



United States Department of the Interior
FISH AND WILDLIFE SERVICE

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ARW-MBC

December 17, 1990

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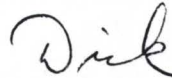
Dear Party Interested in the Winter Protection Project for the Rocky Mountains
of the Trumpeter Swan:

Enclosed is the final environmental assessment and the finding of no
significant impact (page 16).

Since the completion of this document, two operational changes were made to
the contingency plan (page 20). One is the increase in flows in the Henry's
Fork River and the other to increase capturing efforts at Red Rock Lakes
National Wildlife Refuge. Neither of these modifications warrant changes to
the environmental assessment.

We thank those of you who provided comments on the draft assessment.

Sincerely,



Richard D. Bauer
Migratory Bird Coordinator

Enclosures

F I N A L

ENVIRONMENTAL ASSESSMENT

Winter Protection of Rocky Mountain Trumpeter Swan Population

Southeast Idaho Refuge Complex

Idaho - Montana

November 1990

Section I: PURPOSE AND NEED FOR ACTION

1. Why is action being considered?

Increasing numbers of trumpeter swans have exceeded the carrying capacity of winter habitats in the Greater Yellowstone area. Wintering swans and other waterfowl have over-utilized and caused the decline of aquatic vegetation in the Henry's Fork. The decline in available vegetation substantially increases the likelihood of high winter mortality in 1990-91 due to starvation and could also lead to increased dependence on supplemental feeding.

Dispersal of the swans from current winter congregation sites could reduce losses, allow the natural habitat to recover, reduce dependence upon artificial feed and potentially lead to changes in distribution that will increase the population security.

2. How does the action relate to Service objectives?

- Treaty requirements to manage and protect migratory birds.
- This action should help meet long-term goals of this population as established by the Pacific Flyway Study Committee, i.e. self-sustaining population.

3. What is the action supposed to accomplish?

Short term -- reduce mortality

-- allow habitat to recover

-- reduce dependence on supplemental feed

Long term -- encouraging swans to migrate to a variety of widely scattered wintering sites with more suitable climates.

Section II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. No Action Alternative

1. Describe this alternative.

Trumpeter swans would continue to be fed at Red Rock Lakes National Wildlife Refuge (RRL). Working with the U.S. Bureau of Reclamation, we would attempt to keep enough water in the Henry's Fork to protect the vegetation and keep the river from freezing during late winter if such river habitat is needed.

2. To what extent would this alternative satisfy the problems, opportunities or needs identified in Section I?

Would do nothing to reduce the very high potential for winter mortality, relieve overgrazing by waterfowl on the aquatic vegetation, or reduce the populations dependence on artificial feeding.

3. What are the principal environmental (biophysical) effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Likelihood of high swan mortality on the Henry's Fork due to starvation. Also high vulnerability to disease and overcrowding at RRL. Decline of breeding flocks and reduced productivity. Continued damage to the remaining aquatic vegetation and the associated blue-ribbon trout fishery at Harriman State Park. Continued concentration and shortstopping of birds on artificial feed at RRL will reduce the chances of long-term dispersal.

4. What are the principal socioeconomic effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Least expensive alternative in the short term.

It would not address our responsibilities under the Migratory Bird Treaty Act (MBTA), nor would it satisfy people and organizations concerned about the welfare of the species.

5. Would implementation of this alternative likely result in significant controversy? Explain.

Yes. Implementation of this alternative would likely result in the deaths of several hundred swans due to inadequate aquatic plant food in the Henry's Fork. There would probably be a great deal of criticism about the U.S. Fish and Wildlife Service (FWS) not doing our job, particularly if worst-case scenario came to pass and could initiate another listing petition. Further damage to fish habitat would also generate public outcry.

B. Trap/Haze/Feed Preferred Alternative

1. Describe this alternative.

As many swans as possible would be trapped at Harriman State Park during October-December, moved to downstream locations. Supplemental feeding would occur at RRL.

If trapping failed to reduce bird numbers at Harriman, hazing would begin.

If bird numbers at RRL exceeded 450, then trapping would begin there, followed by hazing if necessary. Feeding more than 450 swans would be done only as a last resort.

See attached 1990-91 Contingency Plan for additional details.

2. To what extent would this alternative satisfy the problems, opportunities or needs identified in Section I?

It might not work, but would give the best short-term chance of meeting objectives. Habitat at Harriman would be rested, a start would be made at establishing other wintering flocks, and a start would be made to reducing dependency on grain feeding at RRL. Swans successfully dispersed southward from Harriman and RRL will have a greater chance of survival than those that remain at Harriman. Trapping allows the greatest chance to direct the dispersal of swans to desirable sites and away from problem areas.

3. What are the principal environmental (biophysical) effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Best chance of preventing high winter mortality and successfully dispersing swans to new wintering sites.

Best chance for relieving overuse of Henry's Fork habitat and allowing its recovery to begin.

4. What are the principal socioeconomic effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Would cost \pm \$100K.

Would be best reaction to FWS responsibilities under MBTA and Endangered Species Act (ESA).

May increase the occurrence of trumpeters in areas where accidental kill in snow goose or tundra swan hunts could occur.

5. Would implementation of this alternative likely result in significant controversy? Explain.

Not likely. All publics contacted thus far seem to understand that high mortality is very likely if no action is taken, that some swans will die no matter what is done, and that rather severe actions will be needed to solve the problem, both in the short term and long term. Public has been very supportive. However, potential misperceptions of the situation could lead to some controversy.

C. Haze and Feed Only Alternative.

1. Describe this alternative.

Birds would not be trapped and moved. Hazing would occur at Harriman, and feeding would continue at RRL.

2. To what extent would this alternative satisfy the problems, opportunities or needs identified in Section I?

If hazing works at Harriman, swans are likely to move from Harriman to RRL, resulting in the extreme concentration of over half of the entire population. Vegetation at Harriman would be rested. Dependence upon artificial feeds and reluctance to disperse and migrate would increase. Vulnerability to catastrophic loss would remain very high.

3. What are the principal environmental (biophysical) effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Short-term rest would aid recovery of vegetation at Harriman State Park.

Concentration of birds would be extremely high at RRL.

Tendency of birds to move southward would be thwarted by the attraction to supplemental grain.

Potential for long-term problems increases.

4. What are the principal socioeconomic effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Would be somewhat less expensive than preferred alternative short term, possibly more expensive long term.

Would partially fulfill MBTA responsibilities.

Would probably be some criticism for not doing "enough."
Would probably be criticism for increasing the population's dependence upon artificial food sources and its vulnerability due to extreme crowding.

5. Would implementation of this alternative likely result in significant controversy? Explain.

Yes, if action is perceived to be counterproductive to long-term range expansion goals, or if significant mortality occurs at the feeding ponds at RRL.

Controversy would be most likely among wildlife professionals rather than the general public.

D. Feed at Both Harriman and RRL Alternative.

1. Describe this alternative.

Feeding would continue at RRL as in the past; feed would also be placed at Harriman to tide birds over inclement periods.

2. To what extent would this alternative satisfy the problems, opportunities or needs identified in Section I?

Due to site characteristics at Harriman, the probability of distributing food effectively to swans is very low. If feeding did work, swans, ducks and geese would be attracted into a site that already is overcrowded, increasing pressure on the limited vegetation, and increasing disease potential. Swans would be further conditioned to use this site rather than to disperse, thus increased long-term problems.

3. What are the principal environmental (biophysical) effects associated with implementation of this alternative? (Summarize effects from Section IV.)

Starvation risk might be reduced.

Further concentration of birds on supplemental feed and increased disease potential.

Further stress to Harriman vegetation due to waterfowl grazing when river opens up if they are baited in by feeding. Habitat would probably not recover.

Increasing waterfowl use of a site (Harriman) that already is overused.

Further conditions swans to remain and not migrate.

Multiply problem in future years.

4. What are the principal socioeconomic effects associated with implementation of this alternative?

MBTA responsibilities would be partially addressed.

FWS philosophy against artificial feeding would not be addressed.

Would be required perpetually - no long-term solution to problem.

Extreme anger of waterfowl hunters if swans, ducks and geese are baited into a hunting refuge at Harriman.

5. Would implementation of this alternative likely result in significant controversy? Explain.

Yes. Would be strenuously opposed by several conservation groups, as well as Idaho Department of Fish and Game. Pacific Flyway Council has on several previous occasions also stressed opposition to feeding at Harriman, except as an absolute last resort. Objections would also be raised by fishing concerns because of habitat depletion.

Section III: AFFECTED ENVIRONMENT

Succinctly describe the area in which the proposed action is to occur. If the action will occur on a National Wildlife Refuge or National Fish Hatchery, attach the Refuge/Hatchery public information leaflet to help orient the reader to the general vicinity. For site-specific proposals, include page-sized maps of the general area and the project site. Particular mention should be made of the presence (or absence) of any endangered or threatened species or their critical habitat, historic or cultural resources, parklands, prime or unique farmlands, wetlands, 100-year floodplains, wild and scenic rivers, or other ecologically critical areas (e.g., wilderness areas, research natural areas, etc.)

The following range description and map were taken from the report "The History, Ecology and Management of the Rocky Mountain Population of Trumpeter Swans, Gale, Garton and Ball, August 1987."

Rocky Mountain Population (RMP)

The Rocky Mountain Population summers along the Rocky Mountain corridor in the United States and Canada, and winters primarily in the Tristate area. With nesting areas scattered from Wyoming to the Yukon and Northwest Territories, summer surveys of the RMP have been difficult to coordinate. The best counts of the entire Population have been made in the Tristate wintering area, where 1196 adults and 386 cygnets were counted in February 1987 (USFWS Midwinter Trumpeter Swan Survey 1987). Although the extent of intermixing is unknown, two subpopulations and a number of flocks have been described for management purposes (USFWS 1984) (see also Fig.2). These flocks have often been delineated along state or provincial boundaries which may be biologically artificial, but are useful because they correspond to survey and management jurisdictions.

The RMP includes the predominantly non-migratory Tristate Subpopulation (TSP), and the highly migratory Interior Canada Subpopulation (ICSP). Although both subpopulations winter together in the Tristate region, no pairing between members of the two groups has been documented to date. The existing data suggest that these groups are distinct breeding populations that share a common winter range (see Chapter 9).

Tristate Subpopulation (TSP). Red Rocks Lake (RRL) and the surrounding Centennial Valley of Montana form the primary nesting area of the Tristate trumpeters. Other scattered pairs nest on lakes and ponds throughout eastern Idaho and northwestern Wyoming in and adjacent to Yellowstone National Park (Fig.3). In September 1986, the TSP totaled 333 adults and 63 cygnets (USFWS Tristate Trumpeter Swan Survey 1986) in the following flocks:

- 1) Centennial Valley (CV) flock. Swans that summer in the Centennial Valley of southwestern Montana, including RRL, Bureau of Land Management lands, and private lands are referred to as the Centennial Valley flock. In September 1986, the CV flock included 167 adults and 28 cygnets (USFWS Tristate Trumpeter Swan Survey 1986). Although swans regularly move across the Refuge boundary to adjacent Centennial Valley habitats, occasionally the RRL flock is

referred to as a separate entity in discussions of the history and management of the Refuge. (Although they are on the edge of the Centennial Valley, Elk and Conklin Lakes in the adjacent Gallatin National Forest have most often not been included in summer census compilations for the Centennial Valley flock because of nesting habitat discontinuities between their forest-lake habitat and the Centennial Valley marshlands. These lakes will be included in the census category Other Montana in our tables and appendices.)

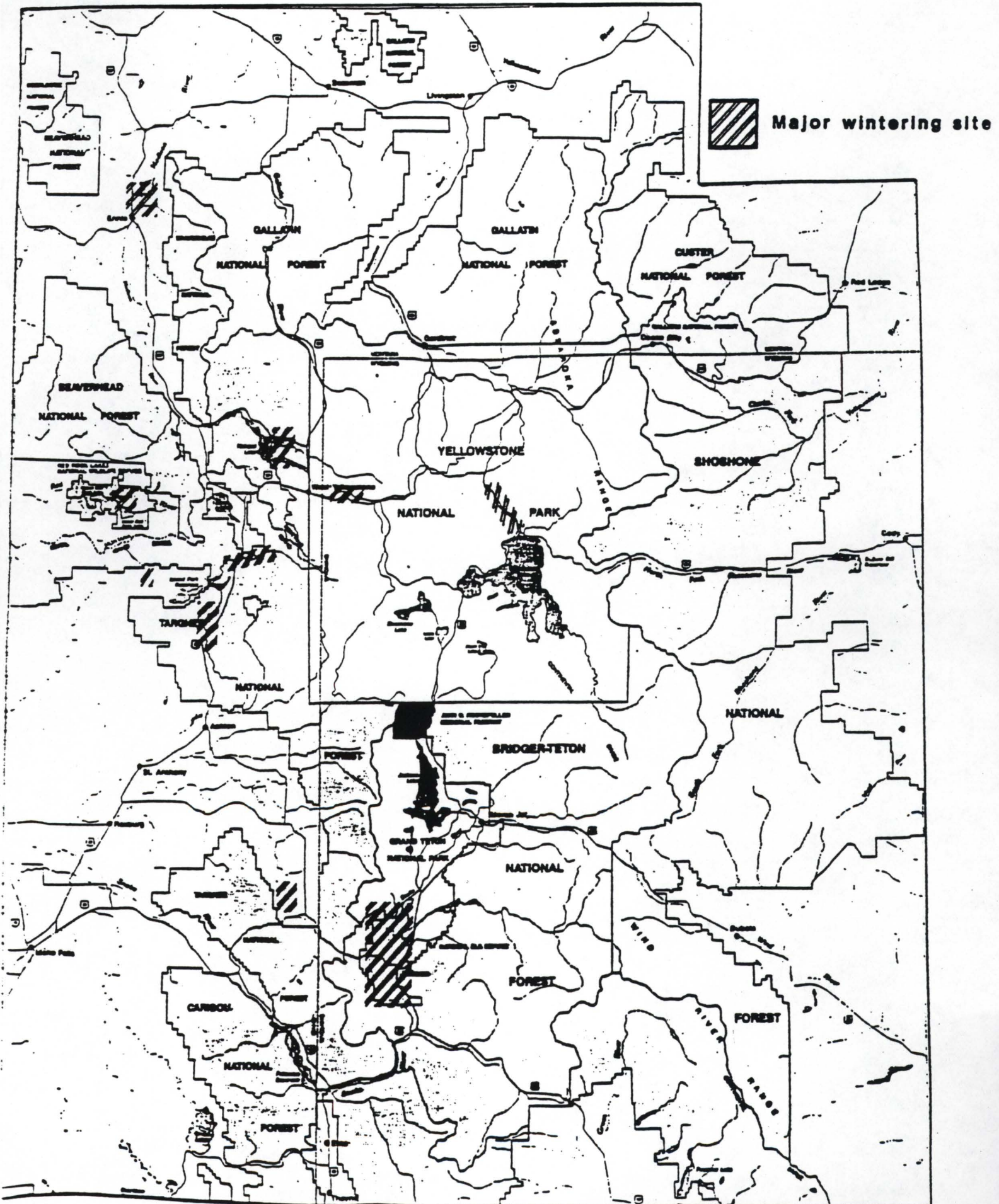
2) Yellowstone National Park (YNP) flock. YNP swans summer in northwestern Wyoming at relatively high elevations (1770 to 2515 m) on pond and river habitats administered by the U.S. National Park Service (Shea 1979). In 1986, this flock contained 24 adults and 12 cygnets (USFWS Tristate Trumpeter Swan Survey 1986).

3) Lower elevation Wyoming flock. Other trumpeters summer in Grand Teton National Park, the National Elk Refuge, National Forest, and private lands, where they are managed by the federal land management agencies as well as by the Wyoming Department of Game and Fish. These swans are grouped together because of similarities in their breeding habitat, which is generally at least 300 m lower in elevation than nesting sites in YNP. In 1986 this flock contained 50 adults and 7 cygnets (USFWS Tristate Trumpeter Swan Survey 1986).

4) Idaho flock. Idaho trumpeters nest primarily on small ponds in the Targhee National Forest immediately south and west of Yellowstone National Park, and on adjacent state and private lands. Occasional nest attempts occur at isolated marshes along the desert fringe of the upper Snake River plain, south and west of the primary range. The Idaho habitat is managed by the Idaho Department of Fish and Game. This flock contained 83 adults and 14 cygnets in September 1986 (USFWS Tristate Trumpeter Swan Survey 1986).

5) East Front, Montana flock. Swans have nested sporadically during the last 20 to 30 years in an area approximately 16 km southwest of Augusta, Montana. One nesting lake near Haystack Butte has been used regularly for at least the last decade and occasional nest attempts by a second pair have occurred in the area (D. Hook, pers. comm.) Only two adults and two cygnets were reported in 1986 (USFWS Tristate Trumpeter Swan Survey 1986).

Figure 3. Tristate area



Section IV: ENVIRONMENTAL CONSEQUENCES

Develop the analysis for this section by referring to the checklists in Appendices A and B. For each alternative, discuss any item answered "Yes" in either the Significance Checklist or the General Environmental Checklist. Where adverse effects are identified, discuss any proposed mitigating measures. (Add pages to this section as necessary.)

Alternative A: No Action

15, 16

National, state and regional interest in the successful restoration of trumpeter swans is relatively high. Any substantial mortality of wintering swans will stimulate a concern and controversy.

20, 21

The no action alternative has the highest likelihood of resulting in high mortality due to starvation. The magnitude of the losses is unpredictable but could be expected to exceed 1/4 of the total population wintering in this area.

Alternative B: Trap/Haze/Feed Preferred Alternative

1. Section 7 consultation re wintering eagles that may be displaced from Harriman and RRL.

15, 16

National, state and regional interest in the successful restoration of trumpeter swans is relatively high. Any substantial mortality of wintering swans will stimulate a concern and controversy.

20, 21

Effects of all action alternatives are uncertain and will be highly dependent upon weather, swan behavior, movements of other waterfowl, presence of disease-carrying birds. Total mortality of swans is virtually unavoidable, the goal will be to minimize mortality, but actual impacts of mortality could range from minor to high depending upon circumstances beyond the control of this project. Similar conditions are anticipated to exist in future years until the swans are successfully dispersed.

Alternative C: Haze/Feed Alternative

1. Section 7 consultation re wintering eagles that may be displaced from Harriman and RRL.

15, 16

National, state and regional interest in the successful restoration of trumpeter swans is relatively high. Any substantial mortality of wintering swans will stimulate a concern and controversy.

20, 21

Effects of all action alternatives are uncertain and will be highly dependent upon weather, swan behavior, movements of other waterfowl, and presence of disease-carrying birds. Total mortality of swans is virtually unavoidable, the goal will be to minimize mortality, but actual impacts of mortality could range from minor to high depending upon circumstances beyond the control of this project. Similar conditions are anticipated to exist in future years until the swans are successfully dispersed.

Alternative D: Feed Only Alternative

15, 16

National, state and regional interest in the successful restoration of trumpeter swans is relatively high. Any substantial mortality of wintering swans will stimulate a concern and controversy.

20, 21

Effects of all action alternatives are uncertain and will be highly dependent upon weather, swan behavior, movements of other waterfowl, and presence of disease-carrying birds. Total mortality of swans is virtually unavoidable, the goal will be to minimize mortality, but actual impacts of mortality could range from minor to high depending upon circumstances beyond the control of this project. Similar conditions are anticipated to exist in future years until the swans are successfully dispersed.

Summary Chart of Alternatives and Expected Effects

Decision-Making Criteria	ALTERNATIVES			
	No Action Alternative A	Trap/Haze/Feed Alternative B	Haze and Feed Alternative C	Feed Only Alternative D
Extent to which problems, needs or opportunities would be satisfied	Not satisfied	Best short-term chance of dispensing birds to south and protecting vegetation. Could fail to disperse as many as desired. Best chance to reduce dependence on grain and meet long-term objective.	Unlikely to move birds south. May protect Harriman vegetation. Will increase dependency upon artificial feed and further concentrate swans.	Not satisfied. Unlikely to prevent mortality at Harriman. Would increase stress on Harriman vegetation. Would increase dependence on grain.
Principal Environmental (Biophysical) Effects	High mortality at Harriman and continued damage to aquatic plants. Increased potential for overcrowding and disease at Red Rock Lakes.	Best chance to reduce mortality potential at Harriman by moving birds to selected southern sites. Reduce stress on aquatic vegetation.	Possible protection of vegetation at Harriman. Increased dependence on artificial feed. Increased concentrations of swans at Red Rock Lakes.	Increased dependence on artificial feed. Increased stress to Harriman vegetation from overuse. High likelihood of mortality at Harriman. Further conditions swans to remain and not migrate.
Principal Socioeconomic Effects	Low response to agency mission. Low public support. Low short-term cost.	Best response to agency mission/ treaty responsi- bilities. Good public reaction. Moderate short- term cost. Possible increased conflicts with whitebird hunts in dispersal area.	Reasonable response to agency commitments. Public support. Lesser short-term costs, possibly greater long term. Possible increased conflicts with whitebird hunts in dispersal area.	Some response to agency mandates. Some public support. Lower, but long- term costs. Hunters angry if waterfowl baited into refuge at Harriman.
Degree of Public Controversy	High	Low, but potential for some if misconceptions arise or clear information is not provided.	Some	Some

Section V: CONSULTATION AND COORDINATION WITH OTHERS

List below parties contacted during the planning process. Summarize results of consultation or coordination with these parties. If the EA was circulated for public comment, also provide a summary of any significant issues raised and how they were resolved.

Idaho Chapter of the Wildlife Society (WS)

The Trumpeter Swan Society (TTSS)

Pacific Flyway Council

Idaho Department of Fish and Game

Idaho Department of Parks and Recreation (IDPR)

Greater Yellowstone Coalition (GYC)

Nevada Department of Wildlife (NDW)

Montana Department of Fish and Wildlife and Parks (MDFWP)

Utah State Division of Wildlife Resources (UDWR)

Background issues, objectives, and potential methods have been discussed with WS, TTSS, GYC on several occasions between 5/90 and 9/90.

TTSS urged emphasis on trapping with hazing as a last resort - feared unknown effects of hazing and lack of control over dispersal. Also emphasized the need to act and address both short-term and long-term plans and the need for timely and accurate public information.

WS expressed concern about level of commitment of adequate funds and manpower; very concerned that necessary actions be taken, also very concerned about potential for obtaining adequate water.

UDWR has requested some swans be released at Fish Springs National Wildlife Refuge.

GYC expressed concern and offered to help if they could.

Agencies endorsed the contingency plan to trap/haze/feed.

IDPR expressed concern about minimizing impacts on their ongoing winter visitor operation.

NDW recommended identifying the specific swan release sites and identifying contingency plans for accidental hunter kill in snow goose and tundra swan hunting areas.

Section VI: CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis contained in this document, I find that implementation of the proposed action:

- Is compatible with the major purposes for which the area was established.
- Is not compatible with the major purposes for which the area was established.
- Would constitute an action significantly affecting the quality of the human environment and, therefore, recommend an EIS be prepared. (Forward Environmental Assessment to the Regional Office for review.)
- Would not constitute an action significantly affecting the quality of the human environment and therefore, recommend a Finding of No Significant Impact (FONSI) be prepared. (District Manager/Supervisor signs FONSI on next page)

Richard D. Bauer
Project Leader

11-9-90
Date

Sanford R. Wells
District Manager/Supervisor

11-9-90
Date

NOTE: If it is uncertain whether an EIS or FONSI should be prepared, the District Manager/Supervisor may forward the EA to the AFWE-SE for review. Additionally, the RD will retain NEPA sign off authority on those actions involving major planning efforts; those actions with potential regional or national policy implications for FWS; those actions involving major controversial issues of regional or national significance; and those actions involving land acquisition of any form.

FINDING OF NO SIGNIFICANT IMPACT

Winter Protection of Rocky Mountain Trumpeter Swan Population

Southeast Idaho Refuge Complex

The U.S. Fish and Wildlife Service proposes to trap, haze, and/or feed wintering trumpeter swans in the RRL and Harriman State Park vicinity as needed to reduce the potential for high winter mortality.

The purpose of the proposal is to disperse wintering swans from sites where mortality from starvation and disease is high to more southerly wintering sites where vulnerability is less, primarily along the Snake River in Idaho and a few at Fish Springs National Wildlife Refuge in Utah and the Salt River in Wyoming.

FWS has analyzed a number of alternatives to the proposal, including the following:

- Trap/Haze/Feed
- Haze/Feed
- Feed Only
- No Action

The proposal was selected over the other alternatives because:

It provides the highest likelihood of minimizing mortality, successfully moving swans to selected wintering sites, protecting the aquatic vegetation in Henry's Fork, and reducing dependency upon supplemental grain and meeting long-term objectives.

Implementation of the preferred alternative would be expected to result in the following environmental and socioeconomic effect:

Best chance to reduce mortality potential at Harriman by moving birds to selected southern sites. Reduce stress on aquatic vegetation.

Best response to agency mission/treaty responsibilities. Good public reaction. Moderate short-term cost. Possible increased conflicts with whitebird hunts in dispersal area.

Measures to mitigate and/or minimize adverse effects have been incorporated into the proposal. These measures include:

Monitoring of swan movements and distribution by air and ground survey, marking of all trapped swans.

Stockpiling extra grain supplies.

The proposal is not expected to have any significant effects on the human environment because:

It will reduce the potential for substantial loss of a wildlife resource that has high cultural and aesthetic values to humans.

The proposal has been thoroughly coordinated with all interested and/or affected parties. Parties contacted include:

The Trumpeter Swan Society
Idaho Chapter of the Wildlife Society
Greater Yellowstone Coalition
Idaho Department of Fish and Game
Idaho Department of Parks and Recreation
Pacific Flyway Council
U.S. Forest Service
Nevada Department of Wildlife
Utah State Division of Wildlife Resources

Therefore, it is my determination that the proposal does not constitute a major Federal action significantly affecting the quality of the human environment. As such, an environmental impact statement is not required. An environmental assessment has been prepared in support of this finding and is available upon request to the FWS facility identified above.

Reference: Winter Protection of Rocky Mountain Trumpeter Swan Population


Regional Director

11-15-90
Date

Appendix A
SIGNIFICANCE CHECKLIST

This checklist is intended to help determine whether a given alternative would affect environmental features of special legal or policy significance. The list of 23 questions can be answered with a "yes" or "no" response. For any item answered "yes", discuss under the appropriate alternative in Section IV. The more items answered "yes", the stronger the likelihood that an EIS is necessary.

WOULD IMPLEMENTATION OF THE ALTERNATIVE BE EXPECTED TO AFFECT OR INVOLVE:

1. Federally listed threatened or endangered species or their critical habitats? (If "Yes", Section 7 internal consultation is required.)
2. Properties either listed in or eligible for listing in the National Register of Historic Places? (If "Yes", consult with State Historic Preservation Office.)
3. Either surface or subsurface disturbance? (If "Yes", consult with SHPO.)
4. Major loss or alteration of natural wetlands that would adversely affect biological productivity, habitat diversity, flood storage capacity, or aquifer recharge capacity? (If "Yes", see FWS floodplain/wetland regulations in November 20, 1979 issue of Federal Register.)
5. Areas within the 100-year floodplain, in terms of increasing the flood hazard potential? (If "Yes", see November 20, 1979 issue of Federal Register.)
6. Natural resources within the officially designated boundary of the State coastal zone? (If "Yes", consult with State Coastal Zone Management Office.)
7. Discharge of dredged or fill materials in waters of the U.S. or adjacent wetlands? (If "Yes", Corps of Engineers' Section 404 permit is required.)
8. Structures or facilities within, under or above a navigable waterway? (If "Yes", Corps of Engineers' Section 10 permit is required.)
9. River segments designated for inclusion within the National Wild and Scenic Rivers System? (If "Yes", consult with National Park Service.)
10. Any area included within the National Wilderness Preservation System?
11. Use of toxic or environmentally hazardous substances, such as pesticides, herbicides, rodenticides, etc.? (If "Yes", consult with Environmental Contaminant Specialist, RO.)
12. Significant degradation of water quality? (If "Yes", consult with State water quality agency and/or U.S. Environmental Protection Agency.)
13. Significant degradation of air quality? (If "Yes", consult with State air quality agency and/or EPA.)

14. Society as a whole? *N*
15. National interests? *Y*
16. State or regional interests? *Y*
17. Long-term irreversible or irretrievable commitments of resources? *N*
18. Public health or safety hazards? *N*
19. Widespread controversy? *N*
20. Highly uncertain effects with unique or unknown risks? *Y ?*
21. Establishment of a precedent for future actions with significant effects, or a decision in principle about a future consideration? *Y ?*
22. Other actions with individually insignificant but cumulatively significant impacts? *N*
23. Potential violation of Federal, State or local law or requirements imposed for the protection of the environment? *N*

Appendix B
GENERAL ENVIRONMENTAL CHECKLIST

This checklist is intended to facilitate effects analysis for the various alternatives under consideration. The list of physical, biological and social considerations can be answered with a "yes" or "no" response. For any item answered "yes", discuss under the appropriate alternative in Section IV.

WOULD IMPLEMENTATION OF THE ALTERNATIVE BE EXPECTED TO AFFECT ANY OF THE PHYSICAL, BIOLOGICAL OR SOCIAL CONSIDERATIONS LISTED BELOW?

PHYSICAL CONSIDERATIONS

- A. 1. Climate *N*
2. Air Quality *N*
- B. Topography
1. Relief *N*
2. Cuts/Fills *N*
- C. Geology
1. Earthquake/Landslide *N*
2. Minerals *N*
3. Energy Resource Depletion/Conservation *N*
4. Radioactive & Toxic Substances/Heavy Metals *N*
- D. 1. Erosion/Deposition *N*
2. Siltation *N*
3. Soil Quality *N*
- E. Hydrology
1. Surface & Ground Water Quality/Quantity *Y*
2. Absorption/Drainage *Y*
3. Flooding *N*
4. Hydro/Geothermal Energy Sources *N*

BIOLOGICAL CONSIDERATIONS

- A. Vegetation
1. Species of Special Concern *N*
2. Critical Wildlife Habitat *Y*
3. Species Diversity/Abundance *N*
4. Noxious Weeds/Exotic Plants/Pathogens *N*
- B. Wildlife
1. Species of Special Concern *Y*
2. Species Diversity/Abundance *Y*
3. Game/Non-Game Species *Y*
4. Pests/Pathogens/Vectors/Predators/Feral or Exotic Animals *Y*

SOCIAL CONSIDERATIONS

- A. Cultural
1. Archaeologic/Historic Sites *N*
2. Educational/Recreational Opportunities *N*
3. Public Access *N*
- B. Economic
1. Cost *N*
2. Employment *N*
3. Commercial/Industrial Buildings *N*
4. Taxes/Property Values *N*
- C. Land Use
1. Plans/Policies/Controls *N*
2. Development/Growth *N*
3. Farmland/Open Space, Natural Areas *N*
4. Transportation Facilities/Public Utilities *N*
- D. Social
1. Quality of Life *Y*
2. Community Cohesion *N*
3. Residents/Residences *N*
4. Population Change *N*
5. Human Health/Safety *N*
6. Public Services *N*
7. National Defense *N*
- E. Aesthetics
1. Scenery *N*
2. Noise *N*
3. Odor *N*

1990-91 CONTINGENCY PLAN
TO REDUCE POTENTIAL FOR MORTALITY OF WINTERING RMP TRUMPETERS
AT HARRIMAN STATE PARK AND RED ROCK LAKES NWR

(Revised to reflect decisions at the November 27 meeting described below)

As a result of decisions at a November 27 meeting with John Doebel, Assistant Regional Director, Refuge and Wildlife, Region 1; Dick Bauer, Migratory Bird Coordinator, Region 1; John Cornely, Migratory Bird Coordinator, Region 6; Rod Drewien, Trapping Team Leader; Ruth Shea, Monitoring Team Leader and Chuck Peck, Trumpeter Swan Coordinator, the following revisions to the October 26, 1990 "Contingency Plan to Reduce Mortality of Wintering RMP Trumpeters at Harriman State Park and Red Rock Lakes NWR" were made. Please append this revision to the October 26 Plan and to the Environmental Assessment.

1. Increase releases from Island Park Reservoir from 250 cfs to 300 cfs. RATIONALE: During the past month, water depths on the Henry's Fork through Harriman State Park (HSP) have decreased while releases have remained constant. Probable reason is reduction in plant biomass due to continuing senescence and removal of plants by feeding swans, geese and ducks. Some areas of the river are so shallow that surface ice will probably extend to the river bottom and permanently damage vegetation and have a direct negative impact on fish. Three hundred cfs was the minimum originally recommended to maintain swan feeding conditions.

2. The number of birds at Red Rock Lakes National Wildlife Refuge (RRLNWR) that would cause trapping and translocation to begin was reduced from 450 to 250. RATIONALE: Identification of individual collared birds this fall indicates more interchange of birds between HSP and RRLNWR than has been previously documented at this time of year. Conditions for capturing birds at RRLNWR are better than at HSP. There was a consensus of opinion that removing swans from RRLNWR will be effective in reducing the number and hence the potential for mortality of swans at both HSP and RRLNWR. The 250 figure is an attempt to balance the breeding population objectives for the Centennial Valley against the potential for winter mortality of swans wintering at the two locations.

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(Revised to reflect decisions at Region 1 and 6 meeting, Missoula, MT,
8/29/90 and habitat depletion at HSP)

BACKGROUND

Recognition of the extreme vulnerability of trumpeters wintering at Harriman State Park (HSP) led to the creation of a "Contingency Plan for Management of Wintering Trumpeter Swans in the vicinity of Harriman State Park, Idaho". This contingency plan was approved on March 9, 1988 by the RMP Trumpeter Swan Subcommittee of the Pacific Flyway Study Committee.

The 1988 contingency plan outlined a strategy for water flow management and hazing of swans out of the HSP vicinity. Artificial feeding was identified as last resort, to be implemented only if the survival of 50 or more swans was in jeopardy. Feeding was intended to be accompanied by simultaneous trapping efforts.

The contingency plan emphasized the need to develop and test winter trapping methods, both as a means of reducing the concentration of swans at HSP and as a means of supplying birds for winter range expansion efforts.

During the summer of 1988, managers realized that the extreme drought conditions were setting the stage for low winter water releases from Island Park Reservoir and ice problems at Harriman. Due to the high likelihood that adequate flows would not be available for wintering waterfowl, an attempt was made to haze swans out of Harriman during November and December 1988. Despite determined efforts by two employees from Red Rock Lakes NWR, understaffing, poor equipment, malfunction of Zon guns at low temperatures, and lack of manpower for monitoring reduced the effectiveness of the effort and made evaluation of results very difficult.

Following the autumn hazing efforts, a "worst case scenario" developed during the winter of 1988-89. Inadequate flows (100 cfs) dried out about 1/3 of the feeding area and ice reduced the swans access to much of the remaining area during December and January. A record-breaking high pressure system and cold front in early February froze all feeding sites in the Harriman vicinity. Approximately 600 weakened swans were completely cut off from all food for 8 days of -30° F temperatures. A last ditch effort to thaw the Henry's Fork by increasing releases to approximately 800 cfs succeeded when air temperatures moderated. An estimated 100 trumpeters died during the crisis from emaciation, hypothermia, and frostbite. The total extent of losses during spring migration and subsequent decreased productivity were not fully documented.

Revised 10/26/90

Because most of the surviving swans appeared extremely weak, wheat was fed at HSP by a graduate student volunteer during February and March. The grain was consumed by swans, ducks and geese. Moderating temperatures allowed the swans to scatter and forage on aquatic vegetation, and the extent of their actual benefit from the grain was unknown. Again, lack of manpower and resources made this feeding effort difficult and inefficient.

No effort was made to develop trapping methods in 1988-89 due to the crisis situation and the extremely poor condition of large numbers of birds. No trapping was attempted in 1989-90, again due to lack of manpower, leadership and money. During 1989-90, graduate student Jeff Snyder developed a trapping proposal which provides the basis for the swim-in trap mentioned later in this plan.

Since adoption of the 1988 contingency plan, events have demonstrated that existing water agreements will not provide adequate water flows for swans during low water years. It is now also apparent, however, that trumpeters at Harriman face serious problems even if adequate water is available. Prior to 1989-90, attention was focused on obtaining enough water to protect the vegetation from desiccation and to prevent ice formation. In 1989-90, however, record numbers of swans (750) congregated at HSP, and despite unusually mild weather, consumed virtually all available vegetation. After exhausting the aquatic vegetation at Harriman, 400-500 swans moved to Red Rock Lakes. Over 800 trumpeters were on the Refuge feeding ponds by mid-March and consumed all available grain.

Winter swan use at HSP in 1989-90 exceeded the site's carrying capacity. If similar or greater numbers of swans return to HSP in future winters, water management, while still extremely important, by itself will not insure adequate food supplies. The vulnerability of the wintering swans has continued to increase since 1988 and the need to disperse the swans to alternate wintering sites is greater than ever.

Therefore, this 1990-91 contingency plan includes tasks, responsibilities and manpower, equipment and budget needs. Assignment of leadership responsibilities and agency resource commitments are essential to the plan's success. Several of the tasks described in this plan were approved two years ago but no action has been taken. These actions can only be implemented effectively if the states and USFWS allocate resources manpower and recognize the priority of these tasks.

1990-91 CONTINGENCY PLAN

GOAL: To reduce the potential for high mortality of trumpeter swans due to inadequate food resources, inadequate water flows and/or disease at Harriman State Park and Red Rock Lakes National Wildlife Refuge.

OBJECTIVES:

1. Maintain water releases from Island Park Reservoir through Harriman State Park adequate to:
 - a. protect aquatic vegetation from exposure and desiccation during autumn (September to mid-November)
 - b. protect aquatic vegetation from ice damage during early winter (mid-November to late December), prior to the peak swan use period
 - c. if the river freezes at release rates that are adequate to protect roots and tubers, allow ice formation to occur. Because the food is inadequate, there is nothing to be gained by deliberately keeping the river ice-free and attracting waterfowl into the area.
 - d. when trapping/hazing efforts have terminated, keep open the option of increasing water releases to make tubers and plants available during February/March to sustain swans that have not dispersed. (This may require purchase of Water Bank water). Exercise of this option will require weighing the risk to swans from starvation versus the risk to remaining vegetation from overutilization.

2. Prevent the number of swans attempting to winter at Harriman from exceeding the carrying capacity of the aquatic vegetation. Observations and measurements in the summer and fall of 1990 indicate that aquatic biomass has been reduced to a level that no more than 100 swans can be sustained through the winter.

3. Maintain the number of swans wintering on supplemental feed at Red Rock Lakes NWR below approximately 450. Be prepared to feed 800 swans January through March if attempts to reduce numbers fail.

Objective 1. Water Management

Tasks:

- 1) Obtain formal agreement with the Bureau of Reclamation, irrigators and power companies to provide adequate flows.
Responsibility: USFWS, Region 1

- 2) Obtain commitment of funds to purchase adequate water.
Responsibility: USFWS, Region 1

- 3) Monitor winter swan numbers, distribution, ice formation, and weather conditions. Request additional water when needed to prevent ice formation.
Responsibility: USFWS

Objective 2. Reduce number of swans wintering at HSP to carrying capacity (100) or below.

We recognize that there is no simple or risk-free way to remove 350-500 swans from the Harriman area. All options involve risks of injury and stress to the birds. Even if dispersal efforts are totally successful, some birds will die as they explore new and unfamiliar environments. We have chosen strategies that strive to keep these risks as low as possible. However, we emphasize that we have weighed the risks of taking action against the risks inherent in taking no action. We believe that the events of recent winters have amply demonstrated that the risk of major mortality at Harriman and Red Rock Lakes is very high and that action is needed to disperse the swans before another crisis develops. The need to prevent further damage to the aquatic vegetation is of at least equal importance.

Therefore, we propose a contingency plan strategy that focuses on water management and trapping. Efforts will escalate to higher risk options if conditions necessitate. Trapping of flighted swans under comparable cold/snow conditions has not been previously attempted. There is no guarantee of success, however several methods appear to have potential although they will require on-site testing and refinement. If a successful method can be developed, swans will be marked and directly transported to new winter ranges. Managers will direct the movement of the swans to preferred locations and attempt to avoid areas that contain hazards or where conflicts with hunting seasons might occur.

Trapping will begin as swans arrive in late October. Constant monitoring of swan numbers and distribution, trapping success and needed refinements, water conditions and weather patterns will occur. If trapping fails and water, weather and swan distribution information indicate a high mortality risk, hazing will be initiated. Hazing would not begin until late November unless trapping proves unsuccessful sooner. If trapping proves successful, or if environmental conditions or swan numbers shift favorably, hazing may not be needed. Constant monitoring and feedback will be essential.

Efforts at Harriman will be closely coordinated with Red Rock Lakes NWR. If high numbers of swans move into the Refuge in November and December, trapping and hazing may be needed. Efforts at Harriman will be self-defeating if they merely move swans to the artificial feed at Red Rock Lakes in November and December.

Trapping and/or hazing operations would be halted at any time if monitoring indicates that the efforts show no potential of success or if unanticipated negative impacts are observed.

Tasks:

- 1) During July and October at least two alternate wintering areas, capable of receiving 200-300 trumpeters need to be identified. Site specific plans to transport, release and monitor transplanted swans need to be made. These sites would be ready to receive trumpeters by November 1990 in the event that trapping is successful. Salt River, (WY) and Fort Hall/Minidoka (ID) may also be used as release sites if conditions are suitable.

Responsibility: USFWS

- 2) During August through October, one individual will be assigned the overall responsibility to locate all necessary equipment, obtain neck-collars, transport boxes, arrange details for housing needs, etc. establish an observer network and coordinate public relation efforts with the PR staffs of the involved agencies. There will be numerous details to coordinate. Although tasks will be delegated, one individual should be responsible for insuring that all details are covered. Loaned equipment will be needed from state and federal agencies.

Responsibility: USFWS

- 3) Also during August, construction of two swim-in traps and preliminary testing of night-lighting techniques will occur at RRLNWR.

Responsibility: USFWS

- 4) Trapping efforts will begin at HSP in late October as trumpeters begin to arrive. Several methods, including nightlighting, drive netting, rocket netting (modified system previously used to capture sandhill cranes), and swim-in traps will be tested. If one or more trapping methods prove successful, up to 500 swans will be moved to alternate wintering sites. As previously stated, the objective will be to reduce the number of swans attempting to winter at HSP and RRLNWR to approximately 550 birds.

Responsibility: USFWS, SEIRC and RRLNWR

Manpower: Project Leader and 3 man crew to run traps and refine techniques; up to 8 additional people available on 24 hr. notice to assist in actual trapping, handling, and transport of birds to wintering sites.

- 5) If trapping shows no promise of success by mid-November, efforts will shift to hazing if the potential for high mortality still exists. The decision to begin hazing will hinge upon the water supply outlook, weather patterns, and monitoring of swan numbers and distribution. If swan numbers are much lower than anticipated and

*See also
how about...*

likely to remain within the carrying capacities of RRLNWR and HSP, hazing would not be necessary.

If water supplies and swan numbers indicate unacceptable risk to birds wintering at HSP, hazing will be conducted. To be effective, hazing efforts must be well equipped, continuous, and on a large scale. The intent will be to get the swans in the air and prevent them from landing nearby or at RRLNWR. Intensive monitoring of the movements of the swans, particularly marked birds, will be crucial to determine whether hazing is moving birds southward or merely resulting in local movements. Aerial and ground monitoring of the Greater Yellowstone area, SE Idaho and Northern Utah will be necessary. A network of Audubon volunteers, and federal and state field biologists will be used to supplement monitoring efforts.

12/11/90
 was a 3 day
 on HSP as well
 include 4/1/91

As part of the RMP range expansion program, contingency must be developed to minimize trumpeter mortality as they expand into areas with white bird hunting seasons. Monitoring of movements caused by trapping and/or hazing, and close coordination with Utah and Nevada will be essential.

The currently anticipated objective of hazing will be to reduce the total swans in the RRLNWR and HSP vicinity to about 500 swans. If however, water or other habitat conditions deteriorate due to drought or other unanticipated factors, the objective of hazing would be to push as many swans as possible out of HSP. Under extreme conditions at HSP, it could become preferable to haze the remaining birds over to the supplemental feed at RRLNWR.

Sometime in late November or December, dependent upon weather conditions and aquatic foods RRLNWR will begin feeding swans that remain in the Centennial Valley. Once feeding begins at RRLNWR, hazing at HSP will continue only if monitoring shows that swans are moving southward and not merely to RRLNWR, or if conditions on the Henry's Fork appear so threatening that concentrating the swans at RRLNWR appears preferable. If numbers at RRLNWR exceed 450, trapping will be undertaken.

Responsibility: USFWS

If swans are successfully trapped and transplanted or hazed, subsequent movement of the swans will be monitored as part of the ongoing RMP range expansion program. Emphasis will be placed on monitoring neck-collared and radioed birds to determine the proportion that successfully return to breeding areas, patterns of dispersal from transplant sites, survival rates in new environments, and the fidelity of birds to new wintering sites.

Responsibility: USFWS

Objective 3. Maintain the number of swans wintering on supplemental feed at Red Rock Lakes NWR below approximately 450. Be prepared to feed 800 swans January through March if attempts to reduce numbers fail.

Tasks:

- 1) At RRLNWR, water levels in the feeding ponds will be drawn down in October to encourage movement of swans out of the Centennial Valley. Swan numbers on the Refuge will be monitored to detect any unusual influx of swans from Harriman. Trapping will begin if numbers exceed 450. Hazing will be undertaken only if trapping fails to reduce the number to 450. Enough grain will be stored to feed 800 swans during January mid April. Pond levels will be raised and feeding begun as late as possible without depleting the condition of the swans that remain on the Refuge.

Responsibility: USFWS

Prepared by the Rocky Mountain Population
Trumpeter Swan Subcommittee of the
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*"Through March"
- see 51*

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