

**Pacific Flyway Council  
Recommendations, Informational Notes,  
and Subcommittee Reports**



A product of the March 2011  
Meetings of the:

**Pacific Flyway Study Committee**  
February 28-March 4, 2011  
Wingate, Missoula, MT

**Pacific Flyway Nongame Migratory Bird  
Technical Committee**  
March 8, 2011  
Conference Call

**Pacific Flyway Council**  
March 15, 2011  
Westin Crown Center, Kansas City, Missouri

## Preface

The Migratory Bird Treaty Act implemented multiple international treaties addressing migratory bird management and conservation, and established federal authority over migratory birds. The Secretary of the Interior, under the authorization of the Migratory Bird Treaty Act, is authorized to determine when hunting of migratory game birds can take place in the United States and to adopt regulations for this purpose. This responsibility has been delegated to the U.S. Fish and Wildlife Service (Service). Similarly, the Secretary of the Interior's authority to regulate the take, use and conservation of nongame migratory birds has been delegated to the Service. The Pacific Flyway Council cooperates with the Service to develop regulations for migratory birds in the United States west of the Continental Divide. Both organizations consider the welfare of migratory bird populations first, and then public demands for recreation and subsistence harvest, and other uses.

The Service sets migratory game bird hunting regulations by establishing the frameworks, or outside limits, for season lengths, bag limits, and areas for migratory game bird hunting. The process includes two separate regulations-development schedules each year—first for early and again for late-season hunting regulations. Early seasons generally begin before October 1 and pertain to migratory game birds other than waterfowl (i.e., webless migratory game birds); all migratory game birds in Alaska; and special early waterfowl seasons, such as resident Canada geese. Late seasons generally start on or after October 1 and include most waterfowl seasons not already established. Members of the Council and its technical advisory group, the Pacific Flyway Study Committee, meet in March and July to disseminate information, combine data, review the status of populations, propose annual hunting regulations, develop cooperative management programs, and coordinate research and management for the protection and conservation of migratory game birds. The Council typically forwards early-season framework recommendations to the Service in March and late-season framework recommendations in July.

In 2006, the National Flyway system was expanded to provide a consolidated forum for the Service and State fish and wildlife agencies to discuss, plan, and coordinate actions to address nongame migratory bird regulatory issues. To facilitate technical review of nongame regulations and associated issues, a Nongame Migratory Bird Technical Committee was created for each flyway based on the successful approach of the Study Committees.

Recommendations, informational notes, and subcommittee reports are typically prepared by the Study Committee and Nongame Migratory Bird Technical Committee (hereafter collectively referred to as Committee[s]), and forwarded to Council for adoption or consideration. The Committees are scientific fact finding bodies whereas the Council is an administrative and policy setting body. Council may develop recommendations or modify Committee recommendations to meet Council needs. In cases where a Committee recommendation is forwarded to Council for consideration of adoption, the recommendation is written on behalf of Council. For example, the Study Committee may adopt a framework recommendation and forward it to Council where Council recommends a particular framework. Committee specific recommendations do not need to be adopted by Council. These are formal actions taken by the either Committee and forwarded to Council for review. For example, the Study Committee may adopt an informational note to submit a revised management plan to Council for review and adoption at

their subsequent meeting. Council has a policy of considering management plans for adoption only after having received the management plan for review at their previous business meeting, typically in March. To expedite Council business, all Council recommendations are listed first followed by Committee recommendations, informational notes, and subcommittee reports. Council recommendations are ordered with routine frameworks first, special season frameworks second, and other recommendations last. Finally, the U.S. Fish and Wildlife Service assumes Council support for continuation of last year's frameworks for which no recommendation is received.

Each recommendation and informational note identifies a contact person. The contact person does not necessarily endorse the recommendation or informational note, but rather volunteers to write the recommendation or informational note such that it represents the position of the Study Committee, Nongame Migratory Bird Technical Committee or Council. The contact person is usually knowledgeable on the subject matter and serves as a contact if there are any questions regarding the recommendation or informational note. If either Committee establishes a subcommittee to address specific actions, the subcommittee is identified on each recommendation or informational note where a subcommittee initiates the recommendation or informational note. The Chair of each subcommittee prepares the subcommittee's report and that person is identified on each subcommittee report.

## Table of Contents

<b>Members, Officers, and Representatives .....</b>	<b>6</b>
Pacific Flyway Council .....	6
Pacific Flyway Study Committee.....	7
Pacific Flyway Nongame Migratory Bird Technical Committee .....	8
Representatives to the Pacific Flyway .....	8
<b>Recommendations .....</b>	<b>9</b>
Recommendation 1 - Mourning and White-winged Dove Season Framework .....	10
Recommendation 2 - Pacific Coast Band-tailed Pigeon .....	12
Recommendation 3 - Interior Band-tailed Pigeon Season Framework.....	13
Recommendation 4 - Rocky Mountain Population Sandhill Crane Season Framework .....	14
Recommendation 5 - Lower Colorado River Valley Sandhill Crane Season Framework.....	17
Recommendation 6 - Allocation of Wyoming Wetlands Society Swans to Approved Release Sites .....	18
Recommendation 7 - Revision of Wrangel Island Snow Goose Harvest Strategy .....	19
Recommendation 8 - Pacific and Rocky Mountain Western Canada Goose September Season Framework .....	22
Recommendation 9 - Revision of Cackling Canada Goose Population Index Method .....	24
Recommendation 10 - Alaska Early Seasons Framework .....	27
Recommendation 11 - Rail Season Framework.....	30
Recommendation 12 - Wilson’s Snipe Season Framework.....	32
Recommendation 13 - Falconry Season Framework .....	34
Recommendation 14 - Youth Waterfowl Hunting Days Framework .....	35
Recommendation 15 - Letter commenting on USFWS Migratory Bird Hunting Supplemental Environmental Impact Statement.....	37
Recommendation 16 - Letter Supporting Carp Management at Malheur NWR, Oregon .....	41
Recommendation 17 - Letter to Acting Chief, Division of Migratory Bird Management, regarding Midwinter Waterfowl Survey Review.....	43
Recommendation 18 - Zones and Season Splits Change.....	46
Recommendation 19 - Harvest Management Working Group Terms of Reference and 2011 Priorities .....	48
Recommendation 20 - Study Committee Assignments and Representation.....	53
Recommendation 21 - A request for the Pacific Flyway Nongame Migratory Bird Technical Committee to be included on the U.S. Fish and Wildlife Service’s Eagle Technical Assessment Group.....	54
Recommendation 22 – A Policy Statement Pertaining to Avian Predation on Fish Resources in Pacific Flyway States.....	56
<b>Informational Notes .....</b>	<b>60</b>
Informational Note 1 - Management Plan for Midcontinent White-fronted Goose.....	61
Informational Note 2 - Flyway Council By-Laws and Quorum .....	62

Informational Note 3 - The Pacific Flyway Migratory Bird Habitat Committee .....	64
Informational Note 4 - Upcoming Issues and Business of the Pacific Flyway Nongame Migratory Bird Technical Committee .....	65

**Pacific Flyway Study Committee Subcommittee Reports..... 66**

1. WMU Mourning Dove Subcommittee.....	66
2. White-winged Dove Subcommittee .....	67
3. Pacific Coast Band-tailed Pigeon Subcommittee.....	67
4. Interior Band-tailed Pigeon Subcommittee.....	70
5. Rocky Mountain Sandhill Crane Subcommittee.....	70
6. Lower Colorado River Valley Population of Sandhill Crane Subcommittee .....	71
7. Lesser and Central Valley Greater Sandhill Crane Subcommittees.....	73
8. Rocky Mountain Population of Trumpeter Swans Subcommittee.....	74
9. Pacific Coast Population of Trumpeter Swans Subcommittee .....	76
10. White Goose Subcommittee.....	78
11. Dusky Canada Goose Subcommittee.....	80
12. Pacific Population and Rocky Mountain Population of Western Canada Goose Subcommittee.....	81
13. Cackling Canada Goose Subcommittee .....	85
14. Taverner's Cackling Goose / Lesser and Vancouver Canada Goose Subcommittee.....	86
15. Aleutian Canada Goose Subcommittee.....	87
16. White-fronted Goose Subcommittee.....	88
17. Pacific Brant Subcommittee.....	88

## **Members, Officers, and Representatives**

### **Pacific Flyway Council**

#### **Members**

Dale Rabe, Alaska  
Larry Voyles, Arizona  
Sonke Mastrup, California  
Tom Remington, Colorado  
Jeff Gould, Idaho  
Ken McDonald, Montana  
Ken Mayer, Nevada  
Ron Anglin, Oregon  
Jim Karpowitz, Utah  
Dave Brittell, Washington  
Bill Rudd, Wyoming

#### **Officers**

Chair, Ken McDonald, Montana  
Vice-chair, Dale Rabe, Alaska  
Secretary, Dan Yparraguirre, California  
Treasurer, Thomas W. Aldrich, Utah (Retired)

### **Consultants to U.S. Fish and Wildlife Service Migratory Bird Regulation Committee**

Dale Rabe, Alaska  
Larry Voyles, Arizona

### **Representative on the National Flyway Council**

Ron Anglin, Oregon  
Bradley Bales, Oregon, Secretary

### **Representative on the North American Wetlands Conservation Council**

Jim Karpowitz, Utah

### **Representative on the AFWA Migratory Wildlife Committee**

As appointed

### **Representative on the North American Waterfowl Management Plan Committee**

Ken Mayer, Nevada

### **Representative on the Hunter Recruitment and Retention Strategy Team**

Jim Karpowitz, Utah

### **Representative on the Cooperative North American Shotgun Education Program**

Tom Remington, Colorado

### **Representative on the Sea Duck Joint Venture Management Board**

Dale Rabe, Alaska

## **Representative on the Arctic Goose Joint Venture Management Board**

Dave Brittell, Washington

## **Pacific Flyway Study Committee**

### **Members**

Dan Rosenberg, Alaska  
Mike Rabe, Arizona  
Melanie Weaver, California  
Jon Runge, Colorado  
Jeff Knetter, Idaho  
Rick Northrup, Montana  
Russell Woolstenhulme, Nevada  
Barry Hale, New Mexico  
Bradley Bales, Oregon  
Justin Dolling, Utah  
Don Kraege, Washington  
Joseph Bohne, Wyoming  
Jason Caswell, Alberta  
Myke Chutter, British Columbia

### **Officers**

Chair, Rick Northrup, Montana  
Vice-chair, Dan Rosenberg, Alaska  
Treasurer, Thomas Aldrich, Utah (Retired)

### **Subcommittees**

Cackling Canada Goose  
Dusky Canada Goose  
Aleutian Canada Goose  
Lesser, Taverner's, and Vancouver Canada Goose  
Pacific Western Canada Goose  
Rocky Mountain Western Canada Goose  
White-fronted Goose  
Brant  
White Goose  
Emperor Goose  
Pacific Trumpeter Swan  
Rocky Mountain Trumpeter Swan  
Western Tundra Swan  
Pacific Coast and Central Valley Sandhill Crane  
Rocky Mountain Sandhill Crane  
Lower Colorado River Valley Sandhill Crane  
Pacific Coast Band-tailed Pigeon 3  
Interior Band-tailed Pigeon  
Mourning Dove  
White-winged Dove

**Representative to the AFWA Migratory Shore and Upland Game Bird and Waterfowl Working Groups**

Bradley Bales, Oregon

**Pacific Flyway Nongame Migratory Bird Technical Committee**

**Members**

Mary Rabe, Alaska

Eric Gardner, Arizona

Carie Battistone, California

David Klute, Colorado

Rex Sallabanks, Idaho

Catherine Wightman, Montana

Larry Neel, Nevada

Hira Walker, New Mexico

Andrea Hanson, Oregon

Jim Parish, Utah

Joe Buchanan, Washington

Susan Patla, Wyoming

**Officers**

Chair, Catherine Wightman, Montana

Vice-chair, Mary Rabe, Alaska

**USFWS Representative**

Tara Zimmerman

**Representatives to the Pacific Flyway**

**U.S. Fish and Wildlife Service**

Robert E. Trost, DMBM, Portland

Todd Sanders, DMBM, Portland

Brad Bortner, Region 1, Portland

Jeff Haskins, Region 2, Albuquerque

David Olson, Region 6, Denver

Eric Taylor, Region 7, Anchorage

Chris Nicolai, Region 8, Sacramento

**Canadian Wildlife Service**

André Breault, Delta, British Columbia

**Alaska Migratory Bird Co-management Council**

Fred Armstrong, Executive Director

## **Recommendations**

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 1 - Mourning and White-winged Dove Season Framework

### Recommendation

The Pacific Flyway Council recommends to (1) combine Mourning and White-winged Dove Season Frameworks into a single framework, (2) allow an aggregate bag in all states, and (3) recommend a moderate season framework for dove.

### Framework:

Western Management Unit

Hunting Seasons and Daily Bag Limits:

Idaho, Oregon, Washington, Utah and Nevada—Not more than 30 consecutive days, with a daily bag limit of 10 mourning doves and white-winged doves in the aggregate.

Arizona and California—Not more than 60 days, which may be split between two periods, September 1-15 and November 1 – January 15. In Arizona, during the first segment of the season, the daily bag limit is 10 mourning and white-winged doves in the aggregate. During the remainder of the season, the daily bag limit is 10 mourning doves. In California, the daily bag limit is 10 mourning and white-winged doves in the aggregate.

### Justification

The U.S. Fish and Wildlife Service suggested combining the mourning and white-winged dove season frameworks into a single framework. The Study Committee agrees with this approach and wanted to also open the white-winged dove season in more areas to protect hunters as these birds continue to expand their range northward. Harvest Information Program data indicates white-winged doves being taken in counties that currently do not allow the take of white-winged doves. White-winged dove harvest in northern states, where no season was specified in previous years will likely be small since birds are few in number and patchy in distribution in those areas.

The interim harvest strategy uses four separate data streams to calculate a composite trend indicator for dove populations. Those data are: Call Count Survey heard, Call Count Survey seen, Breeding Bird Survey, and a population abundance index derived from banding and harvest. The trend in the WMU this year is -2.8% and is within the MODERATE framework. This is the same as last year's framework.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Melanie Weaver



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 2 - Pacific Coast Band-tailed Pigeon

### Recommendation

The Pacific Flyway Council recommends no change in the season framework for Pacific Coast band-tailed pigeons.

The Council recommends a framework in California, Nevada, Oregon, and Washington with outside dates between September 15, 2011 and January 1, 2012, season length of nine days, daily bag limit of two, and possession limit of four. California may select a nine-day season in each of two zones: a North Zone and a South Zone. The North Zone includes Alpine, Butte, Del Norte, Glenn, Humboldt, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Trinity Counties. The South Zone includes the remainder of the State. The season in the North Zone must close by October 3.

### Justification

Based on the current assessment and the harvest strategy from the July 2010 Pacific Coast Band-tailed Pigeon Management Plan, the prescribed regulatory alternative for Pacific Coast band-tailed pigeons during the 2011 hunting season is the restrictive regulatory alternative which represents no change. See the memo from Todd Sanders attached to the subcommittee report.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Brad Bortner

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 3 - Interior Band-tailed Pigeon Season Framework

### Recommendation

The Pacific Flyway Council recommends no change in the season framework for interior band-tailed pigeons.

The Council recommends a framework in the Pacific Flyway portion of Arizona, Colorado, New Mexico, and Utah with outside dates between September 1 and November 30, season length of 30 days, daily bag limit of five, and possession limit of 10. New Mexico may select a 20-day season in each of two zones: a North Zone and a South Zone. The North Zone includes north of a line following U.S. 60 from the Arizona State line east to I-25 at Socorro and then south along I-25 from Socorro to the Texas State line. The South Zone includes the remainder of the State. The season in the South Zone may not open until October 1.

### Justification

The mean band-tailed pigeon harvest during 1999 through 2009 in Arizona, Colorado, New Mexico and Utah combined was 3,136 based on annual harvest estimates from the Migratory Bird Harvest Information Program (HIP). The harvest estimates in 2008 and 2009 were substantially above the previous nine years. State harvest surveys in Arizona and Colorado were discontinued when the HIP program was implemented; however they are maintained in Utah and New Mexico. The estimated harvest in Utah was six birds during the 2009 season. The 2009 harvest estimate for New Mexico is not yet available.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Justin Dolling

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## **Recommendation 4 - Rocky Mountain Population Sandhill Crane Season Framework**

### **Recommendation**

The Pacific Flyway Council recommends no change in the season framework for the Rocky Mountain Population (RMP) of sandhill cranes except that Golden Valley County, Montana be added to an existing RMP sandhill crane hunting unit and that Broadwater County, Montana, is established as a new RMP sandhill crane hunting unit.

The Council recommends a framework in Arizona, Idaho, Utah, and the Pacific Flyway portions of Colorado, Montana, New Mexico, and Wyoming with outside dates between September 1 and January 31, a maximum season length of 30 days, a daily bag limit of three, and a season limit of nine. Participants must have a valid permit issued by the appropriate state in their possession while hunting. Numbers of permits, open areas, season dates, protection plans for other species, and other provisions of seasons must be consistent with the management plan and approved by the Pacific and Central Flyway Councils.

Harvest allocations are as follows: Arizona 118, Idaho 410, Montana 266, New Mexico 567, Utah 179, Wyoming 175, and Mexico 56 for a total of 1,771 cranes.

### **Justification**

The Pacific and Central Flyway Management Plan for RMP Sandhill Cranes allows for the regulated harvest of cranes when the population index exceeds 15,000, as estimated by the mean of the three most recent reliable surveys conducted on fall pre-migration staging areas. As outlined in the management plan the most recent reliable three-year running average (2008, 2009 and 2010) was used to determine the 2010 harvest allocation. Based on the allowable harvest formula for this population, 1,771 sandhill cranes may be harvested during the 2011-2012 hunting season. In 2010 21,064 cranes were counted in the September survey and the most recent three-year average was 20,847 cranes. The population objective is a range of 17,000 to 21,000 cranes.

Two additional areas in Montana are proposed to expand limited permit hunting:

1. Golden Valley County – This County, in the Central Flyway portion of the state, lies immediately east of an existing RMP Crane hunt area. A large wetland, Deadman's Basin, is at the east edge of Wheatland County, and cranes from this area typically fly east into Golden Valley County to feed. Numbers of cranes counted during the September survey for Golden Valley County the last four years have been: 2007 – 235; 2008 – 389; 2009 – 519; and 2010 – 580.

- Broadwater County – This county, which is in the Pacific Flyway portion of the state, would be a new RMP crane hunt unit—an addition to the four existing units. This new unit would provide crane hunting within the annual harvest allocation for Montana. Most hunting opportunities would occur along an 11-mile stretch of the Missouri River floodplain. Crane numbers here have increased substantially since the first fall staging survey was conducted in 2002 (297 cranes). The count in 2010 was 532 cranes, and the five-year average prior to 2010 was 610 cranes (range = 573-644). Because the staging takes place on a relatively small area, Montana Fish, Wildlife, and Parks would start out with a small number of permits (likely five); in combination with monitoring via ground surveys to better understand any significant changes in staging behavior. The hunt would be adapted based on monitoring information. This proposal is a response to local interest in having a crane hunt.

For both of these areas, monitoring of crane numbers will continue through the coordinated September survey, and crane harvest will be monitored through questionnaires as it has been for the existing units. All crane harvest in both counties will be considered RMP cranes.

### 2011 Crane Harvest Allocation

Allowable Harvest = C x P x R x L x f where:

C = Avg of **3** most recent, reliable **fall** population indices.

P = Avg proportion fledged chicks in **3** most recent years

R = 0.5 (estimated recruitment fledged chicks to breeding)

L = 0.8 (retrieval rate)

f = (C/16,000)<sup>3</sup> (harvest rate adjustment)

$$C = \frac{21,156 + 20,321 + 21,064}{3} = 20,847$$

$$P = \frac{0.091 + 0.115 + 0.083}{3} = 0.096$$

$$f = (C/16,000)^3 = (20,847/16,000)^3 = 2.212$$

$$2011 \text{ Harvest Allocation} = 20,847 \times 0.096 \times 0.5 \times 0.8 \times 2.212 = \underline{\mathbf{1,771}}$$

$$2010 \text{ Harvest Allocation} = 21,433 \times 0.096 \times 0.5 \times 0.8 \times 2.404 = \underline{\mathbf{1,979}}$$

$$2009 \text{ Harvest Allocation} = 21,614 \times 0.091 \times 0.5 \times 0.8 \times 2.465 = \underline{\mathbf{1,939}}$$

$$2008 \text{ Harvest Allocation} = 20,577 \times 0.095 \times 0.5 \times 0.8 \times 2.127 = \underline{\mathbf{1,663}}$$

$$2007 \text{ Harvest Allocation} = 19,633 \times 0.091 \times 0.5 \times 0.8 \times 1.848 = \underline{\mathbf{1,321}}$$

$$2006 \text{ Harvest Allocation} = 19,633 \times 0.091 \times 0.5 \times 0.8 \times 1.848 = \underline{\mathbf{1,321}}$$

$$2005 \text{ Harvest Allocation} = 18,945 \times 0.072 \times 0.5 \times 0.8 \times 1.660 = \underline{\mathbf{906}}$$

$$2004 \text{ Harvest Allocation} = 18,295 \times 0.060 \times 0.5 \times 0.8 \times 1.494 = \underline{\mathbf{656}}$$

**2007 Allocation based on 2003, 2004, and 2005 fall counts**

**2008 Allocation based on 2004, 2005, and 2007 fall counts**

**2009 Allocation based on 2005, 2007, and 2008 fall counts**

**2010 Allocation based on 2007, 2008, and 2009 fall counts**

**2011 Allocation based on 2008, 2009, and 2010 fall counts**

	<u>Summer Range</u>	<u>Winter Range</u>	<u>Unused Colorado</u>	<u>Base Allocation Percent</u>	<u>Base Allocation</u>	<u>Total Allocation</u>	
Colorado	2.70 %	5.80 %	---	8.5%	150	0	<b>(0)</b>
Idaho	22.00 %	---	(1.14%)	22.00 %	390	390+20	<b>(410)</b>
Montana	14.30 %	---	(0.76%)	14.30 %	253	253+13	<b>(266)</b>
Wyoming	9.40 %	---	(0.53%)	9.40 %	166	166+9	<b>(175)</b>
Utah	6.60 %	2.70 %	(0.76%)	9.30 %	165	165+14	<b>(179)</b>
Arizona	---	5.80 %	(0.83%)	5.80 %	103	103+15	<b>(118)</b>
New Mexico	---	28.00 %	(4.01%)	28.00 %	496	496+71	<b>(567)</b>
Mexico	---	2.70 %	(0.46%)	2.70 %	48	48+8	<b>(56)</b>
<b>TOTALS</b>	<b>55.00 %</b>	<b>45.00 %</b>	<b>8.49%</b>	<b>100 %</b>	<b>1,771</b>		<b>1,771</b>

\* Numbers in bold in parentheses assume no hunt will occur in Colorado in 2011. Colorado's winter allocation has been divided between winter range states and Colorado's summer allocation has been divided between summer range states.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Joe Bohne

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 5 - Lower Colorado River Valley Sandhill Crane Season Framework

### Recommendation

No hunt is recommended as survey results indicate the three-year average population estimate is below the 2,500 birds required by the framework to hunt Lower Colorado River Valley (LCRV) Sandhill Cranes.

### Justification

This population continues to show stable numbers and survey methodology has improved. Since 2008, the Arizona Game and Fish Department has conducted aerial surveys of LCRV cranes with the same observer in Arizona and used ground counts from cranes on Salton Sea National Wildlife Refuge in California. In previous years, the survey effort was inconsistent in that it used multiple observers and timing of the surveys spanned several days, and were sometimes weeks apart. The average count over the most recent three surveys years (2009, 2010 and 2011) is 2,360 cranes, which is below the threshold of 2500 birds required by the Pacific Flyway LCRV Management Plan requirements for a hunt to proceed. The 2011 LCRV Sandhill Crane count was 2,415. This represents a 6.7% increase over the previous years (2010), but, a 15.2% decrease in the three-year average for the population.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Russell Woolstenhulme

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 6 - Allocation of Wyoming Wetlands Society Swans to Approved Release Sites

### Recommendation

The Pacific Flyway Council recommends the following allocation of swans from the Wyoming Wetlands Society facilities for 2011, based on the availability of 24 yearlings for release: (1) Blackfoot River Valley, MT, 10 yearlings, (2) Summer Lake Wildlife Management Area, OR, 8 yearlings, and (3) Flathead Indian Reservation, MT, 6 yearlings.

Releases slated for Summer Lake are temporarily on hold. Discussions about the trumpeter swan restoration program there will take place between the Oregon Department of Fish and Wildlife and The Trumpeter Swan Society at the North American Wildlife Conference in Kansas City, MO. If those swans are not approved for release at Summer Lake, they would be allocated to the Blackfoot.

The Pacific Flyway also recommends that the Madison River Valley, MT be added as a new trumpeter swan restoration location.

### Justification

The Management Plan for Rocky Mountain Population Trumpeter Swans specifies that the Study Committee develop a prioritization scheme for allocating swans to Council-approved release sites, and to recommend an allocation of available swans during its March meeting. Based on the current expected availability of swans for release in 2011 and requests for swans received from representatives of the approved sites, this allocation represents an equitable allocation of birds given the relative priority of the sites as determined by the procedure used by the Study Committee to rank sites.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Jeff Knetter

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 7 - Revision of Wrangel Island Snow Goose Harvest Strategy

### Recommendation

The Pacific Flyway Council endorses the 2011-2015 harvest strategy for Wrangel Island Snow Geese.

### Justification

The PFSC has updated the 2006-2010 harvest strategy for Wrangel Island snow geese, which was part of the 2006 revision of the Wrangel Island Snow Goose Management Plan. Revision of the strategy involved all agencies throughout the range of the population and considered recent population demographic information. The Wrangel Island population and other flyway white goose populations are currently above management objectives and several states have recently liberalized white goose seasons. The new strategy prioritizes traditional and new season opportunities and prescribes harvest management changes at various population levels.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Don Kraege

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

**HARVEST STRATEGY FOR THE  
WRANGEL ISLAND POPULATION OF  
LESSER SNOW GEESE  
2011-2015**

**BACKGROUND**

This harvest strategy is of interest to the U.S. Fish and Wildlife Service (USFWS), Canadian Wildlife Service (CWS), Russian Federation, Pacific Flyway states and provinces, first nations, and other constituents to jointly conserve and manage the Wrangel Island population of lesser snow geese (WISG). Although WISG occur and are harvested in Alaska (AK), California (CA), Oregon (OR), and other areas of the Pacific Flyway, the Fraser-Skagit segment of the population wintering in British Columbia (BC) and Washington State (WA) accounts for about 50-55% of the population. It is almost impossible to estimate either abundance or harvest of the WISG wintering in CA and southern OR because these birds mix with much larger numbers of snow geese from the western Arctic. Accordingly, this strategy is focused primarily on managing harvest on the Fraser-Skagit segment. Based on population dynamics and marking information, the Fraser-Skagit segment currently has strong winter philopatry, with very little documented immigration from or emigration to other wintering areas.

**Population growth--** This harvest strategy stems, in part, from the increased abundance of this population since the early 1990s and from the need to maintain it within prescribed, manageable boundaries. The intent of this strategy is to maintain WISG into the future, but not allow it to grow out of control as has happened with the mid-continent population of lesser snow geese. The latter population grew exponentially in the 1980s and 1990s, resulting in crop depredation problems on the winter range and severe habitat degradation on the spring staging and breeding grounds (Batt 1997). However, the Wrangel Island ecosystem is different from mid-continent breeding areas; higher latitude nesting conditions, severe weather conditions, high predation pressure in some years, competition from other herbivores, and a limited carrying capacity on the molting area may limit growth rates compared to the mid-continent. Historically, estimates of WISG in the spring reached over 200,000 geese but declined to a low of 56,000 in 1975. The 2010 population was estimated to be 150,000 (2010 index) with a 2006-10 average of 139,000, above the flyway plan objective of 120,000 (see Appendix A).

**Trends in harvest--** Harvest estimates for the Fraser-Skagit segment have averaged 6,307 (n=63 years) since 1948 and 15,831 (n=5) for the period 2005-09 (see Appendix D). Except for most of the 1990s, fall harvest has historically been larger in WA than in BC. A total estimate of WISG fall harvest is not available because Wrangel Island geese mix with snow geese from the western Arctic in southern OR and CA. Alaska subsistence harvest may average approximately 6-8,000 Wrangel Island snow geese per year (includes birds from both wintering segments), mostly taken on the Yukon-Kuskokwim Delta, with additional harvest in the Bering Strait and Northwest Arctic regions. "Harvest rates" from the Fraser-Skagit segment, calculated by comparing harvest survey results (adults + juveniles) to fall/winter surveys, averaged about 7% between 1990 and 2005 (range = 5 - 10%) and averaged approximately 20% between 2005 and 2009 (range = 12 - 26%).

## HARVEST STRATEGY

**Entire population--**The parties to this plan recognize the need to support and maintain a long-term harvest strategy that ensures maintenance of the population and equitable harvests among users. The primary method of regulating the Wrangel Island population will be from sport and subsistence seasons. The response effects of changes in regulations and management programs should be evaluated every five years. In recognition that WISG are a shared resource throughout the flyway, the following harvest guidelines will apply to this population:

1. Hunting seasons will be designed to maintain the population at the Pacific Flyway management plan objective level of 120,000 (three-year average).
2. If the population index drops below 120,000 (three-year average), hunting seasons in areas used by Wrangel Island snow geese will be reduced, with higher priority given to reductions in areas that liberalized most recently.
3. If the population index drops below 60,000 geese (three-year average), light goose seasons will be established to minimize the harvest of WISG.
4. If the population index increases above 200,000 geese (3-year average), the flyway will evaluate the possibility of establishing new conservation seasons in migration and wintering areas.
5. Efforts to control overabundant white goose populations in other parts of North America (e.g. Alberta) should minimize effects on WISG.

**Fraser-Skagit segment—**In recognition of the greater ability to manage WISG harvest in the primary wintering area (Fraser-Skagit) compared to other areas of the flyway, the following guidelines will apply to the Fraser-Skagit segment:

1. Hunting seasons in the Fraser-Skagit area will be designed to maintain this segment at 50,000-70,000 geese. This range is based on current distribution, recognition of increased concerns with recent higher population levels, and the contribution of the Fraser-Skagit segment to the total population objective of 120,000.
2. Hunting seasons in the Fraser-Skagit area will be designed to meet the following prescriptions based on the most recent Fraser-Skagit total goose annual index, unless otherwise noted:

Population Index	Regulation Package
>70,000	Liberal
50,000-70,000	Moderate
30,000-50,000	Restrictive
<30,000 or <60,000 Wrangel Island index (3-year average)	Closed Season
35,000=reopening level after closure	Restrictive

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## **Recommendation 8 - Pacific and Rocky Mountain Western Canada Goose September Season Framework**

### **Recommendation**

The Pacific Flyway Council recommends no change in the September season framework for the Rocky Mountain Population (RMP) and Pacific Population (PP) of western Canada geese, except for an increase in the daily bag limit in the Pacific Flyway portion of Colorado from three birds to four birds, and an increase in the possession limit from six to eight birds. State-specific outside dates, season length, and bag limit as follows:

### Rocky Mountain Population

Colorado may select a 9-day season during September 1–15. The daily bag limit is ~~3~~ 4 and the possession limit is ~~6~~ 8.

Idaho may select a 7-day season during September 1–15. The daily bag limit is 2 and the possession limit is 4.

Wyoming may select an 8-day season during September 1–15. The daily bag limit is 2 and the possession limit is 4.

### Pacific Population

California may select a 9-day season in Humboldt County during September 1–15. The daily bag limit is 2.

Oregon may select a 15-day season during September 1–15. Oregon may select a 15-day season in the Northwest Zone during September 1–20. The Northwest Zone includes Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion, Polk, Multnomah, Tillamook, Washington, and Yamhill Counties. The daily bag limit is 5.

Washington may select a 15-day season during September 1–15. The daily bag limit is 5.

Areas open to hunting of Canada geese in each State must be described, delineated, and designated as such in each State's hunting regulations.

### **Justification**

The 2010 RMP breeding population index (BPI) was 143,842, a 15% increase from the 2009 index of 124,684, but 10% below the three-year average BPI of 160,434. The 2011 RMP Midwinter Index (MWI) of 124,427 showed a 17% decrease from the previous year's index of

149,831. The 2011 RMP MWI was 7% below its running three-year average of 133,312 geese, but this total is well above the management plan liberalization level of 80,000.

Population index data and estimated harvest effects support increasing the bag and possession limits in Colorado. In the past three years, counts from the spring breeding survey have stayed relatively stable, with 1,352 geese counted in 2008, 1,238 in 2009, and 1,464 in 2010. Post-hunting indices collected as part of the mid-winter survey have increased: 5,332 in 2008, 4,449 in 2009, and 7,732 in 2010. During a banding study of resident and molt migrant Canada geese conducted in western Colorado during 2000-2006, band recovery rates were estimated at around 9%; this was a period when the local resident Canada goose population appeared to be growing. Harvest pressure has been described as minimal by CDOW Field Operations personnel. Annual total goose harvest estimates from the federal waterfowl harvest survey have ranged from 3,400 to 17,000 for the Pacific Flyway portion of Colorado; however, estimates from the federal survey are extremely imprecise at this scale. An increase in the daily bag limit is expected to result in minimal increases in Canada goose harvest rates.

The 2010 PP BPI was 144,944, a 3% decrease from 2009 (149,597) and down 21% from the three-year average (184,170). Due to differences in survey methods in the PP, population objectives are most applicable at the management unit level rather the population level. Three units are above liberalization levels, five are at objective levels, and two are below restriction levels. The PP 2011 MWI was 90,238, a 21% decrease from 2010 (113,509), and down 11% from the 3-year average (101,741).

Crop depredation is occurring in all of the proposed September hunt units and the current management philosophy in the Pacific Flyway is to use hunting as the preferred strategy to alleviate damage. These early season hunts are generally designed to address specific, local depredation and nuisance concerns. These hunts follow the Flyway policy to provide fall hunting opportunity as a preferred method to address nuisance and depredation problems. Note that Idaho and Wyoming have three-year average BPOP indices that are well below their respective objectives. They are both addressing nuisance issues.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Don Kraege and Jon Runge



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 9 - Revision of Cackling Canada Goose Population Index Method

### Recommendation

The Council amends the cackling Canada goose management plan to replace the current method of estimating the fall population with an interim method that uses a ratio estimator based on the breeding ground aerial total indicated bird index and mark-resight data (1989-2003). To evaluate the historic and interim population estimation method, the Council will provide \$15,000 for marking and will assess coastal states if more funding is needed to conduct an independent mark-resight study (2011-13).

### Justification

In July 2010, the Council passed Recommendation 12, Canada Goose Depredation in Oregon and Washington, which called for immediate initiation of a process to review and update the 1999 Cackling Canada Goose Management Plan. This review was to include evaluation of the population objectives and harvest strategies, with a target completion by 2011. The plan review process was initiated following the Council meeting and the subcommittee met in Anchorage in September 2010 to initiate discussions about the plan revision. At that meeting, the subcommittee reviewed the current population index method and determined that it was insufficient to provide an accurate estimate of the actual size of the cackling Canada goose population.

The 2010 fall population estimate was 188,623 and the 3-year running average, 180,859 (Bollinger and Hodges 2010). The subcommittee requested the Fish and Wildlife Service (Alaska Region) conduct a review of current and alternative monitoring methods to estimate abundance and trend of cackling Canada Geese. The Service's report (Stehn 2010) was completed in December 2010 and underwent a peer-review in January 2011. Based on Stehn (2011), the subcommittee recommended using a ratio estimator using the breeding ground aerial total indicated bird index and mark-resight data (1989-2003). Using this method, the fall 2010 population estimate of cackling Canada geese is 288,272 (SE=21,917) and the 3-year (2008-10) average is 273,214 (SE=18,383) (Stehn, 2011:Table3).

The Fish and Wildlife Service, Migratory Bird Management Office (Alaska) assessed alternative methods to monitor the fall population size of cackling geese (*Branta hutchinsii minima*) (see Stehn 2011). The current method to predict the fall population relies on a simple linear relationship between indicated total birds on the Yukon-Kuskokwim Delta breeding grounds regressed on the 1985-1998 fall coordinated count data (Pacific Flyway Council 1999, Bollinger and Hodges 2010). Using coefficients from the regression equation, the aerial survey index is converted to a fall population number that is tabulated (USFWS 2010) and compared to the population management objective of 250,000 cackling geese. Although this method was adopted by the Pacific Flyway Council in 1998, it does not provide a scientifically rigorous, direct estimate of fall population size. Rather, the conversion retains the weaknesses of an aerial index,

includes assumptions inherent in linear regression, and assumes constancy of the regression relationship even when extrapolated beyond the extent of the data. Moreover, the fall coordinated count data likely underestimates the actual population as they are uncorrected for incomplete coverage or detection rate. Therefore, converting aerial index data to predict an underestimated fall population will result in an underestimate of the actual fall population.

From 1989 to 2003, an independent cackler fall population was estimated using mark-resight techniques. Unlike aerial survey index data that do not account for detection rate, mark-resight techniques are less likely to provide biased estimates.

Stehn (2011) used linear regression and ratio estimation to establish relationships between breeding ground aerial indices and the mark-resight estimates of fall population. Two breeding ground indices considered included indicated total birds ( $2 \times [n \text{ singles} + n \text{ pairs}] + \text{birds in flocks}$ ) and indicated breeding birds ( $2 \times [n \text{ singles} + n \text{ pairs}]$ ). The regression and ratio techniques using the two breeding ground indices produced similar but not identical estimates because of different statistical model assumptions. However, ratio estimates resulted in smaller estimates of error compared to regression estimates. The subcommittee recommends adopting an interim population estimation method using a ratio between the breeding ground aerial total indicated bird index and mark-resight data (1989-2003) to determine a fall population estimate.

The population objective of 250,000 for cackling Canada geese was established in 1984 following declines in the historic fall population index from over 400,000 in the 1960s to less than 26,000 in 1984. The objective was set cooperatively as part of the 1984 Hooper Bay Plan, the precursor to the Yukon-Kuskokwim Delta (YKD) Goose Management Plan. According to representatives involved in the original discussions, the objective was set considering past population levels and user needs rather than through quantitative methods, in light of distribution of cacklers at that time (California).

A necessary first step in consideration of the objective should be further review and verification of the interim population index method. The subcommittee believes that an independent assessment of the total number of cackling Canada geese in the fall is necessary. To accomplish this, the subcommittee recommends that a mark-resight estimate should be derived similar to what is currently done on an operational basis for Aleutian Canada geese. This estimate will require capturing, banding, and marking with neckbands approximately 2,000 cackling Canada geese on their breeding grounds on the YK-Delta in each on the next two years (sample size subject to revision based on further refinement). It will also require an intensive observation effort for two 2-day intervals during late-October and early November in Washington and Oregon.

Revision of this long-standing flyway population objective should involve deliberations by representatives of management agencies, conservation groups, and hunters from Alaska to California. These deliberations will consider population status, trend, and distribution compared to when the original objective was established. During the two year period necessary to verify the population index method, the subcommittee will enhance communication and coordination among all stakeholders to reach a mutual understanding and agreement regarding the population objective and index methods. As part of these deliberations, the subcommittee will continue to discuss the possibility of converting the population objective and population index metrics to

new values considering only breeding ground surveys, which would improve the accuracy and precision of these estimates.

Similar to the process proposed to evaluate the population objective and index methods, revision of the current cackling Canada goose harvest strategy should consider population status and trends in relation to the population objective. The subcommittee will also review the current harvest strategy during 2011-13. Because recent peer-reviewed analyses using multiple methods have estimated that the population is above the 250,000 objective, the subcommittee believes that some increases in harvest could be allowed during this interim period.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Eric Taylor and Don Kraege



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 10 - Alaska Early Seasons Framework

### Recommendation

The Pacific Flyway Council recommends continuation of the Alaska early season frameworks for 2011 except for the following:

Goose seasons are subject to the following exceptions: (4) [~~In Units 9, 10, 17, and 18, dark goose limits are 6 per day, 12 in possession; however, no more than 2 may be Canada geese in Units 9(E) and 18; and no more than 4 may be Canada geese in Units 9(A-C), 10 (Unimak Island portion), and 17.~~] **In Units 9, 10, 17, and 18, dark goose limits are 6 per day, 12 in possession.**

### Justification

Ducks.—The Council endorses retention of current duck regulation frameworks for Alaska in 2010. These provisions recognize the seasonally limited opportunity for duck harvest in the far north, as well as challenges for hunter identification of ducks species and sex. As warranted, Alaska has promulgated emergency regulations to address the need for significant restrictions identified in the late season process. The basic duck frameworks indicated above are currently well justified, given the status of duck populations. The Pacific Flyway has implemented an adaptive regulatory regime under the Western Mallard Model. Thus, the Adaptive Harvest Management procedures and regulatory packages will guide regulations in 2010.

Canvasback.—The Council endorses a bag limit of 1/3 canvasbacks for Alaska in 2010. Council recognizes that canvasback harvest is small in Alaska (mean = 204, HIP 2001-08) and that Alaska frameworks are decided prior to national regulatory decisions. The Service provides that a season should generally remain open in Alaska, with limits of 1/3, when closures under the Service harvest strategy are expected to be short-term.

Sea Ducks.—The Council continues to support bag limits applied since 2001. Sea ducks provide important basic harvest opportunity in Alaska during late fall and winter, when 6-8,000 sea ducks are taken annually. Also, sea ducks are an important subsistence resource throughout the year, amounting to about 55,000 sea ducks annually (mostly spring harvest in western and northern Alaska). Fall and winter harvest in Alaska Peninsula, Kodiak and Southeast Alaska is provided for under current frameworks.

Geese.—*Pacific white-fronted geese* fall population index (2008-2010) averaged 604,540, well above the population objective of 300,000. Continuation of liberal regulations is justified, while avoiding additional harvest in units where *Tule white-fronts* occur. *Cackling geese* restrictions on primary breeding and staging areas are no longer warranted because the population is believed to be above the 250,000 objective. In 2010, the U.S. Fish and Wildlife Service-MBM (Alaska Region) reevaluated the methodology for estimating the breeding population index of cackling Canada geese on the Yukon-Kuskokwim Delta (YKD) and proposed a new method. This indicated the number of cackling geese exceeds the population objective. These regulations are not expected to have a significant effect on the statewide sport

harvest and will not affect subsistence harvest. Most Canada geese depart the YKD by the end of September and the majority departs Alaska Peninsula staging areas by mid-October. This restricts the time period when geese can be harvested. Fall surveys indicate over 90% of cackling Canada geese stage around Izembek Lagoon where no changes are proposed. In addition human populations in these areas are low and access is difficult. This harvest revision will be reviewed pending completion and verification of new indexing methodology and is not proposed as a long-term conservation strategy at this time.

*Midcontinent white-fronted goose* index (709,800 fall 2010 aerial survey) is above the population objective of 600,000 birds (3-year mean = 663,333, 2008-10). *Lesser and Taverner's geese* are thought to be stable, so retention of basic dark goose limits of 4/8 are warranted in other parts of the state. *Aleutian geese* reached a new high in 2010 of an estimated 126,366 birds (95% CI 98,740–153,991). The current direction of harvest management is to reduce the population. *Dusky Canada goose* current 3-year average index is 8,464, below the management plan threshold of 10,000 which implemented additional harvest restrictions described above. *Emperor goose* 3-year average index (2008-2010) is 73,818, below the 3-year average of 80,000 needed to consider a season.

*Pacific brant* maximum estimates of 139,243 were observed during the fall emperor goose survey of which >99% were in Izembek Lagoon and adjacent estuaries. Average fall population size for brant in the Izembek area was 130,093 based on three surveys. This was 10.0% below the 2009 estimate of 144,594 (n= 2 surveys) and 2.7% above the 35-year average fall count of 133,662. The number of brant nests in 2010 was below average on the Yukon-Kuskokwim Delta. Total number of nests for all colonies decreased by 21% from 2009 (12,206) to 2010 (9,641) and the 2010 estimate was ~41% lower than the long term average. No winter survey was conducted. The continued decline in nests warrants restrictive regulations (limits 2/4) in 2010.

*White goose* regulations remain appropriate as populations remained high in 2010 and Wrangel Island snow geese (150,000) remain above the spring population objective of 120,000.

Tundra Swans.—Alaska has successfully operated swan hunts in Unit 17 since 2001, Unit 18 since 1993, Unit 22 since 1988, and Unit 23 since 1997. Permit issuance and harvest reporting have been accomplished within standards of flyway procedures. The western tundra swan population average index declined from 105,000 in 2009 to 77,000 in 2010 (mid-winter survey). Although this was the lowest index since 2002, numbers remained well above objective levels of 60,000. Total harvest for Alaska's fall seasons has been at or below 80 swans since 2001, which is insignificant in relation to allowable management plan allocations.

Sandhill cranes.—Interior and western Alaska crane harvest, averaging 792 cranes (2002–2009) and comprised 3.7% of the U.S. harvest, is drawn from the Midcontinent Population of lesser sandhill cranes, coordinated with the Central Flyway. The *Mid-continent Lesser Sandhill Crane* Population has been increasing and is currently above population objective thresholds (349-472,000). The 2010 total estimate (738,400) increased 17% since 2009. It is the highest index of record in the years of similar survey design (since 1985). The current three-year average (2008 - 2010), based on photo corrected estimates from aerial transects, is 600,900. Alaska is the only state drawing from the Pacific Flyway Population of *lesser sandhill cranes*. HIP-based harvest estimates have been highly variable but average harvest estimates from 2002-2009 were 332. The long-term average (since 1971) harvest is 265 PFP cranes.

Snipe.—Current harvests are small relative to population levels.

Falconry.—Falconry opportunity for migratory birds in the north is brief. There are 41 registered falconers in Alaska, 27 had falconry birds in possession and their harvest is an insignificant part of statewide harvest totals.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Dan Rosenberg



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 11 - Rail Season Framework

### Recommendation

The Pacific Flyway Council recommends no change in the season framework for the Pacific Flyway population of sora and Virginia rails.

The Council recommends a framework including sora and Virginia rails in the Pacific Flyway portions of Colorado, Montana, New Mexico, and Wyoming with outside dates between September 1 and January 20, season length of 70 days, and daily bag and possession limits of 25 sora and Virginia rails in the aggregate. Season length may be split into two segments. The season shall be closed in the remainder of the Pacific Flyway.

### Justification

There is little or no evidence to suggest that sora and Virginia rail populations are other than stable in the Western Region according to the North American Breeding Bird Survey (BBS); however, information (sample size, abundance, and precision) to detect population trends may be inadequate for this species (Sauer, J. R., J. E. Hines, and J. Fallon. 2008. The North American Breeding Bird Survey, Results and Analysis 1966–2007, Version 5.15.2008. USGS Patuxent Wildlife Research Center, Laurel, MD).

The estimated annual change in the sora population in the Western Region was 0.10% ( $P = 0.92$ ) over the long-term (1966–2007) and  $-0.6\%$  ( $P = 0.28$ ) over the short-term (1980–2007). Although, the short-term population trend for soras is negative, it is not statistically significant. Further, the sora hunting season is closed in the majority of Pacific Flyway states in the BBS West Region. Offering a hunting season on soras in the four easternmost states of the Pacific Flyway will therefore not likely have an affect on the overall population trend in the BBS West Region.

The estimated annual change in the Virginia rail population in the Western Region was  $+2.2\%$  ( $P = 0.02$ ) over the long-term (1966–2007) and  $+1.0\%$  ( $P = 0.35$ ) over the short-term (1980–2007). Hunter participation and harvest estimates for rails are available from the U.S. Fish and Wildlife Service Mail Questionnaire Survey and the Migratory Bird Harvest Information Program. However, essentially no information on rails in the Pacific Flyway portion of the national survey exists, because the Pacific Flyway does not have open seasons on rails, except for the western portions of Colorado, Montana, New Mexico, and Wyoming.

Historically, Pacific Flyway states have expressed little interest in offering a rail season because they lack a rail hunting tradition, and there is concern for clapper, black and yellow rail populations. The last rail season offered in the Pacific Flyway was in 1954. In 1965, the Central and Pacific Flyway administrative boundary was changed, and it lies approximately along the

Continental Divide. The rail season was maintained in the Pacific Flyway portions of split flyway states based on a rail hunting tradition in Central Flyway states.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Jeff Knetter



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 12 - Wilson's Snipe Season Framework

### Recommendation

The Pacific Flyway Council recommends no change in the season framework for the Pacific Flyway population of Wilson's snipe.

The Council recommends a framework with outside dates between September 1 and February 28, season length of 107 days, daily bag limit of 8, and possession limit of 16. Season length may be split into two segments. Seasons may be selected by zones established for duck hunting.

### Justification

There is little or no evidence to suggest that the Wilson's snipe population is other than stable in the Western Region according to the North American Breeding Bird Survey (BBS); however, information (sample size, abundance, and precision) to detect population trends may be inadequate for this species (Sauer, J. R., J. E. Hines, and J. Fallon. 2008. The North American Breeding Bird Survey, Results and Analysis 1966–2007 Version 5.15.2008. USGS Patuxent Wildlife Research Center, Laurel, MD). The estimated annual change in the Wilson's snipe population in the Western Region was  $-0.40\%$  ( $P = 0.26$ ) over the long-term (1966–2007) and  $-0.40\%$  ( $P = 0.30$ ) over the short-term (1980–2007).

Hunter participation and harvest estimates for Wilson's snipe are available from the U.S. Fish and Wildlife Service Mail Questionnaire Survey and the Migratory Bird Harvest Information Program. Based on the Mail Questionnaire Survey, hunter participation and harvest in the Pacific Flyway increased from the 1964-65 season (9,300 and 48,800) until peaking in the 1970s ( $x = 16,868$  and  $102,361$ ). Hunter participation and harvest decreased annually from the 1969-70 season until the 2001-02 season ( $-502 \pm 37.8$  [ $\beta_2 \pm SE$ ], 95% CI = 424 to 579,  $P < 0.01$ ;  $-3,229 \pm 287$ , 95% CI = 2,644 to 3,813,  $P < 0.01$ ), which is the last year data is available from the Mail Questionnaire Survey. In 2009, the preliminary number of hunters and harvest in the Pacific Flyway was 5,200 and 12,700, respectively (Raftovich, R.V., K.A. Wilkins, K.D. Richkus, S.S. Williams, and H.L. Spriggs. 2010. Migratory bird hunting activity and harvest during the 2008 and 2009 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, USA).

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Jeff Knetter



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 13 - Falconry Season Framework

### Recommendation

The Pacific Flyway Council recommends no change in the special season framework for extended falconry seasons.

Falconry is a permitted means of taking migratory game birds in any state meeting federal falconry standards in 50 CFR 21.29(k). The Council recommends that these states may select an extended season for taking migratory game birds in accordance with the following. For all hunting methods combined, the combined length of the extended season, regular season, and any special or experimental seasons shall be 107 days for any species or group of species in a geographical area. Each extended season may be divided into three segments. Outside dates shall be between September 1 and March 10. The falconry daily bag limit for all permitted migratory game birds shall be three singly or in the aggregate, during extended falconry seasons, any special or experimental seasons, and regular hunting seasons in all States, including those that do not select an extended falconry season. General hunting regulations, including seasons and hunting hours, shall apply to falconry in each state listed in 50 CFR 21.29(k). Regular season bag and possession limits shall not apply to falconry. The falconry bag limit shall not be in addition to gun limits.

### Justification

Impacts of falconry harvest on migratory bird populations are inconsequential. States typically select a 107-day waterfowl season when offered, and therefore no days remain for an extended falconry season. During moderate and more restrictive waterfowl season frameworks of less than 107 days, additional days will be available for extended falconry seasons and states may wish to consider extended falconry seasons at that time.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Russell Woolstenhulme

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 14 - Youth Waterfowl Hunting Days Framework

### Recommendation

The Pacific Flyway Council recommends no change in the special season framework for youth waterfowl hunting days.

The Council recommends states may select two consecutive days per duck-hunting zone, designated as “Youth Waterfowl Hunting Days,” in addition to their regular duck seasons. The days must be held outside any regular duck season on a weekend, holidays, or other non-school days when youth hunters would have the maximum opportunity to participate. The days may be held up to 14 days before or after any regular duck season frameworks or within any split of a regular duck season, or within any other open season on migratory birds. The daily bag limits may include ducks, geese, mergansers, coots, moorhens, and gallinules and would be the same as those allowed in the regular season. Flyway species and area restrictions would remain in effect. Youth hunters must be 15 years of age or younger. In addition, an adult at least 18 years of age must accompany the youth hunter into the field. This adult shall not hunt waterfowl but may participate in other seasons that are open during the special youth waterfowl hunt days.

### Justification

The Pacific Flyway Council supports the concept of special opportunities for youth to learn about waterfowl hunting and conservation of waterfowl and wetlands. The special youth season may attract non-hunters to the sport. In the long-term, participation of youth in this special season may result in support for waterfowl and wetland conservation by fostering: a more knowledgeable public, continued support for waterfowl hunting, and continued support for the protection and enhancement of wetland ecosystems. However, evaluation of the realized benefits associated with the Youth Waterfowl Hunting Days is needed to determine if objectives are being met.

In 2000, the U.S. Fish and Wildlife Service increased the special youth season from one to two days. In some portions of the Pacific Flyway, quality waterfowl hunting opportunities are substantial distances from major metropolitan areas. A two-day hunt offers greater incentive and opportunity for youths living long distances from waterfowl hunting areas. Participation estimates are not widely available, but the second day appeared to be popular among states selecting that option. Harvest during the special youth season apparently does not represent a substantial increase in the national waterfowl harvest.

**Adoption**

Pacific Flyway Study Committee

Contact: Melanie Weaver

March 4, 2011

A handwritten signature in blue ink, appearing to read 'R. Northrup', written over a light blue rectangular background.

---

Rick Northrup, Chair

Pacific Flyway Council

March 15, 2011

A handwritten signature in black ink, appearing to read 'Ken McDonald', written in a cursive style.

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 15 - Letter commenting on USFWS Migratory Bird Hunting Supplemental Environmental Impact Statement.

### Recommendation

The Pacific Flyway Study Committee recommends the Council send the attached letter, that provides comments on the USFWS Migratory Bird Hunting Supplemental EIS.

### Justification

The USFWS released the “Draft Supplemental Environmental Impact Statement (SEIS) for the Issuance of Annual Regulations Permitting the Hunting of Migratory Birds” in May 2010 with a comment period that ends March 30, 2011. The letter provides comments from Council on the seven major features of the SEIS. Council members and Study Committee members reviewed and edited an earlier draft of the letter in February, which have been incorporated into this final version.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Rick Northrup

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



March 24, 2011

Dr. Robert E. Trost, Pacific Flyway Representative  
Division of Migratory Bird Management  
U.S. Fish and Wildlife Service  
911 NE 11th Ave.  
Portland, OR 97232-4181

Dear Dr. Trost:

The Pacific Flyway Council has reviewed the Draft Supplemental Environmental Impact Statement (SEIS) for the Issuance of Annual Regulations Permitting the Hunting of Migratory Birds and provides the following comments for consideration by the U.S. Fish and Wildlife Service. Thank you for the opportunity to review and comment.

## **Schedule and Timing of the General Regulatory Process**

The Council recognizes the savings and efficiencies of a single process for promulgating early and late hunting seasons. We are concerned, however, as to the potential impact this single process could have on hunting opportunity. That is, as uncertainty increases, there is likelihood for more conservative approaches to harvest. The SEIS states that “regulations likely would become slightly more conservative due to the increased uncertainty of the population status.” However, no analysis is provided to estimate how this approach would likely perform in the future. Because this is a key point in evaluating the change in regulation process timing, the SEIS should quantify and provide examples of how seasons would become more conservative. We are concerned about the loss of hunting opportunity, particularly for species that are already being managed with separate harvest strategies (e.g., scaup, pintails, canvasbacks). It is also unclear how the preferred alternative would integrate with the current adaptive approach to harvest management.

Because this is a major change to how we have done business for many years, the Council recommends the Service adopt the no action alternative followed with an historical analysis of how the Preferred Alternative would have impacted hunting seasons over the past 25 years. Based on findings, collaborate with the Flyways to develop and adopt a revised regulatory process, if deemed appropriate by all Councils. We believe that this approach will help address any unforeseen impacts. Finally, the Council recommends the Service work with the Flyways to assure the regulatory process and associated schedule fits the needs of key stakeholders.

## **Frequency of Review and Adoption of Duck Regulatory Packages**

The Council agrees with the five-year cycle for adjusting regulatory packages. In addition, the Council encourages the Service to work with Flyways within these five-year cycles to evaluate the role of hunting regulations in waterfowl hunter recruitment and retention.

## **Stock-Specific Harvest Strategies**

The Council is concerned that the analysis within the SEIS assumes stock-specific harvest strategies are the only form of managing harvest for species with a lower harvest potential. That is, the SEIS frames the preferred alternative with alternatives that either expand or reduce the use of stock-specific harvest strategies. However, there are a number of other forms of harvest management that can serve the same purposes and may be more beneficial. For instance, USGS (Fred Johnson, 2009 AHM Work Group Presentation) provided eight examples of different harvest management approaches that can be used to accommodate low harvest potential species. The Council agrees with the intent of *minimizing expansion* of species specific harvest strategies.

Among these harvest strategies, the approaches appear to vary between pintail, scaup, and canvasback (e.g., canvasback seasons are very restrictive even when close to objective). We believe it would be useful to develop standardized criteria to guide development of any new strategies (e.g., population index X% below objective). In the longer term, however, we recommend the Service work with flyways in a more structured and collaborative manner to identify and implement one or more harvest management strategies that may better serve hunters and the waterfowl resource.

## **Special Regulations**

The Council supports the preferred alternative.

## **Management Scale for the Harvest of Migratory Birds**

The Council concurs with managing three separate mallard stocks, as that is biologically based and foundational to the flyway systems. We do, however, question the definition of “management scale” which implies harvest management and monitoring scales are by necessity the same. Depending on how this is applied, the Council does not necessarily agree with this assumption. For instance, it should be possible for states to adopt a more restrictive harvest management package, while utilizing population and harvest monitoring schemes at a flyway and/or mallard stock scale. As an example, when the USFWS sought input on the scaup harvest strategy in 2008, many interior states in the Pacific Flyway recognized potential benefits of a lower bag limit and a full season length—avoiding season within season complexity; but the coastal states sought a shorter season with larger bag limits to accommodate dedicated scaup hunters, unique to coastal states. Allowance of different harvest packages would assist states in achieving hunter recruitment or retention goals. The Council therefore recommends the Service recognize the value for states to choose from two or more harvest strategies (e.g., a standard package such as the status quo and a more conservative simplified package).

## **Zones and Split Seasons**

The Council supports a five-year cycle for adjusting hunting zones and season splits as defined in the preferred alternative. Furthermore, the Council does intend to provide additional comments relative to the separate environmental analysis that is soon to be underway, related to number of allowable hunting zones and season splits.

## **Subsistence-Harvest Regulatory Process**

The Council supports the preferred (no change) alternative. This allows a spring-summer subsistence hunting season with regulations necessary to ensure long-term conservation of the migratory bird resource. Harvest should be managed for consistency with customary and traditional subsistence harvest practices, including egg gathering, and should be evaluated based on each species' conservation status and potential impacts of harvest. The long-term conservation of migratory birds in Alaska depends upon the cooperation of rural residents. Without local cooperation in rural Alaska, long-term conservation efforts enacted solely through the regulatory processes will be ineffective. All management actions considered by the Service to regulate subsistence harvest should be reviewed by the Alaska Migratory Bird Co-Management Council (AMBCC) through the AMBCC process.

Thank you for considering our comments and recommendations.

Sincerely,

Ken McDonald, Chair  
Pacific Flyway Council

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 16 - Letter Supporting Carp Management at Malheur NWR, Oregon

### Recommendation

The Pacific Flyway Study Committee recommends that the Council send the attached letter to Robyn Thorson, Regional Director, Pacific Region, U.S. Fish and Wildlife Service, regarding support for carp control and wetland habitat management on Malheur NWR, Oregon.

### Justification

Malheur Refuge is one of the major migration and waterbird use areas of the Pacific Flyway. Its importance for many significant bird populations is unprecedented. Numerous biologists and habitat joint venture partners recognize the importance of this refuge and promote a preferred management option for enhanced carp control to rehabilitate important wetland habitats in the area.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Brad Bales

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



March xx, 2011

Robyn Thorson, Director  
Pacific Region  
U.S. Fish and Wildlife Service  
911 N.E. 11th Avenue  
Portland, Oregon 97232-4181

Dear Robyn:

The Pacific Flyway Council that represents 11 western states recognizes the importance of Malheur National Wildlife Refuge to Pacific Flyway waterbird populations as the refuge sometimes supports over half of the Flyway populations of some important waterfowl species during the breeding and migration periods. We also know that invasive carp have seriously degraded the waterfowl carrying capacity of Malheur Lake and other wetlands in the Harney Basin. We understand that one alternative in the Refuge's Draft Comprehensive Conservation Plan (CCP) to restore aquatic health of Malheur Lake, uses an integrated approach of establishing a broad partnership and basin-wide approach to control invasive common carp.

We strongly support this carp control alternative and urge the Fish and Wildlife Service to select this Malheur carp control initiative as the preferred alternative in the CCP. We believe that selecting this alternative will highlight the importance of this refuge and hope that adequate funding will be provided to implement this important alternative. We believe that Malheur Refuge and the Harney Basin are appropriate areas to develop new tools and methods for dealing with the impacts of carp. These techniques can be imported to other wetland basins to improve wetlands for waterfowl and other migratory birds and help contribute towards achieving healthy and sustainable bird populations throughout the Pacific Flyway.

Sincerely,

Ken McDonald, Chair  
Pacific Flyway Council

c. Robin West, Regional Refuge Chief  
Robert Flores, Refuge Supervisor  
Tim Bodeen, Project Leader

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## **Recommendation 17 - Letter to Acting Chief, Division of Migratory Bird Management, regarding Midwinter Waterfowl Survey Review.**

### **Recommendation**

The Pacific Flyway Study Committee recommends the Council send the attached letter that is in response to a letter received from Bob Blohm, December 2010.

### **Justification**

The USFWS sent a letter to each of the flyways that seeks their participation in a review of the midwinter waterfowl survey (see attached, following the recommended letter). Don Kraege, Mike Rabe, and Melanie Weaver will assist with the review.

### **Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Mike Rabe

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



March xx, 2011

Marcia Pradines, Acting Chief  
Division of Migratory Bird Management  
Arlington Square, MS MBSP 4107  
4401 N. Fairfax Drive  
Arlington, VA 22203, USA

Dear Ms. Pradines:

The Pacific Flyway Council supports the Service intent to examine the utility of and to summarize existing protocols for the midwinter waterfowl survey as Dr. Blohm described in his letter to all four flyway Councils in December, 2010. Our Study Committee has already begun compiling data from our state survey operations and will continue to do so.

We welcome the opportunity to provide our perspective on the survey and the usefulness of the data collected. We have a mutual interest in assuring the safety of our people, and that we conduct only those surveys that are necessary for effective wildlife management. To conduct this review as efficiently as possible, please contact me as soon as you can so we can further coordinate our efforts.

Sincerely,

Ken McDonald, Chair  
Pacific Flyway Council

Cc: Robert Trost



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Washington, D.C. 20240



Mr. Ken McDonald  
Wildlife Division Administrator  
Montana Fish, Wildlife and Parks  
P.O. Box 200701  
Helena, MT 59620

Dear Mr. McDonald:

As we are all well aware, this past year has been a difficult period, with several aircraft accidents associated with various wildlife surveys. These tragic events clearly saddened all of us and prompted some to reflect on our ongoing programs, particularly with regard to the use of aircraft in the conduct of wildlife surveys, and the safety of our biologists who participate in these programs. Additionally, we recognize the fiscal constraints that our wildlife agencies are under and the impact of those constraints on our collective ability to perform these surveys.

The cooperative Midwinter Waterfowl Survey, in existence for over 75 years, is one such survey whose value has been questioned recently. Although this survey has been the subject of past reviews, given the recent accidents and funding issues, agency personnel have suggested that it might be an appropriate time to conduct a comprehensive review of the Midwinter Waterfowl Survey again. We concur and recommend that this review include several considerations, including: (1) whether or not the survey is still necessary and useful; (2) ways to improve the survey; and (3) for the first time, a review of existing safety and training standards that are currently in place to minimize the inherent risks that are always associated with aerial surveys.

Consequently, we are asking each Flyway to consider this issue at your 2011 winter meetings and advise us regarding your willingness to participate in this review. Division staff will also be addressing those considerations listed above. Our Flyway Representatives will be available to assist in coordinating the overall review and compile the information into a comprehensive report that will be useful to all of us in deciding the future direction of this longstanding monitoring program.

We envision that this effort will take approximately one year to complete and therefore suggest that the ongoing survey be conducted in its current form for the coming year. Additionally, Division staff will be available to respond to any questions you might have about this review proposal. We look forward to your reply following your winter meeting discussions.

Sincerely,

Robert J. Blohm  
Chief, DMBM

cc: Atlantic Flyway Representative  
Mississippi Flyway Representative  
Central Flyway Representative  
Pacific Flyway Representative



---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 18 - Zones and Season Splits Change

### Recommendation

The Pacific Flyway Council requests the United States Fish and Wildlife Service (USFWS) extend the current open period for states to select hunting zone and season split combinations to June 2012.

### Background and Justification

In fall 2010, the USFWS began a draft Environmental Assessment (EA) of hunting zone and split options that was submitted to the Solicitor's Office, but is not yet available for public comment. Additionally, the USFWS requested the National Flyway Council (NFC) initiate an evaluation of hunter responses to zone and season split combinations. The NFC submitted a draft study proposal in January 2011, but the Service rejected the proposal while recommending methods for its improvement.

Due to these procedural delays, the SRC will likely not approve additional options for zone/split combinations in the 2011 open period. Under the current system, States wanting additional options will need to wait until 2016. An extension of the open period until June 2012 will enable the Service, SRC, and States to fully analyze and potentially implement the additional options rather than waiting an additional five years.

The additional flexibility associated with increased options is expected to result in increased hunter satisfaction as States are better able to tailor hunting seasons and zones to hunter requests.

In 1991, the USFWS offered States three options for combining waterfowl hunting zones and season splits. These options include:

1. Three zones with no splits.
2. Split seasons (no more than 3 segments) with no zones
3. Two zones with the option for a 2-way split seasons in one or both zones.

States that had more zones and/or split seasons in 1991 were allowed a grand-father clause and thus retained additional zones and/or split seasons.

On a five year basis, states without a grandfather clause choose from among the three options above. The current year is open for such selection.

In July 2010, Flyway Councils asked the Service Regulations Committee (SRC) to expand available options for zone and split combinations. Specifically, Councils asked for two additional options:

1. Three zones with a 2-way split season in one or all of the zones, and
2. Four zones with no split seasons.

As with the options proposed in 1991, those states with grandfather clauses would retain additional zones and/or split seasons.

**Adoption**

Pacific Flyway Study Committee  
March 4, 2011

Contact: Jon Runge



---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011



---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## **Recommendation 19 - Harvest Management Working Group Terms of Reference and 2011 Priorities**

### **Recommendation**

The Pacific Flyway Council supports the attached edits to the Adaptive Harvest Management Working Group Terms of Reference, to address concerns about the composition and role of the group.

### **Justification**

The AHM Working Group was initially formed in 1992 as the Stabilized Regulations Working Group and during the past 18 years evolved into the Adaptive Harvest Management Working Group. Recently, several state representatives on this working group have become concerned about how positions of the group have been presented after recent meetings, often from the results of informal voting rather than consensus. As a result, the group decided that a more formal description of roles and responsibilities (Terms of Reference) was needed, and a draft was developed at the December 2009 meeting. The Pacific Flyway Council provided comments on the draft terms of reference at its March 2010 meeting (Rec. 22), that suggested improvements to address composition of the group and to define responsibilities relative to the Flyway Councils and SRC. The working group reconsidered the Terms of Reference at their December 2010 meeting in New Orleans and also added a list of priorities for the coming year, which were forwarded to the February 2011 SRC meeting. At the SRC meeting, Pacific Flyway consultants and the SRC chair noted additional concerns about the draft, mainly in regard to the decision-making section. The original draft was then distributed to Flyway Councils for review and comment at their winter meetings. The Pacific Flyway Council believes that the group serves a valuable role as a technical information conduit among management agencies and Flyway Councils, but proposes the attached revisions to address continued concerns about composition of the group, roles of the group within the Flyway Council system, and decision-making. The National Flyway Council could serve a facilitating role to ensure all four flyways support a Terms of Reference for the AHM Working Group.

**Adoption**

Pacific Flyway Study Committee

March 4, 2011



---

Rick Northrup, Chair

Pacific Flyway Council

March 15, 2011



---

Ken McDonald, Chair

Contact: Don Kraege

---

# Pacific Flyway Council Edits

March 2011

## Harvest Management Working Group

### Terms of Reference

2 December 2010

#### **Background**

Following the publication of Supplemental Environment Impact Statement on Sport Hunting in 1988, the

U.S. Fish and Wildlife Service (FWS) desired to develop a regulations-setting process consistent with the preferred alternative of stabilized regulations for fixed periods of time. In 1992, a working group originally comprised of 21 technical representatives from the FWS, the four Flyway Councils (Councils), and the U.S. Geological Survey (USGS) was established at the request of the Service and with the cooperation of the Councils.

The work of this group culminated in the FWS adopting an adaptive management process for establishing duck harvest regulations in 1995. The process came to be identified as Adaptive Harvest Management and the group of technicians the Adaptive Harvest Management Working Group. The Working Group evolved into a partnership of representatives from the FWS, the Councils, Canadian Wildlife Service (CWS) and USGS. During 1992-2010, over 100 individuals have participated in 22 meetings held by the working group.

The FWS and the Councils recognized that numerous technical improvements and communication challenges associated with the implementation of this Adaptive Harvest management approach remained and the group continued to meet annually since the implementation of Adaptive Harvest Management for Mid-Continent mallards in 1995. The group expanded its scope to include other stocks of mallards, other species including some non-duck species, and the development of other model based harvest strategies. To reflect the changes in the roles and responsibilities for the group, the name of the group has changed several times since 1992, e.g. Stabilized Regulations Working Group, Interagency Working Group for the Development of Guidelines for Stabilized Harvest Regulations, Adaptive Harvest Management Technical Working Group, and Adaptive Harvest Management Working Group.

This Terms of Reference document describes the current administrative structure, expanded roles, membership, and responsibilities for this group. To reflect these changes, the name of the group has been changed to the Harvest Management Working Group (HMWG).

#### **Mission**

*To serve in an advisory capacity to the U.S. Fish and Wildlife Service and Flyway Councils by providing technical guidance, evaluation, and coordination for the development and improvement of harvest strategies for waterfowl management.*

#### **Roles and Responsibilities**

- (1) Identify and advocate actions that will further the development, evaluation and support for continued use and expansion of Adaptive Harvest Management as the process by which hunting recommendations are promulgated.

The working group will not make species recommendations regarding harvest regulations, but will strive to effectively communicate the technical background of this process to all stakeholders.

- (2) Assist in the synthesis of new information, development of analytical techniques, technical assessments, and retrospective analyses of existing data related to evaluation and further improvements of harvest management strategies.
- (3) Develop and implement communication strategies for harvest management as a scientifically and administratively sound approach for managing waterfowl harvests.
- (4) Work in cooperation with the NAWMP Science Support Team, Human Dimensions Working Group, and other entities in developing general approaches for planning, monitoring, and assessing an integrated strategy for managing waterfowl populations and their habitats. Invite representative members of the NSST and Human Dimensions working groups to participate in the annual Harvest Management Working Group meeting.
- (5) Evaluate the utility of technical tools and information to assist policy makers in understanding tradeoffs among multiple competing objectives and in identifying fundamental goals of harvest management.
- (6) Identify policy issues that need resolution to move harvest strategies forward, and elicit responses to those issues from appropriate administrators.
- (7) Provide annual progress reports as needed to the Flyway Councils and the FWS for review and potential action.
- (8) The primary focus of the HMWG will encompass duck harvest management, but may in the future address geese as appropriate.
- (9) In light of the expanded roles and responsibilities of the group which affect harvest management roles and responsibilities of all flyways, the HMWG should not be viewed as a surrogate to obtaining full flyway technical committee and Council input on important harvest management issues.

## Membership

The HMWG members (26) or their designees should provide policy and technical expertise in harvest management, habitat conservation initiatives, and human dimensions considerations. The HMWG consists of two appointed representatives from each of the 4 Flyway Councils (8), the respective FWS Flyway Representatives (4), Chief of Population and Habitat Assessment (DMBM) (1), Chief of Harvest Surveys (DMBM)(1), FWS Regional Migratory Bird Chiefs (8), representatives appointed by the USGS (2), and representatives appointed by the Canadian Wildlife Service (2). The composition of the group is designed to provide a broad array of geographic and administrative expertise for independent collaborative discussion of waterfowl management issues, rather than representation for individual agency positions. All costs of participation will be the responsibility of the attendees' agencies. In addition, any additional FWS, USGS, or Flyway/State technical personnel are welcome and encouraged to participate in meetings.

## Coordinator

The coordinator will be the Chief (or designated staff member) of the Population and Habitat Assessment Branch (DMBM). The coordinator will be responsible for presiding over meetings, overseeing group business including establishment of meeting agendas, and reporting on the activities of the group.

## Decision Making

The HMWG does not operate by majority rule, or formal voting, but will strive to reach consensus (i.e., no dissenting opinions) on all issues while working cooperatively. Consensus issues affecting flyway harvest management ultimately need formal endorsement by full flyway technical committees and councils before being considered official flyway input to USFWS and SRC on these issues. On issues where the group does not reach consensus, the meeting report will describe the differing viewpoints for future resolution.

## Meetings

The HMWG will meet at least once a year. Meetings will be planned to occur in advance of the January/February Service Regulations Committee Meeting, generally in November or December.

## 2011 Harvest Management Working Group Priorities

Priority rankings and project leads for technical work proposed at the 2010 Harvest Management Working Group meeting.

### (1) Highest Priorities (Urgent and Important)

- Mid-continent mallard AHM sub-model performance assessment (*Scott Boomer, Nathan Zimpfer, Mark Vrtiska, others...*)
- Eastern mallard AHM sub-model performance assessment (*Bryan Swift, Min Huang, Guthrie Zimmerman, Pat Devers*)
- Updated methods for estimation of mallard harvest rates (*HMWG, PHAB*)
- Evaluation and development of adjustments to harvest strategies based on changes in timing of regulatory decisions in association with proposed SEIS alternatives (*Entire HMWG... Leads to be identified for individual strategies*)
- Coherence/NAWMP Review collaboration with NSST and Human Dimensions representatives (*Scott Boomer (coordinate with Jorge Coppen), Pat Devers, Ken Richkus.*)

### (2) Long-Range Priorities (Non-urgent, but Very Important)

- Multi-stock management (*Jon Runge, Mike Runge, Greg Balkcom (?), Jim Gammonley*)
- Time dependent optimal solutions to address system change (*Scott Boomer, Fred Johnson, Mike Runge*)

### (3) Additional Priorities

- Incorporation of U.S. ponds into mid-continent mallard AHM reproduction models (*Jim Dubovsky, Nathan Zimpfer, Pam Garrettson*)
  - Western mallard AHM sub-model performance assessment (*Todd Sanders, Jon Runge, Dan Yarraguirre*)
  - Mid-continent mallard AHM objective function (*Guy Zenner, Josh Richardson, Mark Vrtiska, Jon Runge*)
  - Alternative methods for updating model weights (*Scott Boomer, Todd Sanders, Mike Conroy?, Guthrie Zimmerman, Pat Devers, Mike Runge*)
  - Alternative scaup population model(s) (*Scott Boomer, Diving Duck chairs*)
  - Developing methods to communicate with constituents (*Dave Case, Pam Garrettson, Communications Team*)
    - Planning for communication challenges associated with changing packages
    - Updating Harvest Management Working Group communications plan
  - Harvest Management Working Group coordination with monitoring program reviews (e.g., WBPBS, Banding Needs,... *Nathan Zimpfer, Pam Garrettson*)
-

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 20 - Study Committee Assignments and Representation

### Recommendation

The Pacific Flyway Council approves the following Council assignments and changes to Study Committee representation for national working groups.

- Pacific Flyway Council Treasurer—replace Tom Aldrich (UT) with Jeff Knetter (ID)
- Pacific Flyway Council Secretary—replace Dan Yparraguirre (CA) with Mike Rabe (AZ)
- AHM Working Group representative—replace Dan Yparraguirre (CA) with Jeff Knetter (ID)
- Teal Working Group representative—replace Tom Aldrich (UT) with Justin Dolling (UT)

### Justification

The above appointments and changes are necessary to continue work of the Pacific Flyway Council and to satisfy requests for Pacific Flyway representation. Tom Aldrich retired and Dan Yparraguirre was promoted, leaving a number of vacant assignments. Travel expenses for the annual AHM working group meeting (a three-day meeting) are covered by PFC funds. Teal Working Group has not required travel, only periodic conference calls. Council Secretary requires travel to the spring PFC meeting, which is also covered by PFC funds.

### Adoption

Pacific Flyway Study Committee  
March 4, 2011

Contact: Rick Northrup

---

Rick Northrup, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## **Recommendation 21 - A request for the Pacific Flyway Nongame Migratory Bird Technical Committee to be included on the U.S. Fish and Wildlife Service's Eagle Technical Assessment Group.**

### **Recommendation**

The Pacific Flyway Council recommends that the U.S. Fish and Wildlife Service (Service) include representation from the Pacific Flyway Nongame Migratory Bird Technical Committee (NTC) as part of the Service's Eagle Technical Assessment Group (see attached letter).

### **Justification**

Members of the NTC have technical expertise and management responsibilities regarding eagle populations within their respective state that would benefit the findings and decisions made by the Eagle Technical Assessment Group. Since those decisions and recommendations will have major implications on state wildlife agencies in the effort to conserve eagles, we believe our participation on the Technical Assessment Group is in our best interests as well as the Service's.

### **Adoption**

Pacific Flyway Nongame Migratory Bird Technical Committee  
March 8, 2011

---

Catherine Wightman, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

## PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



March xx, 2011

Mr. Paul Schmidt  
Assistant Director, Migratory Birds and State Programs  
U.S. Fish and Wildlife Service  
Arlington Square, MS MBSP 4107  
4401 N. Fairfax Drive  
Arlington, VA 22203

Dear Mr. Schmidt:

The Pacific Flyway Council (PFC) is aware that the U.S. Fish and Wildlife Service (Service) has convened a Service Eagle Management Team (EMT) to address ongoing and emerging issues related to Bald and Golden Eagle conservation and management stemming from recent revisions to eagle take regulations. The PFC respectfully requests representation on the Service's Eagle Technical Assessment Team, one of three sub-teams formed under the EMT.

The PFC, through the work of its Nongame Technical Committee (NTC) has actively engaged in reviewing and responding to all of the eagle take regulatory revisions released by the Service to date. The PF NTC is currently reviewing the Draft Eagle Conservation Plan Guidance and the Draft Voluntary Land-Based Wind Energy Guidelines. These regulatory revisions and proposed guidelines are of significant interest and concern to the PFC and individual state member agencies. In consideration of state wildlife agency eagle management responsibilities and our considerable collective expertise in Bald and Golden Eagle management and monitoring, it is imperative that coordination on these issues occur at the early developmental stages. PF NTC representation on the Service's Eagle Technical Assessment Team will facilitate communication and collaboration in developing eagle activities of mutual interest such as the design of a range-wide Golden Eagle monitoring program.

The PF NTC represents a collective body of state agency expertise and a structured point of coordination for the Service to actively collaborate with states on all aspects of eagle management. We appreciate your consideration of this matter, and look forward to your response.

Sincerely,

Kenneth P. McDonald  
Chairman, Pacific Flyway Council

cc: Brian Millsap  
Pacific Flyway Council  
Pacific Flyway NTC  
Flyway Council Chairs

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Recommendation 22 – A Policy Statement Pertaining to Avian Predation on Fish Resources in Pacific Flyway States.

### Recommendation

The Pacific Flyway Council adopts the attached policy statement pertaining to avian predation.

### Justification

The attached policy statement includes pertinent background and justification.

### Adoption

Pacific Flyway Nongame Migratory Bird Technical Committee  
March 8, 2011

---

Catherine Wightman, Chair

Pacific Flyway Council  
March 15, 2011

---

Ken McDonald, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Pacific Flyway Council Policy Statement — Avian Predation on Fish Resources

### I. Purpose and Scope:

This policy statement is intended to provide general guidance to member states of the Pacific Flyway (Flyway) when addressing migratory bird predation issues on fish resources in open waters. The policy establishes guiding principles developed for the Pacific Flyway Council (Council) to consistently respond to avian predation issues in an informed manner. These principles may also serve as a guide to member states responding to more localized bird-fish conflicts in the immediate future that precede Flyway planning and coordination initiated under this policy. Inherent in this policy is the recognition that management of avian predation must be implemented in a manner and at a scale consistent with the conservation of migratory bird populations and the fish populations with which they interact. This policy statement does not apply to hatchery, aquaculture facility, and/or private property concerns as these issues are currently addressed on a case-by-case basis through existing avian management practices.

### II. Shared Management Authority:

Migratory birds comprise a shared international resource that provides substantial intrinsic and ecological benefits to the citizens of the U.S. and other countries. Federal authority to manage and protect migratory birds is derived from the Migratory Bird Treaty Act (MBTA) of 1918 [16 U.S.C. 503, as amended]. The Fish and Wildlife Conservation Act (1956) authorizes the coordination between the states and the U.S. Fish and Wildlife Service for wildlife conservation purposes. With specific regard to migratory bird damage control, some states within the Flyway have developed Memoranda of Understandings with the Wildlife Services Division of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service. Therefore, management of migratory birds, including avian predation control throughout the Flyway, is the joint responsibility of state and federal agencies.

### III. Guiding Principles:

- (1) **Vision and values are clearly and objectively defined** —
  - (a) Migratory fish-eating birds are intrinsically valuable components of naturally-functioning ecosystems throughout the Flyway and are protected under international treaties, and state, provincial, federal, and tribal laws.
  - (b) Native fish populations subject to predation by migratory birds are also intrinsically valuable components of the same ecosystems.
  - (c) Non-native fish populations have other important values (e.g., recreational and economic).

- (d) The extent to which naturally-functioning ecosystems (relative to both bird populations and fish prey populations) have been altered by artificially-created or human-modified habitats, and/or subject to habitat loss, is acknowledged.
  - (e) Where avian-fish conflicts occur, management options provide opportunities to seek the greatest balance with respect to conservation of both avian and fish resources.
  - (f) Science-based conservation informs issue resolution at all levels of management.
- (2) **Avian predation issues are best addressed within the context of population and distribution objectives established for the Flyway —**
- ~~(a) Avian predation issues require comprehensive, multi-state or Flyway wide approaches to management even though they are generally localized in nature.~~
  - (b) Coordinated inter-state management is essential.
  - (c) Consultations involve all affected stakeholders within the range of the subject populations.
  - (d) All conservation, economic, recreational, and societal values are fully considered.
- (3) **Dialogue between states, provinces, federal, and Tribal partners is critical —**
- (a) Shared and differing migratory bird management authorities and conservation objectives are considered.
  - (b) Shared objectives for at-risk, candidate or species (birds and/or fish) listed as Threatened or Endangered (T&E) under the Endangered Species Act (ESA) are considered at the appropriate geographic scale.
  - (c) Value of state and provincial recreational interests is considered.
  - (d) Management authority is recognized and respected.
- (4) **Responses to perceived avian predation issues are based on sound science —**
- (a) Magnitude and scope of predation impacts are best demonstrated through empirical evidence.
  - (b) Monitoring, data sharing, data gaps, and research needs are acknowledged and addressed.
  - (c) Expectations of how management actions will reduce impacts to affected fish populations are explicitly addressed.
  - (d) Expected outcomes of management actions on affected avian populations are clearly understood.
  - (e) Measures are implemented to assess effectiveness of management actions and inform future direction (i.e., adaptive management).
- (5) **Important considerations when evaluating the need for management action in response to avian predation on fish resources —**
- (a) Assessment of population-level impacts for both migratory birds and fish.
  - (b) T&E species conflicts.
  - (c) Native species conflicts.
  - (d) Non-native sportfish impacts.
  - (e) Cost-benefit analyses for proposed management strategies.
- (6) **Methods for reducing avian predation on fish resources are always implemented within existing regulatory frameworks —**
- (a) National Environmental Policy Act, ESA, MBTA, and applicable state, provincial, federal, and Tribal regulatory compliance are fully addressed in all proposed management actions.

- (b) Nonlethal control actions that result in no direct take of nongame migratory fish-eating birds should be attempted first.
- (c) If nonlethal control actions are deemed infeasible or ineffective, then lethal methods may be considered on a case-by-case basis.

#### **IV. Pacific Flyway Policy Statement:**

It is the policy of the Council that issues related to migratory bird predation on fish resources in open waters be addressed using the above guiding principles and that comprehensive management plans for migratory fish-eating birds be established by the Council.

## **Informational Notes**

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Informational Note 1 - Management Plan for Midcontinent White-fronted Goose

The Pacific Flyway Study Committee requests the Pacific Flyway Council review the 2010 revised Management Plan for the Midcontinent Greater White-fronted Goose with intention to seek Council adoption at the July 2011 meeting. Simultaneously the Mississippi and Central Flyway Councils will also review and consider the Plan. The purpose of this plan is to provide guidelines for management decisions that affect the population with a goal to maintain the population at a level that will optimize harvest opportunities and other public benefits consistent with the welfare of the population, international treaties and habitat constraints. The Pacific Flyway Council is engaged with this plan on behalf of Alaska, the only Pacific Flyway state that hosts this population.

The 2005 plan specified a review at five-year intervals by the Central, Mississippi, and Pacific Flyway Councils, their technical committees, and representatives from the Canadian Wildlife Service and the U.S. Fish and Wildlife Service. A revised Management Plan was completed in 2010. As with the 2005 Plan, this plan treats Midcontinent White-fronted Geese as a single population, with consideration for special management options for identifiable and manageable segments or subunits within the population. This Plan contains demographic updates but no major changes from the 2005 Plan which successfully addressed the need for significant regulatory modifications.

### Adoption

Pacific Flyway Study Committee

Contact: Dan Rosenberg

March 4, 2011

---

Rick Northrup, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Informational Note 2 - Flyway Council By-Laws and Quorum

In recent years reductions in state government budgets and out-of-state travel restrictions have created potential issues for establishment of a quorum at Council meetings in order to adopt regulatory recommendations. While the current Council by-laws allow for proxy and electronic communications for voting, current language makes it unclear if a 2/3 membership needs to be present physically to conduct a meeting. The following is language in the current by-laws:

*In all U.S. regulatory matters, only U.S. state fish and wildlife agency members will have one vote. A quorum of state membership must be present during a meeting to consider regulatory recommendations. A quorum is considered to be 2/3 of the active state membership. A majority is considered to be more than 50 percent of the current active state membership. PFC and PFSC activities do not supersede regulatory decision making processes in Canada and Mexico.*

***In all non-regulatory matters, each PFC member will have one vote. A quorum of the PFC must be present during a meeting to adopt any formal recommendation. A quorum is considered to be 2/3 of the current active participants. A majority is considered to be more than 50 percent of the current active membership. Flyway management plans, even though they may contain some language on regulatory matters, are subject to majority approval by the full PFC membership (U.S. and non-U.S. members).***

*Voting members not present at a meeting may vote by proxy, by telephone or written communications (including electronic transmissions), or other means deemed appropriate by the Chair. In voting matters, the Chair will not recognize an active member of the PFSC as a proxy. Voting will be by formal motion and voting proceedings shall follow Robert's Rules of Order. The Secretary will be responsible for reviewing all proceedings for compliance with Robert's Rules of Order and shall provide a copy of the rules at all meetings.*

The bolded language above has raised the question if presence is mandated to be physical or by other means. For those who drafted the current by-laws it is believed that the intent was for a quorum to be comprised of a physical presence but some other means of voting could be allowed by others not present if deemed appropriate by the Chair. Similar quorum questions have been raised by both the Flyway Study Committee and the Non Game Technical Committee. Members from the Council and the two technical committees have mixed opinions on how best to form a voting quorum. Each technical group has relied on some forms of electronic communications in recent meetings to allow some members to participate.

Also in question would be if necessary quorum requirements need to be the same between the Council and its two technical committees. In the past it has been policy to make by-laws as consistent as possible for all three bodies but could vary if deemed appropriate.

The Study Committee would like to begin discussions with Council on how best to address voting quorums in the future and evaluate various electronic means that have been used in recent meetings. If appropriate, language amendments to current by-laws may be needed.

**Adoption**

Pacific Flyway Study Committee

Contact: Dan Rosenberg

March 4, 2011

A handwritten signature in blue ink, appearing to read 'RMA', is positioned above a horizontal line.

---

Rick Northrup, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Informational Note 3 - The Pacific Flyway Migratory Bird Habitat Committee

In March 2010, The Pacific Flyway Study Committee (PFSC) and staff from 3 Joint Ventures organized a work session to establish the Pacific Flyway Migratory Bird Habitat Committee. The Habitat Committee includes scientific staff from Joint Ventures within the Pacific Flyway as well as Study Committee and Nongame Migratory Bird Technical Committee members. The basic purpose of the Habitat Committee is to provide a forum for advancing conservation by more effectively integrating habitat and population management activities—fitting with the need to establish clearer coherence between habitat and population objectives.

A second meeting was held on March 3, 2011 with representatives from 3 Joint Ventures, the Nongame Technical Group (NTC), the U.S. Fish and Wildlife Service, the Canadian Wildlife Service, and the PFSC. The focus was to develop a process to integrate Joint Venture Planning with Flyway Population Management needs. The group 1) reviewed and edited a draft charter for the Habitat Committee, which will undergo further review by the NGTC; 2) recognized the importance of integrating Flyway Management Plans with Joint Venture planning processes; 3) identified shared information needs and suggested methods for improved communication and information exchange at local, regional, and flyway levels; and 4) identified informational and organizational topics for future meetings. These will be defined in more detail in the coming months. The Habitat Committee intends to meet annually either during the spring or winter meetings of the Pacific Flyway technical committees, while accomplishing jointly beneficial tasks during the interim.

### Adoption

Pacific Flyway Study Committee

Contact: Dan Rosenberg

March 4, 2011

---

Rick Northrup, Chair

---

# PACIFIC FLYWAY COUNCIL

---

Alaska • Arizona • California • Colorado • Idaho • Montana  
Nevada • Oregon • Utah • Washington • Wyoming



## Informational Note 4 - Upcoming Issues and Business of the Pacific Flyway Nongame Migratory Bird Technical Committee

Based on information and communications from the USFWS, the Nongame Migratory Bird Technical Committee (NTC) will be working on or anticipating the following issues in the coming months:

1. USFWS revision of the 2003 Double-crested Cormorant EIS. This revision may involve changes to the current Public Resource Depredation Order for cormorants. The USFWS is interested in considering ongoing or proposed management strategies or plans for Double-crested Cormorants at the local, state or flyway scales in this revision. The USFWS will need this information, and possibly additional information on cormorant populations and management within the next 12 to 18 months in order to be considered or incorporated in the EIS. There will be multiple opportunities to comment on the EIS revision in the future.
2. Comments on the draft Eagle Conservation Plan Guidance and draft Land-based Wind Energy Guidelines due on May 19, 2011. The NTC is organizing a coordinated flyway response to these guidelines.
3. Continued coordination within the Pacific Flyway, and in cooperation with USFWS, regarding Golden Eagle monitoring and management issues.
4. Participation in the Pacific Flyway Habitat Committee.
5. Continued efforts to finalize a Pacific Flyway policy on avian predation and work on next steps as directed by Council.
6. Continued issues with member attendance and securing out-of-state travel approvals and meeting quorum requirements.

### Adoption

Pacific Flyway Nongame Migratory Bird Technical Committee

March 8, 2011

---

Catherine Wightman, Chair

# Pacific Flyway Study Committee Subcommittee Reports

## 1. WMU Mourning Dove Subcommittee

Melanie Weaver, California

Population Status.— Seven states (Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington) comprise the Western Management Unit (WMU) and represent 24% of the land area in the United States. This is the third year in which populations have been assessed using the interim harvest management strategy for mourning doves, which was approved by the Pacific Flyway Council in 2008. This interim strategy uses a hierarchical model that uses four sources of data to derive trend: Call Count Survey heard, Call Count Survey seen, Breeding Bird Survey data, and an estimate of population size that is derived from banding returns and harvest estimates from the Harvest Information Program. The result of this model is a composite trend indicator for each of the three mourning dove Management Units. For 2010, the trend derived from that model indicated a -2.8% decline (the posterior probability interval spans -5.8 to 0.1); essentially the same as the previous estimate (-1.9%). This trend estimate specifies a moderate harvest package, the same as the previous year.

Harvest Information.— The 2009 WMU dove harvest estimate was 2,241,000, up slightly from 2008 (2,210,700).

Management Activities.— Banding was conducted in Utah, California, Arizona, Oregon and Washington and banding efforts are proposed to continue. The Mourning Dove Subcommittee was updated on the following by Mike Rabe who participates on the MODO Task Force:

The consensus is to move forward with the harvest strategy as an iterative process. Sanders, Seamans, and Otis have enough information to move forward with the initial development of predictive population models. There is a need to revisit the regulation option matrix and discussions should include ideas about possible changes in the actual regulation packages.

Mail address and web address band reporting rate evaluation: there were some increases in reporting rates with the web address bands. There are concerns that the new rules required by USGS-BBL requiring sub-permittees will slow the process down.

The National dove wingbee was continued in November 2010. All agree that the current approach is working smoothly. Travel support is a concern and the group wants to ensure participation in the long term.

The National Dove Hunter Attitude Survey is still going through the approval process in Service administration even though it was approved at the July 2010 Council meeting. Missouri will contribute an additional \$15k to support the additional analysis work. That survey is expected to be mailed out in summer 2011.

Adrianna Araya of the Service relayed to the group that the Service had contracted out to develop a “how to band” video to aid in training the MODO banders. A draft video should be ready in early March and Adrianna will coordinate a state review with a deadline for comments by March 18.

Research Activities.— None reported.

Recommendations.— The subcommittee recommended the following to the full Study Committee: 1) The mourning and white-winged dove frameworks be combined; 2) an aggregate bag be available for all states; and 3) select a moderate season framework for dove.

## **2. White-winged Dove Subcommittee**

Mike Rabe, Arizona

Population Status.— White-winged doves are assessed in North America primarily by surveys conducted by State agencies in Arizona and Texas. In Arizona, the call count index for white-winged doves are collected concurrent with the mourning dove surveys in May. In Arizona, the count from 2007 was 24.7 birds per route, the 2008 count was 26.9 birds per route and in 2009, the mean number of doves heard per route was 27.9. In 2010, the mean annual count of doves heard per route was 23.6, a slight decrease from the previous year's count. The Breeding Bird Survey estimates a positive trend for White-winged doves in California, a slightly negative trend for Arizona and a positive trend for the Western Management Unit (WMU) as a whole. Many states in the WMU report that infiltration of Eurasian collared doves continues within urban centers of those states, with expansions to outlying rural areas with human habitation and habitat. So far, there is no evidence that Eurasian collared doves compete with native dove species in the Southwest.

Harvest Information.— The HIP estimate of White winged dove harvest in the WMU in 2007 was 197,300 ( $\pm 21\%$ ). In 2008, white-winged dove harvest was 179,900 birds ( $\pm 20\%$ ) and in 2009 192,700 ( $\pm 16\%$ ) were harvested.

Management Activities. — Arizona reported that it continues to band White-winged doves incidentally to its mourning dove banding program. Arizona banded over 503 white-winged doves in 2008 and 389 doves in 2009. Approximately 420 white-winged doves were banded in 2010 in Arizona.

Research Activities.— None reported.

Recommendations.— At the request of the Fish and Wildlife Service, the mourning and white-winged dove frameworks have been combined this year. A recommendation for no change in the season framework for the 2011 season was forwarded to the Study Committee for consideration. This framework includes an aggregate bag for WWDO throughout the flyway.

## **3. Pacific Coast Band-tailed Pigeon Subcommittee**

Brad Bortner, U.S. Fish and Wildlife Service

Population Status and Harvest Strategy.—Todd Sanders provided a copy of a memo on the population status and harvest strategy as outlined in the 2010 Band-tailed Pigeon Management Plan. The annual index of abundance is derived from the Mineral Site Survey (MSS, n=48). The MSS index fell within the prescribed restrictive alternative (see attached memo).

Management Activities.—As of 8 February 2011, Band-tailed Pigeons were listed in the Canadian Species At Risk Act (SARA) as a “species of special concern”. Under the SARA, the federal minister, in cooperation with others, is legally responsible for the preparation of a management plan within three years of the species being listed.

Myke Chutter provided a copy of the Conservation Status Report prepared by the British Columbia Conservation Data Centre.

Research.—Mike Rabe presented the *Priority Information Needs for Band-tailed Pigeons, Zenaida Doves, White-tipped Doves and Scaly-naped Pigeons: A Funding Strategy* document that was prepared by the Association of Fish and Wildlife Agencies Migratory Shore and Upland Game Bird Support Task Force.

Todd Sanders reported on his research into pigeon use of sodium and calcium as mineral, artificial mineral site creation and indirect population estimation.

Recommendations.—The subcommittee recommends no change for the 2011-12 band-tailed pigeon seasons.

INSERT MEMO HERE

#### **4. Interior Band-tailed Pigeon Subcommittee**

Justin Dolling, Utah

Population Status.— The population status as assessed through the Breeding Bird Survey for interior states suggest a decreasing trend of 4.0% per year, and a 95% confidence interval of -8.3 to -0.08, from 1966 to 2009 (Sanders 2010).

Harvest Information. —The mean band-tailed pigeon harvest during 1999 to 2009 in Arizona, Colorado, New Mexico and Utah combined was 3,136 based on annual harvest estimates from the Migratory Bird Harvest Information Program (HIP). The harvest estimates in 2008 and 2009 were substantially above the previous nine years. State harvest surveys in Arizona and Colorado were discontinued when the HIP program was implemented; however they are maintained in Utah and New Mexico. The estimated harvest in Utah was six birds during the 2009 season. The 2009 harvest estimate for New Mexico is not yet available.

Management Activities.— None Reported.

Research activities. — None Reported.

Recommendations.— The subcommittee recommended no change in the season framework for interior band-tailed pigeons.

Sanders, T. A. 2010. Band-tailed pigeon population status, 2010. U.S. Department of the Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C.

#### **5. Rocky Mountain Sandhill Crane Subcommittee**

Joe Bohne, Wyoming

Population Status. — The 2010 fall coordinated survey counted 21,064 cranes, which is the third highest count for the period of record and just outside the range of the population objective of 17,000 - 21,000 cranes.

The 2010 October survey in the San Luis Valley, Colorado estimated 8.3% recruitment, which was down from 11.5% in 2009 and below the three year average of 9.6%.

Harvest Information. — The preliminary 2010 harvest estimate was 1,217 cranes, which is the second highest harvest to date but below the allowable harvest of 1,970 cranes.

Management Activities. — Wyoming expanded a hunting area for Mid-continent Cranes in eastern Wyoming from a county boundary to Interstate Highway 25 in northeast Wyoming in 2008 that could potentially have harvested some breeding Rocky Mountain Population (RMP) cranes. No crane harvest was detected in 2009 or 2010, based on hunter survey responses. The change potentially provided some additional opportunity to harvest mid-continent cranes and better defined the hunt area boundary.

Montana proposes to add two additional areas for expanding limited permit hunting:

1. Golden Valley County – This county, in the Central Flyway portion of the state, lies immediately east of an existing RMP Crane hunt area. A large wetland, Deadman’s Basin, is at the east edge of Wheatland County, and cranes from this area typically fly east into Golden Valley County to feed. Numbers of cranes counted during the September survey for Golden Valley County the last four years have been: 2007 – 235; 2008 – 389; 2009 – 519; and 2010 – 580.
  
2. Broadwater County – This county, which is in the Pacific Flyway portion of the state, would be a new RMP crane hunt unit—an addition to the four existing units. This new unit would provide crane hunting within the annual harvest allocation for Montana. Most hunting opportunities would occur along an 11-mile stretch of the Missouri River floodplain. Crane numbers here have increased substantially since the first fall staging survey was conducted in 2002 (297 cranes). The count in 2010 was 532 cranes, and the five-year average prior to 2010 was 610 cranes (range = 573-644). Because the staging takes place on a relatively small area, Montana Fish, Wildlife, and Parks would start out with a small number of permits (likely five); in combination with monitoring via ground surveys to better understand any significant changes in staging behavior. The hunt would be adapted based on monitoring information. This proposal is a response to local interest in having a crane hunt.

For both of these areas, monitoring of crane numbers will continue through the coordinated September survey, and crane harvest will be monitored through questionnaires, as is the survey technique for the existing units. All crane harvest in both counties will be considered RMP cranes.

Research Activities. — None reported.

Recommendations.— The subcommittee recommends no change in season frameworks for RMP sandhill cranes, except that Golden Valley County, Montana be added to an existing RMP sandhill crane hunting unit and that Broadwater County, Montana, be established as a new RMP sandhill crane hunting unit.

## 6. Lower Colorado River Valley Population of Sandhill Crane Subcommittee

Russell Woolstenhulme, Nevada

Population Status.—Surveys conducted by biologists in Arizona and California resulted in the following observations:

	Cibola NWR	Salton Sea NWR	Colo. River Indian Tribe	Gila River	TOTALS
1998	775	351	596	178	1,900
1999	1,200	325	511	163	2,199
2000	820	235	1,259	252	2,566
2001	961	350	952	134	2,397

	Cibola NWR	Salton Sea NWR	Colo. River Indian Tribe	Gila River	TOTALS
2002	1,003	417	168	52	1,640
2003	1,200	430	455	0	2,085
2004	1,341	521	354	312	2,528
2005	1,513	476	457	191	2,637
2006	1,141	493	673	360	2,667
2007	2,322	295	809	450	2,772
2008	115	687	-	413	1,215
2009	289	603	1,216	293	2,401
2010	266	904	729	365	2,350
2011	553	899	636	327	2,415
Averages:	964	499	678	249	2,429*

\* average does not include 2008 count

In 2009 and 2010 the survey protocol was improved by conducting most of the survey from the air and by counting all cranes within a few days of each other. In 2010, all counts except Salton Sea were aerial counts conducted by the same observer, Mike Rabe, Arizona Game and Fish Department (AGFD). The Colorado River Indian Tribe (CRIT) lands were surveyed with a CRIT biologist as a second observer in the aircraft on January 8, 2011. The Cibola aerial counts were conducted by AGFD on January 8, the Gila River near Buckeye was surveyed by AGFD on January 5, and the Salton Sea National Wildlife Refuge was a ground count conducted by staff biologists on the Refuge on January 6. The average of the last three counts (2009 – 2011) is 2,360 birds.

Veteran crane researcher Rod Drewien reported crane surveys on January 2, 2011. He counted 406 birds, including 38 juveniles, which resulted in an estimated recruitment of 9.4%. Mike Rabe, AGFD, reported that 29 broods were recorded during the survey; 20 of those were single colt broods and nine were double colt broods.

Harvest Information. — The AGFD successfully implemented a junior crane hunt on the Lower Colorado River Population this year. Five youth hunters were given the opportunity to hunt cranes on private lands in the Gila River area. All five had the opportunity to harvest but all five were unsuccessful and no cranes were harvested.

Research Activities. — Both Nevada and Arizona have ongoing research projects. Researchers with the Nevada Department of Wildlife (NDOW) and the University of Nevada, Reno marked a number of cranes with high visibility tarsal bands and followed colts with radio transmitters in Elko County in 2010. A full report of field activities and findings is available from NDOW. This was the final year of the project in Nevada, with final analysis still being conducted on the project. Efforts to locate funding for continuance of the project are underway. Arizona marked a single bird on Cibola Wildlife Refuge in 2010 and attached two Platform Transmitter Terminals (PTT) to cranes on Cibola NWR in February 2010. Arizona continues their effort to get

additional radios on cranes while those birds remain on the refuge this spring. Both research projects seek findings to delineate wintering and breeding areas. The Nevada project also attempts to define vital rates for colts hatched in the breeding area. This information will be used to develop better management for this population of sandhill cranes. Arizona and Nevada will continue to coordinate their research efforts.

Recommendations. — No hunt is recommended as survey results indicate the three-year average is below the 2500 birds required by frameworks to hunt LCRV cranes. To continue momentum on research for LRCV cranes, the subcommittee forwarded a letter encouraging further research to the Migratory Bird Chiefs in Regions 2 and 8.

## **7. Lesser and Central Valley Greater Sandhill Crane Subcommittees**

Brad Bales, Oregon

Population Status. — None reported

Harvest. — Dan Rosenberg, Alaska Department of Fish and Game (ADFG), reported the average annual harvest for cranes for subsistence harvest in Alaska (2004-2009) is 405 birds. The average annual sport harvest for cranes in Alaska (2002-2009) is 332 birds.

Management Activities. — Gary Ivey of Oregon State University and the International Crane Foundation handed out a brochure which summarizes the migration results of a satellite telemetry study of 10 lesser sandhill cranes marked near Homer, Alaska. The brochure illustrates their migration path and important wintering and migration staging areas. The brochure can be downloaded here:  
[http://www.savingcranes.org/images/stories/pdf/conservation/annual\\_travels\\_sh\\_cranes\\_homer.pdf](http://www.savingcranes.org/images/stories/pdf/conservation/annual_travels_sh_cranes_homer.pdf)

Gary also summarized some key points about his PhD study of wintering ecology of lesser and greater sandhill cranes in the Sacramento-San Joaquin Delta of California. He reported that greaters were much more sedentary than lessers, showed stronger site fidelity and flew shorter distances from roost sites to feed (commuting distance). Commuting distances for greaters averaged 2 km, compared to 5 km for lessers. This information will be used to develop models for conservation of crane habitat around roost sites.

Brad Bortner (USFWS) and Brad Bales, Oregon Department of Fish and Wildlife (ODFW), discussed growing complaints of crane depredation on agricultural lands in areas of NW Oregon. Some landowners are requesting crane hunts. The subcommittee would like to see an update of the lesser sandhill crane plan and further review population status of wintering cranes in the area prior to consideration of any hunts. A flyway plan update for this population is not scheduled at this time.

Brad Bortner requested input from Gary Ivey on the importance of refuge lands in the Othello, WA area for migrating sandhill cranes. The refuge is currently undergoing a management plan update.

Research. — None reported

Recommendations. — Dan Rosenberg moved a recommendation for no change in the lesser sandhill crane frameworks in Alaska. The subcommittee approved.

### 8. Rocky Mountain Population of Trumpeter Swans Subcommittee

Jeff Knetter, Idaho

Population Status.—The Subcommittee reviewed U.S. Breeding Flock production from summer/fall 2010. Overall, the number of nesting pairs (89) was 76 lower than the Management Plan objective, and the number of adults and subadults (568) was 150 birds below objective. The cool weather and above average precipitation does not appear to have had as negative an impact on production as in 2008, when only 48 cygnets fledged. In 2010, the number of nesting pairs increased both inside and outside the core area; however, since 2008, production in the expansion areas have exceeded that in the core areas.

Area	Occupied Sites	Nesting Pairs	Successful Nests	Cygnets Hatched	Broods Fledged	Cygnets Fledged	Total Adults (September)
MONTANA	28	24	14	32	12	31	129
WYOMING	39	25	18	66	15	48	149
IDAHO	31	22	19	62	9	29	101
<b>TRI-STATE TOTAL</b>	<b>98</b>	<b>71</b>	<b>51</b>	<b>160</b>	<b>36</b>	<b>108</b>	<b>379</b>
<b>TRI-STATE CORE</b>	<b>53</b>	<b>38</b>	<b>23</b>	<b>73</b>	<b>14</b>	<b>47</b>	<b>234</b>
<b>TRI-STATE EXPANSION</b>	<b>45</b>	<b>33</b>	<b>28</b>	<b>87</b>	<b>22</b>	<b>61</b>	<b>145</b>
<b>Restoration Flocks</b>							
Rabbit Valley Res, OR	0	0	0	0	0	0	5
Malheur NWR, OR	3	3	2	No data	1	2	6
Silvies Valley, OR	0	0	0	0	0	0	0
Sycan Marsh, OR	0	0	0	0	0	0	1
Summer Lake WMA, OR	0	0	0	0	0	0	11
Thompson Res., OR	0	0	0	0	0	0	1
Wood River Marsh, OR	0	0	0	0	0	0	0
Ruby Lake NWR, NV	4	6	1	3	0	0	18
Franklin Lake WMA, NV	0	0	0	0	0	0	0
Flathead Valley, MT	9	9	8	25	7	20	99
Blackfoot/Lincoln, MT	3	0	0	0	0	0	48
<b>RESTORATION TOTAL</b>	<b>19</b>	<b>18</b>	<b>11</b>	<b>28</b>	<b>8</b>	<b>22</b>	<b>189</b>

The 2013 Management Plan objectives for nesting pairs and adult/subadult birds are as follows:

	Montana	Wyoming	Idaho	Oregon	Nevada	Total
Nesting pairs	59	46	37	15	8	165
Adults/Sub adults	290	160	175	75	18	718

A complete summary of Tri-State Area Flocks productivity data is available from the Greater Yellowstone Trumpeter Swan Working Group (GYTSWG) *2010 Nesting Season Annual Summary Reports* (October 2010).

Dave Olson, U.S. Fish and Wildlife Service, reviewed results from the Fall 2010 and Winter 2011 RMP trumpeter swan surveys. The fall count of total swans was 484, 2.3% higher than the count from last year (473). The number of white birds in the Tri-State area (375) increased 3.9% from 2009. The counts for birds at Malheur NWR included two single adults this year. Once again the survey was conducted from the ground by volunteers and is considered an incomplete survey. Eleven swans were counted at Summer Lake WMA this year. Those 11 consisted of birds translocated from area in Wyoming. Also, there was one green collared swan at Sycan marsh and one unmarked swan at Thompson Valley Reservoir (M. St. Louis, personal communication). Ruby Lake NWR did not provide data for this report.

Preliminary results from the 2011 midwinter swan survey suggest that numbers (5,340) increased by 24% from 2010. The number of white birds (4,098) increased 13.8% and cygnets (1,242) increased 80% from 2010. This was the third highest count since 2000, and the results suggest that 91% of the birds were Canadian birds.

The 2010 quinquennial trumpeter swan survey was conducted during late summer, and the goal was to survey the entire summer range. All populations increased since 2005. The Rocky Mountain Population increased by 84% to 9,626 swans. The majority (93%) of these birds were found in Alberta. Those swans in the Tri-State and Restoration areas increased by 8% and 232%, respectively. Furthermore, 4,000 swans remain unaccounted for on the wintering grounds.

The USFWS, Migratory Bird Management Office (Alaska Region) will complete a report on the 2010 Quinquennial Trumpeter Swan Survey by April 2011.

Harvest Information -- States that conduct swan hunting seasons reported harvest estimates. Nevada and Utah reported that no trumpeters were detected as harvested during tundra swan hunts in 2010. Montana reported the take of 10 trumpeter swans from their swan hunt in the Pacific Flyway portion of the state. One illegally harvested bird was reported in Montana. Idaho reported that no conflicts have occurred with Trumpeter Swans during its Light Snow Goose Season hunt near American Falls Reservoir to date.

Partner Reports/Updates -- Gary Ivey provided an update for The Trumpeter Swan Society (TTSS) on their recent activities. They have initiated a program in the Mississippi Flyway entitled "The Trumpeter Watch Initiative", and are currently trying to expand this program to California. This program uses observations collected by volunteers to document swan distribution and abundance. The project reports sightings of trumpeter swans to a list serve to

document expansions into new areas and track neck collar sightings (<http://trumpeterswansociety.wordpress.com/>).

Management Activities -- Jeff Knetter, Idaho Department of Fish and Game (IDFG), presented information for the GYTSWG 2010 fall meeting. There were no issues to bring to council.

Dave Olson, USFWS, presented information regarding releases of trumpeter swans in the Blackfoot Valley area in Montana. There have been 142 swans released to date. There were 30 birds released in 2010 on five different wetlands. All but two birds have been accounted for as of August.

Jeff Knetter, IDFG, presented an update on the status of the southeast Idaho snow goose hunt. The IDFG developed a monitoring plan in cooperation with the USFWS and the Shoshone-Bannock tribe to monitor snow goose and swan distribution and abundance before, during and after the snow goose season. The monitoring effort will also monitor trumpeter swan behavior during the same time period. TTSS participated in the planning process to develop the monitoring plan, but they did not approve of the final plan.

Research Activities -- Dave Olson presented to the Subcommittee that Bill Link continues demographic rates analyses. The analysis is proving to be very difficult.

The contract with United States Geological Survey for genetics work is still open; however, this research has moved to a new facility in Fort Collins, CO. The USFWS has contracted \$6,000 for continued genetic work. Future work will concentrate on swans where information is lacking (i.e. Ruby Lake, NV).

Recommendations -- The Wyoming Wetland Society has 24 yearling swans available for release during 2011. With input received from Pacific Flyway representative Bob Trost and the GYTSWG, the following allocation for 2011 is recommended: (1) Blackfoot River valley, 10 yearlings; (2) Summer Lake Wildlife Management Area, 8 yearlings (pending funding), and Flathead Indian Reservation, 6 yearlings. If funding is not available to cover the costs for swan releases at Summer Lake, those birds would be allocated to the Blackfoot.

In addition, the subcommittee formally adopted the Madison River Valley, MT as a new trumpeter swan restoration. *R. Northrup (MT) made the motion and J. Bohne (WY) seconded the motion. The motion passed unanimously.*

Furthermore, the subcommittee agreed that it is necessary to start thinking about future release sites for trumpeter swans.

## **9. Pacific Coast Population of Trumpeter Swans Subcommittee**

Eric J. Taylor, USFWS-Alaska Region

Population Status.—The Pacific Coast Population (PCP) of Trumpeter Swan Management Plan recommends a range-wide population survey every five years to assess population and breeding distribution of trumpeter swans (Pacific Flyway Council 2006). The Pacific Coast population objective for trumpeter swans is to maintain not less than 25,000 swans. The recommended

management strategy described in the Pacific Flyway Management Plan is to complete a five-year periodic Breeding Trumpeter Swan Survey for the entire breeding range including the PCP, Rocky Mountain Population (RMP) and Interior Population (IP).

Specific objectives include:

1. Estimate the post-breeding population sizes of Trumpeter Swans;
2. Estimate population growth rates;
3. Estimate brood size and percent young;
4. Document current distributions; and,
5. Describe colonization or retraction of swans from available habitats.

This survey was initiated in 1968, repeated in 1974-1975, and continued at 5-year intervals thereafter (1980-2005). The 2010 Quinquennial Trumpeter Swan Population Survey was completed Summer and Fall 2010. Debbie Groves, Wildlife Biologist, U.S. Fish and Wildlife Service-Migratory Bird Management (Alaska) is currently compiling data from federal, state, and Canadian federal and provincial agencies who conducted the 2010 quinquennial trumpeter swan survey.

The goal was to survey entire current range during late summer when swans, especially families, were still dispersed on the breeding grounds. The degree to which this goal was met varied among regions, depending largely on available staff and funding. Areas not surveyed included Saskatchewan and parts of Manitoba and Ontario. However, these areas had few swans in 2005; thus, their omission in 2010 likely did not compromise the population estimate. Although a variety of survey methods were used, the primary methods were aerial cruise surveys, ground counts, or some combination thereof. Ontario used mark-recapture data from banded swans in addition to scattered aerial and ground counts. In general, methods were similar to previous quinquennial surveys. Notable exceptions included Alaska and the Canadian portion of the RMP, where surveys switched from complete censuses to stratified random samples in 2010.

Data analyses are ongoing. However, preliminary results indicate the number of total swans in North America in 2010 was 46,225, an increase of 33% since 2005 (Table 1). Initial results indicate the PCP, RMP, and IP of trumpeter swans increased 7%, 84%, and 111% from 2005 (Table 1). Relative to the PIP, the 2010 population estimates for the Alaska and Yukon/Northwest British Columbia flocks showed a 7% and 17% increase compared to 2005 (Table 2).

Table 1. Preliminary population results for the Pacific Coast Population (PCP), Rocky Mountain Population (RMP) and Interior Population (IP) of Trumpeter Swans.

Population	2010	2005	% Change
Pacific Coast Population	26,790	24,928	+7%
Rocky Mountain Population	9,626	5,228	+84%
Interior Population	9,809	4,647	+111%
Total North America	46,225	34,803	+33%

Table 2. Preliminary population results for the Pacific Coast Population (PCP), Rocky Mountain Population (RMP) and Interior Population (IP) of Trumpeter Swans.

Pacific Coast Population Flock	2010	2005	% Change
Alaska	25,347	23,692	+7%
Yukon and NW British Columbia	1,443	1,236	+17%
Total Pacific Coast Population	26,790	24,928	+7%

Harvest. —No harvest information was presented.

Management.—The U.S. Fish and Wildlife Service, Migratory Bird Management Office (Alaska Region) will complete a report on the 2010 Quinquennial Trumpeter Swan Survey by April 2011 (D. Groves, USFWS-Alaska, pers. comm.).

Research.—No Research on the Pacific Coast Trumpeter Swan population was presented.

Recommendations.—No recommendations.

## 10. White Goose Subcommittee

Brad Bales, Oregon

Population Status.—Andre Breault (CWS) reported that Sean Boyd conducted annual flights in the Fraser-Skagit Delta area. Observations resulted in 63,641 total geese counted with 5 percent young observed.

V. Baranyuk (Wrangel Island Reserve, Russia) reported poor breeding conditions for lesser snow geese on Wrangel Island last spring. Large numbers of geese did return to the island (150,000) but it is estimated that only 18 percent young were produced.

Melanie Weaver, California Department of Fish and Game (CDFG), reported that 800,156 white geese were observed during the December count in California. This is a slight decline from the previous year.

Mid-winter survey information for the flyway is not available at this time. In general, white goose populations are at or above flyway management goals.

Harvest.—Andre Breault reported that the preliminary harvest estimate for white geese in British Columbia is 2,209.

No state harvest estimates are available at this time.

Management Activities.—Jeff Knetter (IDFG) reported that an experimental banding program will occur in Idaho beginning after March 10 for white geese. White geese have begun staging in the Snake River area of Oregon and Idaho in recent years with late season hunts implemented to assist with landowner depredation concerns.

Jeff reported on issues related to The Trumpeter Swan Society (TTSS) concerns over an expanded late white goose hunt in the American Falls area. The IDFG developed a monitoring plan in cooperation with the USFWS and the Shoshone-Bannock tribe to monitor snow goose and swan distribution and abundance before, during and after the snow goose season. The monitoring effort will also monitor trumpeter swan behavior during the same time period. TTSS participated in the planning process to develop the monitoring plan, but they did not approve of the final plan. TTSS asked for closure of the hunt which was denied both by the IDFG Commission and USFWS. Jeff presented preliminary data for the monitoring program which indicated minimal white goose hunting activity in the area of concern.

Brad Bales (ODFW) expressed significant concerns over the position of the TTSS regarding the Idaho white goose hunts and said that arguments used against the white goose hunt could equally apply in areas of Oregon. Oregon is suspending its current trumpeter swan restoration program until further discussions occur with the TTSS.

Jeff also reported on his coordination of the update on flyway white goose plans. The current emphasis is on the plan for the Western Arctic Population of Lesser Snow Geese. Some text updates with new information have been completed. Brad Bales will work with Jeff on development of subcommittee member assignments to continue work on updating and rewriting plans.

Research.—None reported.

Recommendations.—Don Kraege (WDFW) discussed a final draft of a proposed new five-year harvest strategy for Wrangel Island Lesser Snow Geese. This new harvest strategy was presented to the subcommittee in December 2010 and has been under review. V. Baranyuk made comments in favor of changing a proposed 50,000 bird threshold up to 60,000 birds to assure a chance for a quicker recovery if the population fell to lower levels. After discussions the subcommittee agreed. In addition, discussions occurred regarding priorities in hunting restrictions if the population falls below 120,000 birds. It was consensus amongst the subcommittee that while traditional hunting areas will be given higher consideration for maintenance of seasons if restrictions must occur, other newer hunts will be given consideration for continuation and not automatically be suspended. Specific impacts to Wrangel Island snow geese in individual state hunts would be evaluated in the decision-making process. The modified harvest strategy was approved and is recommended for submission to Council.

Dan Rosenberg (ADFG) proposed no change to the white goose framework for Alaska in 2011. The no change recommendation was approved.

## 11. Dusky Canada Goose Subcommittee

Brad Bales, Oregon

Population Status.—Bob Trost (USFWS) reported that the 2010 population estimate for dusky Canada geese was 9,530 birds with a three year running average of 8,464. This is improved over 2009 population levels but still below the 10,000 bird levels which triggered new management actions two years ago. Andre Breault (CWS) reported a count of 525 duskies in British Columbia.

Harvest.—Dan Rosenberg, Alaska Department of Fish and Game (ADFG), reported on the 2010 permit goose hunt in the Cordova, Alaska area. Eighteen birds were checked, and 11 were classified as dusky Canada geese.

Oregon and Washington permit hunts are still underway and harvest summaries will be reported in July.

Management Activities.—Andre Breault gave a presentation on surveys he has coordinated on Vancouver Island and the Queen Charlotte areas. The purpose of the surveys was to support flyway work, obtain distributional data, improve CWS data bases and the understanding of dusky use in these areas and give a preliminary assessment of mid winter populations. Three years of standardized survey work has been completed with the following number of birds were observed:

2008	222 duskies
2009	500 duskies
2010	525 duskies

In addition, 17 collared birds were observed during the surveys.

Andre is also evaluating resighting data of individual birds to look at wintering site fidelity. He still has some concerns about dusky identification in the field. There are plans to expand the survey into other areas of Vancouver Island and the survey is somewhat considered operational by CWS.

Brad Bortner (USFWS) reported on the nesting island program on the Copper River Delta. Information provided by Tim Joyce (USFS) includes:

- The USFS has received Title 2 funds from the Secure Rural Schools funding program in the amount of \$85,000 to purchase replacement dusky Canada goose nest islands
- The USFS is finalizing an agreement with Ducks Unlimited to purchase, transport and install 50 replacement nest islands this summer (2011)
- Additional funds are available from savings in the last round of purchases and installation (reduced transport, no helicopter cost) to purchase an additional 40 new islands
- The USFS cannot totally fund additional nest island maintenance, but has committed to funding the existing islands (330)
- Ducks Unlimited has collected raffle money in the state of Alaska and by state statute those raffle funds must be spent in Alaska. It may be possible for DU to provide labor and supplies for nest island maintenance in the future for new islands above 330 to meet that obligation if they choose to do so.

- A long term agreement (5 years) with DU could be established to provide for migratory bird conservation which can be used to fund maintenance and monitoring of dusky Canada geese nest islands using the Alaska Raffle funds as a match from DU for other donors.

The subcommittee had discussions on methodology for conducting neck collar observation programs on the wintering grounds. Todd Sanders ((USFWS) and Bob Trost will confer and report back to the subcommittee.

Bob Trost gave a recent presentation at the North American Arctic Goose Conference in Portland, Oregon, pertaining to a review of the population ecology of the dusky Canada goose. There is evidence that objectives for wintering ground harvest have been achieved and there are improved survival rates for both adult and juvenile birds. There is still a long-term decline in the population but this is a function of recruitment on the breeding grounds. Banding data indicates no distribution change in the population.

Dan Rosenberg reported that ADFG will attempt to place approximately 15 satellite transmitters on dusky Canada geese in the Prince Williams Sound and Middleton Island areas.

Recommendations.—Dan Rosenberg moved for a no change recommendation for hunting frameworks in Alaska. The subcommittee approved.

## **12. Pacific Population and Rocky Mountain Population of Western Canada Goose Subcommittee**

Don Kraege, Washington

Jon Runge, Colorado

Population Status.—Russell Woolstenhulme (NV) updated Midwinter Waterfowl Survey (MWS) indices for the Rocky Mountain Population (RMP) and Pacific Population (PP) of western Canada geese; Idaho did not conduct the MWS in 2011. The 2011 RMP MWS index of 124,427 showed a 17% decrease from the 2010 index of 149,831. The 2011 RMP MWI was 7% below its running 3-year average of 133,312 geese. The 2010 RMP breeding population index (BPI) was 143,842, a 15% increase from the 2009 index of 124,684, but 10% below the three-year average BPI of 160,434.

The PP 2011 MWI was 90,238, a 21% decrease from 2010 (113,509), and down 11% from the 3-year average (101,741). The 2010 PP BPI was 144,944, a 3% decrease from 2009 (149,597) and down 21% from the 3-year average (184,170). Note that the 2008 RMP and PP BPIs were driven by counts in Alberta that were well above average, which in turn affected the three year running averages.

The 2010 RMP BPI index is well above the management objective of 117,100 geese. For the PP, nine of 11 management units are at or above BPI objectives identified in the PP Western Canada Goose Plan.

Harvest Information.— Harvest data are still being compiled and will be added to annual data tables in July.

Management Activities.— Oregon and Idaho reported that they have increased coordination of efforts for management of western Canada geese along the Snake River. The goal is to standardize survey and harvest management programs in this area. In 2010, 4275 geese were banded in Utah, 870 in California, and 1,216 in Washington.

The RMP and PP subcommittees have been meeting jointly for two years to evaluate current population designations through analysis of band returns and other factors. Current designation of populations into RMP and PP was originally done in the late 1970's. Since that time there have been numerous transplant programs, natural range expansion, and a large increase in the breeding population of western Canada geese in Canada, leading to wintering estimates that are three to four times the levels in the 1970's. During the same period, season frameworks for both populations expanded to 107 days in most areas, and six states have September seasons that focus on resident western Canada geese.

A band recovery analysis conducted using the Multiple Response Permutation Procedure (MRPP) was inconclusive in segregating the PP and RMP, and in fact, a north-south grouping appeared more likely. Several states report that previously distinct groups of western Canada geese on either side of the RMP-PP line in their states have now merged, and it is difficult to justify separate population designations where both populations occur in the same area. Jon Runge (CO) continued analysis of band recoveries to provide information on whether separate or combined management was warranted (see Research section below).

Council management plans for the populations were last revised in 2000 and 2001, and are in need of updating to accommodate changes in breeding surveys and to review current population objectives. In addition, there would be benefits in standardizing surveys and management actions as part of an updated planning process involving the entire flyway. Management emphasis and unit designations would be reviewed as part of this planning process, to be initiated by Don Kraege (WA) and Jon Runge (CO) over the next year.

Research Activities.— Jon Runge (CO) conducted three analyses to examine dispersal of Canada geese between the RMP and PP. The first examined percentages of birds that moved between the RMP and PP populations and between populations if they were defined as north and south (Table 1). This analysis combined direct and indirect recoveries, and results assumed that survival and recovery probabilities were similar among the different populations. Results suggested that movement in a north-south population designation was more than twice that of a RMP-PP population designation, thus suggesting that a RMP-PP population designation better represents segregated populations (if such segregated populations exist).

**Table 1.** Percentage of Canada geese recovered (recoveries / bands).

Movement	AHY	HY	Total
North to South	4.19%	2.25%	3.05%
South to North	1.55%	3.80%	2.17%
Total	3.17%	2.47%	<b>2.82%</b>
RMP to PP	0.32%	0.88%	0.60%
PP to RMP	2.16%	1.34%	1.73%
Total	1.23%	1.13%	<b>1.18%</b>

North = Alberta, BC, Colorado, Idaho, Montana, Oregon, Utah (north of 40 degrees lat), Washington, Wyoming

South = Arizona, California, Nevada, New Mexico

PP = Alberta (exclusive of RMP and HLP), BC, California (north of 39 degrees lat), Idaho (west of 114 degrees long), Montana (west of 113 degrees long), Nevada (west of 117 degrees long), Oregon, Washington

RMP = Alberta (south of 52 deg. west off 111), Arizona, Colorado, Idaho (east of 114 degrees long), Montana (east of 113 degrees long), Nevada (east of 117 degrees long), New Mexico, Utah.

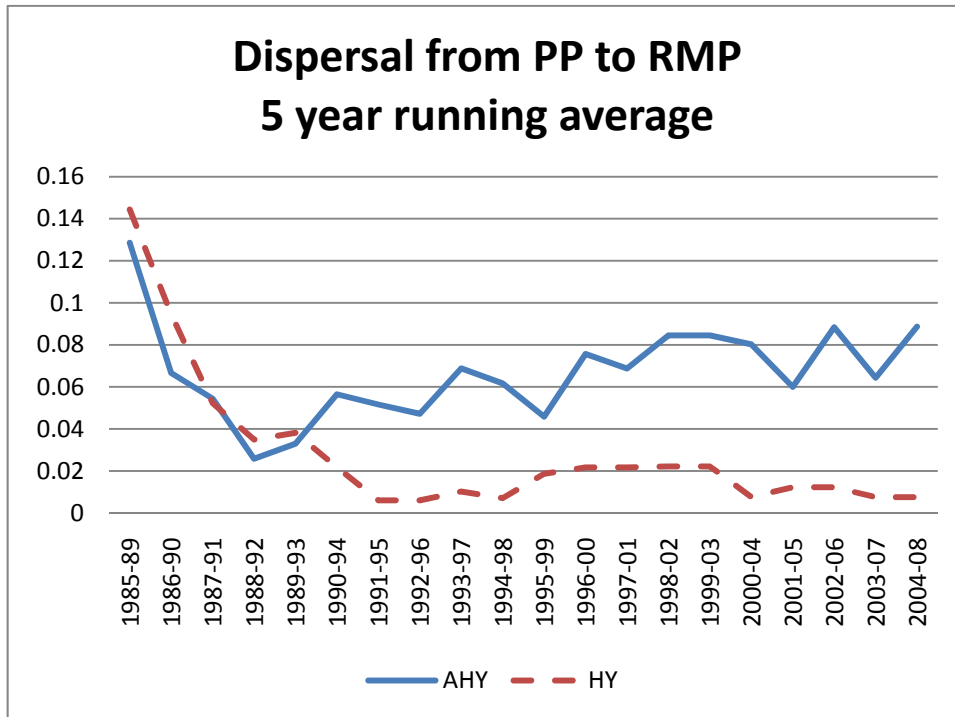
Attempts were made to create a multi-state band-recovery analysis that used both direct and indirect recoveries, but these failed due to lack of resighting or recapture data. Therefore, two additional analyses were undertaken: one using only direct recoveries and one using indirect recoveries.

The analysis using direct recoveries hinged on the following equation: number of birds recovered in a another population (d) = number of birds banded in the original population(n)\*dispersal rate( $\psi$ )\*recovery probability(f) from the population dispersed to (this would be a recovery probability from a Brownie parameterization);  $d = n*\psi*f$ . The quantities d and f are known, and  $\psi$  can be estimated from band-recovery analyses conducted on single populations, leaving  $\psi$  as the only unknown. Thus  $\psi = d/(n*f)$ . Results were obtained for this dispersal rate for both hatch year and after hatch year birds in both the PP and RMP (Table 2), and time specific estimates were obtained and then averaged over a five-year running period for the RMP (Figure 1). On average, dispersal rates between the PP and RMP are low, although estimated dispersal from the PP to the RMP for adults is higher and has been increasing since the late 1980s.

**Table 2.** Dispersal rates estimated from direct recoveries.

Movement	AHY	HY	Pooled
RMP to PP	0.002	0.009	0.006
PP to RMP	0.091	0.035	0.066

**Figure 1.** Five-year running average of dispersal from PP to RMP estimated from direct recoveries



Following the subcommittee meeting, the final analysis used multistate models in program MARK to estimate mortality, dispersal, and recovery probability (analogous to Seber parameterization) from indirect recoveries only. Model selection is incomplete at present, but model results are presented (Table 3), as well as results from the current low-AICc model (Table 4). Differences between the PP and RMP are currently supported for mortality, recovery and dispersal, though it is notable that point estimates for AHY birds are similar between the two populations and variance is low. Dispersal rates estimated from indirect recoveries are all less than 0.05.

**Table 3.** Model selection results from a limited set of models run. M = mortality, r = recovery,  $\psi$  = dispersal; st indicates differences between RMP and PP, age indicates differences between AHY and HY birds, dir indicated differences in dispersal direction, and “.” indicates no differences.

Model	$\Delta$ AICc
M(st*age) r(st*age) $\psi$ (dir*age)	0
M(st) r(st) $\psi$ (dir)	442.348
M(st) r(.) $\psi$ (dir)	551.8578
M(.) r(.) $\psi$ (dir)	636.9577

**Table 4.** Results from low-AICc model for multistate analysis using only indirect recoveries.

Parameter	Population	Age	Estimate	SE	95% LCL	95% UCL
Recovery	RMP	AHY	0.175	0.003	0.170	0.181
Recovery	RMP	HY	0.135	0.008	0.119	0.152
Recovery	PP	AHY	0.172	0.003	0.167	0.178
Recovery	PP	HY	0.051	0.002	0.047	0.056
Mortality	RMP	AHY	0.252	0.003	0.245	0.258
Mortality	RMP	HY	0.308	0.017	0.275	0.342
Mortality	PP	AHY	0.217	0.003	0.210	0.224
Mortality	PP	HY	0.509	0.013	0.483	0.535
Dispersal	RMP to PP	AHY	0.004	0.000	0.004	0.005
Dispersal	RMP to PP	HY	0.046	0.006	0.035	0.061
Dispersal	PP to RMP	AHY	0.027	0.001	0.024	0.029
Dispersal	PP to RMP	HY	0.032	0.004	0.026	0.041

Recommendations.— The PP subcommittee passed a recommendation to combine the RMP and PP into one population for management purposes, and a recommendation to increase bag limits for the CO September season. No other changes to September Canada geese framework regulations were recommended for the PP or RMP.

### 13. Cackling Canada Goose Subcommittee

Melanie Weaver, California

Population Status.—The 2010 fall population estimate was 188,623 and the 3-year running average, 180,859 (Bollinger and Hodges 2010). The subcommittee requested the Fish and Wildlife Service (Alaska Region) conduct a review of current and alternative monitoring methods to estimate abundance and trend of cackling Canada Geese. The Service’s report (Stehn 2010) was completed in December 2010 and underwent a peer-review in January 2011. Based on Stehn (2011), the subcommittee recommended using a ratio estimator using the breeding ground aerial total indicated bird index and mark-resight data (1989-2003). Using this method, the fall 2010 population estimate of cackling Canada geese is 288,272 (SE=21,917) and the 3-year (2008-10) average is 273,214 (SE=18,383) (Stehn, 2011:Table3).

Harvest Information.—Average annual subsistence harvest was 20,703. Harvest estimates from Oregon and Washington were not available because seasons were just ending; however no dramatic changes in harvest are expected from Oregon and Washington. California reported 140 Cacklers harvested on public hunt areas, down from 217 in 2009.

Management Activities.— The Service will issue kill permits to landowners in Oregon and Washington. This allows up to 500 geese to be taken, with not more than five per landowner. Landowners can apply for an additional five. Landowners are required to bring geese to state and federal offices for identification and disposal. A written test must be passed prior to taking geese. Dusky Canada geese are not authorized; furthermore, dusky Canada geese will be added to Oregon's quota if taken by a landowner with a kill permit. Also, landowners are not allowed to call or decoy depredating geese.

Research Activities.—Anne Mini will finish her dissertation this spring and give a presentation at the July meeting.

Recommendations.—The Cackler Subcommittee forwarded the following recommendations for consideration by Council:

1. Amend the current management plan to replace the method to estimate fall population with an interim method that uses a ratio estimator based on the breeding ground aerial total indicated bird index and mark-resight data (1989-2003). To evaluate the historic and interim population estimation method, support an independent mark-resight study (2011-13).
2. Increase the dark goose bag limits to six birds/day in the following Game Management Units (GMU) in Alaska: GMU 10 Unimak Island portion, GMU 9 A-C and E, GMU 17, and GMU 18.

#### **14. Taverner's Cackling Goose / Lesser and Vancouver Canada Goose Subcommittee**

Russell Woolstenhulme, Nevada

Population Status. — No population indices are established for any of these three populations. Work continues to collect genetic samples across the range of Lesser and Taverner's geese to delineate their ranges in Alaska and to develop aerial surveys to provide population indices. No recent population indices are available for Vancouver Canada geese.

Taverner's cackling geese nest in tundra habitats on the North Slope and Western Alaska (Yukon-Kuskokwim Delta (YKD) and Bristol Bay). On the YKD, numbers of Taverner's pairs and total birds were up from 2009 and both indices continue to exhibit a slow long-term positive trend. The 2010 indicated pairs and indicated total bird indices for Taverner's cackling goose on the YKD were 6,942 and 8,981, respectively. Production is expected to be above average on the YKD. On the Seward Peninsula and Kotzebue Sound, indicated total Taverner's indices were up from 2009; however, the 2010 indicated total Taverner's index was 2% above and 19% below long-term averages (1964-2009), respectively. At the time of this report, North Slope data were still being analyzed.

Lesser Canada geese are found in interior and south-central portions of Alaska. In 2010, indicated total lesser Canada geese were down slightly from 2009 and 33% below the 1964-2009 average. Production in interior Alaska as a whole is expected to be average in 2010, with some sites experiencing above average production, such as Kanuti NWR.

Harvest Information. — Combined harvest estimates for Taverner's and lesser Canada geese in Oregon's permit zone were 2,508 in 2010, down from 2,879 in 2009 (-13%). Preliminary 2010 combined harvest estimates in the Washington permit zone are 619, down from 812 in 2009 (-24%). No other harvest estimates were reported.

Management Activities. — A breeding ground identification and winter habitat association study of Taverner's and lesser Canada geese has been ongoing by the Washington Department of Fish and Wildlife since 2008. A total of 379 Taverner's/ lesser geese have been captured and banded. Thirty of these bands have been recovered and reported as harvested. Additionally, eight Platform Terminal Transmitters (PTTs) were deployed on females in the spring of 2010, and three more in the fall of 2010. This project could complement the range delineation and survey work underway in Alaska and allow consideration of alternate harvest strategies for eastern Washington and Oregon, and perhaps Nevada.

Research Activities. —The lesser/Taverner's genetics study by the USGS Alaska Science Center, intended to delineate the breeding ranges of lesser and Taverner's geese in Alaska, released a progress report in December 2009. The report presents a summary of 245 samples analyzed for mtDNA based on samples collected in Alaska from the mid-1990's through the summer of 2009. Among its conclusions are that species specific population indices can be developed for lesser and Taverner's geese using strata with non-overlapping species distributions.

Hupp et al. (2010) published "Winter Distribution, Movements, and Annual Survival of Radio-marked Vancouver Canada Geese in Southeast Alaska." in the Journal of Wildlife Management. Estimates of annual survival were high and similar to historic data. Likely <2% of geese nesting in Southeast Alaska migrated to wintering areas in Oregon or Washington.

Recommendation. — The subcommittee voted in support of no change to Alaska's early season framework changes.

## **15. Aleutian Canada Goose Subcommittee**

Melanie Weaver, California

Population Status.— The population estimate is not available at this time.

Harvest Information.— California reported 23 harvested on public hunt areas, down from 192 in 2009. Harvest estimates were not available from Oregon because seasons continue through March 10.

Management Activities.— The California Department of Fish and Game banded and neck-collared 246 geese in 2010 at the San Joaquin River National Wildlife Refuge.

Research Activities.— None reported.

Recommendations.— Alaska recommended to increase the dark goose bag limits in the following Game Management Units (GMU): GMU 10 Unimak Island portion, GMU 9 A-C and E, GMU 17, and GMU 18.

## **16. White-fronted Goose Subcommittee**

Brad Bales, Oregon

Population Status.—The fall 2010 count for greater white-fronted geese recorded approximately 784,000 birds. The current flyway population objective for this population is 300,000 birds. The mid-winter count data are not available at this time.

Harvest.—Dan Rosenberg (ADFG) reported that the annual average subsistence harvest for white-fronted geese in Alaska (2004-2009) was 25,000 birds.

The late season hunt in Klamath County, Oregon is currently underway.

Management Activities.—Melanie Weaver (CDFG) gave an update on tule white-fronted goose work that is being used to derive a population estimate. In September 2010, a total of 79 Tule geese were captured and 32 were marked with VHF radio collars at Summer Lake Wildlife Area, Oregon. Searches for all available (radios believed to be functioning; 2008=11, 2009=23, 2010=32, total =66) radio-collared birds were conducted from the fall through spring via ground and aerial telemetry in the Summer Lake Basin (ODFW), Klamath Basin (USFWS), Sacramento Valley (CDFG), and the Suisun Marsh (CDFG, USFWS). Radios from early years reached their life expectancy during this fall and winter, a total of 58 were detected at least once. In addition, five sampling periods for developing an indirect estimate of population size occurred in October (2), November, December, and February. Monitoring is ongoing and a 2010 population estimate will be provided in July. Trapping and marking tules at Summer Lake is planned for September 2011.

Research.—None reported.

Recommendations.—Dan Rosenberg moved for a recommendation of no change for white-fronted goose frameworks in Alaska. The subcommittee approved.

## **17. Pacific Brant Subcommittee**

Eric J. Taylor, USFWS-Alaska Region

Population Status. — The Pacific brant (*Branta bernicla nigricans*) 2011 Midwinter Waterfowl Survey in Mexico was cancelled due to safety and security concerns for U.S. Fish and Wildlife Service survey crews and aircraft. The Service intends to resume this important survey with close cooperation of collaborating agencies and organizations in Mexico as soon as conditions improve. The lack of the 2011 Midwinter Waterfowl Survey Program in Mexico prevents comparison with the 2010 population index. The current three-year average based on data collected in 2007, 2008, and 2010 is 141,749 representing an 2.4% increase from the previous three-year (2006-2008) average (138,387).

Canadian Wildlife Service reports that 2,070 black brant (11% young) were counted on the Fraser River Delta in British Columbia (A. Breault, pers. comm.). Based on Christmas Bird Counts, 122 and 212 Black Brant wintered on Vancouver Island and Queen Charlotte Islands, respectively (A. Breault, pers. comm.). Washington Department of Fish and Wildlife personnel recorded 8,547 Western High Arctic brant in Skagit County, WA (D. Kraege, pers. comm.).

Replicate fall surveys (n=3) at Izembek Lagoon and adjacent estuaries between 30 September and 5 October, 2010 provided an average brant count of 130,093. The 2010 estimate was 10% below the number of brant counted in 2009 (144,549; n=2) and 3% below the 33-year average fall count of 133,582 (1975-2007, Izembek NWR files). The most recent three-year average (2008-2010) fall count at Izembek is 134,979 individuals.

Based on aerial surveys conducted 27 February-1 March, 2011, approximately 27,500 brant overwintered at Izembek Lagoon, Alaska. The 2011 count was 4% above the January 2010 estimate of 26,443. The long-term trend in midwinter index counts from 1980-2011 in Izembek Lagoon indicates an increase of approximately 7%/year.

An aerial photographic survey of nesting Pacific black brant was conducted at the five primary colonies on the Yukon-Kuskokwim Delta (YKD), Alaska, USA: Kokechik Bay (KB), Tutakoke River (TR), Kigigak Island (KI), Baird Peninsula (BP), and Baird Island (BI) between 5-6 June, 2010. The total number of nests for all colonies decreased by 21% between 2010 (9,641), and 2009 (12,206), and the 2010 estimate was ~41% lower than the long term average (16,310; 1992-2010) (Wilson 2010). All colonies experienced a decrease in brant nests from the previous year (range: -1 to -35%, 8-1398 fewer nests). Overall, the trend in annual YKD estimates of nesting brant among the five primary colonies is -3.3%/yr and the long-term trends at TR and KB marked the third consecutive year of substantial negative departures from the long-term YKD log-linear trend (5-6% annual declines at TR and KB versus 3.3% annual decline for all YKD), indicating that most of the long term decline continues to be attributed to reductions at the KB and TR. Based on aerial imagery, 2010 was a poorer than average nesting year for colonial nesting brant on the YKD with indications of fox and avian predation, late initiation, nest abandonment and lower than average clutch sizes noted at several colonies. Based on counts of footprints and vehicle tracks, human activity was the highest ever recorded at KB (beginning in 2001), while counts of human footprints at BI and BP were reduced from 2009.

Harvest.—The 2010 Pacific black brant harvest estimates for Alaska, California, Washington, Oregon, and British Columbia are not available at this time. The 2004-2009 average annual subsistence harvest of brant from the Yukon-Kuskokwim Delta was 6,566. Subsistence harvest estimates for other regions are not available.

Management.—During 2010, the Yukon Delta NWR implemented fox control at two historic colonies on the Yukon-Kuskokwim Delta per recommendations contained in *An Adaptive Management Plan to Control Arctic Fox at Pacific Black Brant Colonies on the Yukon-Kuskokwim Delta, Alaska*. The primary objective of the plan was to help restore and thereafter maintain the nesting populations of Pacific black brant at both colonies. In 2010, the USDA APHIS Wildlife Service's personnel trapped four arctic foxes at Kokechik Bay and the Yukon Delta NWR and USDA WS personnel trapped > 40 foxes at Tutakoke River. Effects of fox control on the abundance, distribution, and productivity of Pacific black brant nesting at Kokechik Bay and Tutakoke River in 2010 will be assessed to design appropriate management

and research activities for 2011. The USDA-APHIS Wildlife Service's report will be finalized in March 2011.

The current Pacific Flyway Management Plan for the Pacific Population of Brant contains a harvest strategy with regulation prescriptions primarily based on the midwinter survey (MWS). The closure criterion includes three-year averages that include both a midwinter survey level (90,000) and a nest index level (9,632) on the YKD, but the other prescriptive levels include only midwinter survey levels. The trend for the midwinter survey has recently been different from the trends on the major nesting colonies on the YKD, and has been a subject of discussion by the subcommittee the past three meetings. The subcommittee continues to explore the possibility of revising the existing brant harvest strategy to consider YKD colony counts at all regulation prescription levels, in addition to the midwinter survey and possibly other surveys, to develop annual season regulation packages. The subcommittee will revise the strategy during 2011-12.

The USFWS Migratory Bird Management Office (Alaska) completed an assessment that compared the Midwinter Mexico Brant Survey and the Fall Izembek Brant Survey relative to monitoring brant abundance, trend, and distribution. Estimates of population size and growth rates for Pacific brant are essentially identical between the mid-winter and fall brant surveys conducted from 1982-2008. The average of the replicated fall count of brant at Izembek can replace a mid-winter population estimate in the event that a future mid-winter survey in Mexico is cancelled, or flown at intervals. Given that the other geographic areas of the mid-winter brant survey continue data collection, the sum of brant at these locations can be subtracted from the total number of brant at Izembek to estimate the missing Mexican count (see Stehn et al. 2010).

Continuing the Mid-Winter Brant Survey in Mexico provides the following benefits:

- Provides a population estimate of the largest component of the winter population of brant;
- Monitors winter distribution objectives stated in the Pacific Flyway Management Plan;
- Allows assessment of potential effects of shifting climate or other change on eelgrass quality, quantity, or availability and associated shifts in brant distribution in the coastal lagoons of Mexico;
- Provides information to set annual bag and season limits for waterfowl hunting in Sonora and Sinaloa, Mexico;
- Provides distribution data used by the Mexican government and conservation organizations such as PRONATURA to acquire important lands for conservation;
- Provides aerial count data used by Mexican biologists that promote and complement ground-based studies of brant;
- Promotes opportunity for cooperation and collaboration between USFWS and Mexican biologists on brant and other shared avian species; and,
- Supports USFWS commitment to cooperatively manage waterfowl with governments and partners throughout the Pacific Flyway.

Stehn et al (2011) recommended continuation of the Mexico brant survey, winter counts of brant along the Pacific coast, and fall counts of brant at Izembek. They concluded that both winter and fall count data be included in the Pacific Flyway Management Plan for Black Brant.

R. Stehn (USFWS MBM-Alaska) is currently re-assessing the number of dispersed brant nesting on the YKD Refuge compared to traditional, historic colonies at Tutakoke River, Kokechik Bay, Kigigak Island, Baird Island, and Baird Peninsula.

As a result of research being conducted by the U.S. Geological Survey, Alaska Science Center in Northeast National Petroleum Reserve, Alaska (P. Flint, pers. comm.), the Fish and Wildlife Service counted nearly 12,000 brant outside of the traditional Teshekpuk Lake Goose Molting Survey area (E. Mallek, pers. comm.). In 2011, the Service will expand the Teshekpuk Lake Goose Molting Survey area to incorporate new areas.

Research.—A publication recently published in the *Journal of Wildlife Management* assessed intercolony variation in growth of Pacific Black Brant goslings on the Yukon-Kuskokwim Delta, Alaska (see Fondell et al. 2011).

Recommendations.—The subcommittee recommended no change in frameworks for brant in 2011.