisions of any other section of this chapter, grant an extension of the time within which payments due on any exploration license, lease, or sale of state land, minerals, or materials may be made, including payment of rental and royalties, on a finding that compliance with the requirements is or was prevented by reason of war, riots, or acts of God;

(6) classify tracts for agricultural uses;

(7) after consulting with the Board of Agriculture and Conservation (AS 03.09.010), waive, postpone, or otherwise modify the development requirements of a contract for the sale of agricultural land if

(A) the land is inaccessible by road; or

(B) transportation, marketing, and development costs render the required development uneconomic;

(8) reconvey or relinquish land or an interest in land to the federal

government if

(A) the land is described in an amended application for an allotment under 43 U.S.C. 1617; and

(B) the reconveyance or relinquishment is

(i) for the purposes provided in 43 U.S.C. 1617; and

(ii) in the best interests of the state;

(9) lead and coordinate all matters relating to the state's review and authorization of resource development projects;

(10) exercise the powers and do the acts necessary to carry out the provisions and objectives of AS 43.90 that relate to this chapter;

(11) make grants to soil and water conservation districts established under AS 41.10.130 for the purposes of assisting persons whose property or crops have been damaged or are likely to be damaged by bison and the prevention of bison damage; the total amount of grants made in a fiscal year under this paragraph may not exceed an amount equal to 50 percent of the total revenue collected under AS 16.05.346(b) in the previous fiscal year; grants made under this paragraph may be used for the costs of fencing used to prevent bison damage.

ALASKA STATE LEGISLATURE

House District 6
Co-Chair House Resources Committee
Transportation Committee
Fisheries Committee
Joint Armed Services Committee

State Capitol Room 126
Juneau, Alaska 99801-1182
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REPRESENTATIVE ERIC A. FEIGE

Comparison of HB 202 Version 28-LS0412\C to Work Draft 28-LS0412\P

Work Draft Version 28-LS0412\P address concerns raised in committee by making the following changes:

Title Change: Title is changed to reflect working in the bill to include the allocation of funds and to restrict grants to only soil and water districts.

Page 3 Line 10: Grants were restricted to only soil and water districts. The amount of the grants was limited to one-half the amount collect for bison permit application fees in the previous fiscal year. Fencing was limited to "fencing used to prevent bison damage."

Prepared by Michael Paschall, Office of Rep. Eric Feige, Feb. 27 2014

Rep.Eric.Feige@akleg.gov

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 202
Fiscal Note Number:
() Publish Date:

Identifier: HB202-DFG-WCD-02-21-14
Title: BISON DRAWING PERMIT FEES
Sponsor: FEIGE
Requester: House Resources Committee

Department: Department of Fish and Game
Appropriation: Wildlife Conservation
Allocation: Wildlife Conservation
OMB Component Number: 473

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues	81.0		81.0	81.0	81.0	81.0	81.0

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Initial version

Prepared By: Doug Vincent-Lang, Director Phone: (907)267-2339
Division: Wildlife Conservation Date: 02/14/2014 02:00 PM
Approved By: Kevin Brooks, Deputy Commissioner Date: 02/14/14
Agency: Dept. of Fish and Game

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. HB 202

Analysis

Section 1

Drawing permit application fees are deposited to the Fish and Game Fund as per AS 16.05.110 and used in accordance with AS 16.05.130. An increase of $10 (to a total of $20) to the application fee for a bison drawing hunt is estimated to produce an additional $81.0 in revenue to the Fish and Game Fund.

The number of drawing hunts during the year for Delta bison will depend upon the status of the herd and is therefore viable. We have two hunts (one for bulls and one for cows) if the sex ratio of the herd needs to be closely managed. We have one hunt (for either a bull or a cow) when sex ratio does not need to be closely managed. In 2014 it will be one hunt for either sex.

The table shows the number of applications received for Delta Bison for 2012-2014. The revenue increase is based on one drawing hunt per year (DI403) and an expectation that 15% fewer applications will be received due to the price increase. If two hunts are held, greater revenue will be received.

hunt	regYear	hunt_name	NumSold	ByYear
DI403	2012	20D, Delta	11,045	18,894
DI404	2012	20D, Delta	7,849	
DI403	2013	20D, Delta	11,161	19,605
DI404	2013	20D, Delta	8,444	
DI403	2014	20D, Delta	12,541	12,541
DI404	2014	20D, Delta	n/a	

			Revenue
3 year average for DI403 Hunt:	11,582	$	115.8
Decreased applications due to increase in price, 15%:	(1,737)	$	(17.4)
Projected Number of applicants for 1 hunt in 2015 @ current rate:	9,845	$	98.4
Projected value of additional $10 to the fee:		$	98.4
		$	196.8
Net Additional Revenue deposited to the F&GF (vs 3 yr avg):		$	81.0

House Bill 202 does not direct ADF&G to expend additional funds. Any expenditures made from the Fish and Game Fund is guided by the stipulations laid out in AS 16.05.130.

Section 2

Directs ADF&G to include within the Delta Bison Management Plan mitigating bison damage to farm crops and farm and personal property. No additional funds will be needed to add this requiement to the managment plan.

Fiscal Note

State of Alaska
2014 Legislative Session

Bill Version: HB 202
Fiscal Note Number:
() Publish Date:

Identifier: HB202-DNR-AGR-2-15-14
Title: BISON DRAWING PERMIT FEES
Sponsor: FEIGE
Requester: House Resources Committee

Department: Department of Natural Resources
Appropriation: Agriculture
Allocation: Agricultural Development
OMB Component Number: 455

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2015 Appropriation Requested	Included in Governor's FY2015 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2015**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits	81.0		81.0	81.0	81.0	81.0	81.0
Miscellaneous							
Total Operating	**81.0**	**0.0**	**81.0**	**81.0**	**81.0**	**81.0**	**81.0**
Fund Source (Operating Only)							
1007 I/A Rcpts	81.0		81.0	81.0	81.0	81.0	81.0
Total	**81.0**	**0.0**	**81.0**	**81.0**	**81.0**	**81.0**	**81.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2014) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2015) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed? N/A

Why this fiscal note differs from previous version:

Initial Version

Prepared By: Franci Havemeister, Director — Phone: (907)761-3876
Division: Division of Agriculture — Date: 02/15/2014 01:00 PM
Approved By: Joe Balash, Commissioner — Date: 02/15/14
Agency: Department of Natural Resources

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2014 LEGISLATIVE SESSION

BILL NO. HB202

Analysis

HB202 raises the $10 application fee to $20 for a drawing permit issued by the Department of Fish and Game (ADF&G) for the hunting of bison per Section 1. Section 2 requires ADF&G to include within the Delta Junction Bison Range Area to include mitigation of bison damage to farm crops and farm and personal property.

Section 3 authorizes the Department of Natural Resources (DNR) to make grants to individuals who may or have suffered property damage or crop damage by bison. It also authorizes DNR to make grants to persons that assist persons whose property or crops have been or are likely to be damaged by bison. It also specifices that grants may be used for fencing.

Inter-agency receipt authority estimated to be $81.0 would be required to receive funds from ADF&G related to the increase in their application fee in order that DNR can make grants for the purposes stated in the bill. The $81.0 is the ADF&G's estimate of the additional revenue they may collect, however the actual amount available to transfer to DNR cannot be accurately determined at this time as the Departments are uncertain as to the amount that would be available for these purposes each year pursuant to AS 16.05.130.

DELTA BISON INTERIM MANAGEMENT PLAN

Photo by Stephen D DuBois

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION

2012

DELTA BISON INTERIM MANAGEMENT PLAN

STATE OF ALASKA
Sean R. Parnell, Governor

DEPARTMENT OF FISH AND GAME
Cora J. Campbell, Commissioner

DIVISION OF WILDLIFE CONSERVATION
Douglas S. Vincent-Lang, Acting Director

Alaska Department of Fish and Game
Division of Wildlife Conservation
2012

Acronyms used in this document:

Acronym/Use	Agency/Item/Group
ADF&G or Department	Alaska Department of Fish and Game
DWC	• Division of Wildlife Conservation
COE	U.S. Army Corps of Engineers
DBH	Delta bison herd
DBMP	Delta Bison Management Plan
DBWG or Working Group	Delta Bison Working Group
DJBR	Delta Junction Bison Range
DNR	Alaska Department of Natural Resources
DAG	• Division of Agriculture
DOF	• Division of Forestry
DMLW	• Division of Mining, Land, and Water
DOT&PF	Alaska Department of Transportation and Public Facilities
USDA	U.S. Department of Agriculture

EXECUTIVE SUMMARY

Editor's Note on Interim Plan: *This updated plan for management of the Delta bison herd is interim pending resolution of the issue of fencing. Although the Delta Bison Working Group (a citizens' stakeholder group that provided recommendations on management of Delta bison to the Alaska Department of Fish and Game) agreed that fencing was the best solution for keeping bison out of agriculture fields, and that agriculture lands should be fenced into three large compounds, the farming community and others indicated fencing three large compounds was not a solution they could support. Furthermore, it did not appear likely that the Working Group would be able in the near future to agree on a specific fencing solution supported by key interest groups. Also, the farming community's preference is to explore management alternatives that current ADF&G funding cannot support, or are outside the scope of authority for ADF&G. However, the interim plan will provide the basis for carrying out all other aspects of management of the Delta bison herd. Therefore, to avoid impasse in implementing management actions, ADF&G decided to suspend efforts at this time to resolve the fencing debate through the Working Group. Instead, ADF&G will continue to work at the regional level and through Headquarters to collaborate with the Department of Natural Resources to explore various fencing construction and maintenance alternatives as well as other means to mitigate or prevent bison damage to agriculture fields. Leadership in both departments will seek agreement on recommendations to forward to the Legislature, and to the Governor's office if appropriate. If the ultimate resolution of this issue includes a cost-share agreement for fencing, it may be possible to take advantage of a joint funding offer from the Salcha-Delta Soil and Water Conservation District of $320,000. Further delay, however, in reaching a resolution may result in the expiration of this opportunity.*

The Delta bison herd (DBH) is a valuable and special wildlife resource managed by the Alaska Department of Fish and Game (ADF&G or Department) for residents and visitors of the state. The herd ranges over a large area near the community of Delta Junction which encompasses military land, the State of Alaska's Delta Junction Bison Range (DJBR), other state lands, and private agricultural lands. Introduced to this area in 1928, this plains bison herd provides unique opportunities for hunting and viewing bison in a road-accessible portion of the state. DBH drawing hunt permits are among the most sought after hunting permits in the state, with 10,000–15,000 people applying annually for approximately 80–170 permits.

In the late 1970s and early 1980s, the Alaska Department of Natural Resources (DNR) disposed of approximately 100,000 acres of land for agricultural development in the Delta Junction area. Subsequently, DBH modified its seasonal movements to take advantage of the forage and other amenities derived from these new agricultural lands. Over time, conflicts between bison and agriculture increased, resulting in a significant resource management challenge for ADF&G and DNR. Balancing the statewide interest in bison conservation and hunting with local agricultural land use is the most challenging issue surrounding management of DBH.

This interim plan was produced with assistance from the Delta Bison Working Group (DBWG or Working Group), a 7 member citizen's advisory group that for the past 2 decades has made recommendations to ADF&G on Delta bison management issues. One of the primary accomplishments of the planning process was reaching agreement between agricultural and

hunting interests that the long-term solution to eliminating conflicts between bison and agriculture is to construct bison-proof fences to keep bison out of private agricultural lands. The plan includes a recommendation to develop and adopt legislation to establish a state cost-sharing program to assist with construction of bison-proof fences.

During the term of this plan, ADF&G will work within its present legal authorities and funding capabilities to reduce bison conflicts with agriculture primarily by managing DJBR to attract bison away from agricultural lands and by manipulating the timing and location of bison hunting. While these measures helped reduce bison-caused crop damage in the past, they did not succeed in reducing conflicts to a level acceptable to many farmers. Representatives of the Delta agricultural community and others continue to advocate for more effective permanent, long-term solutions. The recommendation to establish a cost-sharing program to construct bison-proof fences to keep bison out of private agricultural lands is intended as a more effective solution to conflicts between bison and agriculture. However, this recommendation would have to be implemented through legislative action. The cost of constructing and maintaining bison-proof fences around private agricultural lands is significant and there would be additional costs involved in managing the program. Administering a program to fence private agricultural lands is not within the duties or authorities of ADF&G. ADF&G will work with DNR and others to further evaluate the feasibility of a program to construct bison-proof fences around private agricultural lands and work with the Alaska legislature to address this issue.

CONTENTS

FIGURES AND TABLE

MISSION STATEMENT

Maintain a healthy, free-ranging bison herd in the Delta Junction area that provides the greatest reasonable opportunity to hunt and view bison while also keeping conflicts between bison and private property owners to the minimum level possible using all management techniques available to the Alaska Department of Fish and Game.

INTRODUCTION

The Delta bison herd (DBH) is a valuable and special wildlife resource for residents and visitors of Alaska. The herd ranges over a large area near the community of Delta Junction encompassing military land, the State of Alaska's Delta Junction Bison Range (DJBR), other state lands, and private agricultural lands (Figure 1). Introduced in 1928, this plains bison herd provides unique opportunities for hunting and viewing bison within a road-accessible portion of the state. The herd is also unique nationally because it is one of the few genetically pure, wild, free-ranging, hunted bison herds in the United States.

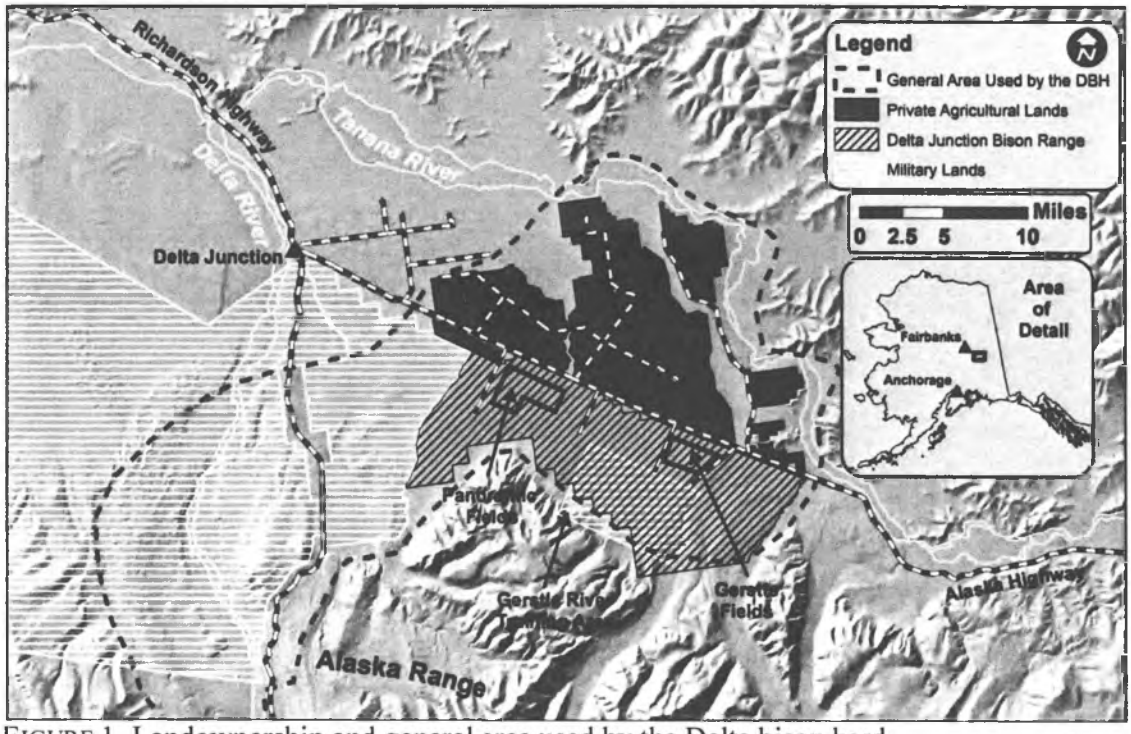

FIGURE 1. Landownership and general area used by the Delta bison herd.

Management of DBH is complex. Management decisions can directly affect or be affected by many activities in the Delta Junction area, particularly agricultural, military land use, and hunting. Bison use of the landscape, including private agricultural land, is multi-faceted and not completely understood. Private agricultural land provides not only high quality forage but also water, cover, and travel corridors for the bison. Balancing the statewide bison conservation and hunting interest in the herd with local agricultural land use is the key issue involved in this plan.

An equitable balance of these interests must be maintained to provide for a free-ranging bison herd in close proximity to agricultural activities, and to preserve public access to nonpublic and public lands for hunting and viewing not only bison but also variety of other species including moose, waterfowl, grouse, coyote, and predators.

The plan was developed through a collaborative process involving Alaska Department of Fish and Game's (ADF&G), Division of Wildlife Conservation (DWC) and a citizen's advisory panel, the Delta Bison Working Group (DBWG or Working Group). In addition, the Alaska Department of Natural Resources (DNR), Division of Agriculture (DAG) participated in the planning process.

DBWG is composed of representatives of local and nonlocal bison hunters as well as Delta agricultural and business interests and is tasked with advising ADF&G on Delta bison management issues (Appendix A). The Working Group assisted DWC in developing a series of Delta bison management plans beginning in 1992, the most recent of which was the 2000–2005 Delta Bison Management Plan (DBMP). ADF&G continued to use the 2000–2005 DBMP to guide Delta bison and DJBR management activities pending completion of a new plan. Persons who served on the Working Group during this most recent planning process and the interests they represent are as follows:

1. Delta Junction hunting – Don Quarberg, Delta Junction.
2. Local agriculture – Mike Schultz, Delta Junction.
3. Statewide hunting – Don Bunselmeier, Delta Junction and Leonard Jewkes, Fairbanks.
4. Delta Junction community – Glen Wright, Delta Junction.
5. Delta Junction business – John Sloan, Delta Junction.
6. U.S. Army – John Haddix, Fairbanks.
7. Statewide agriculture and research – Phil Kaspari, Delta Junction.

2012 Changes to the Interim Bison Management Plan

A primary accomplishment of the planning process was reaching agreement among agricultural and hunting interests that the long-term solution to eliminating conflicts between bison and agriculture is to construct bison-proof fences to keep bison out of private agricultural lands. Although this is a seemingly simple concept, representatives of bison hunting and agricultural interests had not previously agreed to the use of fencing. It should be noted that the recommendation also specified the grouping of agriculture lands into three large blocks for the purpose of fencing. The farming representatives on the Working Group supported "large block" fencing simply to promote further discussion and consideration of fencing in general even though significant skepticism from the farming community was apparent. Subsequently, it was confirmed that the farming community did not support this approach to fencing because of the impracticality of such a project, although they agreed that some type of fencing is necessary. Therefore, while ADF&G supports the concept of fencing private lands, it does not advocate the concept of fencing large blocks of property belonging to multiple owners.

Other key changes in this plan from the 2000–2005 DBMP include recommendations from the Working Group:

1. for a reduction in the herd size objective from 360 bison (precalving) to 275–325 bison (precalving),
2. to continue the cooperative program between ADF&G/DWC and DNR/DAG to annually assess the level of bison-caused crop damage on farms in the Delta area,
3. for the legislature to increase the cost of applying for a Delta bison drawing permit from $10 to $20 to help pay for the cost of Delta bison management activities, and
4. for the legislature to establish a state cost-sharing program to assist farmers with constructing bison-proof fences to keep bison out of private agricultural lands.

Increasing the cost of applying for a DBH hunting permit and establishing a state program to assist farmers in constructing bison-proof fencing require legislative action. Unless legislative action occurs, ADF&G can only implement options that can be accomplished within ADF&G's existing legal mandates, funding levels, and what is judged to be biologically sound and feasible. ADF&G will participate in, and help facilitate, discussions with DNR and the legislature concerning fencing and related issues. If legislative action causes significant changes to the Delta bison management program, the management plan will be amended to conform to revised legal mandates, revised funding capabilities, or both.

DWC prepared this interim plan based on the recommendations of DBWG, other public comment, and professional input of staff. This plan provides guidance for managing DBH and also serves as the game management plan for DJBR as required in AS 16.20.310. The plan will continue to guide management of DBH and DJBR until significant new management issues arise or other changes occur that necessitate an update.

Detailed background information on DBH, the developments in area land use patterns, information on bison movements and foraging patterns, hunting, and other issues involved in managing DBH is in Appendix B. The section also provides information on additional actions taken in recent years to reduce conflicts between bison and agriculture. Together, this information provides background to better understand the basis for the goals, objectives, and tasks that comprise the overall management program for DBH and DJBR.

Appendix A provides additional information on DBWG and the planning process. Appendix C describes some of the alternative actions considered in the past by DBWG and ADF&G but are not proposed as part of this interim plan. A brief rationale for why the action is not being proposed is provided. Appendix D includes legal information that pertains to management of DBH and DJBR. Appendix E describes land use permitting requirements of ADF&G and DNR for DJBR.

DELTA BISON MANAGEMENT GOALS, OBJECTIVES, AND TASKS

This section of the plan identifies the goals, objectives, and tasks (management actions) for management of DBH and DJBR. Each section begins with a goal statement then outlines the management objectives and tasks needed to work towards accomplishment of the goal. Because

there is significant overlap between some goal topics – e.g., herd size, hunting management, and bison conflicts – some objectives and tasks are repeated under different goals.

HERD HEALTH

***Goal*: Monitor the health of the Delta bison herd.**

OBJECTIVE 1: Monitor DBH to determine if any diseases are present which might threaten the health of the herd or other wildlife species.

Task 1: Periodically collect bison bio-samples to test for evidence of disease.

Task 2: Communicate with local, state and federal veterinarians, and livestock owners and hunters whenever there are concerns about the transmission of diseases.

OBJECTIVE 2: Minimize the potential for transmission of diseases between livestock and DBH.

Task 1: Take actions to prevent contact between livestock and wild bison if infectious livestock diseases are discovered in area livestock.

OBJECTIVE 3: Work through the DWC Wildlife Veterinarian and other officials to determine appropriate steps to prevent spread of diseases from bison to other wildlife species if diseases are transmitted from livestock to DBH.

OBJECTIVE 4: Monitor the genetics of DBH.

Task 1: Periodically collect genetic samples and conduct tests to further document the genetic makeup of DBH.

Task 2: Wood bison reintroductions should not overlap with the range of DBH to avoid the risk of cross breeding.

HERD SIZE AND COMPOSITION

***Goal*: Manage the Delta bison herd to accomplish a reasonable balance between providing the greatest opportunity to hunt and view bison while keeping negative impacts to private property at a minimum.**

OBJECTIVE 1: Manage DBH to maintain a herd size of 275–325 bison (precalving) for a 5-year period.

In the 2000–2005 DBMP the herd size objective was 360 bison (precalving). The purposes of establishing a slightly lower herd size objective in this plan include

a. Reduce hunter crowding and competition to improve individual hunter success and to avoid hunting seasons of excessive length.

b. Improve the ability to achieve the harvest objective.

c. Evaluate whether bison-caused crop damage significantly decreases as a result of fewer bison.

In the 2000–2005 DBMP with a herd size objective of 360 bison (precalving), the Department issued between 65 and 170 Delta bison hunting permits annually. As success rates declined permit numbers increased to achieve the harvest and herd size objectives. This resulted in some hunter crowding at times, particularly when the bison were in private agricultural lands where landowners typically restricted the number of hunters on their property at one time, and when hunters were concentrated on DJBR and other non-private land. Initially, more permits will be issued to reach the objective of 275–325 bison (precalving). Once the herd is stabilized at the lower objective, approximately 70 to 90 permits will be issued annually.

The herd size objective will be reevaluated annually to determine the effects on bison hunting opportunity, hunter crowding, bison use of DJBR, and agricultural crop damage. If legislative action occurs and a program to fence private agricultural lands is implemented, the herd size should be based on the biological carrying capacity of the remaining range available to the bison herd. Carrying capacity is difficult to assess directly from measurements of forage, and therefore would have to be estimated through indirect indicators such as range use assessments and nutritional condition of bison. All of these factors will provide a basis for adaptive management of herd size.

Task 1: Monitor herd size and composition by conducting an annual herd census and a sex and age composition count.

Task 2: Issue hunting permits for bull bison, cow bison, or either sex bison to achieve desired sex and age composition.

OBJECTIVE 2: Manage DBH to maintain a sex ratio of no less than 50 bulls (at least 1 year old):100 cows.

Task 1: Monitor herd size and composition by conducting an annual herd census and a sex and age composition count.

Task 2: Issue hunting permits for bull bison, cow bison, or either sex bison to achieve desired sex and age composition.

DELTA BISON HUNTING

***Goal*: Provide the maximum hunting opportunity possible at the prescribed herd size and minimize conflicts with private agricultural operations.**

OBJECTIVE 1: Emphasize providing a larger number of DBH hunting permits rather than managing for large, trophy-size bulls and fewer permits.

This objective is intended to provide the greatest number of bison for hunting and viewing at a given herd size but does not maximize the number of large, mature bulls in the herd.

OBJECTIVE 2: Manage for at least 70% hunter success.

Task 1: Monitor hunter success by compiling the drawing permit results.

Task 2: Adjust bison hunting seasons, bag limits, number of permits issued, and other factors to attain at least 70% hunter success.

Several hunting ideas were discussed during the development of this plan that will be reviewed further for possible use in managing the Delta bison hunt. One idea is to establish an initial either sex bag limit when the regular Delta bison hunt is opened on 1 October. Once the quota established by the Department for either cows or bulls is met, only bison of the remaining sex can be taken. The advantage of this idea is that it will make hunting easier for hunters early in the season which should increase hunter success rates and decrease illegal kills of the wrong sex. The main disadvantage is that later in the season, hunters will have to be informed of the switch to a single sex harvest regime for the remainder of the season. This idea needs a thorough review by Fish and Game advisory committees and the public prior to adoption.

OBJECTIVE 3: Administer the Delta bison hunt to minimize conflicts between landowners and hunters.

In March 2010, the Alaska Board of Game extended the Delta bison hunting season to a year-round season from 1 July–30 June based on the understanding that the Department would conduct the normal hunting season from 1 October–31 March, and issue permits on a case-by-case basis to address bison-agriculture conflicts between 1 April and 30 September.

Task 1: Use the year-round hunting season authorized by the Board of Game to allow hunting of bison that remain in agricultural areas north of the Alaska Highway during the summer months.

a. Bison harvested in summer will be included in the annual harvest quota.

b. The bag limit for this special hunt is any bison.

c. ADF&G will use flexibility provided by the Board of Game with the year-round hunting season to allow take of problem animals during April–September and to condition bison to stay away from agricultural areas until crops are harvested. Decisions on the use of special hunts will be coordinated with private landowners to the degree possible.

Task 2: When needed as a tool to reduce bison-agricultural conflicts, issue permits from 1 April to 30 September to hunt specific areas on a case-by-case basis.

Task 3: Issue permits no earlier than 1 October for the regular season to help prevent conflicts between hunters and farmers during the harvest period.

Task 4: Issue hunting permits for bulls, cows, or either sex bison to achieve desired sex and age composition.

Task 5: Provide a long hunting season from 1 October–31 March to provide maximum hunting opportunity. The intent is to spread hunters over time and space to provide a safe hunt and to minimize conflicts between hunters, and between hunters and the public.

Task 6: Assist landowners in minimizing problems with motorized vehicles on private lands through emphasizing this concern in the hunter orientation information.

Task 7: Increase the application fee for Delta bison hunting permits from $10 to $20.

DBWG unanimously recommended this measure to help improve and offset the cost of DBH management. This requires legislative action. Application fee revenues accrue to the Fish and Game Fund, but not to specific projects such as Delta bison management. However, the legislature can express the intent to use the additional funds from application fees only on Delta bison management; a directive that the Department will honor.

Task 8: Produce winter forage to attract bison to DJBR during the winter months to increase hunting opportunity on state land.

BISON CONFLICT MANAGEMENT

***Goal*: Minimize conflicts between bison and the public, including but not limited to agriculture interests, in the Delta Junction area.**

Habitat management on DJBR and on military lands is directed at fulfilling the legislative intent of reducing conflicts between bison and agriculture. Despite this intent, the bison conflict management goal and several of the objectives in the 2000–2005 DBMP were not met. Specifically, the Department was unable to keep DBH south of the Alaska Highway or out of private agricultural lands by the dates specified in the goals and objectives of the 2000–2005 plan. This was caused in part from changing agricultural practices on private agricultural lands which resulted in the production of crops that are more attractive to bison compared to the crops produced on DJBR. It was also the result of easy access to unfenced grain and hay farms.

OBJECTIVE 1: Manage DJBR to entice bison to remain south of the Alaska Highway and away from private agricultural land until as late in the fall as possible.

The Department manages DJBR to address two issues. One is to attract and hold bison in the summer to delay their movement onto agricultural lands before crops are harvested. The other is to attract bison as much as possible in the fall and winter so they are accessible to hunters on public land. Forage management includes a combination of seeding, fertilizing, mowing, burning, and weed control. As funding allows, the plan is to fertilize approximately 400–600 acres of perennial forage annually, and to plant approximately 200–400 acres with annual grass, oats, and barley. Fertilizer application rates will be adjusted to achieve the highest quality and quantity of forage. Perennial nugget bluegrass and annual grasses, oats or barley will be managed primarily as a high quality fall forage. Perennial red fescue will be managed primarily as lower quality winter forage.

At current funding and staffing levels, it is not possible to cultivate all the acreage originally cleared for cultivation of bison forage. Invasion of native grasses, forbs, and woody vegetation are becoming reestablished in some peripheral areas. The Department will use prescribed

burning, mechanical, and possibly chemical methods to eliminate undesirable, competing vegetation.

NOTE: The "wet blade mower" technique for applying herbicides was tested. After extensive study, the U.S. Department of Agriculture (USDA), Agricultural Research Service recommended against using this technique on DJBR.

Task 1: Promote growth of annual and perennial grasses for bison fall and winter forage through a combination of seeding, fertilizing, mowing, burning, and weed control within the constraints of available funding and staffing.

Task 2: Use prescribed fires to remove plant debris and recycle nutrients.

Task 3: Consider use of herbicides on DJBR to further enhance forage production.

Task 4: Provide mineral blocks and water for bison on DJBR.

Task 5: Manage moose hunting in DJBR fields to limit motorized vehicle traffic that could displace bison onto private agricultural lands.

Task 6: Continue to experiment with new crops or techniques to increase the attractiveness of DJBR to bison.

Task 7: Maintain general public access to DJBR as specified in statute (AS 16.20.320) if it does not interfere with DJBR bison management objectives (see Appendix D for actions that would be necessary to restrict general public access).

Task 8: As stated in Sec. 16.20.310(c), "…coordinate, as closely as possible, the game management plan with the activities of the Agricultural Development Authority, Department of Natural Resources, relating to the Big Delta agricultural development project."

OBJECTIVE 2: Enhance bison summer range west of the Richardson Highway to increase its attractiveness to DBH for the purpose of delaying the herd's seasonal migration eastward towards DJBR and private agricultural lands.

Task 1: Place salt blocks west of the Richardson Highway to delay bison movement into agricultural lands as long as possible in the summer and fall.

Task 2: Depending on funding, consider the following habitat management actions west of the Richardson Highway:

a. Cooperate with the U.S. Army to improve existing military bison food plots and natural forage on Donnelly Training Area.

b. Use prescribed fires to improve summer range habitat.

c. Fertilize native forage along the Delta River.

ADF&G will continue to work with the military to ensure that bison management activities do not disrupt critical training operations.

OBJECTIVE 3: Manage the Delta bison hunt to minimize conflicts between hunters and landowners in order to help maintain hunting access to private agricultural land to the greatest extent possible.

Task 1: Issue permits that require general hunting to begin no earlier than 1 October to help prevent conflicts between hunters and farmers during the crop harvest period.

Task 2: Allow a long hunting season from 1 October to 31 March to give hunters maximum hunting opportunity while avoiding high hunter concentrations to reduce safety concerns and conflicts.

Task 3: When needed as a tool to reduce bison conflicts with agriculture, issue permits between 1 April and 30 September to hunt specific areas on a case-by-case basis, contingent upon landowner approval.

Task 4: Assist landowners in minimizing problems with motorized vehicles on private lands through emphasizing this concern during the hunter orientation.

OBJECTIVE 4: Work with landowners, the public, and DNR to resolve or minimize conflicts with bison to the greatest extent possible.

Task 1: Where bison conflicts with agriculture occur inside a fenced farm, assist the farmers by moving bison out of fenced areas until crops are harvested or until 1 October, whichever is earlier.

Task 2: Where bison conflicts with agriculture occur in unfenced areas, assist the farmers by directing hunters to problem areas during the bison hunting season if requested by landowners.

Task 3: Assist other members of the public who experience bison problems on a case-by-case basis.

OBJECTIVE 5: Conduct annual collection of data for DNR/DAG to use in crop damage assessment.

ADF&G will continue working with DAG on a crop damage assessment program as funding and resources for both agencies allow.

OBJECTIVE 6: Participate in legislative considerations of establishing a state sponsored cost-sharing program to construct fences around private agricultural lands to keep bison out.

DBWG unanimously agreed that "The long term solution to solving conflicts between bison and agriculture is fencing."

ADF&G supports the approach of fencing private property to prevent bison-caused crop damage. Alternatives involving fences to enclose DBH would conflict with the legislative intent to manage DBH as a free-ranging herd and cannot be implemented without legislative action. Further, the Department is not funded or staffed to manage animals in permanent or seasonal captivity. If a state-sponsored fencing program is established to benefit Delta agricultural landowners, ADF&G is not the appropriate agency to administer the program but could assist with advice on the impact of fencing on wildlife.

During Working Group meetings there was extensive discussion about whether fences should be built to enclose DBH either temporarily or permanently, or whether fences should be constructed around private lands to prevent bison access and damage. The Working Group reviewed the following fencing alternatives and issues:

a. Fences could affect public access on local highways and other roads. The Alaska Department of Transportation and Public Facilities (DOT&PF) would have to be consulted and approve fences that affect state highway usage.

b. Because cattle guards become inoperable during winter, only gates can prevent bison from entering fenced areas at road access points.

c. A bison-proof fence should be constructed of high-tensile woven wire at least 8 feet tall. Preliminary construction cost estimates are highly variable and range from approximately $20,000–$70,000 per mile. Land clearing and preparation are not included in these estimates.

d. Fences and gates would have annual maintenance costs that include 1) pounding down "frost-heaved" posts, 2) mending broken wires, 3) annually removing any trees that have fallen on the fence (this is a common occurrence because tree roots are compromised when fence line is cleared), and 4) annually clearing grasses and shrubs that grow up into the fence.

e. Fences would alter or prevent movements of other wildlife such as moose and bears.

f. Fences could complicate problems with wildlife on highways.

g. Females and offspring may become separated on opposite sides of a fence.

h. Some fencing options would result in loss of public access to DJBR for activities including, but not limited to, grouse and upland game bird hunters, berry pickers, youth moose hunters. Restricting public access would require, at a minimum, regulatory action (See AS 16.20.320) by DNR.

i. Management of the Delta bison range youth moose hunt would be affected if DJBR were fenced.

j. Preliminary review by the Department of Law suggests that completely enclosing DBH for even a portion of the year would violate the legislative intent in establishing DJBR to "perpetuate a free-ranging bison herd."

k. A significant portion of fall and winter forage used by DBH is produced on private farm lands. Fencing farms to exclude bison would eliminate access to that forage.

l. The result of farmers choosing to fence their land to protect it from bison could result in additional restrictions or prohibitions on public access to private lands for other activities such as hunting moose, geese, ducks, cranes, and grouse, and wildlife viewing.

m. If fences preclude bison from using winter forage on private agricultural lands in the Delta I and Delta II areas, the bison may move into other agricultural areas in Delta Junction along the Clearwater and Tanana Loop roads. These areas do not experience bison conflicts at this time, but have in the past.

The majority recommendation of the Working Group (5–1 vote) was to establish a cost-sharing program to assist landowners in fencing large blocks of private agricultural lands to keep bison out. However, this recommendation involves several complications. For example, the proposal to fence private agricultural lands in large blocks of multiple landowners would involve numerous road crossings. It has not been determined how a fenced road crossing would be designed to prevent bison from entering while still allowing public access to the roadway. DOT&PF would have to be involved in any proposals to construct fences that might affect roads and highways. The proposal involves a cost-sharing program between private landowners, the state, and possibly other entities; but the DBWG did not make a recommendation on how expenses would be apportioned.

Additional details of DBWG recommendation include:

a. Enclose large blocks of contiguous agricultural lands as complete units with boundary fences rather than fencing individual farms. This approach will help reduce the total length of fence required and costs involved.

b. Construct two sections of drift fence to the west of Sawmill Creek to prevent bison from entering agricultural and residential areas in the Delta-Clearwater and Tanana Loop Road areas.

c. Maintain unfenced corridors, for example the Gerstle River and Sawmill Creek corridors, between large blocks of agricultural land to allow movements of bison and other wildlife species.

d. The necessary fencing should be paid for through a combination of legislative funding and cost-sharing by the involved owners of agricultural parcels.

e. Fencing service districts, similar to the road service area system in place in the Fairbanks North Star Borough, could be used to enable landowners to share in the cost of construction and maintenance of bison-proof fences.

BISON VIEWING MANAGEMENT

***Goal*: Provide opportunities for nonconsumptive enjoyment of the Delta bison herd, such as bison viewing, interpretation, and education.**

OBJECTIVE 1: Identify methods and funding sources other than bison permit fees to improve bison viewing opportunities for the public.

Task 1: Work with DOT&PF and other agencies to improve bison viewing facilities as opportunities arise within agency's routine planning programs.

Task 2: Work with the U.S. Army to provide public bison viewing platforms or designated viewing areas on bison summer range on Fort Wainwright Donnelly Training Area.

Task 3: Work with the DWC Wildlife Viewing program to enhance bison viewing opportunities such as, for example, the development of informational brochures and interpretative signs.

APPENDIX A: DBWG AND THE PLANNING PROCESS

Delta Bison Working Group

ADF&G established the first Delta Bison Working Group (DBWG or Working Group) in 1992 to assist with the development of "a game management plan for bison" in 1993 as specified in Alaska Statute 16.20.310. DBWG subsequently assisted ADF&G with developing updated plans in 2000, and most recently in 2011. DBWG's primary charge was to help ADF&G establish the appropriate balance between the competing interests of the bison herd and agricultural development. DBWG functioned under a consensus decision-making process. However, when consensus was not reached the group used majority rule, although minority opinions were also acknowledged and included in the plans. Also, the group met occasionally during the life of an active plan to discuss various issues when the ADF&G Area Biologist felt it was in the best interest of keeping the public informed or when feedback from the public was desired.

During the 2009–2011 planning process, DBWG included seven seats that represented the following interests: 1) statewide hunting, 2) Delta Junction agriculture, 3) Delta Junction hunting, 4) statewide agriculture and research, 5) the Delta Junction community, 6) Delta Junction business, and 7) the U.S. Army. There were no defined terms for the representatives who served on DBWG. When needed, new representatives were appointed by the ADF&G Region III Supervisor to fill vacant seats. Members of the Working Group brought considerable knowledge and experience regarding Delta bison management, agriculture, and business issues, providing valuable assistance to the Department.

History of the Planning Process

In the late 1990s when the 2000–2005 Delta Bison Management Plan (DBMP) was developed, members of the DBWG and the public did not express an unusually high degree of concern about conflicts between bison and agriculture, suggesting the DBH management program was achieving an acceptable balance between the bison herd and agricultural development. In March 2007 when ADF&G initiated the process to update DBMP by conducting a review of the 2000–2005 DBMP, members of the Working Group did not identify major new issues or concerns about Delta bison management. Because no pressing Delta bison issues were identified and the Delta Area Biologist was occupied with other commitments, ADF&G did not proceed with the plan update at that time but continued to use the 2000–2005 DBMP to guide Delta bison and DJBR management activities.

When the planning effort was resumed during winter 2008–2009, some members of the Delta agricultural community expressed an elevated level of concern about conflicts between the bison herd and agricultural operations. Increased concern was due, at least in part, to bad weather during the previous growing season that negatively affected crop production, exacerbating the damage caused by bison. Also, although much acreage was becoming eligible to be removed from the Conservation Reserve Program some farmers were reluctant to risk new cultivation when faced with the possibility of bison damage. In response, ADF&G expanded the planning process to fully evaluate issues involving conflicts between DBH and agricultural operations and consider options to minimize these conflicts. The heightened level of concern by the agriculture interests compelled the Alaska Department of Natural Resources (DNR), Division of Agriculture (DAG) to become fully-engaged in the planning process.

From March 2007 through April 2011 ADF&G conducted 11 public meetings, including 10 meetings in Delta, to identify actions that could be taken to reduce or eliminate conflicts between bison and agriculture and to receive public comment. In addition, several discussions occurred at the Delta and Fairbanks Fish and Game Advisory Committee meetings and among members of the Delta Chapter of the Alaska Farm Bureau, the Salcha-Delta Soil and Water Conservation District, and between members of the Delta agricultural community and DNR. The majority of the verbal public comment received during public meetings in Delta was focused on concerns about the impact of DBH on agricultural development. Several Delta area farmers attended most meetings and became active participants in the planning process. While several people who came to the Working Group meetings in Delta focused on the conflicts between bison and agriculture, others noted the positive aspects of the Delta bison herd. One Delta resident stated, "Bison are what make the Delta area unique."

During the planning process several representatives of the Delta agricultural community requested that ADF&G take immediate action to prevent or reduce bison crop damage. In response, ADF&G took several actions including increasing funding for forage production on DJBR and conducting an early bison hunt in the agricultural area north of the Alaska Highway from July to October 2010. The U.S. Army also made a significant effort to improve forage on summer range on military lands though fertilization (see Background Information). Members of the Delta agricultural community proposed legislation to require ADF&G to evaluate use of fencing as part of the game management plan for DJBR. In addition, the ADF&G Region III office advanced recommendations made by DBWG for legislative action to the commissioners' offices of ADF&G and DNR for consideration. However, no legislative action occurred during the planning process.

In August 2009 ADF&G organized a tour of the Delta agricultural area, the Bison Range, and bison food plots on Fort Wainwright Donnelly Training Area for members of the Working Group and others closely involved in the planning process. The tour was very informative and helped provide an on-the-ground perspective of the issues and challenges discussed during planning meetings.

In September 2009, following a series of Working Group meetings held in Delta, the Department distributed a newsletter which provided background and history on DBH and Delta agricultural development and requested public comment on the recommendations being considered by the Working Group at the time. The written comments received in response to the newsletter were all focused on the importance of DBH as a valuable wildlife resource of statewide importance that provides a unique hunting opportunity on the Alaska road system.

After considering both verbal and written public comment and the many alternative recommendations proposed, the Working Group agreed at their December 2009 meeting that some type of fencing is needed as a long-term solution to conflicts between bison and agriculture. The Working Group could not however, agree on whether fences should be constructed around private agricultural parcels to keep bison out or whether fencing should be constructed to confine bison on DJBR permanently or seasonally or construct fences to create a barrier south of the Alaska Highway that would prevent or delay bison from reaching private agricultural lands until annual harvesting was complete, usually by 1–15 October.

After an extended impasse over the best approach to fencing, the Working Group met again in January 2011 and the majority of the Working Group recommended that a state sponsored cost-sharing program should be established to assist Delta farmers in constructing bison-proof fences around large blocks of private agricultural land. The majority of the Working Group also supported a proposal to reduce the size of DBH from the present management objective of 360 bison in the precalving count to an objective of 275–325 bison (precalving).

In April 2011 ADF&G distributed a document titled "Proposed Measures to be Included in the Delta Bison Management Plan Update" and invited public comment for a 30-day period. On 21 April 2011 the Department held a public informational meeting in Fairbanks and accepted verbal public comment. The meeting was primarily attended by the same people that had attended previous meetings in Delta and discussion focused on fencing alternatives. No written public comments were received.

In spring 2011 ADF&G requested the USDA Animal and Plant Health Inspection Service to examine the situation involving conflicts between bison and agriculture in Delta and, if possible, provide recommendations for measures that would help reduce conflicts. A second field trip of Delta agricultural areas and DJBR was conducted in July 2011 with ADF&G, USDA Animal and Plant Health Inspection Service, and DNR Division of Agriculture staff, as well as several representatives of the Delta agricultural community and the Chairman of the Delta Fish and Game Advisory Committee. After analyzing the Delta situation, and after consulting with experts in other states, the USDA Animal and Plant Health Inspection Service produced a proposal for an experimental project designed to evaluate the effectiveness of using limited fencing in conjunction with personnel on duty 24 hours a day to discourage bison from moving off of DJBR until early or mid-October. To date, there are no plans to implement this experimental project.

In summer 2011, ADF&G staff prepared the update to DBMP based on input from the public, recommendations of DBWG, and best professional judgment including considerations of the Department's present legal authorities and funding capabilities.

APPENDIX B: BACKGROUND

ORIGIN OF THE DELTA BISON HERD

Bison colonized North America after migrating from Asia to Alaska over the Bering land bridge several hundred thousand years ago. They were one of the most abundant large mammals in Alaska for most of the last 100,000 years. Large-horned forms such as steppe bison (*Bison priscus*) once roamed Alaska in the company of now extinct species such as mammoths, mastodons, horses, lions, sabre-toothed tigers and dire wolves, as well as species which remain present in Alaska today such as moose, caribou, Dall sheep, and muskox. Large-horned Pleistocene bison existed in North America until about 10,000 years ago, after which smaller horned bison evolved.

The International Union for the Conservation of Nature, American Bison Specialist Group, recognizes two subspecies of bison in North America, the plains bison (*Bison bison bison*) which occurred from central Canada south to northern Mexico and the wood bison (*Bison bison athabascae*) which occupied the northern portion of bison range extending into Alaska. There is on-going debate about bison taxonomy and whether North American bison should be classified as two separate subspecies. However, distinct morphological differences exist between plains bison and wood bison. Among the differences, wood bison are somewhat larger than plains bison and the bulls have a hump that declines in a sharp angle to the neck, in contrast to the more rounded hump of plains bison bulls.

Wood bison were the most recent subspecies of bison to naturally occur in Alaska and once inhabited a large portion of the state including the area now occupied by DBH. Wood bison were extirpated from Alaska during the last few hundred years, most likely because of hunting and changes in the distribution of habitat. Wood bison are still present in Canada and ADF&G is proposing to reintroduce them into portions of their historic range in Alaska. One principle of the reintroduction is to maintain the genetic separation of the wood bison subspecies by not placing them in locations where they could breed with plains bison or cattle.

In 1928, 28 plains bison were transplanted from the National Bison Range in Montana to Delta Junction. They were released on the Delta River near the current location of Delta Junction because the area supported abundant native forage. The herd steadily increased until 1950 when a hunting season was established to stabilize herd size. Stock from DBH was used to establish plains bison herds on the Copper River (1950), the Chitina River (1962), and the Farewell burn near McGrath (1965 and 1968).

MOVEMENT PATTERNS OF THE DELTA BISON HERD

Historically, DBH ranged over an area that extends from hills north of the Tanana River south to mountains of the Alaska Range. At times, Delta bison ranged as far east as Healy Lake, as far west as the Little Delta River, and as far south as Rainbow Mountain in the Alaska Range.

DBH normally travels toward the floodplain of the Delta River from mid-February to March (Figure 2). The majority of cows calve from late April to early June on the floodplain. The herd remains along the Delta River floodplain and adjacent uplands between Black Rapids Glacier and the mouth of the Delta River until early to mid-July.

In approximately mid-July, the bison herd migrates from the Delta River to DJBR. Typically they then move onto private agricultural lands north of the Alaska Highway in late July to early August. The herd then winters on both private agricultural lands and DJBR.

In recent years some local farmers reported that a portion of the herd is now remaining on private agricultural lands year-round and is not migrating to the Delta River floodplain to calve. During the April 2011 aerial calving survey, a group of approximately 50 bison, including 4 newborn calves, were observed north of the Alaska Highway. Some of these bison were in private agricultural lands and some were along the Tanana River near the outlet of Healy Lake.

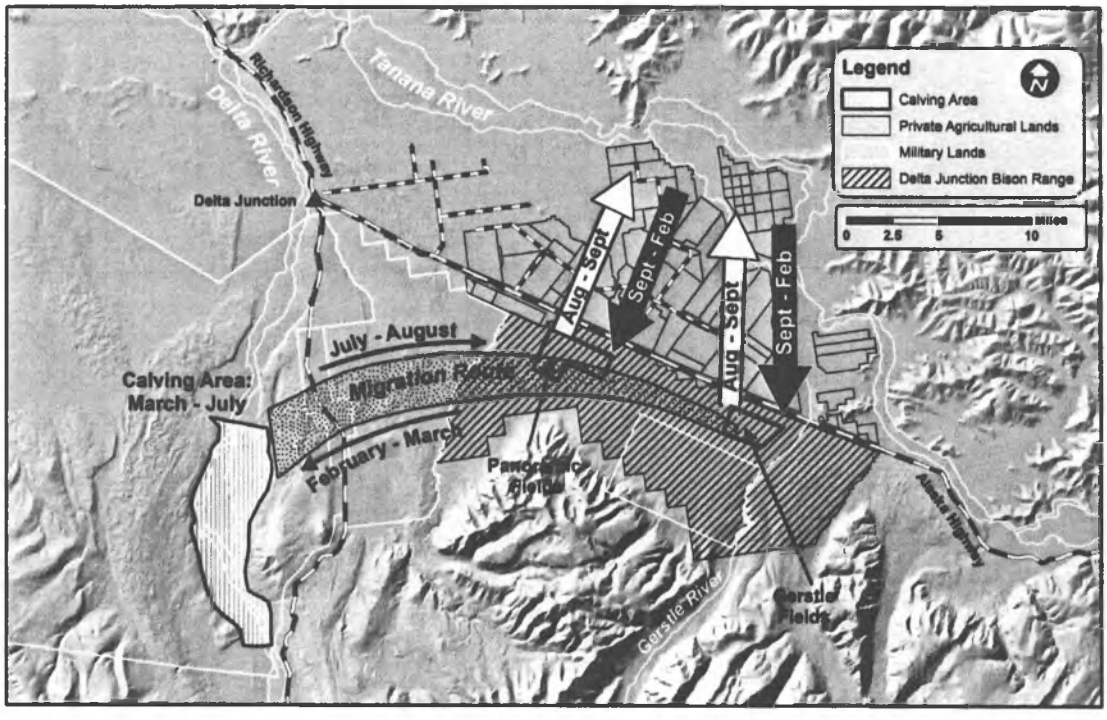

FIGURE 2. Migration routes of the Delta bison herd.

LAND USE AND DEVELOPMENT IN THE DELTA BISON HERD'S RANGE

Military Land Use

Allen Army Airfield was established in 1942 near Delta Junction within the area used by DBH. Military use of the land evolved in purposes over the years. In 1955 it was designated as Fort Greely. The Defense Base Closure and Realignment Act of 1990 resulted in Fort Greely being realigned in July 2001 with most of the land used by DBH being transferred to Fort Wainwright and designated as Fort Wainwright Donnelly Training Area. Increased levels of military training are occurring in these training areas and more are planned for the future. A large portion of the Gerstle River Training Area lies within the legislatively designated boundaries of DJBR (Figure 1) and remains under military control.

Military activities increased in the last 6–8 years and may be a variable that influences DBH movements, particularly on the Fort Wainwright Donnelly Training Area portion of DBH's critical calving and summer range along the Delta River. The Department coordinates with the Donnelly Training Area Range Control regarding areas used by bison, but training activities are rarely altered due to bison presence. The Department has minimal influence on military land use and training practices. However, at least for the time being, all training near the calving ground is in the winter when the animals are not present.

The U.S. Army actively worked within the last 5 years to improve bison habitat and increase forage production on up to 2,000 acres of military lands to lure bison away from important training areas. Habitat improvement actions by the U.S. Army on military land include establishment of a blue grass forage plot, prescribed burning, fertilization of natural vegetation, and mowing. These efforts may help to delay the migration of DBH toward DJBR and private agricultural lands. However, because the habitat improvement areas are generally level and cleared of vegetation, they become attractive for use as military training areas, and many of the forage plots areas are reclaimed for use by the U.S. Army.

Development of Agriculture in the Delta Area

Even before the development of large scale agriculture in the area, residents of the Delta Junction area experienced both conflicts with as well as benefits from the bison herd. Conflicts initially occurred on Fort Greely housing areas and in the town of Delta Junction. In the 1950s, agriculture began to develop within the area traditionally used by DBH. Since agriculture began, conflicts with bison occur primarily on farms. At the same time agriculture began to develop, native bison forage began decreasing in the Delta Junction area as wildfires were suppressed and forests became more abundant.

Since 1978 the State of Alaska sold nearly 100,000 acres to become over 200 farm tracts in the Delta Junction area. As farms developed, bison began to include hay and cereal crops in their fall and winter diets. Crop damage increased following development of private agricultural land in the Delta I and Delta II agricultural areas primarily north of the Alaska Highway in 1979.

Farmers who purchased land in the Delta I portion of the Delta Agricultural Project were not officially informed of potential bison problems, although it was common knowledge that bison were present in the area. ADF&G had provided comments to DNR through the agricultural planning process that conflicts with bison were likely to occur. Sale contracts for agricultural parcels in the Delta II portion of the Delta Agricultural Project stated that DBH uses the area for a portion of their range and that the state is not responsible for damage caused by bison to farms. At the time of Delta II sales, the DBH herd size objective was 250–300 bison (precalving).

Of the approximately 100,000 acres of farm tracts in the Delta area, the land is not all in agricultural production. In 2008, the most recent year for which statistics are available, the following farm acreages were reported in the Delta Junction area (including the Tanana Loop area):

1. grain crops 5,617 acres
2. hay, grain hay, and pasture 4,191 acres
3. grass seed 226 acres

4. potatoes 30 acres
5. canola 40 acres
6. other crops 97 acres
7. fallow 9,600 acres
8. Conservation Reserve Program non-cropped 23,093 acres
9. Grassland Reserve Program non-cropped 1,124 acres

In addition, status is unreported for approximately 23,000 acres of which approximately 50% is fallow and 50% is mostly hay crops with a small portion in grain. USDA considers approximately 33,000 acres as no longer farmable because it is overgrown and is not easily reconverted to crop land. Approximately 50,000 acres were removed from crop land status (L. Wilhelm, personal communication, USDA Farm Service Agency, Delta Junction, Alaska). Some of the land is used for livestock enterprises such as dairy, beef, swine, and game farms which include elk, bison, and yak.

Delta Junction Bison Range

The Alaska legislature established the approximately 87,000-acre DJBR south of the Alaska Highway in 1979 which includes approximately 18,000 of military land (Figure 1). The purposes of the range identified in the legislation are to

1. perpetuate free-ranging bison on the land described in the act by management of habitat to provide adequate winter range for bison, and
2. alter seasonal movements of bison herds on the land in order to diminish the damage caused by the herds to agriculturally developed land.

In 1984 the Alaska legislature appropriated $1.54 million in capital improvement project funds for DJBR development, and they also increased the application fee for a Delta bison hunt permit from $5 to $10. Funds derived from the application fee increase were intended for management of DJBR. Capital improvement funds paid for clearing of 2,700 acres to plant bison forage on DJBR, the purchase of equipment for forage management, and to hire personnel to accomplish these tasks.

The Department is able to influence the timing and direction of DBH movements to some extent by indirect actions, including habitat management on DJBR. However, management practices that would confine the herd, such as fencing, are not allowed.

Although DJBR management practices help to alter the seasonal movements of the bison herd and reduce bison-caused crop damage, conflicts between bison and agriculture continue. The success of DJBR to date is limited to some extent by restrictions placed on ADF&G by various factors including

1. Soils and Water: Soil conditions are poor on DJBR and make producing high quality forage expensive and difficult. DJBR soils are acidic, shallow, silty, rocky, and have low organic matter content that results in very low capacity to hold moisture. Because of the poor soil condition, DJBR forage production is dependent on adequate precipitation and large quantities of expensive fertilizer. Quantity and timing of precipitation is critical for

incorporating fertilizer into the soil and for providing moisture for plants. Droughty conditions significantly reduce bison forage quality and quantity on DJBR.

2. Pesticides: ADF&G management avoided the use of herbicides and insecticides to reduce the invasion of undesirable plant species and grasshopper outbreaks because of public opposition to ADF&G's use of these products. This hampered the Department's ability to manage for high quality forage on DJBR. The Department compensated by managing undesirable native grasses and woody vegetation by mechanical methods that are less effective and more expensive. A new more specific herbicide applicator called a "wet blade mower" was tested statewide and on DJBR in 2007. However, USDA Agricultural Research Service determined that the wet blade mower would not be efficient for ADF&G to use in plant control and management on DJBR.

3. Fences: Legislative intent stipulates that DBH must be managed as a free-ranging herd. Therefore, constructing fences to confine DBH within DJBR is not a management option for the Department.

4. DJBR Staffing: Efforts to maximize forage production with current staffing during summer 2009 and 2010 demonstrated that additional staff and equipment would be necessary to make a significant increase in the forage available on DJBR.

5. Public Access: Legislation that established DJBR includes provisions to maintain public access for recreation, hunting, and other purposes. It is possible that public use of DJBR in August and September contributes to DBH moving towards private farmlands earlier in the year. Closing DJBR to motorized recreation would require working with DNR in a rule-making process that would require public hearings (See Appendix B). Hunting by motorized vehicles in DJBR fields is currently prohibited from 1 July through 30 September.

   In 2002 the Alaska Board of Game restricted moose hunting in the Panoramic and Gerstle Fields to decrease disturbance of bison by moose hunters. Managers recommended this action as a way to further delay movement of bison onto private agricultural land. This board action established a special limited drawing permit for the Bison Range Youth Moose Hunt. The hunt was established to

   a. reduce damage to bison forage crops on DJBR;
   b. reduce disturbance to bison in the fields during moose hunting season;
   c. reduce safety hazards to ADF&G staff conducting fieldwork on DJBR during moose hunting season; and
   d. provide an opportunity for a limited number of youth from ages 10–17 to be introduced to moose hunting in an area with a high chance of success.

   This popular youth hunt reduced activity on DJBR during hunting season. However, it is not clear if there was any significant change in the timing of bison movements towards private agricultural lands.

6. Forage Survival: Bison grazing pressure on DJBR forage is most intense in the late summer and autumn when grasses are preparing for winter and vulnerable to mechanical injury and depletion of carbohydrate reserves. This vulnerability is greatest in the initial year of planting.

State Land Use Plans

The Delta Land Management Planning Study and the Delta-Salcha Area Plan, completed by DNR in 1982, both considered the development of the private agricultural land, wildlife habitat and the public interest in maintaining a free-ranging bison herd in the Delta Junction area. These plans resulted in the recommendation that the area south of the Alaska Highway, including DJBR, should be managed as wildlife habitat and that land north of the Alaska Highway should be managed for agriculture.

The Delta-Salcha Area Plan is now incorporated into DNR's Tanana Basin Area Plan as Subregion 7, Delta-Salcha. Private agricultural lands within the Tanana Basin Area Plan are now classified as "private." DJBR is identified in Tanana Basin Area Plan as Management Unit 7K. The primary surface use of the unit is wildlife habitat and the secondary use is forestry. The plan states, "Reference to the Delta Bison Management Plan should be made on all management decisions concerning this unit." Furthermore, "small timber sales may occur where consistent with the primary management intent, and will require the approval of the Department of Fish and Game." With regard to recreation and access, the plan states, "The existing trail network shall remain available for recreational access. Establishing new access trails for recreational use or to reach other state land and resources must be compatible with maintaining the overall habitat value of this unit, and will be coordinated with the Department of Fish and Game." As of May 2011, DNR was working on an update of the Tanana Basin Area Plan; however, any changes to the plan are not likely to significantly affect management of DJBR.

DBH FORAGING PATTERNS AND EFFECTIVENESS OF DJBR

About 80% of a bison's diet consists of grasses and sedges. Prior to development of agriculture in the Delta Junction area, most of the diet of DBH included arctic grasses. Arctic grasses are adapted to transfer nutrient reserves into the root system in midsummer to fall as they prepare for dormancy and the onset of winter. During this period of senescence, forage quality is greatly reduced.

Large scale DJBR forage development began in the mid-1980s based on the working hypothesis that DJBR would be managed to produce forage that was more attractive to bison than forage available north of the Alaska Highway. To further entice DBH to remain on DJBR, mineral blocks and water were provided, and actions were taken to reduce disturbance levels.

DJBR's working hypothesis was generally successful until the mid- to late 1980s. The greatest determining factor for success seemed to be the ability to produce an adequate amount of high quality forage on DJBR to meet the nutritional requirements of DBH. During the mid- to late 1980s, most agricultural crops were grains. While grains remain higher in nutritional quality than native grasses, as grain crops mature, they do not appear to be as attractive to bison as grass. This is because the forage quality of grain crops decreases as plants transfer nutrients from the leaves and stems into the seed grain.

The trend in recent years is for more production of oat and brome hay. There is usually regrowth after the final harvest of hay. While the regrowth is still high nutritional quality, not enough grows to be commercially harvested; thus it is left in the fields. The forage quality of this regrowth is as high as the quality produced on DJBR. Consequently, instead of having high quality forage available primarily on DJBR during the fall, there are now large quantities available on private farmlands. Therefore, enticing bison to remain south of the Alaska Highway on DJBR in the fall has become less successful.

Bison will find and use food with the highest nutritional quality, including agricultural crops on DJBR and private agricultural lands. Most crop damage occurs when bison move onto farms prior to completion of the fall harvest. However, because bison visit some areas more than others that have the same available forage, ADF&G believes there are other less-understood variables influencing movement. Those include a combination of water, cover, habitual travel routes, and disturbances. For example, private agricultural lands adjacent to the Gerstle River appear to be particularly desirable to DBH where they have ready access to food, forest cover, and water.

HERD SIZE

The management objective for herd size is based on the number of bison in the herd before calving occurs (precalving). The number of bison in the herd increases by about 20% after calving. The first Delta bison management plan that was in place between 1980 and 1985 included a precalving herd size objective of 250–300 bison. The herd size objective was increased in subsequent versions of the plan. From 1992 until present and included in the 2000–2005 Delta Bison Management Plan, the herd size objective has been 360 bison.

For decades people have voiced strong conflicting opinions about the ideal population objective for DBH. There is interest from some people for a herd larger than the current objective, as well as interest from other people for a herd smaller than the current objective. The attributes and aspects of the different herd sizes include the following:

1. Smaller herd
   a. Potentially less impact on the agriculture crops.
   b. Reduced hunter and viewing opportunity.
   c. Decreased genetic variability.

2. Larger herd
   a. Potentially more impact on agriculture crops, fields, and fences.
   b. Increased hunting and viewing opportunities.
   c. Greater genetic variability.
   d. Potentially increase the goods and services purchased by hunters in the Delta Junction community.

Still other opinions argue for managing the herd size based on the limit set by natural environmental factors that do not include access to forage on private agricultural land. It is difficult to determine the number of animals this would be for several reasons. The quantity of forage they get from private agricultural lands and DJBR is unknown. Whether they will

continue to have full access to their summer range on military land is unknown. Also, since the herd is free-ranging it can seek new range.

For a healthy, reproducing and self-sustaining population to remain viable, it should not go below the minimum viable population size. Small populations are more likely to go extinct or approach extinction than large populations. Small populations are more vulnerable to disease, extremes in weather, predation, or loss of genetic diversity than large populations. Although this concept is often applied to a species, it can be applied to isolated populations of a species, such as DBH. Although we do not know what the minimum viable population size is for DBH, the range in size of the herd over the past several decades suggests that the current and past sizes of the herd did not go below the minimum viable population size. In 2010 the International Union of Concerned Scientists, American Bison Specialist Group, recommended managing individual bison herds for a minimum population of 1,000 in order to maintain maximum genetic diversity for long periods of time.

HUNTING MANAGEMENT

The Department uses hunting for managing the size and composition of DBH. Predation is not a significant mortality factor. An unknown number of bison die each year from other causes such as drowning, wounding loss, and other accidents.

DBH hunting permits are among the most sought after hunting permits in the state. In recent years an average of 15,000 people submitted applications for approximately 80–170 drawing permits. The permit winners are selected by a random lottery with no preference for the number of years a person has submitted applications.

The Board of Game currently authorizes the Department to issue up to 200 bison hunting permits per year. The current hunting season is year-round from 1 July to 30 June. However the Department uses its discretionary permitting authority to limit the season from 1 October–31 March, except on a case-by-case basis when hunting is needed as a tool during the other times of the year to reduce bison crop destruction.

Most hunting occurs on private agricultural land and state land in DJBR. However, some hunting also occurs on military land. The ability of hunters to have access to DBH on private land is dependent on the willingness of private landowners to allow access.

Hunting on private land has become more difficult for hunters in recent years for one or more of the following reasons:

1. Some landowners charge access fees.
2. Other landowners do not allow hunters on their property.
3. Some landowners have fenced their land, placing it off limits.
4. Many landowners allow only one hunting party on their property at a time.
5. The number of individual landowners has increased because farm tracts are being subdivided into smaller but more numerous parcels which makes determining ownership and obtaining access more difficult.
6. Hunter success has decreased over time, thus during some years, more permits must be issued to meet harvest requirements resulting in more hunters are in the field.

Motorized vehicles are not restricted for hunting bison. Unfortunately, some hunters use 4-wheelers and snowmachines in an illegal manner to pursue and herd bison while hunting. Commonly this action results in bison being chased through fences. As more private farm acreage becomes fenced, there is an increasing incidence of hunters chasing bison through fences.

Some landowners charge access fees because there is a cost involved in providing access to hunters. For example, dealing with hunters takes time, there may be some damage to fields and fences, and bison carcass remains left in the field can damage farm equipment. Landowners who no longer allow hunting on their property generally cite the following reasons:

1. Landowners have problems with motorized vehicles.
2. Landowners have a sense that the Department and hunters are not concerned about the difficulty farmers have with bison.

Bison Herd Health and Domestic Livestock Interaction Issues

There are no disease syndromes or reoccurring health issues known presently in DBH based on extensive observational effort. DBH is observed through a combination of air and ground methods for more than 100 hours per year by ADF&G staff. Furthermore, more than 100 hunters per year observe DBH during the hunting season. In addition, a number of carcasses from bison harvested each year are inspected by ADF&G staff at hunter check-out. An extensive effort to conduct serosurveillance of DBH took place during 2000–2003. Since then other less extensive sampling has occurred.

However, several diseases are known to occur in domestic livestock in the Delta Junction area, and tests have shown that bison have been exposed to most of them. Those include infectious bovine rhinotracheitis, bovine viral diarrhea, bovine respiratory syncytial virus, infectious bovine kerato conjunctivitis, Johne's disease, and parainfluenza III.

Based on the past specific disease testing and current level of health monitoring, we believe there are no major health risks to the herd at this time. However, during annual DBH movements, the herd comes into close proximity to domestic livestock in the Delta Junction area. Furthermore, some domestic livestock have become feral within the range of DBH. ADF&G has no control over domestic livestock health and limited control over the consequences of contact between free-ranging bison and livestock.

Health monitoring of DBH will continue to rely on extensive observation effort by ADF&G staff, bison hunters, and the public. Animals deemed of high enough interest by ADF&G staff regarding their health status may be immobilized or euthanized for further examination and testing. Since specific disease testing has not been done for approximately 10 years, we are proposing a monitoring guide for 2013–2015. In the future, we will compile a list of diseases and parasites for testing, sample sizes, and any needed funding sources.

Genetics

In the late 1800s when plains bison numbers were very low, some ranchers intentionally crossbred plains bison with cattle in an attempt to create a more hardy variety of livestock. As a result, few herds of genetically pure plains bison remain today, including the present day herd on

the National Bison Range in Montana. However, bison brought to the Delta area in the 1920s from the National Bison Range were still free of cattle genes. Genetic testing of DBH to date has not detected any cattle introgression. DBH and other Alaskan plains bison herds are among the relatively small number of plains bison herds in North America that may remain free of cattle genes. Therefore, DBH may be useful in the future for providing cattle-free genetic bison stock.

Three domestic herds of plains bison are currently in pastures in the Delta area. Bison have escaped from two of these herds and joined DBH. Because the genetic purity of the domestic herds is not known, the genetic purity of DBH could be compromised. Further genetic testing of DBH would be needed to detect cattle gene introgression.

Interim Actions Taken to Help Reduce Bison Crop Damage

During 2009–2010 while the planning process was underway ADF&G implemented a number of interim actions to reduce conflicts between bison and agriculture in the Delta area. These actions included

1. In 2009 and 2010 the Department allocated approximately $20,000 in additional funding per year for bison forage management on DJBR. Increased forage management included:
    a. Planting an additional 200 acres of oats (2009 and 2010).
    b. Increasing the fertilization rate on 700 acres of perennial bluegrass (2009 and 2010); Planting 30 acres with forage turnips in 2009 and 70 acres in 2010 to assess if it would be a preferred forage species that would help keep bison on DJBR longer.
2. ADF&G conducted an early bison hunt that started on 26 July 2010 to test whether hunting bison only in agricultural areas north of the Alaska Highway would cause bison to avoid agricultural lands and move back to DJBR.
3. In 2009 and 2010, the U.S. Army invested over $140,000 to improve bison summer habitat on military lands, primarily by fertilizing 550 acres on the Buffalo Dome Flats summer range on the west side of the Delta River and bison food plots in the Meadows Road area. This level of funding from the military is not likely to be available on a regular basis in the future.

With this additional effort in 2009 and 2010 ADF&G concluded

1. The workload required to manage bison forage at the increased funding level during the last 2 years is not sustainable with a DJBR staff of one person.
2. During summer 2009 and 2010, the timing of the bison herd movement was in late July. This timing was later than the mid-July movement dates recorded from 2000 to 2008. During summer–fall 2009 and 2010, ADF&G and U.S. Army bison management activities did not significantly alter DBH movement patterns observed since about the early 1990s.

Crop Damage Assessment Program

The economic value of bison damage to agricultural crops had not been assessed in the past, which makes evaluating the efficacy of bison management actions to reduce damage difficult. In summers 2009, 2010, and 2011, ADF&G gathered data for a crop damage assessment program in cooperation with the Alaska Division of Agriculture. Each year, ADF&G staff flew several

aerial surveys over all grain and potato crops north of the Alaska Highway during the harvest season and photographed bison crop damage. Dr. Charlie Knight from the Division of Agriculture analyzed the aerial photos and conducted ground surveys of crop damage. In 2011, Dr. Knight noted that there were more fenced fields in the Delta I Agricultural Area.

Dr. Knight produced monetary estimates of crop damage for 2009, 2010, and 2011 (Table 1). In presenting these data Dr. Knight emphasized that these are very rough estimates and further work is needed to accurately assess actual crop damages. Dr. Knight categorized the aspects of crop damage or economic loss as follows:

1. Grain Down: Barley, oat, or canola fields that had been trampled, wallowed, or eaten. Values were determined by field areas and percent losses estimated within each field.
2. Extra Grain Desiccation and Drying Costs: In an attempt to minimize bison damage to their crops, Delta farmers often harvest their grain earlier and at a higher grain moisture level than they would have if the bison threat were not present. In 2010, some grain was sprayed with a crop desiccant to facilitate an early harvest. In most cases, however, harvest time in the Delta area was dictated by the weather conditions rather than the presence of bison. Thus, additional drying costs were less in 2010 than in 2009. However, in 2010, some oats were harvested at moisture levels as high as 33% to avoid further bison damage. In 2011 a later harvest resulted in lower drying costs. Additional costs of grain drying and crop desiccation were estimated following interviews with the farmers affected.
3. Grass, Hay, and Straw: Hay fields along the Sawmill Creek and Gerstle River corridors get many different kinds of bison damage each year. Bison roll and graze in the uncut fields; they eat, scatter, and leave manure in the cut hay that is drying in the windrows; they ram their horns into the big rounds of baled hay and rip up the wrapping materials and eat holes in them; and they get into the stacks and break open the stored bales of hay and straw. The combination of all of the actions reduces the quality, the usable quantity, and ultimately the value of these crops. Farmers occasionally do not get their straw all baled in the fall and wait until spring to bale it. Bison eating, bedding down, and spreading manure on the straw during the fall and winter reduces quantity and quality. All of these losses have been lumped together in this category.
4. Potato Damage: Potato crops experienced some damage, which is different from damage to other crops. Rot caused by physical harm to a small portion of the crop can be spread to a shed full of potatoes. This causes a considerable reduction in the value of the entire crop. Although not reported as a loss, there is fear that bison and other animals can spread viruses as they walk through the fields.
5. Fence Damage: Bison usually do not go through fences unless they are being pursued or are strongly attracted to a crop behind the fence. Dr. Knight said he had two reports of bison going through fences in 2010 causing more labor than actual materials damage.
6. Missed Opportunities: Rather than planting hay or barley, many farmers would like to plant higher cash-value crops such as potatoes, oats, canola, field peas, wheat, or later-maturing, higher yielding varieties of barley. However, most of these crops are very attractive to or easily damaged by bison. Therefore the farmers feel that it would be

unwise to plant such crops as they would almost certainly be damaged by bison. Several farmers mentioned that these missed opportunities were the source of their greatest losses; however, it is impossible to assign a dollar value on missed opportunities.

TABLE 1. Alaska Department of Natural Resources, Division of Agriculture estimates of bison-caused crop damage, 2009–2011.

Damage type	2009	2010	2011
Grain down (barley, oats, and canola)	$32,190	$58,238	$50,480
Extra grain desiccation and drying costs	$30,700	$10,650	$5,200
Grass, grass hay, barley, and oat straw	$37,250	$38,065	$20,100
Potato damage	$35,000	$48,000	$31,000
Seedling grass field damage	$4,000		
Fence damage (labor and materials)	$3,000	$3,000	$0
Total	$142,140	$157,953	$106,780

APPENDIX C: ALTERNATIVES CONSIDERED BUT NOT ADOPTED

COMPENSATION PROGRAMS

1. Farmers purchase crop insurance to receive compensation for bison-caused crop damage.

   Rationale: Crop insurance programs currently available are not adequate to compensate farmers for on-going bison-caused crop damage. There is no standard methodology established to assess the economic losses caused by bison nor are there qualified insurance adjusters in Alaska with the necessary expertise.

2. Establish a state program to compensate farmers for bison-caused crop depredation.

   Rationale: There is no standard methodology established to assess the economic losses from bison crop damage. Furthermore there is concern that establishing a crop damage assessment program for Delta bison would create a precedent for the state accepting liability for other wildlife caused damages.

FENCING ALTERNATIVES

3. Fence DBH into DJBR or a portion of the range either year-round or on a temporary basis from mid-July until crops are harvested.

   Rationale: Confining DBH in a fenced area would violate the legislative intent of DJBR to "perpetuate free-ranging bison." More detail on the legal, management, and financial issues involved in managing DBH in an enclosed area are provided in Appendix E.

4. Construct a barrier or "drift" fence along the south side of the Alaska Highway to prevent the bison from migrating into private agricultural areas.

   Rationale: The effectiveness of constructing a barrier fence along the Alaska Highway is uncertain because bison can go around the ends of the fence to access the agricultural areas. A barrier fence would interfere with public access to DJBR and would disrupt movement patterns of moose and other wildlife. DOT&PF expressed concerns about disruption of wildlife movements and the possible effects on wildlife-vehicle collisions. They would need to be consulted on any proposals involving fencing along highways.

BISON HUNTING MANAGEMENT PROVISIONS

5. Establish an open season with no bag limit north of the Alaska Highway to eliminate nonmigratory bison.
6. Provide information to hunters on the location of the bison herd. Conduct a weekly aerial survey and provide a report to hunters. Farmers could provide information to ADF&G about bison on their lands.
7. Escort hunters. If ADF&G escorted the hunters, perhaps landowners would be more receptive to letting people hunt on their land.
8. Allow local people to guide hunters on their own property.
9. Use an alternate hunter list. If someone does not intend to use his/her permit it could be reissued to another hunter.

10. Break the hunt into designated hunt periods. Most people do not need 6 months to hunt. Allow 3 months to hunt, and then let someone else get a chance.
11. Establish a preference or bonus point system for DBH hunting permits so that people who apply year after year have a greater chance of receiving a permit.
12. Charge successful permit applicants a large fee and use funds to compensate farmers or contribute to bison management
13. Give landowners, or a designated group of hunters, the chance to harvest bison as soon as they cross the Alaska Highway.
14. Open bison hunting on the north side of the Alaska Highway on 1 July while keeping the season closed on the south side of the highway in DJBR until crops are harvested in the fall. This is to discourage bison from entering agricultural lands until crops are harvested.

    Rationale: Bison hunting provisions that were supported by the DBWG are incorporated into the management recommendations of this plan.

Allocate a Portion of DBH Hunting Permits to Farmers

15. Issue depredation permits to farmers. Let landowners have a few of the bison; either part of the quota that were not already killed at the end of the season, or get some up front.

    Rationale: Awarding a portion of DBH hunting permits to farmers was not supported by members of DBWG as means of providing compensation for bison-caused crop damage. If such a program were established it would be difficult to determine how to allocate the permits among affected farmers.

Hazing Bison

16. Haze bison out of agricultural areas until crops are harvested.

    Rationale: Hazing bison was attempted in the past and had limited usefulness in keeping bison out of agricultural areas.

APPENDIX D: LEGAL REQUIREMENTS

CONSTITUTION OF THE STATE OF ALASKA

Article VIII of the Constitution of the State of Alaska provides the overarching policy for management of natural resources in the state. Section 3, often referred to as the "Common Use Clause" is particularly pertinent to discussions of the DBWG during the development of this plan. This clause may preclude the possibility of designating one or more Delta bison hunting permits to a specific group, such as the Delta agricultural landowners who experience impacts from the bison herd and bison hunting.

Article VIII, Natural Resources states:

Section 1. It is the policy of the state to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest.

Section 2. The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and waters, for the maximum benefit of its people.

Section 3. Wherever occurring in the natural state, fish, wildlife, and waters are reserved to the people for common use.

Section 4. Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the state shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

Section 5. The legislature may provide for facilities, improvements, and services to assure greater utilization, development, reclamation, and settlement of lands, and to assure fuller utilization and development of the fisheries, wildlife, and waters.

ALASKA STATUTES

Several sections of Title 16, Fish and Game, apply to management of Delta bison and DJBR. There are general provisions, such as the authority of the commissioner and there are specific measures that apply to DJBR and the auctioning and/or raffling of bison hunting permits.

Sec. 16.05.020. Functions of commissioner. The commissioner [of the Alaska Department of Fish and Game] shall

(2) manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state.

In 1979 House Bill 31 established DJBR. The purposes of the act identified in Section 1 of the legislation are:

> "to perpetuate free-ranging bison on the land described in this Act by management of habitat to provide an adequate winter range for bison," and
> "to alter seasonal movements of bison herds on the land in order to diminish the damage caused by the herds to agriculturally developed land."

This legislation was codified into Sections 16.20.300–320 of the Alaska Statutes. Section 16.20.300 identifies the lands included in DJBR. The text of the other portions of the statute follows.

Sec. 16.20.310. Game management plan for bison.

(a) The commissioner shall develop and may amend a game management plan for bison in the area described in AS 16.20.300. After holding public hearings in accordance with 44.62.310 and 44.62.312, the commissioner shall implement the game management plan.

(b) The game management plan must include, but is not limited to:

(1) planting grains for bison and planting other wildlife forage;

(2) altering existing plant cover to create additional range and year-round habitat for bison and other animal species in the area;

(3) tilling to produce forage.

(c) The commissioner shall develop and amend the game management plan to coordinate, as closely as possible, the game management plan with the activities of the Agricultural Development Authority, Department of Natural Resources, relating to the Big Delta agricultural development project.

Sec. 16.20.315. Bison range timber sales. The Department of Natural Resources, Division of Forestry, shall provide for the sale of timber in the Delta Junction bison range area in a manner that does not delay implementation of the game management plan required under AS 16.20.310.

Sec. 16.20.320. Activities on bison range area. Nothing in AS 16.20.300–16.20.320 shall be construed as prohibiting activities on land described in AS 16.20.300 that are otherwise permitted in accordance with the laws and regulations of this state, including, but not limited to, hunting, trapping, engaging in recreational activities, using the land for access to adjacent areas, and a 300-foot Alaska Railroad right-of-way.

AS 16.05.343 provides for auctions or raffles of big game harvest permits. These provisions are relevant to DBWG's consideration of providing a bison harvest permit to Delta agricultural interests who are impacted by bison damage (Appendix C). The key provision of both paragraphs (a) and (c) is that "The donation may be made only to a nonprofit corporation established to promote fish and game law enforcement…" Thus, donation of a bison harvest permit to an agricultural organization would require legislative action to make an organization other than a nonprofit established to promote fish and game law enforcement eligible for a permit donation. Even if legislation were proposed, it may violate the Equal Access Clause of the Constitution (see above).

Sec. 16.05.343. Auctions or raffles for big game harvest permits.

(a) The Department may donate one bison harvest permit each year for a bison from the Delta bison herd for a competitive auction or raffle. The donation may be made only to a nonprofit corporation established to promote fish and game law enforcement, subject to the terms of a memorandum of understanding developed by the Department.

(b) (Not applicable to Delta Bison)

(c) The Department, subject to regulations adopted by the commissioner, may issue, through a competitive auction or raffle, up to two harvest permits each year for each of

the following big game species: Dall sheep, bison, musk ox, brown or grizzly bear, moose, caribou, and wolf. Notwithstanding AS 36.30, the Department may authorize a qualified organization to conduct the auction or raffle on behalf of the Department. If the Department does authorize a qualified organization to conduct an auction or raffle for a big game species, the Department shall make available to a qualified organization based in the state at least one harvest permit for that species. If the auction or raffle is conducted by a qualified organization, the organization may retain an amount from the gross proceeds of the auction or raffle equal to the administrative cost of the auction or raffle plus an amount not to exceed 10% of the net proceeds. The proceeds from the auction or raffle of a big game harvest permit may not be used to make a contribution to any candidate for political office or to any organization supporting or opposing ballot propositions or to pay expenses associated with lobbying the legislature or administration. All proceeds from the auction or raffle of the big game harvest permit, less the amount that is retained by a qualified organization under this subsection, shall be deposited in the Fish and Game Fund under AS 16.05.100. A person who is issued a big game harvest permit under this subsection shall receive upon the person's request a complimentary hunting license and a big game tag for the big game species for which the big game harvest permit is issued. A hunting license issued under this subsection must bear the inscription "Governor's license" or a similar designation. A person who receives a big game harvest permit, hunting license, or big game tag under this subsection may exercise the privileges conveyed by the permit, license, or tag only in accordance with applicable law. In this subsection "qualified organization" means a nonprofit corporation established to promote fish and game law enforcement or an organization that is established to promote management of hunted game species and use of game populations for hunting and that complies with applicable laws governing activities under this subsection.

Legislative History, Attorney General's Opinions and Legal Decisions

Management of the Delta Bison Herd and Delta Junction Bison Range

In 1980 the Alaska legislature passed House Bill 568 which extended the life of DJBR from 3 years to 10 years. In 1988 the legislature repealed the termination date for DJBR. Although the bill consisted of only a few lines of text, the Chairman of both the House Special Agricultural Committee and the House Resources Committee sent the Speaker of the House, Terry Gardiner, a letter of intent stating:

> "It is the intent of the Legislature that the Delta Junction bison herd be managed for maximum reproduction and productivity. The present base population is not to be reduced and the past average number of animals harvested by hunting permit shall be continued. Any animals which seasonally exceed the base population after historic hunting allocation shall be disposed for maximum return to the state."

Mandate for Managing DBH as a Free-Ranging Herd

On 30 June 2009, while this plan was being developed, Representative John Harris requested clarification of Delta bison legal issues from Brian Kane, Legislative Counsel for the Legislative Affairs Agency Legal Services. The two questions raised by Representative Harris on the free-ranging status of DBH and key parts of the responses are as follows:

1. Can the 1979 session law enacting AS 16.20.300 be used to justify free ranging even though the language is not in today's statutes?

   Response: The purpose behind why the legislature passed the act – "to perpetuate free-ranging bison on the land described in the act" is still in place.

2. Is the Delta Junction bison herd a true free ranging herd?

   Response: Seeing as the bison are not owned by anyone, not held in place by barriers, appear to at the very least have freedom to roam, and are also descendants of a wild stock from Montana, the signs all point to the Delta Junction bison being considered a free-ranging herd.

STATE LIABILITY FOR BISON DEPREDATION OF CROPS

In 1980 a Delta Farmer, Howard Smith, was sued by the Alaska Farmer's Cooperative for nonpayment for seed and fertilizer he purchased from the cooperative. In his defense, the farmer filed a cross-complaint against the state alleging the state was liable for any sums owed because the state failed to protect his crop from bison depredations. The state filed a motion for summary judgment against Smith and the motion was granted in the state's favor in a June 1982 court decision. The state's case was based on "the common law rule that states are not liable to individuals for damages to real or personal property inflicted by wild animals protected by game laws which are administered by governmental agencies."

In a memo to Representative Pappy Moss dated 27 February 1981 the Alaska State Legislature House of Representatives Research Agency described the state's potential liability for wildlife depredation of crop land. This memo was written in response to questions relating to proposed legislation dealing with compensation by the state to producers of certain agricultural products for income loss attributable to bison depredation. The memo refers to two Assistant Attorney General Opinions and was inconclusive with regard to the state's liability. Eighteen months later the courts issued the Howard Smith decision that determined that the state is not liable for bison depredation of crops.

More recently the memo prepared by Brian Kane, Legislative Counsel for the Legislative Affairs Agency Legal Services agrees with previous Attorney General's Opinions but does not conclusively indicate whether the state is liable for bison-caused crop damage. The memo identifies provisions or conditions that might affect a legal claim for liability. Some key parts of the response are:

1. The state may be held liable for damage by Delta bison if a court were to find that it has negligently performed or failed to perform a duty to keep the critters away from farmer's crops.
2. The statute specifically states that the game management plan must include "altering existing plant cover to create additional range and year-round habitat for bison and other animal species in the area." It seems that this provision of the management plan falls in line with the second stated purpose of the Act: "to alter seasonal movements of bison herds on the land in order to diminish the damage caused by the herds to agriculturally developed land." This second purpose increases the state's duty to protect the agriculture

of the area, but uses the words "diminish the damage," which does not mean the state has to 100% keep the bison from damaging crops. Even if a duty was created by the Act, the state may only need to show that its management plan achieved the stated goal of diminishing the damage to agricultural lands.

3. It would be up to the court, if a claim were pursued, to determine whether the state was liable for damages, and that is an outcome I am unable to predict.

Access Fees for Hunting on Agricultural Lands

An Assistant Attorney General's memo to the Commissioner of the Department of Fish and Game, dated 7 May 1992, addresses the topic of access fees for hunting on agricultural lands. The memo specifically examines holders of state agricultural rights in the Delta Junction area. The memo concludes:

> "The owner of the agricultural interests to land acquired from the state may limit access to those lands for hunting and other purposes. The owner may allow public access, and charge a fee therefore, if the hunting use of the land is not inconsistent with or contrary to the agricultural use of the land."

APPENDIX E: DJBR MANAGEMENT AND LAND USE PERMITTING

The statutory designation of the Delta Junction Bison Range (DJBR) in AS 16.20.300-320 provides for a game management plan for bison and other wildlife species, timber sales on the range, and continued public use of the lands (Appendix A). The law requires that the game management plan for DJBR be coordinated with the Department of Natural Resources (DNR). This appendix stems from review and coordination with DNR and is intended to help clarify how agency and public land use permitting on DJBR is to be handled.

Public Recreational Use and Other Activities

Activities permitted in accordance with the laws and regulations of the state, including, but not limited to, hunting, trapping and recreational activities on DJBR are specifically authorized in AS 16.20.320. Generally, casual public use of DJBR lands is authorized without a permit, similar to other state-owned and managed lands. This plan does not include any proposals to adopt regulations to restrict public use of DJBR. If in the future the Alaska Department of Fish and Game (ADF&G) sought to close DJBR to certain public uses in order to better manage for bison or wildlife habitat, the Department would be required to work with DNR to restrict land uses through a public rulemaking process according to state land use regulations.

Organized events or other public uses that might result in impacts to the land may require a state land use permit. DNR, Division of Mining, Land, and Water (DMLW), should be consulted on the need for a land use permit. The Delta Junction Area Biologist will forward all DJBR public use requests to DMLW for determination of permitting requirements. If a proposed activity requires a land use permit or other authorization, DMLW shall consult with the Division of Wildlife Conservation (DWC) and will only issue a permit after receiving DWC's concurrence that the activity will not result in significant adverse effects to bison and other wildlife habitat purposes for which DJBR was established.

Department of Fish and Game Wildlife and Wildlife Habitat Management Activities

Management activities for wildlife and wildlife habitat undertaken by ADF&G are covered within the statutory purposes of DJBR and generally do not require a land use permit from DMLW. This includes typical activities such as tilling to produce forage, altering existing plant cover to create habitat for bison and other animal species and planting grains for bison and planting other wildlife forage.

Prescribed burning on DJBR will be done in consultation with DNR. The prescribed burn approval is sufficient authorization from DNR for a prescribed burn on DJBR; however, if the burn is to extend outside of DJBR lands, a land use permit is also required.

Timber in DJBR is included in DNR, Division of Forestry (DOF) timber base. Because of vegetative cover type and seasonal hydrology, some lands within DJBR may be considered wetlands by the U.S. Army Corps of Engineers (COE). Normal silviculture practices intended to regenerate forest cover types after timber harvesting, including surface preparations that scarify soil, are exempt from COE Section 404 permits (33 CFR 323.4 [a]). However, if DWC wildlife management activities are intended to *convert* [italics added] areas of forest cover into

grasslands, a COE 404 wetland permit may be required. Before undertaking actions to convert forest lands to grasslands or other non-forest land uses, DWC should consult COE and, if necessary, request a wetlands determination for the specific lands involved. If required by COE, wetland permits must be obtained prior to initiating the project. If such a forest land use conversion project is envisioned by DWC, DOF should be notified so that the lands can be removed from the timber base. The term "conversion" does not include a temporary change in forest cover type such as removing black spruce to allow growth of aspen or other species (See AS 41.17.110 and 11 AAC 95.200, that governs conversion of forest land to other uses). In addition, if DJBR lands are cleared for non-timber purposes DWC, in consultation with DOF, will determine if the timber has significant salvage value (See AS 41.17.083). If the timber has significant salvage value, the timber will be salvaged as part of the clearing process, unless there are overriding reasons why the salvage would be detrimental to the purposes of enhancing bison or other wildlife habitat.

Timber Sales and Other Forestry Practices

Timber sales, access roads, and other forestry practices proposed for DJBR by DOF are designated as secondary uses by DNR's Tanana Basin Area Plan, and will be coordinated with the ADF&G Habitat and Restoration Division and the Delta Area Biologist. Any proposed forestry practices must be consistent with or not interfere with the primary purpose of the bison range, which is enhancement of bison and other wildlife habitat. Concurrence of DWC must be obtained prior to initiation of forestry activities on DJBR.

Fire Management

ADF&G is the land manager for decisions on fire suppression during wildland fire events, particularly as related to wildlife populations and/or habitat. The Delta Area Biologist or their designee will cooperate with DOF in preparation of the Wildland Fire Situation Analysis as provided for in the Alaska Interagency Wildland Fire Management Plan. The fire Incident Commander retains ultimate authority for decisions involving a threat to public safety and for overall fire manageability. Fire rehabilitation on DJBR will be accomplished through the normal fire rehabilitation process and funding mechanisms in DOF, with rehabilitation decisions being made cooperatively with the Delta Area Biologist to maximize benefit to bison and other wildlife habitat.

Alaska Department of Fish and Game

Delta Junction — State Bison Range
Area Overview

History of Bison in Alaska

Bison colonized North America after migrating from Asia to Alaska over the Bering land bridge several hundred thousand years ago. They were one of the most abundant large mammals in Alaska for most of the last 100,000 years. Large-horned forms such as steppe bison (*Bison priscus*) once roamed Alaska in the company of now extinct mammoths, mastodons, horses, lions, sabre-toothed tigers and dire wolves, as well as moose, caribou, Dall sheep and muskox. Large-horned bison evolved into modern small-horned bison (*Bison bison*) between 5,000 and 10,000 years ago. Wood bison (*Bison bison athabascae*) were the last native bison to occur in Alaska. They became extinct in Alaska during the last few hundred years, most likely because of hunting and changes in the distribution of habitat. Bison once inhabited a large region in Alaska including the Delta River near the community of Delta Junction, Alaska.

The Delta Bison Herd

In 1928, 23 bison from the National Bison Range in Moiese, Montana were transplanted to their historic range along the Delta River. By 1947 the herd of plains bison had increased to 400 animals. Beginning in 1951, hunting was allowed and is currently used to limit the herd to a precalving population of 275–300 bison. The herd is maintained at this level to reduce the potential for damage to agricultural crops and to keep the herd within the carrying capacity of its summer range. About 6,000–11,000 people apply each year for an average of 40 permits to hunt Delta bison. Delta bison have been used to start three other herds in Alaska.

The Delta herd's summer range is along the Delta River, in the eastern interior of the state, southwest of Delta Junction. In the fall, bison migrate from the Delta River toward Delta Junction. Prior to agricultural development, the winter range included country east of Delta Junction between the Granite Mountains and Tanana Hills. With development of agriculture, bison began using farms extensively during the fall and winter.

Bison and Agriculture in the Delta Junction Area

Delta bison began to use hay and cereal grains for part of their fall and winter feed when farms were developed in the herd's traditional winter range. Most crop damage occurred when bison fed in farm fields prior to fall harvest. Problems began in the 1950s, continued through the 1970s, and escalated with development of the Delta Agricultural Project in 1979.

History of the Delta Junction Bison Range

In 1979, the Alaska Legislature established the 90,000-acre Delta Junction State Bison Range. The purpose of the bison range was to perpetuate free-ranging bison by providing adequate winter range and to alter seasonal movements of bison to reduce damage to agriculture. However, no money was appropriated for bison range development, and only small scale habitat development was initially possible. As the Delta Agricultural Project was developed in the early 1980s, conflicts between bison and agriculture increased. Because both bison and agriculture are important to Delta Junction, the community became concerned with the growing problem. The community urgently requested a special appropriation from the Alaska Legislature to fund bison range habitat development. In 1984, the legislature approprated $1.54 million for bison range development and increased the bison hunt application fee from $5 to $10. Funds from the fee increase were for management of the bison range.

Results of Bison Range Development

Large scale forage development began on the bison range in 1985. Approximately 2800 acres of land were cleared and planted with the perennial grasses, nugget bluegrass and arctared fescue. Current management is limited to income from Delta bison hunting application fees and is approximately $50,000 annually. With these funds, the Department of Fish and Game provides six months salary for the Bison Range Manager, fertilizes 500 acres of forage annually, manages forage with techniques such as controlled burns, and conducts small scale equipment maintenance. The biggest challenge for the bison range at this time is controlling the invasion of the native grass, bluejoint reedgrass *(Calamagrostis canadensis)*. Bluejoint is a major threat to successful bison forage management.

During the fall migration, bison now leave the Delta River and migrate directly to the bison range instead of migrating to the Delta Agricultural Project as in the early 1980s. Bison damage to farms was significantly reduced in 1985 with the first substantial habitat development on the bison range. Continued development in 1986 and 1987 resulted in no fall crop damage those years. The legislative appropriation has also allowed the Department of Fish & Game to purchase farm equipment for forage production, develop bison watering sites, construct an equipment storage building, hire bison range staff, and related projects.

Other Uses of the Bison Range

The bison range is managed for a wide variety of public uses. Public groups are encouraged to use the range if the use is compatible with bison management. For example, the 1987 Alaska State Blackpowder Rendezvous was held on the bison range during three days in July. The bison range is also used for timber sales, hunting, cross-country skiing, agricultural research, dog sledding, trapping, wildlife viewing, fishing, and other activities.

The bison range starts about 12 miles southeast of Delta Junction on the Richardson Highway. During the spring and summer, motorists driving the Richardson Highway from Delta Junction to the Black Rapids Glacier may spot bison along the Delta River. The best viewing on the range itself is from mid-July to mid-September. Binoculars are helpful. Wildlife watchers may also see moose, black bears, coyotes, waterfowl, grouse, and other birds.

Economic Impact of the Bison Range

The bison herd and Delta Junction State Bison Range make an important contribution to the economy of Delta Junction. About 40 hunting parties travel to Delta Junction each year to hunt bison. Each group spends about $300 in the community on lodging, gasoline, meals, and groceries. In addition, the bison range appropriation has been used to pay nearly $1 milliion to local businesses for habitat development. Salaries for bison range staff have also contributed to the local economy.

The Future of the Bison Range

The bison range has benefitted the Delta bison herd, farmers, and the community of Delta Junction. If the bison range and the $10 bison hunting application fee are retained, the range will be increasingly effective in providing fall and winter bison forage, contributing to the local economy, and providing public recreation for Alaskans.

For more information on the Delta Junction State Bison Range please refer to the Delta Junction Management Plan (*PDF 1,032 kB*). For current land status information, see the Delta Junction Land Status Map (*PDF 693 kB*). You may also download the KML file which depicts the refuge area boundary.

ALASKA HIGHWAY
Gerstle River Training Area
(Army Recreational Area)
Gerstle River
012S
013S
014S

10-15-1981

Bison Depredation on Grain Fields In Interior Alaska

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BISON DEPREDATION ON GRAIN FIELDS IN INTERIOR ALASKA

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INTRODUCTION

The reported value of grain damaged by bison (Bison bison) may exceed $100,000 annually in the vicinity of Delta Junction, Alaska. This paper reviews the history and present status of bison and their relations to agriculture around Delta Junction. A number of management options are discussed that may reduce conflicts between bison enthusiasts and farmers.

BACKGROUND

A close relationship has existed between bison and agriculture in North America since the 1500's when settlers began to farm inland from coastal areas. Bison provided a dependable food supply in most pioneer farming communities until crops could be planted and herds of domestic livestock established (Roe 1970). Damage to newly established crops by bison was common, but short-lived, since bison were usually extirpated in farming areas within a few years following settlement.

Millions of bison occurred in North America until the late 1870's and early 1880's when commercial hunters eliminated the last of the large herds (McHugh 1972). By 1889 probably less than 1,000 bison existed in North America. The remaining plains bison (B. bison bison) were in Yellowstone National Park and several private herds; only one group of wood bison (B. bison athabascae) survived in the vicinity of Great Slave Lake, now Wood Buffalo National Park (Roe 1970).

Plains bison were present in Alaska until about 500 A.D. (Guthrie, pers. comm.). Bison were absent from that time until 1928 when plains bison were transplanted to Alaska from the National Bison Range in Montana. Twenty-three bison, six males and 17 females were shipped to Alaska during June 1928. Nineteen were released near present Delta Junction (Figure 1) in 1928 with two dying soon after being released. The remaining bison were held at the University of Alaska for feeding research. Two of them were released in 1980 (Burris and McKnight 1973).

The free ranging herd near Delta Junction increased to about 500 in the 1940's, then decreased to approximately 250 animals in the early 1950's. Three hundred and fifty-two bison, including 51 calves, were counted during an aerial survey in summer 1981, and a few more bison were probably in the area (Johnson, pers. comm.). Limited harvests were permitted from 1951 through 1953, 1961, 1963 through 1965 and 1968 through 1981. Interest in hunting bison has been high. For example, in 1978 over 4,000 persons applied for 25 permits available for the Delta herd (Alaska Department of Fish and Game 1980).

Delta bison migrate seasonally in a generally counter-clockwise pattern. Most bison spend the spring and summer on gravel bars along the Delta River,

approximately 30 km south of Delta Junction (Figure 1). Cows give birth in this area. During August and September bands of bison move north and disperse north and east of Delta Junction. Scattered bands winter from the confluence of the Delta and Tanana Rivers as far east as Healy Lake. Foraging sites during winter include wetlands surrounding lakes and ponds, recently burned areas, cropland clearings, forage plantings established for bison, the Trans-Alaska Oil Pipeline right-of-way, and until it was moved during 1981, the local landfill. During late winter and early spring bison move southwest toward the Delta River, then return south to the gravel bars for the summer.

CONFLICTS BETWEEN BISON AND AGRICULTURE

Conflicts between bison and agriculture started during the 1950's when farms were developed near favored bison wintering areas along a dry channel of Jarvis Creek and along Clearwater Creek (Alaska Department of Fish and Game 1980). Farming gradually increased on homesteads east of Delta Junction through the 1960's (Figure 1).

By the mid-1970's there was political pressure in Alaska to diversify the economy of the state to reduce financial dependence upon oil and gas. Expansion of agriculture including grain, red meat and dairy industries was widely recommended (Weeden 1977). The State of Alaska initiated a project involving approximately 60,000 acres near Delta Junction in the late 1970's to test the feasibility of commercial grain production (Palmer 1977). The location of this project is shown in Figure 1.

Serious damage to grain crops may result from bands of bison moving through and feeding, bedding, or wallowing in fields before grains are harvested. Damage to barley by bison during 1980 was estimated at $100,000 (Thomas, pers. comm.). During 1981 damage by bison was minimal, due largely to efforts by personnel of the Alaska Department of Fish and Game to frighten bison from croplands.

A number of factors contribute to bison depredations on grain fields. One factor is the location of the Delta Barley Project in bison wintering areas. Another factor has been delays in harvesting barley. If grain crops are mature and harvested by mid-August, damage by bison is minimized since bison generally do not depart their summer range until mid-August. McKendrick (1981, 1982) suggested that bison might remain on their summer range later into autumn if adequate forage was available. Annual forage supplies are exhausted by mid-August along Delta River gravel bars and this shortage of feed may trigger the autumn migration. The condition of summer range is gradually deteriorating due to erosion of soil and succession from favored grasses and forbs to shrubs (McKendrick 1981).

Control of fires has resulted in a reduction of available winter foraging sites. Historically, fires were responsible for periodic removal of mature forests. Patches of grasses and forbs were present for several years following burns. In recent years fires have been controlled by the Bureau of Land Management and the State of Alaska Department of Natural Resources. Instead of scattered stands of herbaceous vegetation, scrub forests predominate in the absence of fires. This reduction in natural food sources probably contributes to increased use of croplands by bison.

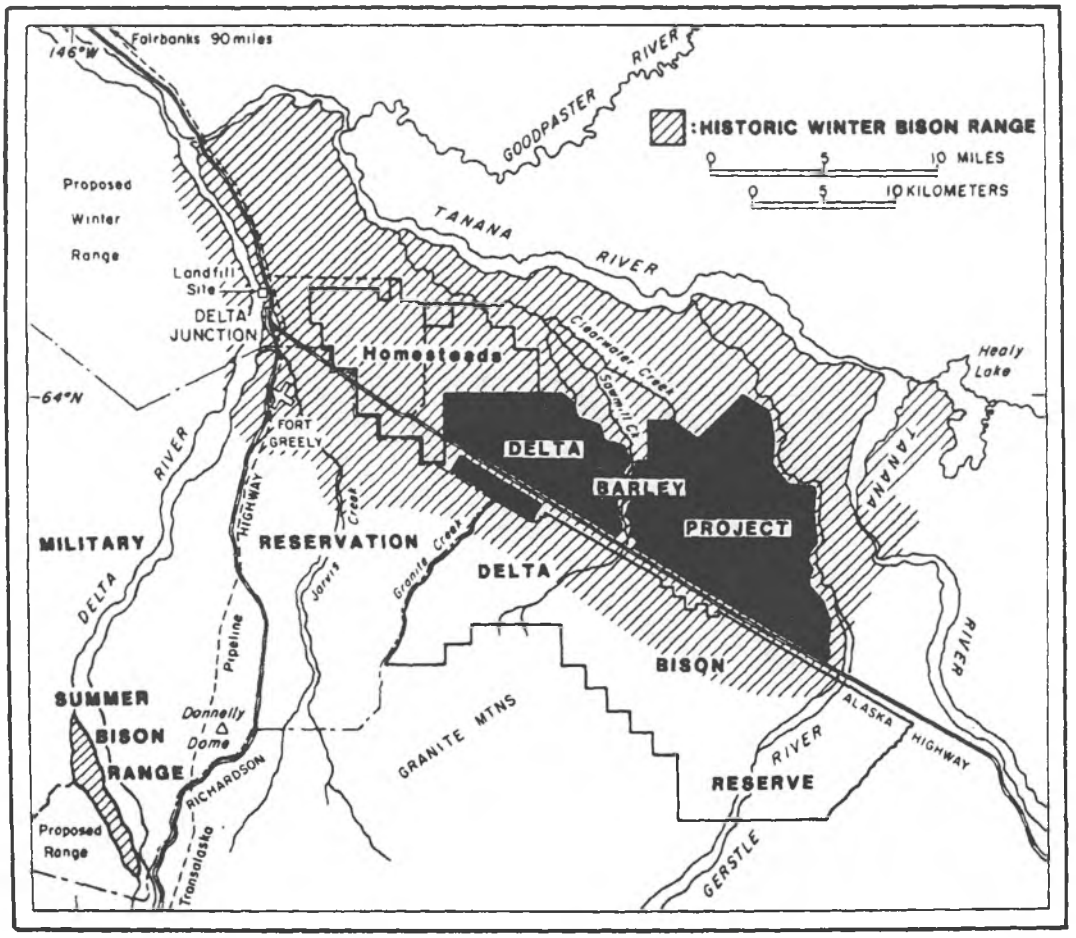


Figure 1. Range of the Delta Bison Herd. Top of the Figure is North. Bison migrate during August and September from the summer range along the Delta River, north and east to overwinter between Healy Lake and the confluence of the Delta and Tanana Rivers. During late winter bison return southwest toward the Delta River, then south along the river to calve and spend the summer on gravel bars about 30 km south of Delta Junction.

MANAGEMENT OPTIONS

The long term solution to conflict between barley production and bison probably must include increasing forage available to the herd. A major step would be improving and/or expanding the summer range. Biologists from the Alaska Department of Fish and Game (Johnson, pers. comm.) and Fort Greely Army Base (Spires, pers. comm.) propose to improve summer range along the Delta River by burning brush and scrub stands of spruce. An interagency team visited an area west and south of the present summer range during summer 1981 and recommended that the area be burned to create additional summer range (Figure 1). The summer range is well suited for controlling burning. The woody vegetation is predominantly spruce (Picea mariana, P. glauca), willow (Salix alaxensis), silverberry (Elaeagnus commutata), and cottonwood (Populus balsamifera) and the area is bounded by streams so fire could be controlled with minimum effort.

Developing additional winter range for bison would also reduce depredations to grain fields. Forage plantings are being established on the bison reserve south of the Alaska Highway and on Fort Greely Army Base as part of a cooperative bison management plan between the Alaska Department of Fish and Game (1981) and U.S. Army (Kiker and Fielder 1980). Wintering areas west of the Delta River could also be established (Figure 1), possibly attracting many bison out of the vicinity of croplands.

Clearing forest lands through burning or mechanical means and seeding them to grasses is probably the best way to establish new winter range for bison. This will be costly whether it is done on the Bison Preserve, on Fort Greely, or on new areas west of the Delta River. Once new winter foraging areas are developed, it will be important to maintain them in grasses and prevent reinvasion of shrubs and trees. One method of offsetting costs would be to lease the grassland for hay harvest with a contract that only the first crop of hay would be harvested each year, with the harvest timed to permit a second growth for fall and winter grazing by bison. A soil fertilization program also would be needed to maintain grass stands. Game managers would be involved primarily in administration of contracts rather than developing bison range. A side benefit would be to increase the hay supply for local markets.

Fences could be employed to direct movements of bison away from croplands, to exclude bison from individual grain fields, or to confine bison. A fence along the Alaska Highway extending from Delta Junction eastward beyond the Gerstle River (Figure 1) would keep most bison from grain fields. However, installation of such a fence is probably not practical because of the high costs of the fence and because of opposition to obstructing movements of moose and other game animals. Fencing individual fields could exclude bison. Difficulties with this option are the high costs of suitable fences, and bison would be eliminated from fields throughout the winter. Most farmers do not object to bison being present on fields after crops are harvested, and harvested fields presently provide important winter range for bison. Harvested fields probably will continue to be important use areas until alternate wintering ranges are developed.

The herd could be confined to a fenced range similar to the National Bison Range in Montana. This proposal has generally been resisted by hunters and other wildlife enthusiasts. Establishment of a large fenced bison range

is complicated by the land ownership pattern in the region. The calving area, summer range and migratory routes between summer and winter ranges are on Fort Greely Army Base. The Bison Preserve and most adjacent lands south of the Alaska Highway are owned by the State of Alaska. The Delta Barley Project lands and other lands around Delta Junction are privately owned and the Bureau of Land Management administers most other lands in the region.

Harassment of bison on or near grain fields is a short term solution to grain depredations, but almost continuous patrol of croplands is required. During 1981, radio transmitters were placed on several bison by personnel of the Alaska Department of Fish and Game. By monitoring locations of radio-tagged bison, biologists were able to determine when bands of bison were approaching grain fields and chase them away.

A crop insurance program to compensate farmers for losses to bison has been suggested by local farmers. This could be accomplished through a State of Alaska program, federal crop insurance, or through private insurance coverage. Grain producing areas of Alaska are being considered for inclusion in the U.S. Department of Agriculture Federal Crop Insurance Program (Lasley 1981).

Other possible management options include reducing the size of the herd or eliminating bison from the region. Local opponents of bison point out that bison presently in the Delta Junction area are alien to the region and could be removed without negative impacts upon native wildlife and vegetation. Bison became extinct in interior Alaska hundreds of years ago and bison presently in the area were introduced from breeding stock in the lower 48 states. Elimination of the herd appears to have little support in Alaska. The Alaska Department of Fish and Game Management Plan for the Delta Herd (1981) calls for maintaining a precalving population of approximately 275 bison with regulation of herd size accomplished through public hunting.

One additional option that may have merit is replacement of the present Delta Herd of plains bison with wood bison from Wood Buffalo National Park in Canada. Wood bison generally travel in smaller bands than plains bison (Roe 1970). There are reports that wood bison favor forested habitats and they are more wary than plains bison. Seton (1911) on his first encounter with wood bison in Northwest Territories in 1907 described them as "more shy than moose". It is possible wood bison would avoid farmlands frequented by the present herd of plains bison. Wood bison are likely to be even more valued as game animals in interior Alaska than the plains bison.

SUMMARY

Bison from the Delta herd damage grain when they move into farming areas during August and September. Damage results from bison walking through and wallowing in grain fields and from consumption of grain. Damages can be minimized by harvesting grain crops by mid-August when possible, prior to the arrival of most bison. Crop insurance programs to compensate farmers for losses to bison could reduce friction between farmers and bison enthusiasts. Harassing bison to frighten them from grainfields may reduce grain losses. Long-term solutions to bison depredations will probably involve enhancement of summer range and development of alternate winter foraging areas, possibly on the bison preserve and sites west of the Delta River. Fences could be employed to exclude bison from grain fields or to confine bison on designated

ranges. Other management possibilities include substantial reduction or elimination of bison to stop grain depredations. The present herd of plains bison could be replaced with wood bison from Canada, possibly reducing depredation to grain while providing better game animals than the present plains bison.

LITERATURE CITED

ALASKA DEPARTMENT OF FISH AND GAME. 1980. The American bison in Alaska. Game Division Report, Juneau. 13 pp.

ALASKA DEPARTMENT OF FISH AND GAME. 1981. Delta bison management plan. Game Division, Juneau. 61 pp.

BURRIS, O.E. and D.E. McKNIGHT. 1973. Game transplants in Alaska. Alaska Department of Fish and Game. Game Technical Bulletin No. 4. 57 pp.

KIKER, E.B. and P.C. FIELDER. 1980. A bison management plan for Fort Greely, Alaska. U.S. Army Plan. Fort Greely. 5 pp.

LASLEY, K.H. 1981. Federal crop insurance for Alaska. Alaska Farm Magazine 1:6-7.

McHUGH, T. 1972. The time of the buffalo. Alfred A. Knopf, New York, New York. 339 pp.

McKENDRICK, J.D. 1981. 1980 progress report on bison range research for the Delta, Alaska Bison Herd. Alaska Agriculture Experiment Station Report. University of Alaska, Palmer. 18 pp.

McKENDRICK, J.D. 1982. Alaska's bison: A game biologist's range management problem. Agroborealis 14:73-79.

PALMER, W.I. 1977. A brief look at the Delta Barley Project Proposal. Pages 19-25 In B. Weeden (Seminar Leader). 1977. Expanding Agriculture and the Management of Interior Alaska Resources. The School of Agriculture and Land Resources Management. University of Alaska, Fairbanks. 153 pp.

ROE, E.F. 1970. The North American buffalo. University of Toronto Press, Toronto, Canada. 991 pp.

SETON, E.T. 1911. The arctic prairies. Doubleday, Page, Garden City, New York. 255 pp.

WEEDEN, B. (Seminar Leader). 1977. Expanding agriculture and the management of interior Alaska resources. The School of Agriculture and Land Resources Management. University of Alaska, Fairbanks. 153 pp.

Farmers, hunters battle over bison in Delta: Fence them or hunt them?

Tim Mowry / tmowry@newsminer.com | Posted: Thursday, December 24, 2009 10:01 pm

FAIRBANKS - A battle over Alaska's biggest bison herd is brewing between hunters and farmers in Delta Junction, the latter of who contend the wild beasts are damaging agricultural crops and need to be reined in, whether it means building fences to keep them off crop lands or drastically reducing the size of the herd.

Hunters, meanwhile, are dead set against fencing the wild herd in and/or thinning it down. If anything, hunters want to grow the herd to create more opportunity for what is Alaska's most popular drawing permit hunt.

The result is a "confirmed stalemate" that will likely require action from the Alaska Department of Fish and Game or the Alaska Legislature to iron out, according to wildlife planner Randy Rogers with the Alaska Department of Fish and Game.

"The Delta Bison Working Group made recommendations on a number of things but didn't come to agreement on herd size or concepts of fencing," Rogers said of an advisory committee created to help the department make management decisions regarding the herd. "They agreed that fencing is a long-term solution but there's a big split in what kind of fencing option to use."

Some farmers want to fence the herd in on the 90,000-acre Delta Junction Bison Range, which sits south of the Alaska Highway, just a short romp from a number of farms in the Delta Agricultural Project. The range was created by the legislature in the early 1980s to keep bison off farm land but it hasn't been successful, for various reasons.

Some farmers would rather fence the bison out of their fields, assuming they could get considerable help paying for the fencing, because they, not the state, would be responsible for building and maintaining it.

Some farmers simply want to knock the size of the bison herd down.

"It's time to either cut the herd way back or solve the problem through fencing," Delta farmer Mike Schultz, a member of the bison working group and one of the farmers most effected by bison damage, said.

That's not necessarily the way hunters see it, however. The bison, introduced to the area in 1928, were there long before the farmers moved in, albeit at the encouragement of the state with the development of the Delta Agricultural Project.

"I sympathize with the farmers," Fairbanks hunter Lenny Jewkes, the statewide hunter representative on the bison working group, said. "The farmers do have a major problem that was created by selling the land where the buffalo roam."

But that doesn't mean hunters should be the one who pay for the formation of a penned herd and fewer hunting opportunities, he said. State law requires the herd to be free ranging, Jewkes noted

"Fencing the herd in is not an option and a drastic reduction in herd size is not an option as far as hunters are concerned," Jewkes said.

Popular hunt

At an estimated 435 animals this fall, the Delta Bison Herd is the biggest of three free-ranging bison herds in Alaska. The other two herds are located on the Farewell Burn west of the Alaska Range near McGrath and in the Wrangell Mountains near Chitina, both fairly isolated areas.

The management objective for the Delta herd is 360 bison before the spring calving season, according to Delta area biologist Steve DuBois with the Department of Fish and Game.

The state regulates the herd size through sport hunting. Each year, based on the most recent population estimate, the state issues a select number drawing permits for hunters to hunt the herd.

Given the relatively easy access, high success rates and large size of the animals, the Delta bison hunt is by far the most popular drawing permit hunt in the state. More than 10,000 hunters per year apply for an average of about 100 Delta bison permits.

"It's a very, very popular hunt," Don Quarberg, the Delta hunting representative on the bison working group, said.

If the department were to reduce the size of the herd to 300, which was one of the proposals considered by the working group, it would mean an initial increase in the number of permits issued but a reduction in permits down the road.

"We would probably go down to about 80 permits (per year) and those would be split between bull or cow permits," DuBois said.

Whether or not reducing the herd would solve the problem is unknown but it makes sense that fewer bison would cause less damage.

"We really don't know what the result of reducing the herd would be and whether or not it would reduce the agricultural damage or not," Rogers said.

Reducing the size of the herd and the number of permits to hunt it might help cut down on crop damage but it would also have an economic impact on Delta Junction, Jewkes said. Hunters bring in about $1 million a year to the Delta economy, he noted.

Jewkes feels that hunters and farmers have to work together to solve the problem. There needs to be compromises made on both sides, though he wasn't sure what those compromises are. Farmers will need the support of hunters if they're going to succeed, he said.

"There's 10,000 of us and 20 of them," Jewkes said.

The damage

It would also help if there was some way to determine how much damage the bison are actually doing to farmers' crops, a point repeatedly brought up by hunting representatives on the working group.

Based on the fact they spend about half the year on private ag lands, DuBois said the bison currently get about half their forage from ag crops and the other half from state and military land.

The Division of Agriculture in Fairbanks conducted its first ever crop damage assessment this year and estimated that bison caused approximately $142,140 worth of damage to crop lands this fall.

But Charlie Knight, northern region manager for the ag division, cautioned that the estimate is "kind of a crude number."

"It's almost impossible to come up with a number," he said. "On the ground you can't see all the damage and in the air you can't tell how much is bison damage and how much is moose damage."

Knight used aerial photographs taken by DuBois to pinpoint damage areas and then surveyed the damaged areas on the ground. He also interviewed farmers about damage, investigated reports of damage and created an online survey farmers could fill out.

The damage caused by bison comes in different forms. In some cases, the bison simply trample, eat and wallow in crops like barley, oats, grass and hay. In other cases, farmers are forced to harvest grain earlier than they would like to prevent bison from damaging it. Doing so results in expensive drying costs. Bison also run through potato fields, roll around in seeding grass fields and run through fences.

Damage this year wasn't as bad as last year or some previous years farmers reluctantly told Knight, but they contend that damage by bison is significant, he said. This year's damage estimate was lower than Knight thought it would be.

"To be honest, I thought it would come up to $350,000 to $450,000," he said. "We had a warmer summer and they could get their harvest in about the time the bison were coming in."

Still, Schultz said he had some barley fields that "got hammered pretty hard" by bison.

One of the recommendations the bison working group did make was to establish an on-going crop damage assessment program to get a better handle on crop damage and the cost benefits of building expensive fencing. The Department of Fish and Game will take up that possibility with the Department of Natural Resources and the legislature, Rogers said.

On the fence

The basic question when it comes to fencing is do you fence the bison in or out?

The Department of Fish and Game opposes fencing the herd in because it goes against the department's mandate to manage the state's wild game resources in a responsible manner for the best interest of all Alaskans.

"We just don't do that," Fairbanks regional supervisor David James said of fencing wild animals.

Barring any fencing, the herd should be knocked down to 150 animals, Schultz said.

"If hunters want a larger herd than that there has to be a fencing program that goes along with that," he said. "Whether you fence them in or out."

Fencing the bison in "would be easiest and cheapest for all concerned," Schultz said.

The working group nearly had consensus on a proposal to reduce the herd to 300 animals and to support a cost-sharing program for farmers to fence their fields but Phil Kaspari, a farmer who also sits on the working group representing the Cooperative Extension Service in Delta, wouldn't agree to it.

"It doesn't solve the problem," Kaspari said of farmers fencing off their fields.

The bison are just going to wander around searching for food and farmers who can't afford to fence their fields will suffer, he said. In addition, maintaining a fence is not easy, Kaspari said.

"It's another burden on the farmer when I would just as soon the agriculture industry be able to spend its resources on agricultural ventures," he said.

Kaspari favors fencing the bison onto the state bison range and "thinking outside the box" to come up with a long-term solution.

"We need to have a fundamental shift in philosophy," he said. "We need to quit looking at the herd as a problem between agriculture and bison and start looking at this as an opportunity."

The state should clear more land and plant more crops on the 90,000-acre bison range — the state currently farms about 2,000 acres of the range — similar to the program at Custer State Park in South Dakota, which is home to a penned herd of about 1,500 bison on 72,000 acres that is open for hunting.

"They manage the herd and they manage the range," he said.

Successful agriculture and free-ranging bison are not a good mix, Kaspari said.

"Everybody (in the Lower 48) laughs when they hear that," he said. "They don't go hand in hand."

Even ignoring the cost factor of putting up miles of expensive, bison-proof fence, there are all sorts of potential impacts with fencing. Any kind of fence would have to be maintained and there would always be the threat of someone cutting the fence. If that happened, who would round up the bison?

Fencing bison off private ag lands could simply move the problem from one area to another, too. Bison would start wandering around looking for other food sources, similar to what they did prior to the development of the Delta ag project, DuBois said. Before the ag project was built, bison were routinely seen wandering around town and were a problem for farms on Tanana Loop, he said.

Fencing would also impact the travel patterns of other wildlife, such as moose, DuBois said, not to mention open the door to all sorts of access issues.

"Every one (of the fencing options) has major implications," DuBois said. "There's all kinds of variables and we don't have a handle on any of them."

Quarberg, the Delta hunting representative on the working group, said he hasn't talked to a single hunter who wants to fence in the bison.

"That's not acceptable," he said. "We're going to fight that tooth and nail."

At this point, the department will try to act on the recommendations the working group did agree on — to improve bison habitat on the bison range, increase hunter success rates to ensure harvest objectives are reached and to establish an on-going crop damage assessment program — while it debates potential herd size and fencing options with the Department of Natural Resources and Alaska Legislature, Rogers said.

"We have to make some decisions on how we're going to move forward," he said.

Contact outdoors editor Tim Mowry at 459-7587.

SALCHA-DELTA SOIL & WATER CONSERVATION DISTRICT

CONSERVATION CORNER

VOLUME 32, ISSUE 3 4TH QUARTER 2012

DATES TO REMEMBER

- December 24 & 25
  Christmas, Office Closed
- January 1
  New Year's Day, Office Closed
- January 8
  Board Meeting, 8:30 am
- January 21
  MLK, Jr. Day, Office Closed
- February 5
  Board Meeting, 8:30 am
- February 18
  Presidents' Day, Office Closed
- February 23
  Farm Forum

Board meetings are usually scheduled for the first Tuesday of every month at 8:30 am in the Jarvis Building conference room.

INSIDE THIS ISSUE

DISTRICT RECEIVES FUNDING TO ASSIST WITH BISON RANGE MANAGEMENT

The Salcha-Delta SWCD received military funding for the 2012 field season to assist with the management of bison ranges within the Donnelly Training Area.

The objective is to maintain and improve the condition of forage on both introduced and native ranges for the Delta bison herd, and to reduce the occurrence of bison herds entering military training grounds. This management helps the military conduct live-fire training exercises on military ground, where the bison would otherwise forage and which often resulted in canceled or rescheduled training exercises.

The District provides agronomic recommendations and resource planning on both native and introduced ranges and ensures that the project is successfully completed each year.

During the 2012 field season, the District assisted the military with range management on 300 acres. Projects that were accomplished included aerial fertilizer application on remote native range, brush management on native range, and smoothing, seeding, and fertilizing berms on introduced range.

Each range is unique in its location, forage species, and utilization by bison and other wildlife species.

Above—A berm is lightly dragged by a SWCD employee on an ATV after grass was seeded and fertilized on the bison range.

Extensive time and planning is necessary before actual field management can take place each year. Management planning involves working around military training exercises, sensitive areas, such as rivers, lakes, wetlands and shallow soils, and working around the natural migration of the bison herd, as well as nesting dates of bird species.

By Meghan Lene, Agricultural Specialist

RECREATIONAL TRAILS INVENTORY

Last summer, the Salcha-Delta Soil and Water Conservation District received funding from NRCS to perform trail inventories within the District's boundaries. The purpose of the trail inventory project is to catalogue recreational trails in the District and assess them for resource issues, such as wetland degradation, soil erosion, use patterns, drainage issues, and others.

District employees Colin Barnard and Will Wright, along with occasional volunteers, hiked and used ATVs to inventory over 130 miles of trails within the District boundaries, spanning fifteen different trail systems (*bottom left*).

Using GPS units, Colin and Will tracked the center-line of the trails, as well as collected geo-referenced photo points of resource concerns and general features of the trail. These include stream crossings, culverts, benches, signs, restrooms, scenic over-looks, camping areas and public use cabins.

Above left—Red lines on the map indicate the inventoried trails.

Above—GPS equipment used in the trail inventory above McCallum Creek in the Alaska Range.

The collected information will be useful to not only assist NRCS in identifying areas for possible future rehabilitation projects, but also to the District. The District plans to utilize the information to create a Delta Junction area trail guide available in both booklet form and KML format, which can be downloaded and viewed in Google Earth. This will significantly increase available outdoor recreational opportunities for local residents and visitors alike.

By Colin Barnard , GIS Program Administrator

Above center—Bryce Wrigley's ATV is stuck in the mud on a portion of Bluff Cabin Trail. This is a potential NRCS rehabilitation project in the near future.

Above right—A suspension footbridge on the Gulkana Glacier Trail near Summit Lake.

DELTA FFA COMPETES AT NATIONALS

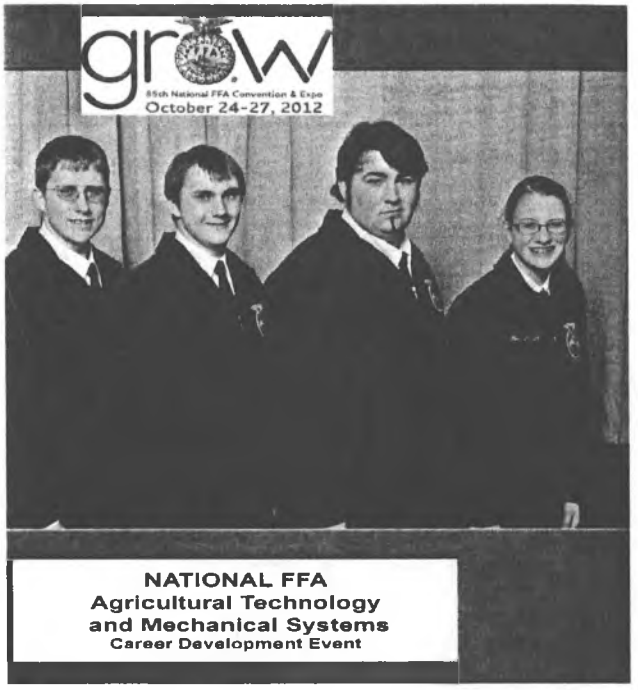
This past October, members of the Delta Junction FFA chapter traveled to Indianapolis, Indiana, to attend the 85th National FFA Convention. They were also one of forty-five teams participating in the National FFA Agricultural Technology and Mechanical Systems Career Development Event (CDE). Each team in the event competed with other chapters in their own state for the privilege of participating in the national event.

Led by SWCD staff member and Delta chapter FFA advisor, Tammie Kovalenko, the Alaskan team was awarded a bronze emblem. Members also competed for individual awards with 166 other participants. Keldrake Wolf, Dawson Taylor, and Kristof Webb each received a bronze emblem. Hailey McNabb attended the convention to learn what FFA has to offer on a national level in veterinary sciences.

The agricultural technology and mechanical systems event is sponsored by the Bridgestone Americas Tire Operations as a special project of the National FFA Foundation.

The National FFA offers twenty-five different Career Development Events, Agricultural Technology, and Mechanical Systems. CDE is just one of the competitive events that allows students to apply classroom knowledge to real-life situations.

Activities included in the event are a written exam, a team event, demonstration of problem-solving skills, and hands-on performance activities. Areas of emphasis include environmental and natural resource systems, machinery and equipment systems, structural systems, energy systems, and electrical systems.



From l-r: Delta FFA members who attended Nationals are Kristof Webb, Dawson Taylor, Keldrake Wolf, and Hailey McNabb.

About National FFA Organization

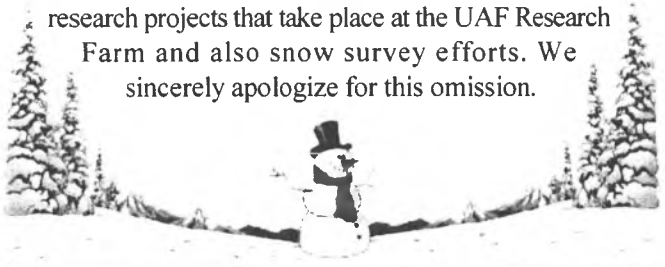
The National FFA Organization is a national youth organization of 557,318 student members as part of 7,498 local FFA chapters in all fifty states, Puerto Rico, and the Virgin Islands. The FFA mission is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education.

The National FFA Organization operates under a federal charter granted by the Eighty-first United States Congress and it is an integral part of public instruction in agriculture. The U.S. Department of Education provides leadership and helps set direction for FFA as a service to state and local agricultural education programs.

By Tammie Kovalenko, Conservation Education

Newsletter Corrections

In the last newsletter issue, *2012 Annual Report*, we unintentionally failed to mention that the District collaborates with NRCS on a majority of research projects. Additionally, NRCS provides a significant portion, if not all, of the District's funding for the research projects that take place at the UAF Research Farm and also snow survey efforts. We sincerely apologize for this omission.



COOPERATIVE EXTENSION SERVICE

Upcoming Ag Events

- **Agricultural Community Planning**
  January 15 or 17 in Delta
- **Greenhouse and Nursery Conference**
  January 24-25 in Fairbanks
- **Peony Growers Conference**
  February 13–15 in Fairbanks
- **Alaska Produce Growers Conference**
  February 19–20 (tentative) in Palmer
- **Delta Farm Forum**
  February 23 in Delta
- **Sustainable Agriculture Conference**
  March 12–14 in Fairbanks

Harvest Wrap Up Cancelled

Due to a lack of agricultural research in the Delta area this past summer, the CES Delta District Office will not be hosting the annual Harvest Wrap Up in December.

In place of this event, the extension service is planning to offer an **Agricultural Community Planning** event scheduled for the third week in January (either the 15th or the 17th). Detailed information will be made available once the agenda has been confirmed.

Please contact the CES office for more information at 907-895-4215.

Special Guest: John Bagnasco — John will be talking about grafting vegetables. He has been in the gardening industry for over 35 years, starting with a horticulture degree from Michigan State University and followed by a stint at Frank's Nursery and Crafts in Detroit. He is president and host of the GardenLife Radio Show, author of *Plants for the Home Vol. 1* and he breeds roses.

Watch your email for registration information!

COOPERATIVE EXTENSION SERVICE

UAF is an AA/EO employer and educational institution.

Alaska Greenhouse & Nursery Conference

For more information, contact UAF Cooperative Extension Service Tanana District at 907-474-1530.
www.uaf.edu/ces • 877-521-5211

Master Gardener Classes

with instructor Steven Seefeldt, Ph.D.
Tanana District agriculture and horticulture agent

SPRING 2013 CLASS
February 19 to April 11
Tuesdays, 6–9 p.m./Thursdays, 6–9 p.m.
(No classes spring break week, March 18–22)

Location
UAF Cooperative Extension Service
Tanana District Classroom
724 27th Ave., Suites 2 & 3
Fairbanks, Alaska

Registration Fee
$150 with 40-hour volunteer commitment
(includes *Sustainable Gardening, The Alaska Master Gardener Manual*)

Questions & Information
907-474-2423 or 1-877-520-5211
ssseefeldt@alaska.edu
www.uaf.edu/ces

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF ALASKA FAIRBANKS

Alaska Peony Growers Winter Conference

February 14 & 15, 2013

Growing Peonies—From the Ground Up

Preconference: New & Intermediate Growers School and tours
February 13

Westmark Fairbanks
Hotel and Conference Center
Fairbanks, Alaska

Registration information can be found at http://alaskapeonies.org

For more information, contact
Marji Illingworth at
marji@northpolepeonies.com

Alaska GROWN

Merry Christmas

from the staff at the Salcha-Delta SWCD!

Board Election Results

Two SWCD Board of Supervisors seats were up for election last month. Seat nominations were submitted to the Department of Natural Resources. As a result, Phil Kaspari was reappointed to Seat D and Gary Sonnichsen was reappointed to Seat E. Both seats are three-year terms, expiring on December 12, 2015.

SALCHA-DELTA SOIL AND WATER CONSERVATION DISTRICT

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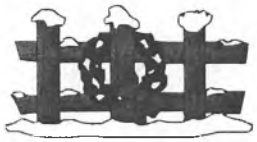
Happy Holidays



Conservation Corner is published on a quarterly basis. Call (907) 895-6279 or email violetaswcd@wildak.net to receive this free publication either by mail or email, or if you wish to be removed from the District mailing list.

Salcha-Delta Soil and Water Conservation District
PO Box 547
Delta Junction, AK 99737

2009 Delta Bison Crop Damage Assessment Report

Steve DuBois, Alaska Department of Fish and Game, P.O. Box 605, Delta Junction, AK

Abstract: Delta bison crop damage assessment aerial surveys were conducted on August 20, September 1, and September 14, 2009 for grain crops in the Delta I and Delta II agricultural areas north of the Alaska Highway. Delta bison began moving out of the Delta Junction Bison Range and into agricultural lands north of the Alaska Highway on August 11. Damaged crops were identified and photographed. Digital photographs of bison damage where given to Division of Agriculture staff for assessment.

Introduction

During the 2009 Alaska Department of Fish and Game (ADF&G) Delta bison management planning process the Delta Bison Working Group and other participants determined that having an assessment of bison damage to agricultural crops would be an important set of data to acquire. Therefore, ADF&G and Alaska Department of Natural Resources, Division of Agriculture (ADNR) agreed to cooperate on a Delta bison crop damage assessment program during fall 2009.

ADF&G and ADNR agreed that the damage assessment would be based on an estimate of crop yield and acreage damaged calculated by ADNR staff. Four damage assessment aerial surveys were to be flown with one near the beginning of harvest, one near the end of harvest, and two in the interim.

Two assessment techniques were to be tested if possible. One technique was to take aerial photographs of damaged grain crops to allow a visual examination of the photographs for an estimation of acreage damaged. I was going to test the photographic technique. The second technique was to use a computer tablet with maps or photographs of the area to record damaged acreage, as currently conducted by Alaska Division of Forestry for timber surveys. Division of Agriculture staff was going to test the computer tablet technique.

Methods

I conducted the photographic surveys from a Piper PA-18 Supercub aircraft and observed all agricultural areas with grain crops north of the Alaska Highway in the Delta I and Delta II agricultural areas. I took photographs of grain crops that I identified as having bison damage. I identified bison damage by the evidence of trails through grain that appeared to be made by numerous animals and that showed other evidence of bison such as wallows, beds, or the presence of bison. I took the photographs from an altitude of 1,000 feet above ground level (AGL) to give adequate coverage and perspective of the damage. I took photographs at a focal length of approximately 50mm through an open window in the aircraft. I used large jpg files on a Canon 1DMark3 digital single lens reflex camera with resolution of 3888 x 2592 pixels and 3.5 MB file size. I took the photographs to overlap if necessary to show the entire damaged area. In a few cases, I took photographs from an altitude higher than 1,000 feet AGL to give

an overview of the area. I recorded latitude and longitude of each damaged area in WGS 84 degrees decimal minutes. I also made a visual estimate of the total proportion of crops damaged in a farm tract.

Results

Bison were first observed by ADF&G north of the Alaska Highway on August 11 when 40 bison were seen on Tract 3 (Fig. 1), nine days prior to the first damage assessment survey. During the August 20 survey, 192 bison were seen on Tract 3 and 230 were observed on the Delta Junction Bison Range (DJBR) Gerstle Fields (Fig. 1). During the September 1 and 14 surveys all of the bison I observed were north of the Alaska Highway.

August 20 Survey

I flew the damage assessment flight with Golden Eagle Outfitters of Delta Junction from approximately 1745 hours until 1900 hours on August 20, 2009 for a cost of approximately $250.

I identified 20 agricultural tracts that had grain crops (Table 1) and determined that 16 had no visible bison damage. Three tracts (F, 3, U) had damage that I estimated to total <1% of grain on each tract respectively (Fig. 2). One tract (5) had more damage that I estimated to be approximately 20% of grain on the tract. I observed numerous tracts with moose trails and beds and grain that was down due to environmental factors such as wind or rain.

I submitted sample photographs to ADNR Natural Resources Manager Charles Knight for initial evaluation as a damage assessment tool.

September 1 Survey

Prior to the September 1 survey, ADNR staff determined that using the computer tablet was not an acceptable method to document bison damage and we decided that I would continue to fly photographic surveys.

I flew the September 1 survey damage assessment flight from 1730 hours until 2050 hours for a cost of about $425. This flight time included conducting an aerial bison census, which required about one-half of the flight time.

I surveyed the 20 agricultural tracts identified as having grain crops during the August 20 survey (Table 2). Harvest was underway ranging from 100% of grain crops harvested on some tracts and none harvested on others. Bison trails and damage to crops were more extensive than during the August 20 survey. Tract U owned by the Schultz's appeared to have the heaviest bison damage I observed. I saw no signs of bison damage on nine tracts. I took aerial photographs of those tracts that had bison damage for assessment by ADNR staff.

I observed the most bison on Peterson's Tract 1B where I counted a group of 227 bison in apparent CRP acreage. There were also approximately 100 bison in the Delta

Clearwater River bog. No bison were present on the DJBR.

September 14 Survey

I flew the September 14 survey from 0755 hours until 0910 hours for a cost of about $240. I also conducted a bison census during this time.

I surveyed 19 of the same 20 agricultural tracts identified as having grain crops during the August 20 survey (Table 3). I did not survey Hendry's Tract 8E because it was difficult to determine if grain was present. However, I did survey Tract A3 on the south side of the Alaska Highway that had grain but I had not surveyed before.

Most grain crops were harvested at the time of this survey and much of the grain straw had also been baled (Table 3). Ron Nelson had just started harvesting potatoes on Tract V and there were extensive bison trails through the bare dirt on his tract and undoubtedly bison had been walking through his potatoes.

Bison were observed on several farm tracts. Peterson's Tract 4 had 14 bison in grain, Schultz's Tract U had 117 bison in CRP brome, Nelson's Tract V had 41 bison in brush, and Geier's Tract 8C (Figure 4) had 170 bison with most in brush but some in grain.

After the September 14 survey I determined that there was not enough unharvested grain remaining to justify flying another damage assessment survey. I gave digital copies of all photographs I had taken to Division of Agriculture staff. At the request of Mr. Ron Nelson I also gave him copies of photographs taken of his acreage.

Discussion

Based on the August 20 Delta bison assessment survey I felt that overall damage to agricultural crops was light at that time, although Tract 5 owned by Mike and Scott Schultz had received most of the damage that had occurred. It appeared to me that Tract 5 was receiving the majority of current damage because bison were attracted to this area because there was an abundance of CRP brome grass nearby which provided a large quantity of quality bison forage, the nearby Gerstle River and a gravel pit pond on Tract 5 provided bison with a water source, and the adjacent Gerstle River greenbelt provided easy escape cover for the bison.

At the time of the September 1 survey, bison had been present north of the Alaska Highway for an additional 12 days and there were more extensive bison tracks and damage within the agricultural tracts. Although harvest was underway, rainy and cool weather had delayed harvest during the previous 12 days. The Schultz acreage appeared to be receiving the most damage, with Tract U being most impacted at the time.

During the September 14 survey, most grain had been harvested which made determining additional damage difficult on those tracts where the grain was harvested. Harvest of straw was underway. All bison located were north of the Alaska Highway.

I think the photographic assessment technique was a practical and affordable method to determine the extent of bison crop damage. If damage becomes more extensive requiring substantially more photographs to be taken and organized then the technique would likely be more difficult and costly.

The quality of light appeared to influence the ability to observe and photograph bison crop damage from the air. Damage was easier to observe and photograph when the sky was clear and sunlight was bright and casting shadows versus when the sky was overcast and there were few shadows.

Based on my frequent observations of grain that was damaged due to environmental factors, damage assessment observers should be careful not to attribute damaged grain to wildlife if it had some other cause.

Table 1. August 20, 2009 Delta bison crop damage assessment data sheet.

Date: August 20, 2009
Time Off Delta: 5:45 pm
Time On Delta: Completed damage assessment at 7:00 pm; on Delta at 8:30 pm
Weather: Prtly cldy; 65F; wind 030 at 4 mph
Pilot: Jim Cummings
Observer: Steve DuBois
Aircraft: PA-18
Camera: Canon 1DMark3 at large jpg

Farm Tract:Owner	***Latitude/ Way Pt***	***Longitude***	***Photo file numbers***	***Description of Observed Damage***
B:Rule				No visible bison damage (NVBD)
Robinson:Hanson Rd				NVBD-moose trails
C-1:Wrigley				NVBD-cow/calf moose; blow down
C-3:Robinson				NVBD-blow down
G:Olson			2459-2460	NVBD-moose trails
E-1:Purviance				NVBD-blow down
E-8:Green			2461-2465	NVBD-blow down
F:Green	63°55.50	145°14.68	trail 1 = 2466-2482	2 bison trails with no major wallows or
	63°55.73	145°15.75	trail 2 = 2483-2486	feeding; trails & beds on eastern tree line
			NW damage = 2487-	& NW corner likely moose; total Tr F bison
			2490	damage ~<1%
			E. tree line = 2491-	
			2492	
H:Eagles Ridge				NVBD-moose trails; blow down
4A:Peterson				NVBD
4B:Peterson				NVBD
2:Heide				NVBD
3:Schultz	64°01.11 64°01.36	145°06.40 145°05.82	2493-2494	Damage in 2 areas; total ~<1%
5:Schultz	64°00.94 64°00.82	145°03.98 145°04.35	2496-2507	Significant damage ~20% of Tr F
U:Schultz	63°59.81 63°59.01	145°03.39 145°03.48	2510-2516	Minor bison damage ~<1% in NW; blow down
9D:Robinson				NVBD-blow down
8C:Geier				NVBD
V:Nelson				NVBD
Q:Green				NVBD
S:Filla				NVBD

Table 2. September 1, 2009 Delta bison crop damage assessment data sheet.

Date: September 1, 2009
Time Off Delta: 5:30 pm
Time On Delta: 8:50 pm (completed simultaneous bison census)
Weather: Overcast, 60F, 090° @9mph
Pilot: Jim Cummings
Observer: Steve DuBois
Aircraft: PA-18
Camera: Canon 1DMark3 at large jpg

NVBD=No visible bison damage

Tract:Owner	*Latitude/ Way Pt*	*Longitude*	*Photo file numbers*	*Description of Observed Damage*
B: Rule				NVBD; ~5% harvested
Hanson Rd:Robinson				NVBD; 0% harvested
C-1:Wrigley				NVBD; moose trails; harvest starting
C-3:Robinson				NVBD; 100% harvested
G:Olson				NVBD; ~50-70% harvested
E-1:Purviance				NVBD; 0% harvested
H:Eagle Ridge	63°57.52	145°15.02	3027-3029	Hvy bison trail on North fld; <1% damage;
H continued				0% harvested
E-8:Greens				NVBD; 0% harvested
F:Greens	63°56.50	145°16.78	3030-3036	Hvy bison trails & wallows in NW oats
F continued	63°55.22	145°15.84	3037-3039	Trails of 4 griz bears obsrved by Cummings
F continued				<1% damage TrF; 0% harvested
4:Peterson	63°00.03	145°09.19	3040-3045	Hvy bison trails; <1% damage Tr4; 0% harv
2:Hiede	64°01.53	145°10.06	3046-3049	Hvy bison trails; 5% damage; 0% harv
2 continued	64°01.76	145°11.16	3050-3053	
3:Schultz	64°01.57	145°08.97	3054-3061	Hvy bison trails; 5% damage;
3 continued	64°01.195	145°07.62	3062	48 bison in CRP; 33% harvested
3 continued	64°01.09	145°06.67	3063-3066	
5:Schultz				Hvy bison trails in straw; 75% harvested
U:Schultz	63°58.64	145°02.81	3067-3075	Hvy bison trails; 5% damage; 50% harv
U continued	63°59.07	145°02.92	3076-3086	
V:Nelson			3087-3094	Hvy trails in dirt, hard to see in potatoes
10A:Robinson				100% harvested
8E:Hendry	64°00.22	144°54.98	3094-3100	Trails from bison or cows; 0% harvested
8C:Geier	64°00.73	144°58.78	3101-3103	Bison trails; <1% damage; 0% harvested
Q:Green				NVBD; 0% harvested
S:Filla				NVBD; 0% harvested

Table 3. September 14, 2009 Delta bison crop damage assessment data sheet

Delta Bison Damage Data Sheet

Date: September 14, 2009
Time Off Delta: 0755
Time On Delta: 0910
Weather: Prtly cldy; wind calm; 37F
Pilot: Cummings
Observer: DuBois
Aircraft: PA 18
Camera: Canon 1DM3

NVBD = No visible bison damage

Tract:Owner	Latitude/ Way Pt	Longitude	Photo file numbers	Description of Observed Damage
B:Rule				100% harvested; straw remaining
Hanson:Robinson				100% harvested; straw 50%
C1:Wrigley				100% harvested; straw 50%
C3:Robinson				100% harvested; straw 100%
G:Olson				100% harvested; straw 100%
E1:Purvivance				100% harvested; straw 50%
E8:Green				100% harvested; straw 100%
F:Green				50% harvested; 25% straw;
F continued				no new visible bison damage
H:Eagle Ridge				100% harvested; 0% straw
4:Peterson				75% harvested; 25% straw;
4 continued				no new visible bison damage
2:Peterson	64°01.83	145°10.38	4707-4710	50% harvested; 20% damage
3:Schultz				100% harvested; straw 100%
5:Schultz				100% harvested; straw 40%
U:Schultz				100% harvested; straw 100%
V:Nelson	63°58.04	145°01.20	4715-4728	10% harvested; lots bison tracks
V continued				in dirt
8C:Geier			4730-4737	20% harvested; 20% bison damage
10A:Robinson				100% harvested; straw 100%
Q:Green				100% harvested; straw 0%
S:Filla				50% harvested; straw 0%; NVBD
A3				100% harvested

Figure 1. Map of agricultural tracts north of the Alaska Highway that were surveyed during 2009 Delta bison crop damage assessment survey, and the Panoramic and Gerstle Fields of the Delta Junction Bison Range south of the Alaska Highway.

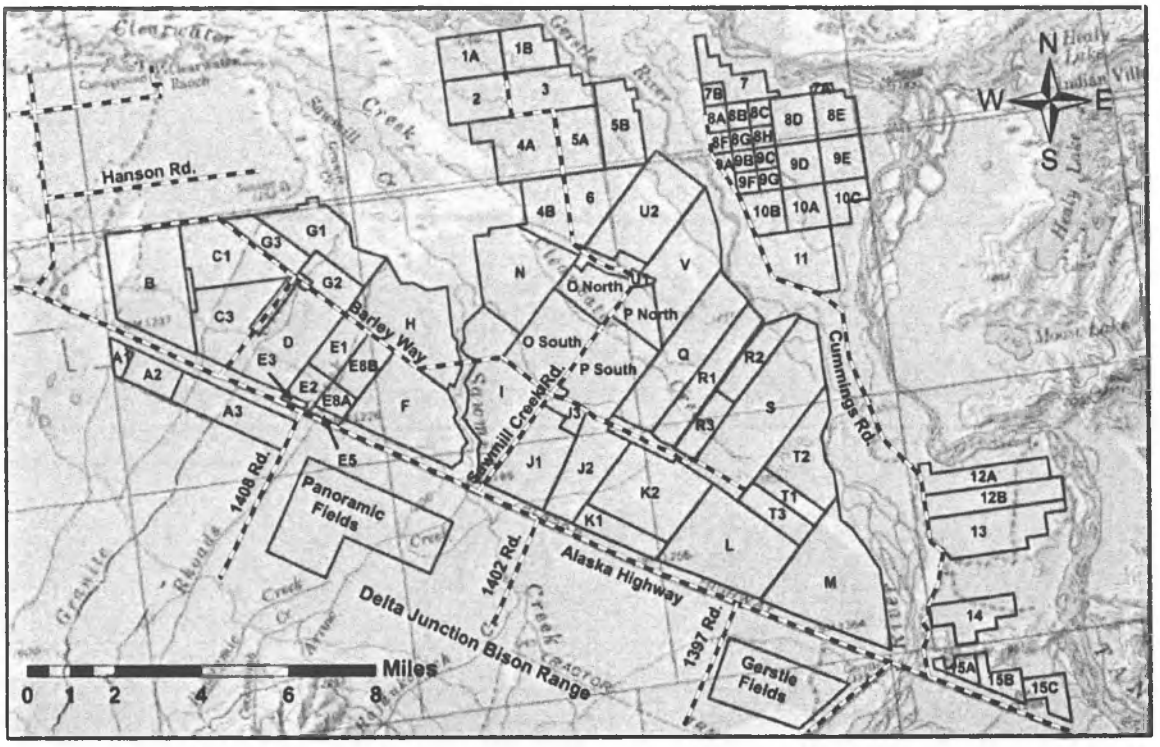


Figure 2. Overview photograph of a bison trail across agricultural Tract F taken on August 20, 2009 during a Delta bison crop damage assessment survey.

Figure 3. A portion of the bison damage observed on Tract U during the September 1, 2009 damage assessment survey.

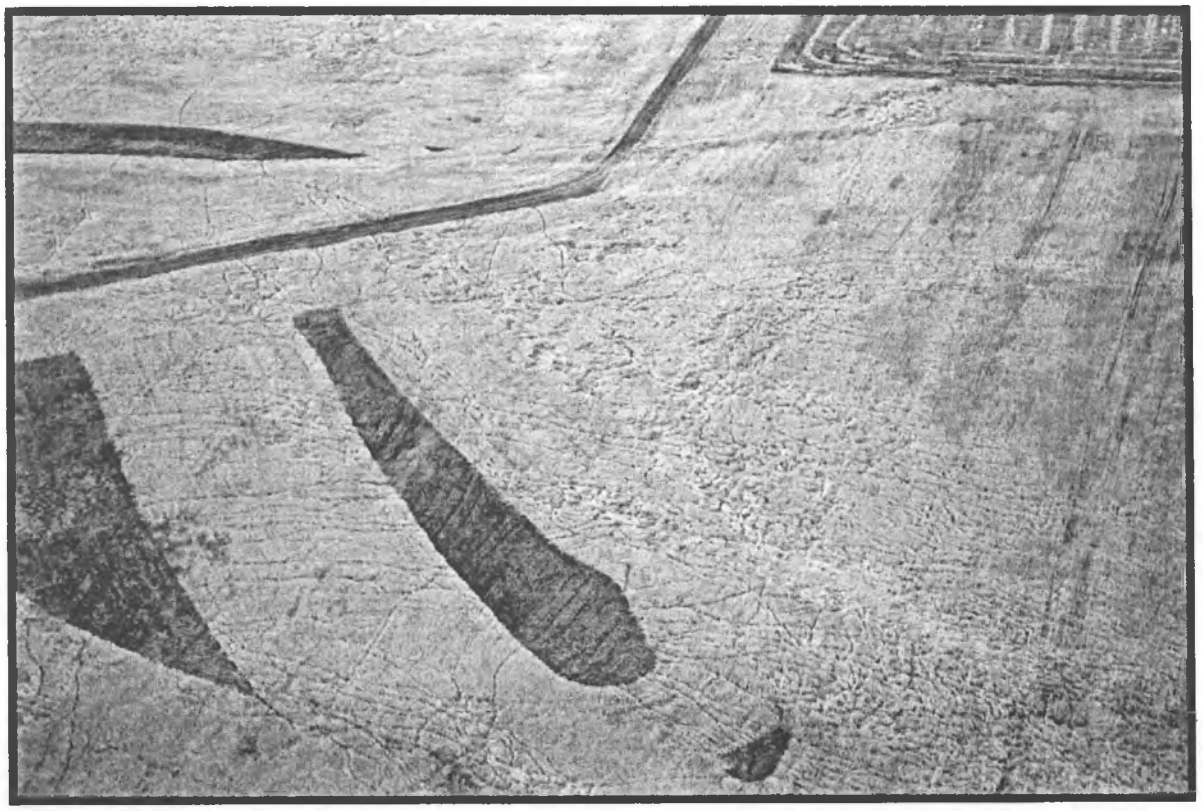
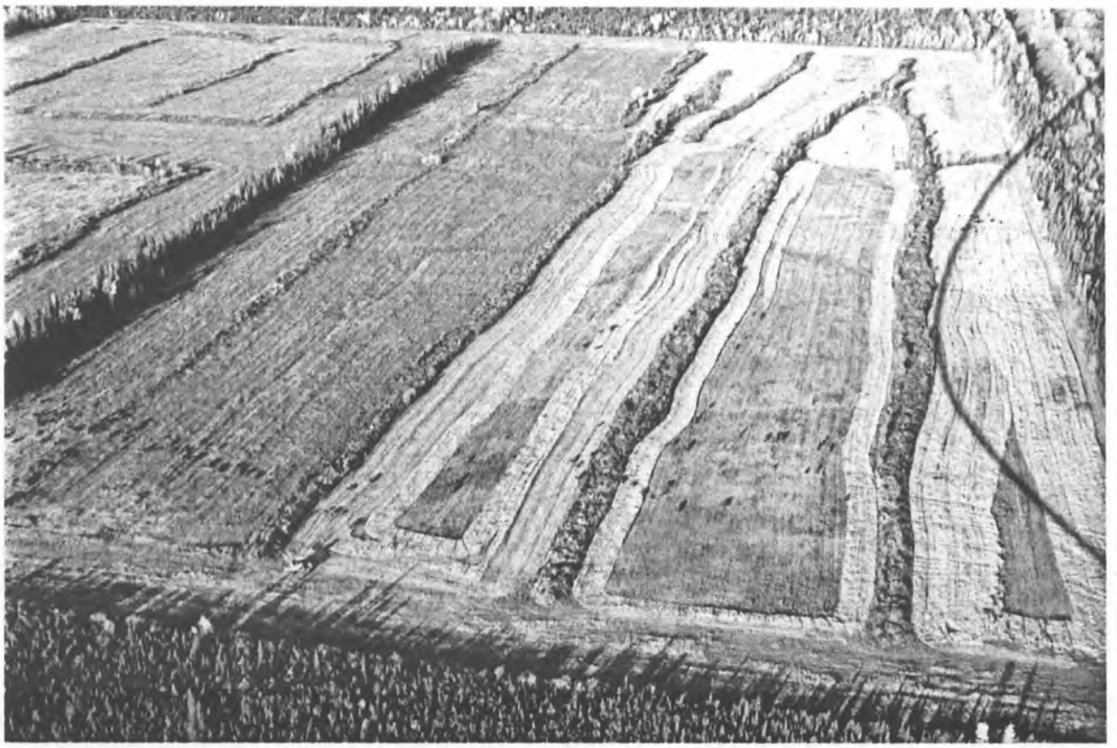


Figure 4. Bison observed on Tract 8C during the September 14, 2009 damage assessment survey.



Trevor Fulton

Subject: HB 202

From: J Lipscomb [mailto:back2alaska@acsalaska.net]
Sent: Tuesday, February 25, 2014 10:01 AM
To: Sen. Click Bishop; Sen. John Coghill; Sen. Mike Dunleavy; Sen. Fred Dyson; Sen. Dennis Egan; Sen. Johnny Ellis; Sen. Anna Fairclough; Sen. Hollis French; Sen. Berta Gardner; Sen. Cathy Giessel; Sen. Lyman Hoffman; Sen. Charlie Huggins; Sen. Pete Kelly; Sen. Lesil McGuire; Sen. Kevin Meyer; Sen. Peter Micciche; Sen. Donny Olson; Sen. Bert Stedman; Sen. Gary Stevens; Sen. Bill Wielechowski; Rep. Alan Austerman; Rep. Mike Chenault; Rep. Mia Costello; Rep. Harriet Drummond; Rep. Bryce Edgmon; Rep. Eric Feige; Rep. Neal Foster; Rep. Les Gara; Rep. Lynn Gattis; Rep. Max Gruenberg; Rep. David Guttenberg; Rep. Mike Hawker; Rep. Bob Herron; Rep. Pete Higgins; Rep. Lindsey Holmes; Rep. Shelley Hughes; Rep. Doug Isaacson; Rep. Craig Johnson; Rep. Andy Josephson; Rep. Scott Kawasaki; Rep. Wes Keller; Rep.Jonathon.Kreiss-Tomkins@akleg.gov; Rep. Gabrielle LeDoux; Rep. Bob Lynn; Rep. Charisse Millett; Rep. Cathy Munoz; Rep. Benjamin Nageak; Rep. Mark Neuman; Rep. Kurt Olson; Rep. Lance Pruitt; Rep. Lora Reinbold; Rep. Dan Saddler; Rep. Paul Seaton; Rep. Bill Stoltze; Rep. Geran Tarr; Rep.Steve.Thopson@akleg.gov; Rep. Chris Tuck; Rep. Peggy Wilson; Rep. Tammie Wilson
Cc: dmglaf@yahoo.com
Subject: HB 202

Dear Alaska Legislator,

I was unavailable to present oral testimony on HB-202 when it was heard before the Resources Committee on 21 Jan 2014. I am taking this opportunity to let each and every member of the Legislature know my personal feelings on this bill, as well as those expressed to me by attendees at the Delta Junction Advisory Committee (AC) to the ADF&G.

I, and the 9 others I have heard from on this, (in addition to the 11 members of the Delta AC) oppose this bill as written. Making hunters pay more to create a funding stream for personal property improvement (fencing), or additional crop damage payments is unacceptable. This would set a dangerous precedent: Is the next step to raise the moose application fees so I can be paid for damage to my cabbage and pumpkin patch? Or to buy me fencing? For the rest of us, who have gardens we depend on too, the responsibility is ours if we wish to keep wildlife out. I suggest the same should be true for larger scale operations who have bison issues. Crop damage payments and/or fencing private property should never be funded on the backs of sportsmen.

The concept of increasing the application fee to provide ADF&G extra funds to do science-based biological management of the Delta Junction bison herd is supported by myself and those who have spoken to me.

Please, either modify HB 202 to limit the use of hunter funded increases to biological management of the herd by ADF&G, or vote to defeat a bill that is unfair and sets a dangerous precedent

Thanks,

Jeffrey Lipscomb

907-388-3185

Back2alaska@acsalaska.net

Trevor Fulton

From: Jane Hamilton [mailto:janehamilton99737@yahoo.com]
Sent: Thursday, February 20, 2014 2:24 PM
To: Rep. Eric Feige; Rep. Dan Saddler
Cc: Rep. Peggy Wilson; Rep. Paul Seaton; Rep. Mike Hawker; Rep. Craig Johnson; Rep. Kurt Olson; Rep. Geran Tarr; Rep. Chris Tuck
Subject: HB 202

The Delta Farm Bureau Chapter has voted to support HB 202. We believe that this bill will help the Delta agricultural community to better coexist with the Delta Bison Herd.

Jane Hamilton, Secretary
Delta Farm Bureau Chapter
PO Box 760
Delta Junction, AK 99737
907-803-4752

HB 202 Bison Drawing Permit Fees

From Don Quarberg

I am a 38 year resident of Alaska and a 36+ year resident of Delta Junction. I have professionally worked as a District Conservationist with the USDA-SCS (now NRCS) during the beginning of the Delta Agricultural Project. In 1979, I changed professions to become the Agricultural Extension Agent with the University of Alaska Fairbanks from which I retired as Professor Emeritus of Agricultural Extension.

I'd like to speak to some of the introductory comments made at the February 21 hearing on this bill. HB 202 was introduced by Legislative Aid Mike Paschall – who also happens to be chair of the Delta chapter of the AK Farm Bureau, but failed to mention this. In this position, Mr. Paschall lead an attempt a few years ago to have the Delta bison eradicated because they were a non-indigenous, invasive species (much as are all of us non-indigenous, invasive humans occupying Alaska). The bison were here 50+ years before the development of the Delta AG Project. Prospective Farmers knew this or certainly should have.

Mr. Paschall talked of the lost opportunity (woulda-coulda-shoulda appeal) the farmers face because of the bison. They imply that there are higher value crops that could be planted but because of the perceived bison damage, they are not. If there really are any miracle crops that would grow on the Delta Ag project, would it not be reasonable to assume that it would already be growing in the Tanana Loop farm area or the Eielson Farm Project, both of which have better soils and no bison problems? Would it not also be reasonable to also assume that this crop would be growing inside some of the already fenced areas on Ag Project lands?

Another loss to the farmers, as stated by Mr. Paschall, is the extra cost of drying the grain, because the farmers harvest it earlier, before it has cured in the field, to avoid having bison damage. In 1981 early snow prevented some 75-80% of the grain from being harvested by the farmers. In 1992, permanent snow arrived on September 10th, again preventing a substantial amount of the grain crop from being harvested. Snow is non-selective in that it covers all crops, severely lodges the grain and makes it unharvestable. Any grain that can be harvested following snowfall requires much more drying effort due to the snow trapped in the awns and heads of the grain. In reality, bison do damage some of the grain when they arrive early; snow damages ALL of the grain when it arrives before harvest. Consequently the farmers harvest grain when it is physiologically mature and at an acceptable moisture to balance against the increased cost of drying and the losses of weather and bison (not just because of the threat of bison).

Agriculture here in Alaska has cost the State well over $100 million since the launching of the Delta Ag Project. In addition, the Federal Government (USDA) has spent approximately the same in loans and subsidies to Alaska Agriculture over the same time period. For example, one farm family received over $3 Million in subsidies over a 15 year period for doing basically very little, never planted one post for a fence, and is now strongly advocating that this bill pass

Farmers have been forgiven millions of dollars in loans and received millions of dollars more in subsidies and now this bill asks Alaskan hunters to double the cost of a bison permit fee to give grants to a select few farmers for fences. This is absurd!

I urge you to oppose this bill. It sets precedence by addressing one land user's (farmers) economic compensation for damage from one species (bison). After all the farmers signed contracts acknowledging the bison's presence, while agreeing to hold the State harmless for any damage they incurred from bison.

Thank You, Don Quarberg, Professor Emeritus Agricultural Extension, 907-895-4650 or dmqlaf@yahoo.com

SALCHA-DELTA SOIL AND WATER CONSERVATION DISTRICT
P.O. Box 547 – Delta Junction, AK 99737 – (907) 895-6279

January 2, 2013

Dear Cooperator,

The Salcha-Delta SWCD announces a cost-share program to install perimeter fencing to protect crops and livestock from bison damage.

This program is available to cooperators that have a current cooperator agreement with the Salcha-Delta Soil and Water Conservation District. A scoring matrix will be used to prioritize applications in the event applications exceed the amount of authorized funding.

The Salcha-Delta SWCD will cost-share half of the cost of materials and installation, for a perimeter fence around the farm up to $1.25 per linear foot. Payment will be made after the completion of the fence and gated access to specifications outlined in the program guidelines. Please see the Bison Fencing Program guidelines included with this letter.

Contact the District at 907-895-6279 or deltaswcd@wildak.net if you have any questions about the program.

Sincerely,

Bryce Wrigley
District Manager

Bison Fencing Program

The intent of this program is to provide a perimeter fencing program to protect crops and livestock from bison damage. The program is available to Cooperators with the Salcha-Delta Soil and Water Conservation District. A scoring matrix will be used to prioritize applications in the event applications exceed the amount of authorized funding.

Salcha-Delta Soil and Water Conservation District will cost share 50% of the cost of materials and installation, not to exceed $1.25 per linear foot, for a perimeter fence around the farm. Payment will be made after completion of the fence and gated access to specification.

By signing below, the participant agrees to the following minimum requirements:

1. Submit the fence and gate design, including a map or drawing showing the area encompassed and gate location, to the District for approval **before** construction. **Applicant must participate in a District-sponsored construction/maintenance workshop.**

2. Bison fence would be installed per best management standards, using at a minimum, 4' high tensile net wire. Completed fence should be at least 5 feet high and in no place exceed 20 inches off the ground.

3. Landowner is responsible for verifying true property lines and may be required to provide proof of ownership to the District before fencing begins.

4. Landowner agrees to maintain fence for bison exclusion for 20 years, including brush removal or control. Periodic inspection may be made by the District to insure the integrity of the fence. Deficiencies must be corrected by the landowner. In the event of a change in ownership, the new owner must be willing to assume the maintenance of the fence for the duration of the term.

5. Cost share is taxable, so a 1099 will be issued to participants.

6. Eligible land will be land on which crops or livestock are being raised.

7. Fences installed previous to the implementation of the cost-share program would not be reimbursed for fencing costs.

8. The District will work with the farmer to determine a reasonable fence design. **Final eligibility will be determined by the Salcha-Delta Soil and Water Conservation District Board of Supervisors.**

I, _____, agree to comply with the above provisions for fence construction.
(print name)

Signed: _____ (Landowner)

Date: _____

13 March 2014

Honorable Chairmen Representative Feige and Representative P.Wilson

I see House Resources Committee is hearing HB202 today, and there will be no public testimony. I would like you to review what I have outlined about what the statue in context says.

1. ADF&G only has the ability to make and implement a bison plan "within" the 90,000 acres set aside by the Legislature (16.20.300 1979)
2. The bison working group can only help development a plan for management of the described 90,000 acres. (16.20.310 (a)
3. The current bill ask to remove language "**but is not limited to**". Why would you do that? This would limit the Department to only planting, altering, and tilling. The Department has drilled wells for irrigation and watering ponds for bison. If this was ability was taken away and they needed another well or more water, they would have to go back to the Legislature for a change in statue. Keep "but is not limited to" in the statue. (if this bill moves on)
4. **"with the activities of the Department of Natural Resources relating to the Big Delta agricultural development project" (16.20.310 (c)**. What are the actives of the DNR relating to agricultural development project? And how has the ADF&G worked with the DNR on this project?
5. Why increase sportsmen's fees for applications. What about timber sales? (16.20.315) why can't other users of the Delta Junction Bison Range Area (DJBRA) have a fee? Or the Big Delta Agricultural Development Project (16.20.310 (c). If there is even a Big Delta Agriculture Project plan anymore?
6. Adding the language: **(4) mitigating bison damage to farm crops and farm and personal property.**
   A. The department has no jurisdiction outside the DJBRA. AS 16.20.310 (a) Says: "in the area described in AS 16.20.300". There are no privet farms with in this area.
   B. Mitigate personal property? Really? When people have a motor vehicle accident with a bison, will they be able to go to the Department for mitigation for damages to their personal property?
   C. Personal property damaged such as my parked car, my traps, and snares that get damaged by bison could be mitigated?

Below are the pertaining Statues.

I don't know how the department will be able to help farmers within the context of this Statue? You should be able to ask some very good questions with this outline and not pass the bill on.

Your thoughts would be greatly appreciated if you have time.

Thanks again

AL Barrette

380 Peger rd.

Fairbanks, Ak 99709

452-6047

Sec. 16.20.310. Game management plan for bison.

(a) The commissioner shall develop and may amend a game management plan for bison in the area described in AS 16.20.300 . After holding public hearings in accordance with AS 44.62.310 - 44.62.319 (Open Meetings Act), the commissioner shall implement the game management plan.

(b) The game management plan must include, but is not limited to

(1) planting grains for bison and planting other wildlife forage;

(2) altering existing plant cover to create additional range and year-round habitat for bison and other animal species in the area;

(3) tilling to produce forage.

(c) The commissioner shall develop and amend the game management plan to coordinate, as closely as possible, the game management plan with the activities of the Department of Natural Resources relating to the Big Delta agricultural development project

Sec. 16.20.315. Bison range timber sales.

The Department of Natural Resources, division of forestry, shall provide for the sale of timber in the Delta Junction bison range area in a manner that does not delay implementation of the game management plan required under AS 16.20.310 .

Sec. 16.20.320. Activities on bison range area.

Nothing in AS 16.20.300 - 16.20.320 shall be construed as prohibiting activities on land described in AS 16.20.300 that are otherwise permitted in accordance with the laws and regulations of this state, including, but not limited to, hunting, trapping, engaging in recreational activities, using the land for access to adjacent areas, and a 300-foot Alaska Railroad right-of-way.

Distributed by: Al Barrette 3/13/14

rcvd via email

March 14, 2014

I must again correct the misstatements and untruths stated by Mr. Mike Paschall at the House Resources Committee hearing on HB 202 today.

My name is Don Quarberg and I am Chair of the Delta ADFG Advisory Committee. I did serve as District Conservationist with the USDA in Delta, as well as the University of Alaska Fairbanks Agricultural Extension Agent. In both positions, I worked closely with the Salcha-Delta Soil and Water Conservation District for over 20 years. In addition, I was a cooperator with the Soil and Water Conservation District for over 15 years.

I am not an opponent of Agriculture! I was born and raised on a dairy farm in Wisconsin. Agriculture is the greatest industry in America and the world.

What I am opposed to is the pathetic complaining, by some of the Delta Farmers, as well as Mike Paschall, (chair of the Delta Farm Bureau) that they are being so decimated by the Delta Bison Herd and in no way share any responsibility for their situation.

The bison were here in Delta in 1928!

The Delta Agricultural Project land was sold to private individuals in 1978 – 50 years after the bison were here. The planning process for this project was replete with warnings from ADFG and local citizens that the bison will cause damage. Promoters and land purchasers chose to disregarded these warnings.

Many of the vocal landowners (most members of the Farm Bureau) are complaining of the bison at the same time they have their hands fully extended to receive Federal Subsidies (see www.farm.ewg.org and look at southeast Fairbanks for a list of the Delta Farmers). For example, one of the most vocally opposed to the bison, has received approximately $5 million dollars in subsidies, for doing very little. These subsidies were not a planned part of the Delta Ag Project!

If bison truly are the largest impediment to Delta Agriculture and fencing is the solution, would not one expect the landowner to take some responsibility and use a portion of this subsidy (gift) to build a fence and eliminate the problem? Even with this public money (Federal Subsidy) they still want the public (You and ME) to build them a fence to protect their property from the bison.

This is morally wrong (to me). I totally oppose HB 202.

REPRESENTATIVE
ERIC FEIGE
House District 6

House Resources Committee Co-Chair
Transportation Committee
Joint Armed Services Committee
Fisheries Committee

Alaska State Legislature

H[illegible]esentatives

During Session:
State Capitol Room 126
Juneau, Alaska 99801-1182
(907) 465-4859
Fax (907) 465-3799
1-888-465-4859

MEMORANDUM

TO: Rep. Dan Sadler, Co-Chair, House Resources
Rep. Eric Feige, Co-Chair, House Resources

FROM: Rep. Eric Feige EF

DATE: January 28, 2014

RE: Request for Hearing – HB 202

I am requesting a hearing on HB 202 in the House Resources Committee. Attached you will find the following documents:

1. Sponsor Statement
2. Copy of Bill as Introduced
3. List of Potential Witnesses

I would like to request the committee hearing be teleconferenced to the Delta Junction LIO.

If you have any questions, please contact Michael Paschall on my staff at 465-5446.

Attachments (3)

Email: Representative.Eric.Feige@akleg.gov