Appendix A. Glossary

Acre-foot: The amount of water required to cover an acre of land to the depth of 1 foot.

Active nest: Birds initiated nest building but may not have progressed further.

Adaptive resource management: Management viewed as an adaptive process involving an array of potential management actions, set of models representing effects of actions, measures of uncertainty, and objective junctions to evaluate actions.

Alkaline: The opposite of acid; having a high pH value.

Alluvial: Relating to river and stream deposits.

Arroyo: A step-sided, flat-bottomed gully cut through cohesive sediment deposits in arid regions.

BLM: Bureau of Land Management

Blinds: Structures made of artificial or natural materials that provide visual camouflage for hunters or wildlife viewers and photographers.

BMN: Refuge bat mist netting records

BP: Before present

Browse: Tender parts of shrubs, woodvines, and trees that are eaten as food by animals. Browsing is distinct from grazing because it refers to eating woody material, whereas grazing is usually restricted to non-woody plants such as grasses.

Candidate species: Animal or plant species that are being considered for Federal designation as either threatened or endangered.

Carrying capacity: The level of visitor use that can be sustained without degrading visitor experience as well as minimizing wildlife disturbance.

CCP: Comprehensive Conservation Plan (See Comprehensive Conservation Plan)

CFS: An abbreviation for water flow measured in cubic feet per second. A measure of streamflow volume. One cubic foot is 7.98 gallons. A flow of 1 cfs produces 448.8 gallons per minute.

Compatible use: A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, in the sound professional judgement of the refuge manager, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the major purposes of the affected national wildlife refuge.

Conservation: Management of natural resources to provide maximum benefit over a sustained period of time. Conservation includes preservation and forms of wise use, including reducing waste, balanced multiple use, and recycling.

Comprehensive conservation plan (CCP): The CCP is a document that describes the desired future condition of the refuge and provides long-range guidance and management direction for the refuge manager to accomplish the purpose of the refuge, contribute to the mission of the System, and to meet other relevant mandates.

COE: Corps of Engineers

Core: A specimen of rock, soil, or sediment that has been extracted by drilling.

CRSP: Colorado River Storage Project Act of 1956.

Cultural resource: Evidence of human occupation or activity that is important in the history, architecture, archaeology or culture of a community or region.

Dense: A term used to describe the density of vegetation in a given area and indicates the physical difficulty an animal would experience while traveling through the habitat.

Desert pavement: A thin layer of coarse particles left on the surface of unconsolidated sediment after finer particles have been carried away by wind.

Downcutting: Reduction in sediment and streambed materials causing an erosive deepening of the active river channel.

Drawdown: Lowering water levels within a reservoir.

Emergent: Vegetation that is rooted below the water's surface but grows above the surface of the water.

Extirpation: The loss or removal of a species from one or more specific areas but not all areas.

Endangered species (E): Any species whose populations have been reduced to the point that it is at risk of becoming extinct over much or all of its range in the near future.

Evapotranspiration: The combined water loss from a biotic community or ecosystem into the atmosphere caused by evaporation of water from the soil plus the transpiration of plants.

Fauna: All the animals of a particular region or a particular area.

Fee-title: Acquiring total, unrestricted ownership of a parcel of land.

Flora: All the plants in a particular region or a particular area.

Forage: Food for animals, especially that obtained by grazing or browsing. Also, to look for food.

FTE: Full-time employee

Game species: Huntable wildlife

Geographic Information System (GIS): Through the use of computer technology, GIS allows the input, storage, analysis, and display of a variety of physically locatable data, i.e., data which is known to exist at some specific place or area on the ground.

gpm: Gallons per minute

Habitat: The place where an animal or plant normally lives or grows, usually characterized either by physical features or by dominant plants.

Herbaceous: Resembling an herb, a green, leafy plant that does not produce persistent woody tissue. Herbaceous plants form the lowest layer of vegetation in most plant communities.

HSP: Harriman State Park

High succession: Relatively complex, stable communities composed of populations of many different species of plants, animals, birds, insects, and microorganisms. Usually highly stable in that populations of member species tend to replace themselves over time and are resilient to distress.

Horsepower: Traditional unit for measuring the ability of an engine to do work in the foot-pound-second system, now usually replaced by the watt.

Interpret: Signs and structures that provide information on the natural environment and cultural resources for the convenience, education, and enjoyment of the visiting public.

Invertebrate: An animal without a backbone or internal body skeleton.

IPM: Integrated pest management

Kilowatt: One thousand watts. One kilowatt is approximately 1.34 horsepower.

Kiosk: A structure used to provide public information.

Loam: A general term for a soil mixture containing sand, silt, and clay in nearly equal parts.

Macrophyte: A large plant, as opposed to small and microscopic plants such as algae.

Maintenance Management System (MMS): The MMS is a national database which contains the unified maintenance needs of each refuge.

Marsh: Lowland that is occasionally covered by water. A marsh differs from a swamp in that it is dominated by rushes, reeds, cattails, and sedges with few, if any woody plants. It differs from a bog in having soil rather than peat as its base.

Migratory corridor: Route by which migratory birds move from one place to another.

Mitigation: Avoiding or minimizing impacts by limiting the degree or magnitude of the action and its implementation. Also, rectifying the impact by repairing, rehabilitating or restoring the affected environment and reducing or eliminating the impact through preservation and maintenance operations during the life of the action.

Monoculture: A method of farming in which one type of crop is grown on a large area over a number of years, or a plantation devoted to one species of trees. Monoculture results in the reduction in the diversity of associated animal species, including beneficial insect predators; it increases pest and disease.

Morphology: Study of the structure and form of an organism.

Multiple-use: Principle of managing public land such as a national forest so that it is used simultaneously for a variety of purposes such as timbering, mining, recreation, grazing, wildlife preservation, and soil and water conservation.

Neotropical migrants: Birds that migrate north in the summer and winter in South or Central America.

NEPA: National Environmental Policy Act

Nongame species: Non-huntable wildlife

Noxious weeds: A plant species that is undesirable or causes conflicts with native species.

NWI: National Wetlands Inventory

NWPCP: National Wetlands Priority Conservation Plan

NWRS: National Wildlife Refuge System

Open ponded water: Wetland classification that indicates all ponds and lakes that are entirely free of permanent vegetation.

Overstory: Uppermost layer of vegetation in a forest, formed by the leaves and the branches of the highest trees. The overstory contributes to the entire canopy.

Patchy: A term that describes the dispersion of vegetation within a given area and the relative level of difficulty that an animal traveling through the area would experience. See dense.

PIF: Partners in Flight

Prescribed burning: Controlled application of fire to wildland fuels, either their natural or modified state, under such conditions as to allow the fire to be confined to a predetermined area while producing the intensity of heat and rate of spread required to achieve planned management objectives.

Priority public use: See wildlife-dependent recreational use.

Provinces: Natural regions that share similar climate, soils, topography, and vegetation.

Raptors: A bird of prey, such as an eagle or hawk.

reclamation: A general term for the filling, grading, and reseeding or replanting of land that has been disturbed.

Reclamation: United States Bureau of Reclamation

Refuge Administration Act: National Wildlife Refuge System Administration Act

Refuge Operating Needs System (RONS): The RONS is a national database which contains the unified operational needs of each refuge.

Relief: A general reference to the degree of variation in elevation between parts of a landscape.

Resident migrants/songbirds: Birds that migrate generally between elevations, but remain within the same general area such as the Tropic of Cancer.

Riparian: A term pertaining to features or land use along the banks of a stream or river.

RMIS: A collection of databases containing information on the resources, needs, activities, and accomplishments of the National Wildlife Refuge System.

RONS: See Refuge Operating Needs System

ROW: Right-of-way

RRL: Red Rock Lakes National Wildlife Refuge

Sandy loam: Any loam that contains at least 70 percent sand and less than 15 percent clay particles.

SCORP: State Comprehensive Outdoor Recreation Plan

Service: U.S. Fish & Wildlife Service

SOP: Standard operating procedure

Sound professional judgement: A finding, determination, or decision that is consistent with the principles of sound fish and wildlife management and administration, available science and resources, and adherence to the requirements of the National Wildlife Refuge Improvement Act and other applicable laws.

sp.: Species

spp.: Subspecies

Species of Special Concern: Plants and animals are considered "species of special concern" if they are vulnerable to extirpation at the global or state level due to: 1) inherent rarity (restricted geographic range, small population size, low population density, or specialized habitat requirements), and 2) significant loss of habitat, or sensitivity to human-caused mortality or habitat disturbances.

Step-down management plans: Step-down management plans deal with specific management subjects such as habitat, public use, and safety. Step-down management describe the management strategies and implementation schedules.

Story: A layer of vegetation within an area.

Structural diversity: Variations in the physical characteristics of an environment that create a variety of habitats within a community, increasing the diversity of species that can live there.

Substrate: Surface or medium that serves as a base for something. Substrate refers to the nutrient medium for an organism, or to a physical structure on which it grows.

Sustained yield: A level of harvest of a renewable resource per year (or any other time period) that can be continued without jeopardizing the ability of the ecosystem to be fully renewed, and thus to continue to provide an undiminished level of harvest each year long into the future.

Terrestrial: Of or relating to the land rather than water; the opposite of aquatic. Terrestrial organisms live or grow on land.

Threatened species: A species that is not currently in danger of extinction but is likely to be in the foreseeable future. The status is determined by the Secretary of the Interior.

Trona: soda ash

Turbidity: A lack of clarity in a fluid, usually caused by turbulent flow picking up large quantities of particulate.

Two-track road: Unsurfaced road

Understory: The lowest layer of trees in a forest; the layer between the overstory tree layer and the shrub layer.

Uneconomic remnants: These are lands outside the Refuge boundary purchased from private parties as parts of larger parcels within the boundary.

Ungulate: Describing hoofed animals that usually graze, such as horses, deer, or cows.

Upland: Area where water usually does not collect or flow on an extended basis. The opposite of wetlands.

Upland game: Animal species, especially game animals such as bighorn sheep, living in mountainous areas.

Vertebrate: Distinguished by possession of cartilagineous or bony, axial endoskeleton that forms a brain case and a vertebral column supporting the nerve cord.

Viewshed: A landscape unit seen from a key viewing area.

Weed: Any plant growing where it is not wanted, usually a wild plant that grows without much cultivation or care and may be invasive in cultivated areas.

Wetlands: Areas of land that are covered with water for at least part of the year, have characteristically hydric soils, and have one of a number of distinctive vegetation types: swamps marshes, salt marshes (and other coastal wetlands), and bogs. Wetlands have important functions including purifying the water that recharges the aquifers, providing food and habitat for many different species, and providing temporary stopover sites for migrating waterfowl and other waterbirds.

WFS: Refuge Waterfowl Surveys

Wildlife-dependent recreational use: A use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation. These uses are the six priority general public uses of the Refuge System as established in the Refuge Administration Act.

WOL: Refuge Wildlife Observation Log

WYG&F: Wyoming Game and Fish Department

WYWS: Wyoming Wetland Society Trumpeter Swan Fund

GLOSSARY - SPECIAL STATUS DEFINITIONS: Definitions for Tables 3.4 and 3.7.

Species conservation status (Heritage Ranks, Federal and State status) cited from Wyoming Natural Diversity Database (WYNDD). 2001. University of Wyoming, Laramie, WY.

PIF Ranks cited from Cerovski, A., M. Gorges, T. Byer, K. Duffy, and D. Felley. 2000. Wyoming DRAFT Bird Conservation Plan. Wyoming Partners in Flight, Lander, WY.

Heritage Ranks

WYNDD uses a standardized ranking system developed by The Nature Conservancy's Natural Heritage Network to assess the global and statewide conservation status of each plant and animal species, subspecies, and variety. Each taxon is ranked on a scale of 1-5, from highest conservation concern to lowest. Codes are as follows:

G Global rank: Rank refers to the rangewide status of a species.

T Trinomial rank: Rank refers to the rangewide status of a subspecies or variety.

S State rank: Rank refers to the status of the taxon (species or subspecies) in Wyoming. State ranks differ from state to state.

1 Critically imperiled because of extreme rarity (often known from 5 or fewer extant occurrences or very few remaining individuals) or because some factor of a species' life history makes it vulnerable to extinction.

2 Imperiled because of rarity (often known from 6 to 20 occurrences) or because of factors demonstrably making a species vulnerable to extinction.

3 Rare or local throughout its range or found locally in a restricted range (usually known from 21 to 100 occurrences).

4 Apparently secure, although the species may be quite rare in parts of its range, especially at the periphery.

5 Demonstrably secure, although the species may be rare in parts of its range, specially at the periphery.

H Known only from historical records. 1950 is the cutoff for plants; 1970 is the cutoff date for animals.

X Believed to be extinct.

A Accidental or vagrant: A taxon that is not known to regularly breed in the state or which appears very infrequently (typically refers to birds and bats).

B Breeding rank: A state rank modifier indicating the status of a migratory species during the breeding season (used mostly for migratory birds and bats)

N **Nonbreeding rank**: A state rank modifier indicating the status of a migratory species during the non-breeding season (used mostly for migratory birds and bats)

ZN or ZB Taxa that are not of significant concern in Wyoming during breeding (ZB) or non-breeding (ZN) seasons. Such taxa often are not encountered in the same locations from year-to-year.

U Possibly in peril, but status uncertain; more information is needed.

Q Questions exist regarding the taxonomic validity of a species, subspecies, or variety.

? Questions exist regarding the assigned G, T, or S rank of a taxon.

Federal Status

The U.S. Fish & Wildlife Service (USFWS) is directed by the Endangered Species Act (ESA) to identify and protect Threatened and Endangered plant and animal species. USFWS revised its candidate system in 1996, eliminating the old categories of C2 and 3C. The following categories are now being used to rank listed and candidate species:

Endangered Defined in the ESA as a species, subspecies, or variety in danger of extinction throughout all or a significant portion of its range.

Threatened Defined in the ESA as a species, subspecies, or variety likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

E/SA Treated as endangered due to similarity of appearance with a listed species.

Proposed Taxa formally proposed for listing as Endangered or Threatened (a proposal has been published in the Federal Register, but not a final rule).

Candidate (formerly C1): Taxa for which substantial biological information exists on file to support a proposal to list as Endangered or Threatened, but no proposal has yet been published in the Federal Register.

State Status

The Wyoming Game and Fish Department (WYG&F) has developed a matrix of habitat and population variables to determine the conservation priority of all native, breeding bird and mammal species in the state. Six classes of Species of Special Concern (SSC) are recognized, of which classes 1, 2, and 3 are considered to be high priorities for conservation attention.

These classes can be defined as follows:

SSC1 Includes species with on-going significant loss of habitat and with populations that are greatly restricted or declining (extirpation appears possible).

SSC2 Species in which (1) habitat is restricted or vulnerable (but no recent or significant loss has occurred) and populations are greatly restricted or declining; or (2) species with on-going significant loss of habitat and populations that are declining or restricted in numbers and distribution (but extirpation is not imminent).

SSC3 Species in which (1) habitat is not restricted, but populations are greatly restricted or declining (extirpation appears possible); or (2) habitat is restricted or vulnerable (but no recent or significant loss has occurred) and populations are declining or restricted in numbers or distribution (but extirpation is not imminent); or (3) significant habitat loss is on-going but the species is widely distributed and population trends are thought to be stable.

SSC4 Species of Special Concern but are not a high priority for conservation attention.

Partners In Flight (PIF)
Partner's In Flight (PIF) was formed by the National Fish and Wildlife Foundation in 1990 to develop Bird Conservation Plans in each state to keep common birds common and reverse the downward trends of declining species. Priority species were ranked using 7 criteria, which include relative abundance, breeding distribution, non-breeding distribution, threats on the breeding grounds, threats on non-breeding grounds, population trend, and area of importance.

Priority species are defined as follows:

Level 1 (Conservation Action) Species needs conservation action. Includes species of which Wyoming has a high percentage of and responsibility for the breeding population, monitoring, and the need for additional knowledge through research into basic natural history, distribution, etc.

Level 2 (Monitoring) The action and focus for the species is monitoring. Includes species of which Wyoming has a high percentage of and responsibility for the breeding population, species whose stability may be unknown, species that are peripheral for breeding in the habitat or state, or additional knowledge may be needed.

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Appendix C. RONS and MMS Projects

The following two tables show the top 10 RONS projects and the top 19 MMS projects associated with the CCP. The "Goal or Objective" column on the tables link back to the Goals, Objectives, and Strategies section in the CCP. For further information on these projects, please contact the Refuge Manager.

RONS Projects						
RONS No.	**Goal or Objective**	**Project Description**	**Construction Funding**	**First Year Need**	**Recurring Annual Need**	**FTE***
00001	A1, A2.1, A2.4, A2.5, B2.1, B2.2, B2.3	Improve water level management to enhance wetland impoundments		$49,000		
00002	C1.1, C1.2, C2.1, C3.1, C3.2, C3.3, C4.1	Improve directional and interpretive signing to enhance visitor experience and protect habitats		$36,000		
00003	C2.1, C3.1, C4.1	Provide education outreach displays and protect historic trails		$40,000		
97002	A2.1, B4.1	Improve trumpeter swan management and augmentation program		$38,000		
97006	B5.1	Control and eradicate noxious weeds by utilizing sustainable methods		$78,000	$40,000	.5
97014	A2.4, A2.5, B1.1, B1.2, B1.3, B2.4, B4.2	Implement riparian restoration efforts		$54,000	$50,000	
98008	C1.1, C2.1, C3.1, C3.3, C5.1	Enhance public education and outreach activities		$139,000	$74,000	1.0
98009	C1, C1.1, C1.2, C3.1, C2.1, C4.1	Maintain public use and Refuge facilities on Seedskadee and Cokeville Meadows NWRs		$125,000	$60,000	1.0
99003	C1.1, C1.2, C2.1, C3.1, C4.1	Enhance Refuge brochures and public information		$29,000		
99005	C5	Enhance volunteer and temporary hire housing facility		$65,000		
01001	C1, C1.1, C1.2, C2, C3	Enhance auto-tour roads		$155,000		
01002	C1.1, C3.1, C4.1	Design and install intrepretive display at new refuge visitor/education center		$140,000		
Totals				$948,000	$224,000	2.5
* FTE = Full Time Equivalency						

MMS Projects			
MMS No.	**Goal or Objective**	**Description**	**Cost**
00001	A1-A2; B1-B4; C1-C5	Replace 1980 auto car tractor truck	$140,000
00002	A1-A2; B1-B4; C1-C5	Replace deteriorating 1991 Chevy 3/4 ton pickup truck	$40,000
00003	A1-A2; B1-B4; C1-C5	Replace over-used 1991 4x4 Chevy extended cab truck	$40,000
00004	A1-A2; B1-B4; C1-C5	Replace worn-out 1981 International 6-yard dump truck	$120,000
00005	A1-A2; B1-B4; C1-C5	Replace deteriorated 4x2 Dodge pickup truck	$40,000
00006	A2.1, B1.1, C1.1, C2.1, C3.1	Replace worn-out John Deere 850 tractor/crawler	$230,000
00007	A1-A2; B1-B4; C1-C5	Replace 1981 John Deere 550 tractor/crawler (dozer)	$150,000
00008	A1-A2; B1-B4; C1-C5	Replace deteriorating 1980 Case front-end loader	$165,000
00009	C1.1, C1.2, C2.1, C3.2	Replace worn-out 1979 road grader with 12 foot blade	$200,000
00010	A2.1, A2.4, A2.5, B2.1	Replace water control structure at Pool 5 of the Hawley Weltand Impoundment	$15,000
00011	A2.1, A2.4, A2.5, B2.1	Rehabilitate 8,000 feet of Hamp 2-C dike to improve wetland management	$320,000
00012	C1.1, C2.1, C4.1	Restore 1922 Dodge suspension bridge remaining support structure	$25,000
00014	A2.1, B2.1, C1.1, C2.1, C3.2	Replace outdated and worn-out 80 hp 1969 John Deere tractor	$200,000
00015	A1-A2; B1-B4; C1-C5	Replace six hand-held radioes	$18,000
95008	C3	Paint interior and exterior of shop building	$20,000
97001	C3, C5.1	Rehabilitate residence lawns, windows, windbreaks, and cooling	$70,000
99004	A1-A2; B1-B4; C1-C5	Replace worn-out all terrain vehicles (ATVs)	$18,000
01001	A1-A2; B1-B4; C1-C5	Replace 4x4 Chevy Blazer	$38,000
01002	A1-A2; B1-B4; C1-C5	Replace 4x4 Chevy Suburban	$45,000
01003	A1-A2; B1-B4; C1-C5	Replace Dodge Ram 4x4 V8-3800 magnum fire truck	$65,000
01004	A1-A2; B1-B4; C1-C5	Replace 1999 4x4 Silverado pickup truck	$40,000
01005	A1-A2; B1-B4; C1-C5	Replace 1999 4x4 Silverado pickup truck	$40,000
01006	A1-A2; B1-B4; C1-C5	Replace 1999 4x4 Chevy extended cab pickup with portable fuel tank	$45,000
01007	A1-A2; B1-B4; C1-C5	Replace 1999 4x4 Ford SUP chassis 162 super-duty maintenance truck - diesel	$50,000
01008	A1-A2; B1-B4; C1-C5	Replace 2000 12 cubic yard dump truck	$118,000
01009	A1-A2; B1-B4; C1-C5	Replace 2000 Chevy flatbed 4x4 truck	$40,000

Appendix D. Compatibility Determinations

Station Name: Seedskadee National Wildlife Refuge (NWR): Established November 30, 1965.

Establishing and Acquisition Authorities: Seedskadee NWR, located in Sweetwater County in southwestern Wyoming, was authorized under the provisions of Section 8 of the Colorado River Storage Project Act of April 11, 1956, Public Law 485 of the 84th Congress, 2nd Session. Section 8 of the Act specifically authorizes and directs the Secretary of the Interior to plan, develop, and maintain facilities for recreation and fish and wildlife conservation in connection with the BOR's Colorado River Storage Project and to purchase lands and withdraw public lands for these purposes. The Refuge is intended to restore prime waterfowl and wildlife habitat lost through the construction of Fontenelle and Flaming Gorge Reservoirs.

The Director approved acquisition of Seedskadee NWR on June 11, 1958. It was established November 30, 1965, with the purchase of the first tract of private land.

Purpose(s) for which Established: Each refuge within the National Wildlife Refuge System (System) is managed to fulfill the mission of the System as well as the specific purposes for which each refuge was established. Seedskadee NWR's purpose is defined by two pieces of Federal enabling legislation. The principal purpose of Seedskadee NWR is to provide for the conservation, maintenance, and management of wildlife resources and its habitat including the development and improvement of such wildlife resources. Additionally, the Refuge is charged to protect the scenery, cultural resources and other natural resources and provide for public use and enjoyment of wildlife-dependent activities.

The two pieces of enabling legislation are:

1. Fish and Wildlife Coordination Act: ". . . shall be administered by him/her (Secretary of the Interior) directly or in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. 664
2. Colorado River Storage Act (section 8): "In connection with the development of the Colorado River Storage Project (CRSP) and of the participating projects, the Secretary is authorized and directed to investigate, plan, construct, operate, and maintain . . . (1) public recreational facilities on lands withdrawn or acquired . . ." for the Colorado River Storage Project or participating projects in order to ". . . conserve the scenery, the natural, historic, and archaeologic objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects by such means as are consistent with primary purposes of said projects . . . and (2) facilities to mitigate losses of and improve conditions for, the propagation of fish and wildlife." The Secretary may ". . . dispose of . . ." the facilities ". . . to Federal . . . agencies . . . upon such terms and conditions as will best promote their development and operation in the public interest." 43 U.S.C. 620g

National Wildlife Refuge System Mission: The Mission of the National Wildlife Refuge System is "to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

This goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Description of Proposed Use: Wildlife Observation, Wildlife Photography, Environmental Interpretation and Environmental Education

The Refuge strives to provide opportunities that support wildlife-dependent recreation, education, and outreach to the public. Approximately 6,000 visitors come to Seedskadee National Wildlife Refuge annually for wildlife/wildland observation, photography, and interpretation/education. The majority of the use is focused on the auto-tour route located near the Refuge headquarters, the auto-tour route near Upper Dodge Bottoms, Lombard Ferry interpretive site, and visitors completing scenic floats on the Green River.

Interpretation and environmental education services are provided when staff are available and include talks or guided tours for school groups, scouts, 4-H clubs, and special interest groups. The public is invited to a variety of special events sponsored by the Refuge including Take A Kid Fishing Day, International Migratory Bird Day, National Wildlife Refuge Week, etc.

The Comprehensive Conservation Plan proposes to continue with the above uses and add the following to improve wildlife viewing, interpretation, and access for visitors:

- Build an Education/Visitor Center Building adjacent to the Headquarters to expand the visitor center displays, group presentation area, and wildlife viewing opportunities.
- Develop an interpretive trail at the Lombard Ferry Historical Site to further interpret this site.
- Develop an interpretive trail near the headquarters to interpret historical sites and wildlife habitat areas.
- Assist schools by conducting limited Refuge environmental education programs.
- Develop new Refuge brochures and update old brochures to meet new Service standards.
- Develop a River interpretive boat trail brochure.
- Develop interpretive panels at a minimum of five pullouts along the auto tour routes.
- Develop teacher workshops to help teachers educate students about the Refuge's natural resources.
- Improve four existing boat ramps located on the Refuge and work with cooperators to establish boat ramps off-Refuge.
- Continue participation in "special community events" like the Green River Annual Fly Swap, Take a Kid Fishing Day, etc.
- Improve auto pullouts along Refuge roads which offer optimum wildlife viewing opportunities.
- Provide the Refuge General Public Use Brochure at 15 primary Refuge entrances - the brochure will provide a map showing designated roads and list all Refuge regulations.
- Develop a road marker system to facilitate navigation on Refuge roads and reduce off-road travel.

Availability of resources:
Currently, resources are stretched to continue the existing wildlife-dependent recreation. An outdoor recreation planner is required to meet the Refuge's current demands. The additional items to be added from the Comprehensive Conservation Plan are tied to funding requests in the form of the attached RONS and MMS projects (Appendix C).

Anticipated impacts of the use:
Some disturbance to wildlife will occur in areas of the Refuge frequented by visitors. A majority of the use that occurs on the Refuge occurs along the 15 mile auto-tour route, the 8 mile loop road at Upper Dodge Bottoms, the 18 mile East River Road, and on the first 15 miles of Green River which flows through the Refuge. The remaining areas receive minimal use and disturbance. Primary wildlife species disturbed by vehicles, floaters, and hikers are pronghorn antelope, moose, mule deer, raptors, sage grouse, waterfowl, trumpeter swans, and rabbits.

Construction of interpretive facilities, a new education center, and improved roads will result in the loss of a small portion of wildlife habitat. The improved roads may increase both the amount of traffic and vehicle speeds which may result in increased wildlife mortality. It is anticipated that all uses will increase, particularly if better access and interpretation are offered.

Justification:
Based upon biological impacts presented above and in the Environmental Assessment, it is determined that wildlife observation, wildlife photography, interpretation, and environmental education within Seedskadee National Wildlife Refuge will not materially interfere with or detract from the purposes for which this Refuge was established. By limiting areas open to public use and closing non-designated Refuge roads, these impacts can be lessened. Monitoring of activities and their impacts and limiting the location and time of year for wildlife-dependent visits will maintain use at an acceptable level.

Although human activities have been shown to disturb wildlife and habitat, the stipulations presented below and in the CCP should reduce impacts to a minimal level. One of the secondary goals of the National Wildlife Refuge System is to provide opportunities for the public to develop an understanding and appreciation for wildlife when a use is found compatible. The four uses are identified as priority public uses in the National Wildlife Refuge System Improvement Act of 1997 and will help meet that goal at Seedskadee NWR with only minimal conflicts with the wildlife conservation mission of the Refuge System.

Determination: Wildlife Observation, Wildlife Photography, Interpretation, and Environmental Education are compatible.

Stipulations necessary to ensure compatibility:

- ✓ During peak concentrations of migratory waterbirds or during critical wintering periods, areas may be closed and access restricted to minimize wildlife disturbance and provide resting areas.
- ✓ Monitor use, regulate access, and maintain necessary facilities to prevent habitat degradation in high public use areas.
- ✓ Monitor levels of use and corresponding effects on wildlife.
- ✓ Implement additional educational and interpretive programs that discuss wildlife disturbance.
- ✓ Vehicles will be restricted to designated Refuge roads and the speed limit will be 25 miles per hour.
- ✓ Road construction will focus on improving existing roads. No new roads will be constructed.
- ✓ Enforce Refuge regulations.
- ✓ Improve signing and availability of Refuge information brochures.
- ✓ River use, specifically boating, may be restricted in the future to a daily limit on numbers of launches for non-commercial users.
- ✓ Recreationists will be asked to provide a voluntary 1/4 mile buffer zone to trumpeter swans.

Description of Proposed Use: Commercial Outfitters (Fishing, Scenic Floats)

Currently six commercial outfitters are issued Special Use Permits to conduct commercially guided sport fishing and scenic tours on Seedskadee National Wildlife Refuge. These activities are permitted on the Green River from the north boundary of the Refuge to the Six Mile Hill Boat Ramp (Otterson Ramp). All commercial guiding activities must be in compliance with the Special Conditions issued with the Special Use Permits (5 RM 17.3) and information found in the "Operating Plan: Commercial Outfitting for Sport Fishing on Seedskadee National Wildlife Refuge." An annual fee is charged for each special use permit through the User Fee Demonstration program. Funds generated from these permits are used to help pay for implementation of the program, including improvement of Refuge infrastructure for wildlife and people. In 1999, seven outfitters conducted 304 trips on the Refuge between April 1 and October 31.

The CCP proposes to continue with the proposed use. Development of the following may minimize visitor impacts on resources and ensure a quality recreational experience for the visiting public:

- Improve law enforcement coverage associated with this use.
- Monitor impacts of use to Refuge resources and "visitor experience."
- Further reduce numbers of outfitters to four or less in accordance with Draft Commercial Outfitting Plan.

Availability of resources:
Current resources are stretched to maintain the existing commercial outfitter permit operation. If additional staff support were available, this program could be better managed and effective law enforcement implemented to monitor compliance. The additional items to be added from the CCP are tied to funding requests in the form of the attached RONS projects (Appendix C). Funding of the RONS projects would accomplish the goals of the CCP and improve the existing program.

Anticipated Impacts of the use:
Commercial outfitting for sport fishing will result in increased public use of the Refuge. This results both from individual guided trips and from national advertising associated with the commercial businesses. Cumulative impacts of this increased use have correlating effects on wildlife, habitat, and the fisheries resource. This includes more disturbance to wildlife, vegetation trampling, potential introduction and spread of exotic aquatic and terrestrial plants, potential transmission of diseases including whirling disease, problems associated with disposal of human waste, and deposition of lead sinkers and fishing line. These impacts, however, apply to all angling activity, both commercial and non-commercial. Special conditions of the Special Use Permits are designed to minimize these impacts. In addition, limiting numbers of commercial outfitters will also minimize these impacts.

Permitting commercial outfitting on the Refuge results in some negative feelings within the local community. Some residents feel strongly that there is no place for commercial guiding on the Refuge. Comments from local residents also express concern about having to compete for a limited public resource with a commercial guide who is making a profit on those same resources. As a result, to some degree, permitting commercial guiding on the Refuge negatively impacts the Refuge's relationship with the local community. Regulating the numbers of outfitters and guides helps mitigate these impacts somewhat.

Commercial outfitting creates additional wear and tear on Refuge roads, boat ramps, and other facilities. Time spent administering the program diverts staff time from other activities and programs.

To a limited degree, permitting regulated commercial guiding on the Refuge may increase public awareness of Seedskadee Refuge and the Refuge System, helping to build support for the Service's mission. However, this is highly dependent on an individual guide's efforts in educating their clients.

Justification:
Fishing is a popular wildlife-dependent public use of the Refuge. Commercially-guided sport fishing, in compliance with the Special Conditions of the Special Use Permit and the "Operating Plan: Commercial Outfitting for Sport Fishing on Seedskadee National Wildlife Refuge," has no more impacts on wildlife than other recreational anglers. Guided trips allow visitors from various parts of the country to enjoy Seedskadee National Wildlife Refuge and its associated resources. In addition, it provides an additional opportunity for community members with disabilities to utilize the Refuge.

Determination:
Commercial Outfitting for Sport Fishing and Scenic Tours are compatible when conducted within guidelines stipulated in the "Operating Plan: Commercial Outfitting for Sport Fishing on Seedskadee National Wildlife Refuge," and if additional staff funding is provided to administer and monitor the program. The addition of an outdoor recreation planner would greatly facilitate the administration of this program.

Stipulations necessary to ensure compatibility:

- ✓ Based on fisheries data, public comments, impacts to wildlife and habitat, and Refuge goals, the Refuge can support a maximum of four outfitters for commercial guiding on the Refuge (see "Operating Plan: Commercial Outfitting for Sport Fishing on Seedskadee National Wildlife Refuge"). The Refuge currently has six outfitters that have established commercial guiding use on the Refuge. Through voluntary attrition, over a period of unspecified years, the number of Special Use Permits will be reduced to four or less. Permits are non-transferrable and will be retired as outfitters stop guiding on the Refuge.
- ✓ Commercial guiding for sport fishing is highly regulated on the Refuge. Use is limited to between April 1 and October 31 to minimize impacts to wildlife. In addition, numbers of trips per day for each outfitter is limited to minimize impacts to wildlife and to the general public. Outfitters and their guides must be in compliance with all Special Conditions on the Special Use Permit. For specific details regarding the special conditions, please contact the refuge manager.
- ✓ User fees have been established as part of the Entrance and Recreation User Fee Demonstration Program. These fees are used to cover the majority of the expenses the Refuge incurs for running the commercial outfitting for sport fishing program. Collection of these fees is instrumental to this program to prevent diversion of station funds from other programs.

Description of Proposed Use: Fishing

A secondary use of the Refuge is public sport fishing according to State Regulations. Year-round bank, wade, and boat fishing is allowed. Visitors participating in this use at the Refuge are estimated at 6,000 per year. Available facilities include four boat ramps, registration boxes, several instream habitat improvement projects, and parking areas. In addition, Fontenelle Dam operations are coordinated with the State Fish and Wildlife Agency to optimize conditions for sport fisheries.

Approximately half of the 36-mile-long Refuge has been designated as trophy trout waters (northern section of the Refuge). Anglers in the trophy trout section of the River are restricted to artificial flies and lures and may only keep one trout over 20 inches. General State regulations for trout apply to the southern half the Refuge. Game fish include rainbow, brown, and cutthroat trout, and white fish (native species).

The Comprehensive Conservation Plan proposes to continue with the above uses and add the following to improve fishing opportunities and access for visitors:

- Improve the four existing boat ramps and associated parking areas.
- Provide additional interpretative signs to inform the public about Refuge resources.
- Work with adjacent landowners to add additional boat ramps off Refuge lands.
- Develop a new fishing/hunting brochure.
- Add a rest room facility at the Dodge Bottoms boat ramp.
- Install a sill at Big Island to restore an historic river oxbow and improve riparian and fish habitat.
- Work with Wyoming Game and Fish Department to establish a wakeless zone through the Refuge.
- Improve vehicle pullouts throughout the Refuge.

Availability of resources:
Currently, sufficient resources are available to continue the existing recreational fishing.

Anticipated impacts of the use:
Fishing and other human activities cause disturbance to wildlife. Cumulative impacts of this increased use have correlating effects on wildlife, habitat, and the fisheries resource. This includes more disturbance to wildlife, vegetation trampling, potential introduction and spread of exotic aquatic and terrestrial plants, potential transmission of diseases including whirling disease, problems associated with disposal of human waste, and deposition of lead sinkers and fishing line. Birds or mammals feeding or resting on or near the River may be disturbed by boats or anglers fishing from the bank. The current visitor use is often low enough that disturbance by anglers have minimal impacts to most wildlife species. Over the past couple of years, the reputation of the Refuge's trophy trout waters has spread and subsequently the amount of angling pressure has increased. There are now days when cumulative boat/foot traffic may be having negative impacts to some wildlife.

Travel on non-designated roads and the creation of additional two-tracks continues to be a problem.

During the critical late fall and winter months, impacts may be occurring to wintering birds, especially trumpeter swans. Boating associated with fishing may be especially detrimental to over-water or riverine nesting species such as grebes, herons, eagles, and mergansers. Development of seasonal closed areas may be warranted in the future if visitor use increases.

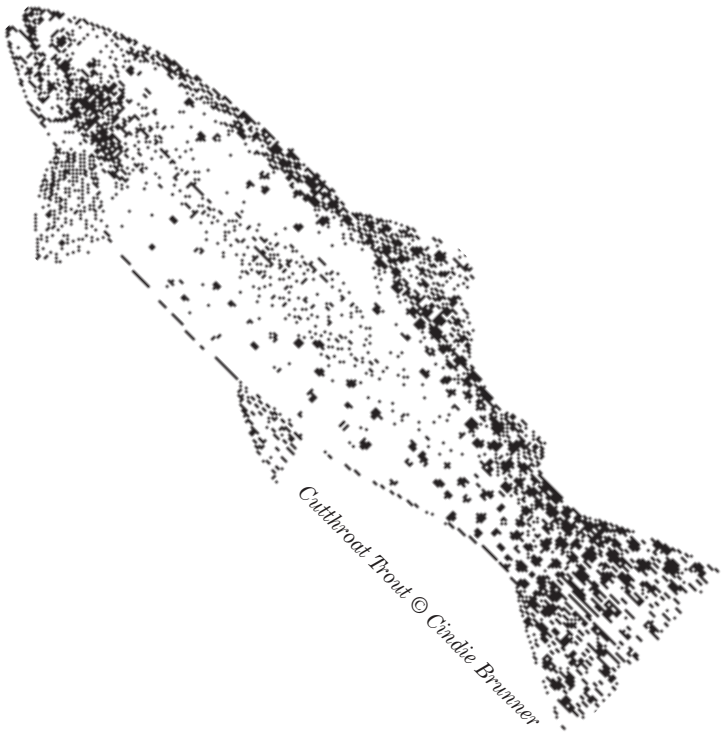
Justification:
Based upon biological impacts described above and in the Environmental Assessment, it is determined that recreational fishing within Seedskadee NWR will not materially interfere with or detract from the purposes for which the Refuge was established.

One of the secondary goals of the National Wildlife Refuge System is to provide opportunities for public fishing when compatible, and it is identified as a priority public use in the National Wildlife Refuge System Improvement Act of 1997. Current recreational fishing at Seedskadee NWR will support this goal with only minimal conflicts with the wildlife conservation mission of the Refuge System.

Determination:
Recreational fishing is compatible.

Stipulations necessary to ensure compatibility:

- ✓ Monitor existing use to ensure that facilities are adequate and disturbance to wildlife continues to be minimal.
- ✓ Work with the Wyoming Game and Fish Department to limit boat use to non-motorized or wakeless power devices (no jet skis, powering boating, etc.).
- ✓ Only the riverine sections of the Refuge will be open to fishing (no wetland impoundments, ditches or marshes will be open to fishing).
- ✓ Parking lot, road, and related access facilities will be maintained as necessary to prevent erosion or habitat damage.
- ✓ Promote use of non-toxic sinkers, split shot, and lures.
- ✓ During peak concentrations of migratory waterbirds or for the protection of special wildlife species/habitats, areas may be closed and access limited to minimize any wildlife disturbances.
- ✓ The Refuge may have to limit numbers of boats per day in the future to prevent wildlife disturbance and maintain a quality fishing experience for anglers.



Cutthroat Trout © Cindie Brunner

Description of Proposed Use: Recreational Hunting

Seedskadee NWR is open to hunting of mourning dove, sage grouse, mule deer, pronghorn antelope, moose, waterfowl, cottontail rabbit, skunk, red fox, and raccoon. Hunting seasons start around September 1 and continue through February. Visitation for these activities is estimated at 3,000. Species are hunted according to State and Federal laws.

Currently, two closed areas exist on the Refuge. Approximately 800 acres are closed to migratory bird hunting below Highway 28. A second area of approximately 800 acres is closed to all hunting and protects Refuge buildings and primary wetland impoundments. When these backwater closed areas freeze over in fall or early winter, there are no open-water areas remaining which are closed to hunting on the Refuge.

Hunting of mourning dove, cottontail rabbit, skunk, fox, and raccoon is minimal. Waterfowl, grouse, and big game hunts comprise the greatest hunting pressure (approximately 2,950 hunters). Hunting pressure is often concentrated around the opening of each hunt season, but a steady hunt pressure continues throughout the seasons.

The CCP proposes to continue most of the above uses and add or change the following to improve the hunting experience and better protect Refuge resources:

- Develop a hunting/fishing brochure.
- Modify the existing closed hunting areas to better accommodate wildlife needs and improve hunting opportunities. A separate public process will be initiated to develop new closed area boundaries.
- Update the Hunting Stepdown Management Plan to address changes in National Wildlife Refuge policy and CCP goals and objectives.

Availability of resources:
Currently, sufficient resources are available to continue the existing recreational hunting. Additional law enforcement support is necessary to ensure compliance with Refuge regulations.

Anticipated impacts of the use:
Hunters disturb non-target species and harvest target species. Recreational hunting will remove individual animals from the wildlife populations ensuring that carrying capacity (especially for big game species) is not exceeded (possibly impacting other species habitat). The areas closed to various hunting activities do provide some sanctuary for target and non-target species. Once wetland impoundments which are closed to hunting freeze up, no sanctuary areas are available for waterfowl and swans, and consequently disturbance to these species increases.

Travel on non-designated roads and the creation of additional two-tracks (illegal off-road travel) continues to be a problem.

Justification:
Hunting is a legitimate wildlife management tool that is used to manage deer, antelope, moose, and, where necessary and justified, predator populations. This is necessary to ensure that populations above the carrying capacity are controlled to reduce impacts to habitat and other wildlife that also depend upon that habitat. Hunting of predators such as skunk, raccoon, and red fox has, in the past, benefitted ground-nesting species such as waterfowl, geese, swans, grouse, cranes, etc. In addition, raccoon and red fox are nonnative in Wyoming and considered as exotic species. Some wildlife disturbance will occur during the hunting seasons. Proper zoning, regulations, and Refuge seasons will be designated to minimize any negative impact to wildlife populations using the Refuge.

Based upon biological impacts presented in the CCP and in the Environmental Assessment, it is determined that recreational hunting within Seedskadee NWR will not materially interfere with or detract from the purposes for which this Refuge was established.

One of the secondary goals of the National Wildlife Refuge System is to provide opportunities for public hunting when it is found to be compatible, and it is identified as a priority public use in the National Wildlife Refuge System Improvement Act of 1997.

Determination: Recreational hunting is compatible.

Stipulations necessary to ensure compatibility:

- ✓ Only non-toxic shot is permitted on the Refuge when hunting with a shot gun. This restriction minimizes the exposure of waterfowl and other wildlife to lead.
- ✓ Hunting must be in accordance with Federal and State regulations.
- ✓ Hunting on Seedskadee NWR will take place in a manner that will minimize disturbance to migrating waterbirds.
- ✓ Hunting will be evaluated to provide a safe hunt (reduce conflicts between hunt seasons).
- ✓ The Refuge deer, antelope and moose hunts will be coordinated with the Wyoming Game and Fish Department to determine the number of permits to manage the populations.
- ✓ Monitor all hunting uses to assure they do not interfere with and are compatible with other wildlife-dependent recreational activities.
- ✓ During critical wintering periods for waterbirds or for the protection of special wildlife species/habitats, areas may be closed and access limited to minimize any wildlife disturbances.
- ✓ Refuge areas closed to hunting must be re-evaluated to ensure adequate habitat for migrating, feeding, and resting waterfowl and other wildlife is available. A closed area inclusive of some portion of the main stem of the Green River must be created to ensure compatibility of the hunting program.
- ✓ Dog training on the Refuge will not be allowed. Dogs must be confined or leashed except when participating in a legal hunt for sage grouse, cottontail rabbits and migratory game birds.

Description of Proposed Use: Camping

Camping is not currently permitted on the Refuge except for a limited number of special groups (i.e. scouts) which are conducting projects to enhance Refuge habitat (i.e. trash pickup, protecting trees, etc.). Historically, camping occurred on lands which were eventually acquired (or transferred) to Seedskadee NWR. Some demand occurs for camping on the Refuge from visitors wishing to conduct multiple day floats through the Refuge. Currently, three BLM/ BOR developed campgrounds are located approximately five miles north of the Refuge boundary. The BLM lands surrounding the Refuge also offer camping opportunities.

Availability of resources:
Development of specific campgrounds would require additional funding to build, maintain, and monitor. Currently, resources are stretched to maintain existing Refuge facilities and conduct law enforcement of existing public uses. Resources are not available to accommodate this use. Camping is not required to participate in the six priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation).

Anticipated impacts of the use:
Camping is a high impact activity which often results in the degradation of Refuge habitat. Camping in itself will disturb and disperse wildlife. Human activity, generators, loud motors, music, and dogs associated with camping disturb wildlife and detract from the outdoor experience for other Refuge users. Fires and firewood collection damage habitat and pose serious resource threats. Use of detergent, soap, and toothpaste in or near rivers harms fish and other aquatic life. Human waste creates unsanitary conditions and litter. Campers often leave garbage, trash, and other undesirable items. Illegal removal of natural objects (plants, antlers, live animals, etc.) and cultural objects may result from camper visits. Creation of "improvements" (lean-tos, tables, chairs, game poles, etc.) and alternation of the site (trenching) are also byproducts of camping.

Camping results in inappropriate uses, tramples vegetation (particularly herbaceous and shrub layers), and devalues wildlife habitats. Camping can degrade land, water, and wildlife by simplifying plant communities, increasing mortality, displacing and disturbing wildlife and distributing refuse (Boyle and Samson 1985). In addition, camping induced soil disturbance may provide conditions that favor weed infestations. Camping in riparian areas may also result in increased runoff into streams due in part to exposed soil and reduction in vegetation (Green 1998). Camping also requires additional law enforcement efforts that may have to be directed at a wide range of violations from those listed above to domestic disturbance/assaults.

Justification:
Camping is not required to support the priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation). Developed campgrounds are available five miles north of the Refuge and the surrounding BLM lands provide primitive camping opportunities. In addition, numerous hotel accommodations are available 45 minutes away in Green River and 30 minutes away in Farson, Wyoming.

Determination:
Camping is not a compatible use unless conducted under a special use permit for the exclusive purpose of completing a civic project to enhance Refuge habitat.

Stipulations necessary to ensure compatibility:
- ✓ Any camping permitted under a special use permit will not exceed one nights stay on Refuge lands and group size will not exceed 12 individuals.
- ✓ Within any given year only three special use permits will be issued for camping in order to minimize impacts to wildlife and habitat.
- ✓ Groups permitted to camp on Refuge lands for the purpose of completing specific projects must adhere to all conditions specified in the special use permit and Refuge regulations.
- ✓ Refuge management will identify campsite locations. All solid waste must be removed from Refuge lands.
- ✓ Special use permits for camping will be issued based on the project proposed and cannot be reserved more than four months in advance.

Description of Proposed Use: Horseback Riding, Picnicking

Picnicking is often associated with many of the wildlife-dependent recreational uses such as hunting, fishing, hiking, wildlife observation, boating, and wildlife photography. Horseback riding is rarely observed on the Refuge and is most often affiliated with hunting or the removal of trespass cattle and sheep. Horses may travel anywhere on the Refuge which is open to public foot access. Numerous locked gates, fences, and cattle guards make the Refuge difficult to ride through. The CCP does not propose any additional improvements beyond maintaining the existing use.

Availability of resources:
Currently, sufficient resources are available to continue the existing recreational picnicking and horseback riding.

Anticipated impacts of the use:
Picnicking and horseback riding may cause disturbance to wildlife and increase litter problems. Horses brought in from outside the local area may introduce noxious weeds not currently on the Refuge via fecal material. Present levels of these activities do not appear to be a problem. Limiting of areas open to public use at specific times of the year can limit impacts. Monitoring of activities and their impacts and limiting the location and time of year for wildlife-dependent visits will maintain use at an acceptable level.

Justification:
Picnicking and horseback riding do not appear to create any special problems and are most often associated with other wildlife-dependent uses such as hunting, fishing, or wildlife viewing.

Determination:
Picnicking and horseback riding are compatible.

Stipulations necessary to ensure compatibility:
- ✓ Visitors must comply with Refuge regulations.
- ✓ Monitor levels of use and effects on wildlife.
- ✓ Monitor use, regulate access, and maintain necessary facilities to prevent habitat degradation in high public use areas.
- ✓ During critical wintering periods for waterbirds or for the protection of special wildlife species/habitats, areas may be closed and access limited to minimize any wildlife disturbances.

Description of Proposed Use: Cross-country skiing, Snowshoeing

Occasionally, winter visitors engage in cross-country skiing and snowshoeing activities (less then 10 visitors/year estimated). Often these uses are conducted in association with other wildlife-dependent recreational uses such as wildlife observation, wildlife photography, and hunting. These activities are permitted in any areas open to foot travel. The Refuge staff does not groom or maintain any winter trails. The CCP does not propose any additional improvements beyond maintaining the existing use.

Availability of resources:
Currently, sufficient resources are available to continue the existing recreational cross-country skiing and snowshoeing uses.

Anticipated impacts of the use:
Cross-country skiing and snowshoeing may cause disturbance to wildlife during critical winter periods. Present levels of these activities do not appear to be a problem. Limiting areas open to public use at specific times of the year can reduce impacts. Monitoring activities and their impacts and limiting the location and time of year for wildlife-dependent visits will maintain use at an acceptable level.

Justification:
Cross-country skiing and snowshoeing do not appear to create any special problems and are most often associated with other wildlife-dependent uses such as hunting, wildlife viewing, and wildlife photography.

Determination:
Cross-country skiing and snowshoeing are compatible.

Stipulations necessary to ensure compatibility:
- ✓ Monitor these uses to assure they do not interfere with, and are compatible with, other wildlife-dependent recreational activities.
- ✓ Monitor existing use to ensure that disturbance to wildlife continues to be minimal during the critical winter months.
- ✓ During peak concentrations of wintering waterbirds (especially trumpeter swans) or for protection of special wildlife species/habitat, areas may be closed and access limited to minimize any wildlife disturbance.

Description of Proposed Use: Off-road vehicles (motorized dirt bikes, all-terrain-vehicles, snowmobiles)

Off-road vehicles which are not licensed by the State for highway travel are not permitted on Refuge lands (50 CFR 27.31). Vehicles licensed for highway travel are allowed on designated Refuge roads. Travel off any designated Refuge road is prohibited.

Availability of resources:
Support of off-road vehicle use would require additional funding for law enforcement and would cause extensive damage to wildlife habitats. Currently, resources are stretched to maintain existing Refuge facilities and conduct law enforcement of existing public uses. Resources are not available to accommodate off-road vehicle use. The use of off-road vehicles is not required to participate in the six priority public uses.

Anticipated impacts of the use:
Motorized off-road vehicles are disturbing to wildlife and impact vegetation and soils when used off of designated roads. Loud motors detract from the quality of other forms of Refuge recreation. Studies indicate snowmobile disturbance increases the home range sizes of winter ungulates and increases deer metabolism (Moen et al. 1982, Dorrance et al. 1975). Snowmobile trails provide access to habitats for species such as coyotes and bobcat that otherwise may not use certain winter habitats. Snowmobile use hinders the solitude of the Refuge for winter visitors and may reduce air quality.

Illegal off-road use continues to occur, despite attempts to close non-designated roads and two-track spur roads. Many signs have been removed or destroyed and fences cut by off-road violators.

Justification:
Use of off-road vehicles is not necessary to support the priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation). In fact, these types of vehicles often degrade other recreationists experiences. Surrounding BLM, BOR, and USFS lands provide numerous opportunities to recreate with these types of vehicles.

Determination:
Off-road vehicle use (dirt bikes, all-terrain-vehicles, snowmobiles) is not a compatible Refuge use.

Description of Proposed Use: Hiking and Cycling

Hiking is a popular activity which is often associated with wildlife observation, wildlife photography, and hunting. Hiking occurs along roads, trails and throughout various habitats of the Refuge. Bicycles are considered vehicles and are restricted to designated Refuge roads. Off-road cycling is not permitted. Cycling is most affiliated with wildlife observation.

Approximately 500 visitors engage in these activities annually. The CCP proposes to continue with the above uses and add the following to improve hiking opportunities:

- Develop a short trail at the Lombard Ferry Historical Site.
- Develop an interpretive hiking trail near the Refuge Headquarters.

Availability of resources:
Currently, sufficient resources are available to continue the existing levels of hiking, and cycling.

Anticipated impacts of the use:
These activities, when conducted responsibly, may create minor and temporary disturbances to wildlife. At the current level of use, these activities are not expected to materially interfere with Refuge purposes. Limiting of areas open to public use at specific times of the year can reduce impacts. Monitoring of activities and their impacts and limiting the location and time of year for wildlife-dependent visits will maintain use at an acceptable level.

Justification:
Hiking and cycling do not appear to create any special problems and are most often associated with other wildlife-dependent uses such as hunting, wildlife viewing and wildlife photography.

Determination:
Hiking and cycling are compatible uses.

Stipulations necessary to ensure compatibility:

- ✓ Cycling is restricted to designated Refuge roads which are open to vehicle traffic. Bicycles are considered vehicles on the Refuge.
- ✓ Hiking may occur anywhere on the Refuge open to visitor use (public entry). During certain times of the year, the Refuge may exclude public entry into portions of the Refuge to protect habitat or reduce disturbance to sensitive wildlife species.

Description of Proposed Use: Providing Livestock Access to Water

As part of the purchase of lands from the Rock Springs Grazing Association (RSGA), the Service is required by a Warranty Deed (10/26/1996) to provide access to water for livestock. The way in which livestock are afforded access to water shall be jointly determined by RSGA and the Seedskadee NWR Manager. Watering opportunities which occur on Refuge lands (outside current water gaps) will be permitted via a special use permit.

Availability of resources:
Currently, resources are available to continue this use. Additional staffing is needed to would provide for better monitoring of this activity.

Anticipated impacts of the use:
Sheep trailing within Sweetwater County generally occurs between April 1 and May 15. The Service provides direct guidance via a special use permit to RSGA permittees as to where they can water sheep on Refuge lands. Approximately 7 to 10 sheep bands (200 to 2,000 sheep/band) trail along the Refuge boundary. During the trailing period, short duration trampling and grazing of vegetation occurs. Any wildlife in the area, especially ground-nesting birds would be temporarily and/or permanently disturbed or displaced. Nest trampling can occur. Vegetation, primarily grasses/forbs, will be consumed and damage to shrubs may occur from trampling. Long-term changes to vegetation may happen because trailing occurs in the same areas each year.

Justification:
The Service is obligated to provide this activity as indicated in the Warranty Deed signed 10/26/1996. It is a legal requirement for the Refuge to provide RSGA livestock members access to water for livestock. Access to water may occur directly on Refuge lands or the Refuge may provide off-Refuge watering sites.

Determination:
This activity is not considered a compatible use of the Refuge. Provided that all stipulations are followed by all cooperators of the RSGA in the annual special use permit, impacts can be minimized.

Stipulations necessary to ensure compatibility:
- ✓ Herders may not camp on Seedskadee NWR.
- ✓ Herders will immediately exit Seedskadee NWR after watering sheep.
- ✓ Herders will keep sheep moving across Seedskadee NWR except when sheep are watering at specified sites. Grazing is not permitted.
- ✓ Herders will water sheep at specific watering sites indicated on maps supplied by the Refuge Manager to avoid cottonwood groves and riparian shrub (willow) areas.
- ✓ Operators will be fully accountable for the actions of their herders. RSGA will be fully accountable for the actions of its operators.
- ✓ Use of vehicles off designated roads is prohibited. All Refuge regulations apply to all operators, herders, and the RSGA.
- ✓ All gates will be locked and/or closed immediately after livestock enter or exit the Refuge.

Description of Proposed Use: Research

Research is completed on refuges to address specific refuge management problems or provide information to assist with regional/national research questions (i.e. research on specific species like sage grouse, trumpeter swans, pepperweed, etc.). Research results often have a direct benefit for management activities. Current research conducted on Seedskadee NWR involves invasive species, riparian restoration, and public use. It is anticipated that various research projects will continue on the Refuge over the next 15 years to address a variety of local and national issues.

Availability of resources:
Currently, resources are stretched to continue the existing research projects. Often staff are required to assist with research projects in some capacity and a balance between research demands and other duties must be maintained. Additional assistance with invasive species research is needed.

Anticipated impacts of the use:
Depending on the type of research projects, disturbances may occur to wildlife and/or wildlife habitat. Prior to permitting any research projects, the Service will fully explore potential impacts to Refuge resources relative to the value of information gathered for refuge or national interests. Research projects will be strictly monitored and are required to comply with Refuge regulations and special stipulations dictated by special use permits.

Justification:
Research often results in a better understanding of the natural resources studied and often assists in solving resource management issues. The knowledge gained by research should outweigh disturbances to wildlife and habitat. Efforts will be made to minimize all potential disturbances. Researchers must obtain a special use permit from the refuge manager which will outline conditions required to comply with refuge management.

Determination:
Research conducted at Seedskadee NWR is found to be compatible with the purposes of the Refuge provided all permit conditions are followed.

Stipulations necessary to ensure compatibility:
- ✓ All researchers must be issued special use permits by the refuge manager to conduct research on the Refuge.
- ✓ Researchers must comply with all Refuge regulations unless authorized otherwise by the refuge manager in the conditions of the special use permit.
- ✓ All data collected by the researcher also becomes property of the Refuge. Copies of any reports, summaries, and data regarding the research must be provided to the Refuge.
- ✓ Researchers are responsible for coordinating with various agencies to gain specific permits to complete their projects. Authorized projects will be in compliance with all local, State, and Federal laws.

Description of Proposed Use: Construction of Environmental Education and Visitor Center

Seedskadee NWR plans to construct a 6,000 square foot building for the purpose of providing an interpretative center and environmental education training area. The building would be located between the Refuge Headquarters and housing residence #5. The proposed building is one story. The entire building would be fully accessible to people with disabilities. The main floor of the facility would contain interpretive displays, rest rooms, and an office. The basement level would contain a kitchen, rest room, and a large open room which would be used to conduct environmental education programs or Refuge/community meetings. Construction of this building would improve the Service's ability to conduct public outreach and environmental education on Seedskadee NWR.

Availability of resources:
Funding for the construction of this project will be supplied by the Bureau of Reclamation. Current staff is available to administer the construction and completion of this project. Additional funding will be required in future Refuge budgets to maintain the facility (heat, electricity, phone, etc.) and create/maintain/update interpretive displays. An additional staff position (outdoor recreation specialist) will also be required to coordinate outreach and education programs.

Anticipated impacts of the use:
The area impacted by the construction of the building would be less then one acre and has been previously disturbed. The area has been cleared previously for cultural resources and Section 7.

Visiting public which formerly visited the headquarters office will be directed to the new visitor/education building. Creation of the new building may attract more tourists and environmental education groups to the Refuge and, therefore, increase the potential public use and awareness of the Refuge.

Costs of maintaining the new building (electricity, phone, heat) and providing adequate staff will increase the overall funding needs of the Refuge.

Disturbance to wildlife may increase if public use increases. Monitoring activities and their impacts and limiting the location and time of year for wildlife-dependent visits will maintain use at an acceptable level.

Water use for domestic purposes may increase slightly with addition of more visitors.

Justification:
The current office/visitor center cannot accommodate current school groups, does not provide adequate office space for Refuge employees, and limits display of interpretive materials. The addition of the new facility will provide an area for the Refuge staff to conduct slide presentations and environmental education programs. Transfer of interpretive displays from the current headquarters to the new building will provide areas for additional office space. The new facility will contain one office and also provide an area to expand the current interpretative displays which are very limited. The new building will also provide the public a place to conduct meetings regarding environmental issues.

Determination:
Construction of the new visitor and education building will support several of the secondary goals of the National Wildlife Refuge System which are to provide for wildlife observation, interpretation, and environmental education. Based on biological impacts described above, it is determined that the construction of this building will not materially interfere with or detract from the purposes for which the Refuge was established.

Stipulations necessary to ensure compatibility:
- ✓ Service will comply with all building codes.
- ✓ During construction, efforts will be made to minimize disturbance to the immediate construction area. All disturbed areas around the building will be landscaped with native vegetation.
- ✓ All features of the building must be fully accessible to people with disabilities.

Description of Proposed Use:
Construction of an 800 foot interpretive trail at the Lombard Ferry Historical Site

Seedskadee National Wildlife Refuge plans to build an 800 foot asphalt trail at the Lombard Ferry site adjacent to State Highway 28. The trail and two additional interpretive signs will be designed to match an existing handicapped-accessible interpretive walkway. The trail will follow an already disturbed pathway that parallels the Green River to a replica of a ferry used by early settlers to cross the River. The completed trail will provide Refuge visitors with an overview of the Refuge and an insight into the significance of the area as a River crossing by pioneers using several historical trails that traverse the Refuge. This site currently receives a relatively high volume of public use, including many people passing through that otherwise may not stop to visit the Refuge. Completion of the trail will enhance the Refuge's ability to conduct public outreach for these and other visitors.

Availability of resources:
Funding of this project will come from several partnered sources. A private family with historic ties to the area is donating funds for purchase of new interpretive signs and benches. Funding for the construction of the trail will be supplied by the Bureau of Reclamation. The Bureau of Land Management is purchasing and producing the interpretive signs and bases, assisting with planning and construction details, and will maintain the asphalt trail as needed. Finally, Refuge staff will complete project planning, administer all phases of construction, complete naturalization of the area when completed, and monitor the site.

Anticipated impacts of the use:
- Some short-term disturbance could occur to wildlife during construction.
- The area that would be impacted by the construction of the trail is already a disturbed site, devoid of vegetation. Revegetation of the site at the conclusion of the project will make the site more visually aesthetic.
- A cultural resources survey has already been completed, and the area has been cleared for construction.
- Construction of a new trail will focus public use in a limited area, reducing impacts to contiguous habitat.
- Disturbance to wildlife could increase if public use increases. However, due to the steady rate of visitation in the warmer months and the proximity of the site to State Highway 28, it is expected that any additional impacts would be minimal.

Determination:
Construction of this trail is compatible with Refuge and Refuge System purposes. It will support several of the secondary goals of the Refuge System including providing opportunities for wildlife observation, interpretation, and environmental education. The construction of this trail will not materially interfere with or detract from the purposes for which the Refuge was established.

Stipulations necessary to ensure compatibility:
- ✓ During construction, efforts will be made to minimize disturbance to the immediate construction area. The entire trail area, including all disturbed sites, will be landscaped/naturalized with native vegetation.
- ✓ All features of the trail must be fully accessible to people with disabilities.
- ✓ Use of the trail and surrounding associated area will be monitored by Refuge staff after its completion to ensure the integrity of the site is maintained.

Description of Proposed Use: Beaver Trapping

The Refuge staff proposes to continue to allow trapping of beaver, *Castor canadensis*, on Seedskadee National Wildlife Refuge. Changes in the hydrology of the Green River since the completion of the Fontenelle Dam in 1964 has had a significant impact on recruitment of cottonwood and willow trees. Cottonwood and willow trees that dominate the riparian forest no longer regenerate to the degree necessary to maintain a healthy forest. This forest zone is critical, however, to a large variety of migrating and nesting birds and resident wildlife. Due to the very high and expanding beaver population, many areas of the Refuge have experienced extensive damage to mature and seedling cottonwood and willow trees by beaver. Girdling or cutting down mature cottonwoods generally results in the tree's death. To alleviate this situation, beaver will be trapped and removed from the Refuge to minimize damage to trees and reduce beaver numbers to meet their carrying capacity of the Refuge.

Availability of resources:
Current Refuge resources are stretched and additional funding and staff are necessary to ensure this program is consistently applied to achieve Refuge objectives. Funding RONS projects in Appendix C would accomplish the goals of the CCP and improve the existing program.

Anticipated impacts on Service lands, waters or interests:
Reduction of beaver numbers will have a direct, positive effect on the preservation of mature and seedling cottonwood and willow trees. This is critically important for the Refuge given the extremely low recruitment rate of new trees. These trees provide habitat for nesting and migrating bird species. They are important perching and roosting sites for wintering raptors, including bald and golden eagles. Several heron rookeries, which are dependent on mature cottonwoods, are also located on the Refuge. Resident wildlife species also benefit from these riparian forests, which provide significant food and shelter for species such as moose, mule deer, sage grouse, and many other species.

The digging of bank dens by beaver, in some cases, damages water control structures, levees, irrigation ditches, or wetland management units. Beaver also routinely block or obstruct water control structures. A reduction in beaver numbers will reduce damages they cause to these facilities, saving significant amounts of staff time throughout the year on repairs.

Beaver trapping is supported by the Wyoming Game and Fish Department. It will provide an opportunity for a local resident to trap.

Justification:
Changes in the hydrology of the Green River since the completion of the Fontenelle Dam in 1964 has had a significant impact on recruitment of cottonwood and willow trees. Cottonwood and willow trees that dominate the riparian forest no longer regenerate to the degree necessary to maintain a healthy forest. This forest zone is critical, however, to a large variety of migrating and nesting birds and resident wildlife. Due to the very high and expanding beaver population, many areas of the Refuge have experienced extensive damage to mature and seedling cottonwood and willow trees by beaver. Girdling or cutting down mature cottonwoods generally results in the tree's death. To alleviate this situation, beaver must be trapped and removed from the Refuge to minimize damage to trees and reduce beaver numbers to meet their carrying capacity of the Refuge.

In the past, some mature cottonwood trees have been protected by wrapping the tree bases with wire. While individual cottonwood groves are wrapped annually by volunteer groups, this alternative is still not practical on a large scale, primarily due to the labor needs and the large numbers of trees that need protection. Hiring a professional trapper is a cost efficient, fast, and low-profile way to reduce beaver population levels on the Refuge.

The following excerpt is taken from Beaver: Water Resources and Riparian Habitat Manager by Olsen and Hubert, 1994: "Unlimited beaver populations can be detrimental to riparian habitats. Likewise, removing beavers completely from an area can eliminate a natural component of an ecosystem that is important to many species of animals and plants. Management cannot embrace total protection or reduction of beaver populations, but (rather) discretionary management that promotes adequate harvest where conflict occurs or protection where habitat enhancement is needed . . . ."

Determination:
Beaver trapping conducted under a special use permit for management purposes is considered a compatible use.

Stipulations necessary to ensure compatibility:
- ✓ Trapping is only permitted via a special use permit issued by the refuge manager. Permittee must adhere to all special conditions listed in the special use permit (see special use permit for a full list of stipulations).
- ✓ Trapping will be done in compliance with Wyoming Game and Fish Department regulations.
- ✓ Permittee will provide a report, in writing, on the number, age, and sex of beaver taken and numbers of trap nights. Permittee will also provide a map (Refuge travel map) marking the locations of dens, food caches, trap sets, and where beaver were taken. Report and maps will be provided to the Refuge office within one month of the completion of trapping.
- ✓ Only beaver may be trapped. Any non-target animals that are still alive will be released immediately and a record of species and their condition will be provided to the Refuge office. All non-target animals killed will be turned over to the Refuge for proper disposition. Traps may not be set in any areas where evidence of river otter use exists.
- ✓ Failure to comply with any terms of the special use permit or other Refuge regulations may result in revocation of the permit.

Description of Proposed Use: Commercial Shuttle Service

The Refuge proposes to issue special use permits for the purpose of allowing commercial shuttle services on Seedskadee National Wildlife Refuge. The shuttle service is used primarily by boaters needing assistance moving their vehicle from a launch site to a take-out site. Shuttle services will be permitted only on designated roads on the Refuge. All commercial shuttle service activities must be in compliance with general Refuge regulations and the Special Conditions issued with the Special Use Permit.

Availability of resources:
Current resources are stretched to maintain the existing commercial permit operations. If additional staff support were available, this program could be better managed and effective law enforcement implemented to monitor compliance. The additional items to be added from the CCP are tied to funding requests in the form of the attached RONS projects (Appendix C). Funding of the RONS projects would accomplish the goals of the CCP and improve the existing program.

Anticipated impacts on Service lands, waters or interests:
Commercial shuttles may result in increased use of the Refuge. Shuttle services provide a useful and needed public service for visitors. A permitted shuttle service could reduce wear and tear to Refuge roads and other resources due to familiarity with Refuge regulations. In addition, personnel conducting shuttles may disperse information about Refuge regulations to visitors thereby decreasing the numbers of violations of Refuge regulations and reducing impacts to resources.

Commercial shuttle services may create additional wear and tear on Refuge roads, boat ramps, and other facilities and will also be deriving a profit from using these facilities. A fee for the Special Use Permit will help mitigate these impacts. Time spent administering the program diverts staff time from other activities and programs.

Justification:
Commercial shuttle services provide a valuable service to many people who float the Green River on Seedskadee National Wildlife Refuge. Allowing commercial shuttle services under a Special Use Permit will provide the Refuge with a means to monitor this activity and ensure compliance with Refuge regulations. This may also provide the Refuge with an opportunity to provide additional information about the Refuge to clients of the shuttle service.

Determination:
Commercial shuttle services are compatible when conducted under the stipulations of a special use permit and if additional staff funding is provided to administer and monitor the program. The addition of an outdoor recreation planner would greatly facilitate the administration of this program.

The following stipulations are required to ensure compatibility:
- ✓ Permittee and employees must be in compliance with all Special Conditions listed on the Special Use Permit. For specific details, refer to the Special Use Permit.
- ✓ User fees have been established as part of the Entrance and Recreation User Fee Demonstration Program. These fees are used to cover the majority of the expenses the Refuge incurs for running the commercial outfitting for sport fishing program. Collection of these fees is instrumental to this program to prevent diversion of station funds from other programs.
- ✓ Permits are not transferrable and renewed annually.
- ✓ Permittee must comply with all Refuge regulations.

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Signatures:

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Date

Concurrence:

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9/24/02
Date

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Appendix E. Legislation and Policies Legal Parameters And Policy Direction

Following is a list of the most pertinent statutes establishing legal parameters and policy direction for the National Wildlife Refuge System. At the end of the list are those statutes and mandates that pertain to Reclamation's role in upper Colorado River management and Refuge development.

For some laws that provide special guidance or have strong implications relevant to the Service and the refuges, summaries are offered below. Many of the summaries have been taken from *The Evolution of National Wildlife Law* by Michael J. Bean.

Summary of Congressional Acts, Treaties, and other Legal Acts Relating to Administration of the National Wildlife Refuge System.

1. The National Wildlife Refuge System Improvement Act of 1997. The Act establishes that the conservation of fish, wildlife, plants and their habitats is the mission of the NWRS and sets forth the policies and procedures through which the System and individual refuge are to be managed in order to fulfill that mission for the long-term benefit of the American people. The Act requires that public use of a refuge may be allowed only where the use is compatible with the mission of the System and purpose of the individual refuge, and sets forth a standard by which the Secretary shall determine whether such uses are compatible. It establishes as the policy of the United States that wildlife-dependent recreation, when it is compatible, is a legitimate and appropriate public use of the Refuge System, through which the American public can develop appreciation for fish and wildlife. It establishes compatible wildlife-dependent recreational uses as the priority general public use of the Refuge System. Finally, it also requires the Secretary to prepare comprehensive conservation plans for each refuge.

2. Executive Order 12996, 3/25/96, Management and General Public Use of the NWRS. In this Executive Order, the President defined the mission of the NWRS and identified four guiding principals and issued ten directives to the Secretary of Interior on how the System should be managed in the future. The Executive Order identified opportunities for compatible wildlife-dependent recreation, habitat protection, partnerships with sportsmen, other conservation interests and public involvement as guiding principals of the Refuge System. In particular, the President identified "compatible wildlife-dependent recreation activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation as priority general public uses of the Refuge System."

3. Recreational Fisheries...Executive Order.

4. Lacey Act of 1900, as amended (16 U.S.C. 701).

5. Antiquities Act of 1906 (16 U.S.C. 431).

6. Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-711). Migratory Bird Treaty Act of 1978 (40 Stat. 755).

7. Migratory Bird Conservation Act (1929), as amended (16 U.S.C. 715-715s). "Migratory Bird Conservation Act (16 U.S.C. 715-715d, 715e, 715f-715r) — The Act of February 18, 1929, (45 Stat. 1222) established a Migratory Bird Conservation Commission to approve areas recommended by the Secretary of the Interior for acquisition with Migratory Bird Conservation Funds. The Commission consists of the Secretary of the Interior (as chairman), the Secretaries of Transportation and Agriculture, two members of the Senate and two of the House of Representatives, and an ex-officio member from each State in which acquisition is being considered.

   The Commission, through its chairman, is directed to report by the first Monday in December of each year to Congress on its activities. The Secretary of the Interior is authorized to cooperate with local authorities in wildlife conservation and as to conduct investigations, to publish documents related to North American birds, and to maintain and develop refuges. The Act provides for cooperation with States in enforcement. It established procedures for acquisition by purchase, rental or gift of areas approved by the Commission for migratory birds.

   Public Law 94-215, approved February 17, 1976, (90 Stat. 190) included in acquisition authority under the Act the purchase or rental of a partial interest in land or waters.

   Public Law 95-552, approved October 30, 1978, (92 Stat. 2071) required that the Secretary of the Interior consult with the appropriate units of local government and with the Governor of the State concerned, or the appropriate State agency, before recommending an area for purchase or rental under the provisions of the Act. This provision was subsequently amended by P.L. 98-200, approved December 2, 1983 (97 Stat. 1378); P.L. 98-548, approved October 26, 1984 (98 Stat. 2774); and P.L. 99-645, approved November 10, 1986 (100 Stat. 3584) to require that either the Governor or the State agency approve each proposed acquisition.

   Public Law 95-616, approved November 8, 1978, (92 Stat. 3110) authorized acquisition of areas for purposes other than inviolate sanctuary."

8. Fish and Wildlife Coordination Act (1934), as amended (16 U.S.C. 661-666). This Act was "the first major Federal wildlife statute to employ the strategy of compelling consideration of wildlife impacts. The act authorized 'investigations to determine the effects of domestic sewage, trade wastes, and other polluting substances on wildlife, encouraged the development of a program for the maintenance of an adequate supply of wildlife on the public domain' and other Federally owned lands, and called for state and Federal cooperation in developing a nationwide program of wildlife conservation and rehabilitation."

9. Historic Sites Act of 1935 (16 U.S.C. 461).

10. Convention of Nature Protection and Wildlife Preservation in the Western Hemisphere 1940 (56 Stat. 1354).

11. Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742-742).

12. Refuge Recreation Act, as amended (Public Law 87-714,76 Sta. 653; 16 U.S.C. 460k) September 28, 1962. This Act authorizes the Secretary of the Interior "to administer areas of the System 'for public recreation when in his judgment public recreation can be an appropriate incidental or secondary use; provided, that such public recreation use shall be permitted only to the extent that it is practicable and not inconsistent with the primary objectives for which each particular area is established.' Recreational uses 'not directly related to the primary purposes and functions of the individual areas' of the System may also be permitted, but only on an express determination by the Secretary that they 'will not interfere with the primary purposes' of the refuges and that funds are available for their development, operation, and maintenance." This legislation is the basis for establishment of the refuge allowable use compatibility process. A compatibility process not only invokes consistency with refuge purposes, but also National Wildlife Refuge System goals in NWRS Improvement Act 1997.

13. Refuge Revenue Sharing Act of 1964 (16 U.S.C. 715s), as amended (P.L. 95-469, approved 10-17-78). This Act provides "that the net receipt from the sale or other disposition of animals, timber, bay, grass, or other products of the soil, minerals, shells, sand, or gravel, from other privileges, or from leases for public accommodations or facilities in connection with the operation and management'...of areas of the National Wildlife Refuge System shall be paid into a special fund. The monies from the fund are then to be used to make payments for public schools and roads to the counties in which refuges having such revenue producing activities are located."

14. Land and Water Conservation Fund Act of 1965, as amended (16 U.S.C. 460L-4 to 460L-11), and as amended through 1987.

15. National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd - 668ee). This Act, derived from sections 4 and 5 of Public Law 89-669, "consolidated 'game ranges', 'wildlife ranges', 'wildlife management areas', 'waterfowl production areas', and 'wildlife refuges', into a single 'National Wildlife Refuge System.' It placed restrictions on the transfer, exchange, or other disposal of lands within the System; clarified the Secretary's authority to accept donations of money to be used for land acquisition; and, most importantly, authorized the Secretary, under regulations, to 'permit the use of any area within the System for any purpose, including, but not limited to, hunting, fishing, public recreation and accommodations, and access whenever he determines that such uses are compatible with the major purposes for which such areas were established."

16. National Historic Preservation Act of 1966 (16 U.S.C. 470).

17. National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4347).

18. Environmental Education Act of 1975 (20 U.S.C. 1531-1536).

19. Endangered Species Act of 1973 (16 U.S.C. 1531-1543 87 Stat. 884) P.L. 93-205). The Endangered Species Act as amended by Public Law 97-304, The Endangered Species Act Amendments of 1982, dated February 1983. The 1973 Act "builds its program of protection on three fundamental units. These include two classifications of species—those that are 'endangered' and those that are threatened'—and a third classification of geographic areas denominated critical habitats.'"

    This Act: (1) Authorizes the determination and listing of species as endangered and threatened, and the ranges in which such conditions exist; (2) Prohibits unauthorized taking, possession, sale, and transport of endangered species; (3) Provides authority to acquire land for the conservation of listed species, using land and water conservation funds; (4) Authorizes establishment of cooperative agreements and grants-in-aid to states that establish and maintain active and adequate programs for endangered and threatened wildlife; and, (5) Authorizes the assessment of civil and criminal penalties for violating the Act or regulations.

    Section 7 of the Endangered Species Act requires Federal agencies to ensure that any action authorized, funded, or carried out by them does not jeopardize the continued existence of listed species or modify their critical habitat.

20. Floodplain Management Executive Order of 1977 (Executive Order 11988, dated May 24, 1977).

21. Wetlands Preservation Executive Order of 1977 (Executive Order 11990, dated May 24, 1977).

22. The Archeological Resource Protection Act of 1979 (P.L. 96-95, 93 Sta. 721, dated October 1979) (16 U.S.C. 470aa - 47011).

23. Fish and Wildlife Conservation Act of 1980 (P.L. 96-366, dated September 29, 1980). ("Nongame Act") (16 U.S.C. 2901-2911; 94 Stat. 1322).

24. Administrative Procedures Act (5 U.S.C. 551-559, 701-706, 1305, 3105, 3344, 4301, 5362, 7521; 60 Stat. 237), as amended (P.L. 79-404, as amended).

25. Bald Eagle Protection Act of 1940 (16 U.S.C. 668-668d; 54 Stat. as amended).

26. Canadian United States Migratory Bird Treaty (Convention Between the United States and Great Britain for Canada for the Protection of Migratory Birds. (39 Stat. 1702; TS 628), as amended.

27. Clean Air Act (42 U.S.C. 1857-1857f; 69 Stat. 322), as amended.

28. Cooperative Research and Training Units Act(16U.S.C. 753a-753b, 74 Stat. 733, as amended. P.L. 86-686).

29. Federal Aid in Fish Restoration Act (16 U.S.C. 777-777k, 64 Stat. 430).

30. Federal Aid in Wildlife Restoration Act (16 U.S.C. 669-669i; 50 Stat. 917), as amended.

31. Federal Environmental Pesticide Control Act of 1972 (7 U.S.C. 136-136y; 86 Stat. 975), as amended.

32. Federal Land Policy Management Act of 1976 (43 U.S.C. 1701-1771, 1714-1716 for land acquisitions and other U.S.C. sections; 90 Stat. 2743). Public Law 94-579, October 1976.

33. Federal Power Act (16 U.S.C. 791a 825r; 41 Stat. 1063), as amended.

34. Federal Property and Administrative Services Act of 1949 (40 U.S.C., 471-535, and other U.S.C. sections; 63 Stat. 378), as amended.

35. Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251-1265, 1281-1292, 1311-1328, 1341-1345, 1361-1376, and other U.S.C. titles; 86 Stat. 816), as amended.

36. Federal Water Project Recreation Act (16 U.S.C. 4601-12-4601-21; 79 Stat. 213), as amended P.L. 89-72, approved July 1985.

37. Fish and Wildlife Improvement Act of 1978 (16 U.S.C. 7421; 92 Stat. 3110) P.L. 95-616, November 1978.

38. Flood Control Act of 1944 (16 U.S.C. 460d, 825s and various sections of title 33 and 43 U.S.C.; 58 Stat 887), as amended and supplemented.

39. Freedom of Information Act (5 U.S.C. 552; 88 Stat. 1561.

40. Refuge Trespass Act (18 U.S.C. 41; Stat 686).

41. Rivers and Harbors Act of 1899 (33 U.S.C. 401 et seq.; 30 Stat. 1151, as amended and supplemented.

42. Transfer of Certain Real Property for Wildlife Conservation Purposes Act of May 1948, (16 U.S.C. 667b-667d; 62 Stat. 240), as amended.

43. Water Resources Planning Act (42 U.S.C., 1962-1962a-3; 79 Stat. 244), as amended.

44. Waterfowl Depredations Prevention Act (7 U.S.C. 442-445; 70 Stat. 492), as amended.

45. Clean Water Act of 1972, Section 404. Under this Act, permits are required to be obtained for discharges of dredged and fill materials into all waters, including wetlands. Implementation of the 404 program involves three other Federal agencies in addition to limited state involvement. The Environmental Protection Agency (EPA), the National Marine Fisheries Service, and the Service review permit applications and provide comments and recommendations on whether permits should be issued by the Corps. The EPA has veto authority over permits involving disposal sites if impacts are considered unacceptable, and also develops criteria for discharges and state assumption of the 404 program. Due to a national lawsuit, Section 404 regulations were changed in 1984, and now apply to tributaries of navigable waters, isolated wetlands, and waters where interstate commerce is involved. With the new regulations, all washes, drainage, and tributaries of navigable waters, including ephemeral and perennial streams, are included under the 404 program in Arizona.

46. The Flood Security Act of 1985 (Farm Bill). Revised.

47. Migratory Bird Hunting and Conservation Stamp Act. (U.S.C. 718d(b)-e).

48. Mining Act of 1872, as amended (30 U.S.C. 21 et. Seq.) Authorizes and governs prospecting and mining for the so-called "hardrock" minerals such as gold and silver, on public lands.

49. Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et. Seq.)
Authorizes and governs leasing of public lands for development of deposits of coal, oil, gas and other hydrocarbons, sulphur, phosphate, potassium, and sodium, Section 185 of this title contains provisions relating to granting rights-of-way over Federal lands for pipelines. (Additional requirements for refuges are found at 16 U.S.C. 668dd(d)(2).)

50. Federal Coal Leasing Amendment Act of 1976 In section 16, the Act provides that nothing in the Mining Act, the Mineral Leasing Act, or the Mineral Leasing Act for Acquired Lands authorizes the mining of coal on refuges.

51. *Mineral Leasing Act for Acquired Lands* as amended (30 U.S.C. 351 et. seq.) Authorizes and governs mineral leasing on acquired lands.

52. Wyoming State Statute 23-1-105, Migratory Bird Refuges Gives consent of state to acquisition of land (20,000 acres) by United States in the Seedskadee area for the purpose of establishing and maintaining a migratory bird refuge. If ceases to be used as a migratory bird refuge, the land reverts back to the State. Provides for the owner of any land acquired under this section to reserve all oil, gas, coal, or other minerals as well as the right to enter the land for exploration, development and production of oil, gas, coal, or other minerals.

53. Volunteer and Partnership Enhancement Act of 1998: To amend the Fish and Wildlife Act of 1956 to promote volunteer programs and community partnerships for the benefit of national wildlife refuges, and for other purposes. October 5, 1998

Bureau of Reclamation Mandates.

1. Colorado River Storage Project Act, Section 8 (43 U.S.C. 620-620o, except certain sections classified to the Colorado River Basin Project Act; 70 Stat. 105), as amended. This Act authorized the Secretary of the Interior to construct a variety of dams, power plants, reservoirs, and related works. This Act also authorized and directed the Secretary, in connection with the development of the Colorado River Storage Project and participating projects, to investigate, plan, construct, and operate facilities to mitigate losses of, and improve conditions for, fish and wildlife and public recreational facilities. This Act provided authority to acquire lands and to lease or convey lands and facilities to state and other agencies.

2. Colorado River Basin Project Act, Sept. 30, 1968, Public Law 90-537, 82 Stat. 885.

3. Colorado River Basin Salinity Control Act, June 24, 1974, Public Law 93-320, 88 Stat. 266.

4. Reclamation Act of 1902, 32 Stat. 388, 43 U.S.C. 391.

5. Upper Colorado River Basin Compact, approved by Congress, December 21, 1928, c 42 § 13, 45 Stat. 1064.

6. Conservation of Wildlife, Fish and Game, March 10, 1934, 48 Stat. 401.

7. Coordination of Recreation Programs, Public Law 88-29, May 28, 1963, 77 Stat. 49.

8. The Seedskadee Reclamation Act of 1958, August 28, 1958, 72 Stat. 963.

Appendix F. Species List of Seedskadee NWR

Birds

Loons

Common Loon	*Gavia immer*

Grebes

Pied-billed Grebe	*Podilymbus podiceps*
Horned Grebe	*Podiceps auritus*
Eared Grebe	*Podiceps nigricollis*
Western Grebe	*Aechmophorus occidentalis*
Clark's Grebe	*Aechmophorus clarkii*

Pelicans

American White Pelican	*Pelecanus erythrorhynchos*

Cormorants

Double-crested Cormorant	*Phalacrocorax auritus*

Bitterns, Herons, and Egrets

American Bittern	*Botaurus lentiginosus*
Great Blue Heron	*Ardea herodias*
Great Egret	*Ardea alba*
Snowy Egret	*Egretta thula*
Cattle Egret	*Bubulcus ibis*
Black-crowned Night-Heron	*Nycticorax nycticorax*

Ibises and Spoonbills

White-faced Ibis	*Plegadis chihi*

New World Vultures

Turkey Vulture	*Cathartes aura*

Swans, Geese, and Ducks

Snow Goose	*Chen caerulescens*
Ross' Goose	*Chen rossii*
Canada Goose	*Branta canadensis*
Trumpeter Swan	*Cygnus buccinator*
Tundra Swan	*Cygnus columbianus*
Wood Duck	*Aix sponsa*
Gadwall	*Anas strepera*
American Wigeon	*Anas americana*
Mallard	*Anas platyrhynchos*
Blue-winged Teal	*Anas discors*
Cinnamon Teal	*Anas cyanoptera*
Northern Shoveler	*Anas clypeata*
Northern Pintail	*Anas acuta*
Green-winged Teal	*Anas crecca*
Canvasback	*Aythya valisineria*
Redhead	*Aythya americana*
Ring-necked Duck	*Aythya collaris*
Lesser Scaup	*Aythya affinis*
Long-tailed Duck	*Clangula hyemalis*
Bufflehead	*Bucephala albeola*
Common Goldeneye	*Bucephala clangula*
Barrow's Goldeneye	*Bucephala islandica*
Hooded Merganser	*Lophodytes cucullatus*
Common Merganser	*Mergus merganser*
Red-breasted Merganser	*Mergus serrator*
Ruddy Duck	*Oxyura jamaicensis*

Osprey, Kites, Hawks, and Eagles

Osprey	*Pandion haliaetus*
Bald Eagle	*Haliaeetus leucocephalus*
Northern Harrier	*Circus cyaneus*
Sharp-shinned Hawk	*Accipiter striatus*
Cooper's Hawk	*Accipiter cooperii*
Northern Goshawk	*Accipiter gentilis*
Swainson's Hawk	*Buteo swainsoni*
Red-tailed Hawk	*Buteo jamaicensis*
Ferruginous Hawk	*Buteo regalis*
Rough-legged Hawk	*Buteo lagopus*
Golden Eagle	*Aquila chrysaetos*

Falcons and Caracaras

American Kestrel	*Falco sparverius*
Merlin	*Falco columbarius*
Peregrine Falcon	*Falco peregrinus*
Prairie Falcon	*Falco mexicanus*

Gallinaceous Birds

Greater Sage-Grouse	*Centrocercus urophasianus*

Rails

Virginia Rail	*Rallus limicola*
Sora	*Porzana carolina*
Common Moorhen	*Gallinula chloropus*
American Coot	*Fulica americana*

Cranes

Sandhill Crane	*Grus canadensis*
Whooping Crane	*Grus americana*

Plovers

Black-bellied Plover	*Pluvialis squatarola*
Semipalmated Plover	*Charadrius semipalmatus*
Killdeer	*Charadrius vociferus*
Mountain Plover	*Charadrius montanus*

Stilts and Avocets

Black-necked Stilt	*Himantopus mexicanus*
American Avocet	*Recurvirostra americana*

Sandpipers and Phalaropes

Greater Yellowlegs	*Tringa melanoleuca*
Lesser Yellowlegs	*Tringa flavipes*
Solitary Sandpiper	*Tringa solitaria*
Willet	*Catoptrophorus semipalmatus*
Spotted Sandpiper	*Actitis macularia*
Upland Sandpiper	*Bartramia longicauda*
Long-billed Curlew	*Numenius americanus*
Marbled Godwit	*Limosa fedoa*
Semipalmated Sandpiper	*Calidris pusilla*
Western Sandpiper	*Calidris mauri*
Least Sandpiper	*Calidris minutilla*
Baird's Sandpiper	*Calidris bairdii*
Pectoral Sandpiper	*Calidris melanotos*
Stilt Sandpiper	*Calidris himantopus*
Short-billed Dowitcher	*Limnodromus griseus*
Long-billed Dowitcher	*Limnodromus scolopaceus*
Common Snipe	*Gallinago gallinago*
Wilson's Phalarope	*Phalaropus tricolor*
Red-necked Phalarope	*Phalaropus lobatus*

Skuas, Jaegers, Gulls, and Terns

Franklin's Gull	*Larus pipixcan*
Bonaparte's Gull	*Larus philadelphia*
Ring-billed Gull	*Larus delawarensis*
California Gull	*Larus californicus*
Herring Gull	*Larus argentatus*
Caspian Tern	*Sterna caspia*
Common Tern	*Sterna hirundo*
Forster's Tern	*Sterna forsteri*
Black Tern	*Chlidonias niger*

Pigeons and Doves

Rock Dove	Introduced	*Columba livia*
Mourning Dove		*Zenaida macroura*

Cuckoos and Anis

Yellow-billed Cuckoo	*Coccyzus americanus*

Typical Owls

Great Horned Owl	*Bubo virginianus*
Snowy Owl	*Nyctea scandiaca*
Burrowing Owl	*Athene cunicularia*
Long-eared Owl	*Asio otus*
Short-eared Owl	*Asio flammeus*
Northern Saw-whet Owl	*Aegolius acadicus*

Nightjars

Common Nighthawk	*Chordeiles minor*
Common Poorwill	*Phalaenoptilus nuttallii*

Swifts

White-throated Swift	*Aeronautes saxatalis*

Hummingbirds

Black-chinned Hummingbird	*Archilochus alexandri*
Calliope Hummingbird	*Stellula calliope*
Broad-tailed Hummingbird	*Selasphorus platycercus*
Rufous Hummingbird	*Selasphorus rufus*

Kingfishers

Belted Kingfisher	*Ceryle alcyon*

Woodpeckers

Lewis' Woodpecker	*Melanerpes lewis*
Red-headed Woodpecker	*Melanerpes erythrocephalus*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Red-naped Sapsucker	*Sphyrapicus nuchalis*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Northern Flicker	*Colaptes auratus*

Tyrant Flycatchers

Olive-sided Flycatcher	*Contopus cooperi*
Western Wood-Pewee	*Contopus sordidulus*
Willow Flycatcher	*Empidonax traillii*
Least Flycatcher	*Empidonax minimus*
Hammond's Flycatcher	*Empidonax hammondii*
Gray Flycatcher	*Empidonax wrightii*
Dusky Flycatcher	*Empidonax oberholseri*
Cordilleran Flycatcher	*Empidonax occidentalis*
Say's Phoebe	*Sayornis saya*
Western Kingbird	*Tyrannus verticalis*
Eastern Kingbird	*Tyrannus tyrannus*

Shrikes

Loggerhead Shrike	*Lanius ludovicianus*
Northern Shrike	*Lanius excubitor*

Vireos

Plumbeous Vireo	*Vireo plumbeus*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*

Crows, Jays, and Magpies

Blue Jay	*Cyanocitta cristata*
Clark's Nutcracker	*Nucifraga columbiana*
Black-billed Magpie	*Pica hudsonia*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*

Larks

Horned Lark	*Eremophila alpestris*

Swallows

Tree Swallow	*Tachycineta bicolor*
Violet-green Swallow	*Tachycineta thalassina*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Bank Swallow	*Riparia riparia*
Cliff Swallow	*Petrochelidon pyrrhonota*
Barn Swallow	*Hirundo rustica*

Titmice and Chickadees

Black-capped Chickadee	*Poecile atricapilla*
Mountain Chickadee	*Poecile gambeli*

Nuthatches

Red-breasted Nuthatch	*Sitta canadensis*
White-breasted Nuthatch	*Sitta carolinensis*

Creepers

Brown Creeper	*Certhia americana*

Wrens

Rock Wren	*Salpinctes obsoletus*
Bewick's Wren	*Thryomanes bewickii*
House Wren	*Troglodytes aedon*
Marsh Wren	*Cistothorus palustris*

Kinglets

Ruby-crowned Kinglet	*Regulus calendula*

Old World Warblers

Blue-gray Gnatcatcher	*Polioptila caerulea*

Thrushes

Mountain Bluebird	*Sialia currucoides*
Townsend's Solitaire	*Myadestes townsendi*
Veery	*Catharus fuscescens*
Swainson's Thrush	*Catharus ustulatus*
Hermit Thrush	*Catharus guttatus*
American Robin	*Turdus migratorius*

Mimic Thrushes

Gray Catbird	*Dumetella carolinensis*
Northern Mockingbird	*Mimus polyglottos*
Sage Thrasher	*Oreoscoptes montanus*
Brown Thrasher	*Toxostoma rufum*

Starlings

European Starling	*Sturnus vulgaris*

Wagtails and Pipits

American (Water) Pipit	*Anthus rubescens*

Waxwings

Bohemian Waxwing	*Bombycilla garrulus*
Cedar Waxwing	*Bombycilla cedrorum*

Wood Warblers

Tennessee Warbler	*Vermivora peregrina*
Orange-crowned Warbler	*Vermivora celata*
Nashville Warbler	*Vermivora ruficapilla*
Virginia's Warbler	*Vermivora virginiae*
Yellow Warbler	*Dendroica petechia*
Chestnut-sided Warbler	*Dendroica pensylvanica*
Magnolia Warbler	*Dendroica magnolia*
Yellow-rumped Warbler	*Dendroica coronata*
Pine Warbler	*Dendroica pinus*
American Redstart	*Setophaga ruticilla*
Northern Waterthrush	*Seiurus noveboracensis*
MacGillivray's Warbler	*Oporornis tolmiei*
Common Yellowthroat	*Geothlypis trichas*
Wilson's Warbler	*Wilsonia pusilla*
Yellow-breasted Chat	*Icteria virens*

Tanagers

Western Tanager	*Piranga ludoviciana*

Sparrows and Towhees

Green-tailed Towhee	*Pipilo chlorurus*
Spotted Towhee	*Pipilo maculatus*
American Tree Sparrow	*Spizella arborea*
Chipping Sparrow	*Spizella passerina*
Brewer's Sparrow	*Spizella breweri*
Vesper Sparrow	*Pooecetes gramineus*
Lark Sparrow	*Chondestes grammacus*
Sage Sparrow	*Amphispiza belli*
Lark Bunting	*Calamospiza melanocorys*
Savannah Sparrow	*Passerculus sandwichensis*
Grasshopper Sparrow	*Ammodramus savannarum*
Fox Sparrow	*Passerelia iliaca*
Song Sparrow	*Melospiza melodia*
Lincoln's Sparrow	*Melospiza lincolnii*
Harris' Sparrow	*Zonotrichia querula*
White-crowned Sparrow	*Zonotrichia leucophrys*
Dark-eyed Junco	*Junco hyemalis*
McCown's Longspur	*Calcarius mccownii*
Lapland Longspur	*Calcarius lapponicus*
Chestnut-collared Longspur	*Calcarius ornatus*
Snow Bunting	*Plectrophenax nivalis*

Cardinals, Grosbeaks, and Allies

Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Black-headed Grosbeak	*Pheucticus melanocephalus*
Lazuli Bunting	*Passerina amoena*
Indigo Bunting	*Passerina cyanea*
Dickcissel	*Spiza americana*

Blackbirds and Orioles

Bobolink	*Dolichonyx oryzivorus*
Red-winged Blackbird	*Agelaius phoeniceus*
Western Meadowlark	*Surnella neglecta*
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*
Rusty Blackbird	*Euphagus carolinus*
Brewer's Blackbird	*Euphagus cyanocephalus*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
Baltimore Oriole	*Icterus galbula*

Finches

Gray-crowned Rosy Finch	*Leucosticte tephrocotis*
Black Rosy-Finch	*Leucosticte atrata*
Pine Grosbeak	*Pinicola enucleator*
Cassin's Finch	*Carpodacus cassinii*
House Finch	*Carpodacus mexicanus*
Common Redpoll	*Carduelis flammea*
Pine Siskin	*Carduelis pinus*
American Goldfinch	*Carduelis tristis*
Evening Grosbeak	*Coccothraustes vespertinus*

Mammals

Cinereus or Masked Shrew	*Sorex cinereus*
Merriam's Shrew	*Sorex merriami*
Dusky or Montane Shrew	*Sorex monticolus*
Common Water Shrew	*Sorex palustris*
Vagrant Shrew	*Sorex vagrans*
Western Small-footed Myotis	*Myotis ciliolabrum*
Long-eared Myotis	*Myotis evotis*
Little Brown Myotis	*Myotis lucifugus*
Long-legged Myotis	*Myotis volans*
Hoary Bat	*Lasiurus cinereus*
Silver-haired Bat	*Lasionycteris noctivagans*
Big Brown Bat	*Eptesicus fuscus*
Pallid Bat	*Antrozous pallidus*
Pygmy Rabbit	*Brachylagus idahoensis*
Desert Cottontail	*Sylvilagus audubonii*
White-tailed Jackrabbit	*Lepus townsendii*
Least Chipmunk	*Tamias minimus*
Yellow-bellied Marmot	*Marmota flaviventris*
Uinta Ground Squirrel	*Spermophilus armatus*
Wyoming Ground Squirrel	*Spermophilus elegans*
Golden-mantled Ground Squirrel	*Spermophilus lateralis*
Thirteen-lined Ground Squirrel	*Spermophilus tridecemlineatus*
White-tailed Prairie-dog	*Cynomys leucurus*
Northern Pocket Gopher	*Thomomys talpoides*
Olive-backed Pocket Mouse	*Perognathus fasciatus*
Great Basin Pocket Mouse	*Perognathus parvus*
Ord's Kangaroo Rat	*Dipodomys ordii*
American Beaver	*Castor canadensis*
Deer Mouse	*Peromyscus maniculatus*
Northern Grasshopper Mouse	*Onychomys leucogaster*
Bushy-tailed Woodrat	*Neotoma cinerea*
Long-tailed Vole	*Microtus longicaudus*
Montane Vole	*Microtus montanus*
Meadow Vole	*Microtus pennsylvanicus*
Sagebrush Vole	*Lemmiscus curtatus*
Common Muskrat	*Ondatra zibethicus*
Western Jumping Mouse	*Zapus princeps*
Common Porcupine	*Erethizon dorsatum*
Coyote	*Canis latrans*
Red Fox	*Vulpes vulpes*
Black Bear	*Ursus americanus*
Common Raccoon	*Procyon lotor*
Ermine	*Mustela erminea*
Long-tailed Weasel	*Mustela frenata*
American Mink	*Mustela vison*
American Badger	*Taxidea taxus*
Northern River Otter	*Lontra canadensis*
Striped Skunk	*Mephitis mephitis*
Bobcat	*Lyns rufus*
Wapiti or Elk	*Cervus elaphus*
Mule or Black-tailed Deer	*Odocoileus hemionus*
Moose	*Alces alces*
Pronghorn	*Antilocapra americana*

Reptiles and Amphibians

Reptiles

Many-lined Skink	*Eumeces multivirgatus*
Northern Sagebrush Lizard	*Sceloporus graciosus*
Northern Plateau Lizard	*Sceloporus undulatus*
Eastern Short-Horned Lizard	*Phrynosoma douglassi*
Eastern Yellowbelly Racer	*Coluber constrictor*
Great Basin Gopher Snake	*Pituophis melanoleucas*
Wandering Garter Snake	*Thamnophis elegans*
Western Plains Garter Snake	*Thamnophis radix subspeci. haydenies*

Amphibians

Tiger Salamander	*Ambystoma tigrinum*
Great Basin Spadefoot	*Scaphiopus intermontanus*
Northern Leopard Frog	*Rana pipiens*
Boreal Chorus Frog	*Pseudacris triseriata*

Fish

Rainbow Trout	*Oncorhynchus mykiss*
Snake River Cutthroat Trout	*Oncorhynchus clarki*
Bonnieville Cutthroat Trout	*Oncorhynchus clarki utah*
Kokanee Salmon	*Oncorhynchus nerki*
Brown Trout	*Salmo trutta*
Lake Trout	*Salvelinus namaychus*
Mountain Whitefish	*Prosopium williamsoni*
Channel Catfish	*Ictalurus punctatus*
Smallmouth Bass	*Micropterus dolomieui*
Mottled Sculpin	*Cottus bairdi*
White Sucker	*Catostomus commersoni*
Mountain Sucker	*Catostomus platyrhychus*
Flannelmouth Sucker	*Catostomus latipinnis*
Bluehead Sucker	*Catostomus discobolus*
Common Carp	*Cyprinnus carpio*
Utah Chub	*Gila atraria*
Roundtail Chub	*Gila robusta*
Bonneville Redside Shiner	*Richardsonius balteatus*
Fathead Minnow	*Pimphales promelas*
Speckled Dace	*Rhinichthys osculus*

Vascular plant species of Seedskadee National Wildlife Refuge, Sweetwater County, Wyoming

Last Update – 1/04/2001, Following Dorn 1992.

SCIENTIFIC NAME	COMMON NAME	FAMILY	TYPE
TREES			
*Populus angustifolia James.	Narrowleaf cottonwood	SALICACEAE	NP
SHRUBS			
*Artemisia frigida Willd.	Fringed sagebrush	ASTERACEAE	NP
*Artemisia nova A. Nels.	Black sagebrush	ASTERACEAE	NP
*Artemisia spinescens Eaton	Bud sagebrush	ASTERACEAE	NP
*Artemisia tridentata Nutt.	Big Sagebrush	ASTERACEAE	NP
*Atriplex confertifolia (Torrey & Frem.) Wats.	Shadscale	CHENOPODIACEAE	NP
*Atriplex gardneri (Moq.) Dietr.	Gardner saltbush (former Nuttall)	CHENOPODIACEAE	NP
Betula occidentalis Hook.	Water birch	BETULACEAE	NP
Chrysothamnus linifolius Greene	Green/Douglas rabbitbrush	ASTERACEAE	NP
*Chrysothamnus nauseosus (Pallas ex Pursh) Britt.	Gray/Rubber rabbitbrush	ASTERACEAE	NP
*Cornus sericea L. (former = C. stolonifera)	Red-osier dogwood	CORNACEAE	NP
*Elaeagnus commutata Bernh. Ex Rydb.	Silverberry/wolf willow	ELAEAGNACEAE	?
Elaeagnus angustifolia L.	Russian olive	ELAEACEACEAE	IP
Eriogonum brevicaule Nutt.	Umbrella plant	POLYGONACEAE	??
*Grayia spinosa (Hook.) Moq.	Spiny hop-sage	CHENOPODIACEAE	NP
Gutierrezia sarothrae (Pursh) Britt. & Rusby	Snakeweed	ASTERACEAE	NP
*Leptodactylon pungens (Torrey) Nutt.	Granite prickly gilia	POLEMONIACEAE	NP
Lycium barbarum L.	Matrimony vine	SOLANACEAE	IP
Opuntia Spp?	Prickly pear cactus	CACTACEAE	NP
*Pediocactus simpsonii (Engelm.) Britt. & Rose	Pincushion cactus	CACTACEAE	NP
*Rhus trilobata Nutt.	Skunkbush/fragrant sumac	ANACARDIACEAE	NP
*Ribes aureum Pursh	Wax currant, golden currant	GROSSULARIACEAE	NP
[1]*Ribes oxyacanthoides L. var. setosum Lindl. Dorn	Missouri/Redshoot gooseberry	GROSSULARIACEAE	NP
*Rosa woodsii Lindl.	Woods' rose	ROSACEAE	NP
*Salix bebbiana Sarg.	Bebb willow	SALICACEAE	NP
*Salix exigua Nutt.	Coyote willow	SALICACEAE	NP
Salix lasiandra Benth. var. caudate (Nutt.) Sudw.	Whiplash willow	SALICACEAE	NP
*Sarcobatus vermiculatus (Hook.) Torr.	Black greasewood	CHENOPODIACEAE	NP
*Sheperdia argentea (Pursh) Nutt.	Silver buffaloberry	ELAEAGNACEAE	NP
Tamarix ramosissima Ledeb.	Salt cedar	TAMARICACEAE	IP
*Tetradymia canescens DC.	Gray horsebrush	ASTERACEAE	NP
*Tetradymia spinosa H.&A.	Cottonthorn horsebrush	ASTERACEAE	NP
FORBS			
Abronia fragrans Nutt.ex Hook.	Snowball sand verbena	NYCTAGINACEAE	?
[2]Abronia micrantha Torrey	Sandpuffs	NYCTAGINACEAE	?A
* Acroptilon repens L. = Centaurea repens (L.) De Candolle	Russian knapweed	ASTERACEAE	IP
Agoseris glauca (Pursh) Raf.	Pale agoseris	ASTERACEAE	?P
*Allium textile Nels. & Macbr.	Wild onion	LILIACEAE	NP
Antennaria parvifolia Nutt.	Littleleaf pussytoes	ASTERACEAE	?P
*Arabis holboellii Hornem.	Holboell rockcress	BRASSICACEAE	?B-P
*Arenaria hookeri Nutt.	Hooker sandwort	CARYOPHYLLACEAE	?
*Artemisia dracunculus L.	Tarragon sagewort	ASTERACEAE	NP
*Artemisia ludoviciana Nutt.	Louisiana wormwood/sagewort	ASTERACEAE	NP
*Asclepias speciosa Torrey	Showy milkweed	ASCLEPIADACEAE	NP
[3]*Aster chilensis Nees refer to A. ascendens Lindl.	Pacific aster	ASTERACEAE	?
*Astragalus agrestis Dougl.ex G. Don	Purple/Field milkvetch	FABIACEAE	?P
*Astragalus argophyllus Nutt.	Silver-leafed Milkvetch	FABIACEAE	?P
*Astragalus canadensis L.	Canada/Short-toothed milkvetch	FABIACEAE	?P
*Astragalus chamaeleuce Gray	Milkvetch	FABIACEAE	?P
[4]*Astragalus convallarius Greene (diversifolius, Dorn)	Lesser Rushy milkvetch/Timber poisonvetch	FABIACEAE	?P
*Astragalus geyeri Gray	Geyer's Milkvetch	FABIACEAE	?P
*Astragalus pubentissimus T&G.	Green River milkvetch	FABIACEAE	?P
*Astragalus purshii Dougl. Ex. Hook.	Wooly pod milkvetch/Purshes locoweed	FABIACEAE	?P
*Astragalus spatulatus Sheld.	Draba/Tufted milkvetch	FABIACEAE	?P
*Astragalus tenellus Pursh.	Loose flower milkvetch	FABIACEAE	?P
*Calochortus nuttallii T&G	Nuttall's mariposa lily	LILIACEAE	NP
Camissonia minor (A. Nels.) Raven	Evening primrose family	ONAGRACEAE	?
*Camissonia scapoidea (T.&G.) Raven	Naked stemmed evening primrose	ONAGRACEAE	?
Cardaria draba (L.) Desv.	Hoary cress	BRASSICACEAE	IP
*Cardaria pubescens (Meyer) Jarmol.	Longstalk whitetop	BRASSICACEAE	IP
*Carduus nutans L.	Musk thistle	ASTERACEAE	IA-B
*Castilleja augustifolia (Nutt.) G. Don (former chromosa A. Nels.)	Desert paintbrush	SCROPHULARIACEAE	NP
*Centaurea muculosa Lam.	Spotted knapweed	ASTERACEAE	IB-P
*Chenopodium glaucum L.	Oakleaf goosefoot	CHENOPODIACEAE	?A
Chenopodium leptophyllum (Moq.) Nutt. ex Wats.	Slimleaf goosefoot	CHENOPODIACEAE	?A
*Cicuta maculata (in Dorn) [old? Douglasii (DC.) Coult. & Rose]	Water hemlock	APIACEAE	NP
Cirsium arvense (L.) Scop.	Canada thistle	ASTERACEAE	IP
[5]*Cirsium foliosum (Hook.) DC. [C. scariosum Nutt.]	Elk thistle	ASTERACEAE	NP
*Cirsium vulgare (Savi) Tenore	Bull thistle	ASTERACEAE	IB

*Cleome lutea Hook.	Yellow beeplant	CAPPARACEAE	NA
Comandra sp. [C. umellata (L.)??]	Bastard Toadflax	SANTALACEAE	??
Convolvulus arvensis L.	Field bindweed	CONVOLVULACEAE	IP
*Cordylanthus ramosus Nutt. Ex Benth.	Bushy birdbeak	SCROPHULARIACEAE	??
*Crepis runcinata (James) T.&G.	Dandelion hawksbeard	ASTERACEAE	?P
*Cryptantha flavoculata (A. Nels.) Payson	Roughseed cryptantha	BORAGINACEAE	NB-P
*Cryptantha sericea (Gray) Payson	Cryptantha	BORAGINACEAE	NB-P
*Cymopterus acaulis (Pursh) Raf.	Biscuit root	APIACEAE	NP
*Cymopterus longipes Wats.	Biscuit root	APIACEAE	NP
*Descurainia pinnata (Walt.) Britt	Pinnate tansy-mustard	BRASSICACEAE	NA
*Descurainia sophia (L.)Webb ex Prantl	Flixweed tansy-mustard	BRASSICACEAE	IA
*Erigeron glabellus Nutt.	Smooth fleabane	ASTERACEAE	??
*Erigeron pumilus Nutt.	Low fleabane	ASTERACEAE	??
*Eriogonum cernuum Nutt.	Nodding eriogonum	POLYGONACEAE	?A-B
*Eriogonum ovalifolium Nutt.	Cushion eriogonum	POLYGONACEAE	??
Euphorbia brachycera Engelm. var. robusta (Engelm.) Dorn	Rocky Mountain spurge	EUPHORBIACEAE	?P
Euphorbia glyptosperma Engelm.	Ridgeseed spurge	EUPHORBIACEAE	?A
*Gaura coccinea Nutt. ex Pursh	Scarlet gaura	ONAGRACEAE	NP
*Gilia leptomeriaGray	Gilia	POLEMONIACEAE	NA
Glaux maritima L.	Sea-milkwort	PRIMULACEAE	??
*Glycyrrhiza lepidota Pursh	American licorice	FABACEAE	NP
*Grindelia squarrosa (Pursh) Dunal	Curlycup gumweed	ASTERACEAE	NB-P
Gypsophila paniculata L.	Babysbreath	CARYOPHYLLACEAE	IP
*Halimolobos virgata (Nutt.) Schulz	Halimolobos	BRASSICACEAE	??
*Halogeton glomeratus (Bieb.) Meyer	Common halogeton	CHENOPODIACEAE	IA
*Haplopappus acaulis (Nutt.) Gray	Stemless goldenweed	ASTERACEAE	?P
*Haplopappus lanceolatus (Hook.) T.&G.	Lanceleaf goldenweed	ASTERACEAE	?P
[6]*Haplopappus nuttallii T. & G. [Former Machaeranthera grindelioides Nutt. Shinners]	Nuttall goldenweed	ASTERACEAE	??
*Helenium autumnale L.	Common sneezeweed	ASTERACEAE	?P
*Hippuris vulgaris L.	Common marestail	HIPPURIDACEAE	NP
*Hymenopappus filifolius Hook.	Fineleaf hymenopappus	ASTERACEAE	?P
*Hyoscyamus niger L.	Black henbane	SOLANACEAE	IA-B
[7]*Ipomopsis congesta (Hook.) Grant [former = Gilia congesta Hook.]	Common ball-head gilia	POLEMONIACEAE	??
*Iris missouriensis Nutt.	Rocky Mountain iris	IRIDACEAE	NP
*Iva axillaries Pursh	Poverty weed	ASTERACEAE	NP
Kochia scoparia (L.) Schrad.	Kochia	CHENOPODIACEAE	IA
Lactuca serriola L.	Prickly lettuce	ASTERACEAE	?NA-B
Lappula occidentalis (S. Wats.) Greene	Western sticktight	BORAGINACEAE	NA
*Lepidium latifolium L.	Tall whitetop, pepperweed	BRASSICACEAE	IP
Lepidium perfoliatum L.	Clasping pepperweed	BRASSICACEAE	IA
*Lepodactylon pungens (Torr.) Nutt.	Lepodactylon	POLEMONIACEAE	??
*Lesquerella alpina (Nutt.) Wats.	Bladderpod	BRASSICACEAE	??
*Lesquerella ludoviciana (Nutt.) Wats.	Bladderpod	BRASSICACEAE	??
*Lithospermum incisum Lehm.	Narrow-leaf gromwell	BORAGINACEAE	NP
[8]*Lupinus argenteus Pursh. [= L. caudatus}	Silvery lupine	FABIACEAE	NP
*Lupinus pusillus Pursh.	Rusty lupine	FABIACEAE	NA
*Lygodesmia grandiflora (Nutt.) T.& G.	Skeletonweed	ASTERACEAE	?P
*Machaeranthera canescens (Pursh) Gray	Purple aster	ASTERACEAE	?P
[9]*Maianthemum stellatum (L.) Link	Starry solomon plume	LILIACEAE	N?
*Malcolmia africana (L.) R.Br.	Malcolmia	BRASSICACEAE	?A
*Medicago sativa L.	Alfalfa	FABIACEAE	IP
*Melilotus albus Medic.	White sweet-clover	FABACEAE	IA-B
*Melilotus officinalis (L.) Pallas	Yellow sweet-clover	FABACEAE	IA-B
*Mentha arvensis L.	Field mint	LAMIACEAE	NP
*Mirabilis linearis (Pursh) Heimerl	Narrowleaf umbrella wort	NYTAGINACEAE	?P
Monolepis nuttalliana (Schultes) Greene	Poverty-weed	CHENOPODIACEAE	NA
*Nama densum Lemmon	Leafy/Matted nama	HYDROPHYLLACEAE	?A
*Oenothera caespitosa Nutt.	Tufted evening primrose	ONAGRACEAE	N?
[10]*Oenothera hookeri T. & G.??	Hooker evening primrose	ONAGRACEAE	N?
[11]*Oenothera pallida Lindl.	Hairycalyx evening primrose	ONAGRACEAE	N?
Oenothera villosa Thunb.	Evening-primrose	ONAGRACEAE	NB
*Orobanche fasciculate Nutt.	Tufted broomrape	OROBANCHACEAE	N?
*Oxytropis deflexa (Pallas) DC.	Drop-pod locoweed	FABIACEAE	NP
*Oxytropis riparia Litv.	River oxytrope	FABIACEAE	NP
*Oxytropis sericea Nutt. ex T. & G.	Silky crazyweed	FABIACEAE	NP
*Penstemon arenicola A. Nels.	Sand penstemon; beardtongue	SCROPHULARIACEAE	NP
Penstemon eriantherus Pursh	Crested penstemon	SCROPHULARIACEAE	NP
*Penstemon fremontii T. & G. ex Gray	Fremont penstemon	SCROPHULARIACEAE	NP
*Phlox hoodii Richardson	Hood's phlox	POLEMONIACEAE	NP
*Physaria acutifolia Rydb.	Twinpod/Bladderpod	BRASSICACEAE	NP
*Physostegia parviflora Nutt. Ex Gray	False dragonhead	LAMIACEAE	??
*Plantago eriopoda Torr.	Saline/Redwood plaintain	PLANTAGINACEAE	NP
*Plantago major L.	Broadleaf plantain	PLANTAGINACEAE	IP
*Polygonum aviculare L.	Prostrate knotweed	POLYGONACEAE	IA
*Potentilla anserina L.	Common silverweed	ROSACEAE	NP
*Potentilla hippiana Lehm.	Wooly potentilla	ROSACEAE	NP
[12]*Psoralidium lanceolatum (Pursh) Rydb	Lemon scurf pea	FABIACEAE	?P
*Ranunculus cymbalaria Pursh	Marsh/Seaside buttercup	RANUNCULACEAE	NP
Rorippa curvipes Greene	Cress	BRASSICACEAE	??
*Rorippa sinuate (Nutt.) A.S. Hitch.	Spreading yellow cress	BRASSICACEAE	??

*Rumex crispus L.	Curly dock	POLYGONACEAE	NP
*Rumex hymenosepalus Torrey	Dock	POLYGONACEAE	??
*Rumex maritimus L. [var. fueginus (Phil) Dusen]	Dock	POLYGONACEAE	??
*Salicornia rubra A. Nels.	Rocky Mountain glasswort	CHENOPODIACEAE	
[13]Salsola iberica Sennen	Russian thistle	CHENOPODIACEAE	IA
[14]*Schoenocrambe linifolia (Nutt.) Greene	Plains/Basin mustard	BRASSICACEAE	?P
*Senecio hydrophilus Nutt.	Groundsel	ASTERACEAE	NP
*Sisyrinchium spp.	Blue-eyed grass	IRIDACEAE	NP
*Solanum rostratum Dun.	Buffalobur	SOLANACEAE	NA
*Solidago missouriensis Nutt.	Missouri goldenrod	ASTERACEAE	NP
*Sonchus arvensis L.ssp. uliginosus (Bieb.) Nyman	Marsh sow-thistle	ASTERACEAE	IP
*Sonchus asper L. Hill	Spiny sowthistle	ASTERACEAE	IA
*Sphaeralcea coccinea (Nutt.) Rydb.	Scarlet globemallow	MALVACEAE	NP
*Sphaeromeria argentea Nutt.	False sagebrush	ASTERACEAE	?P
*Sphaerophysa salsula (Pall.) DC.	Swainsonpea	FABIACEAE	IP
*Taraxacum officinale Weber in Wiggers	Common dandelion	ASTERACEAE	IP
*Tiquilia nuttallii(Hook.) Richardson	Tiquilia	BORAGINACEAE	?A
*Townsendia incana Nutt.	Hoary townsendia	ASTERACEAE	??
*Trifolium andinum Nutt.	Nuttal clover	FABACEAE	??
Triglochin maritimum L. var. elatum (Nutt) Gray	Maritime arrowgrass	JUNCAGINACEAE	NP
*Typha latifolia L.	Common cattail	TYPHACEAE	NP
Valeriana edulis Nutt. ex T. & G.	Edible valeriana	VALERIANACEAE	?P
Verbena bracteata Lag. & Rodr.	Prostrate vervain	VERBENACEAE	?A-P
*Veronica anagallis-aquatica L.	Water Speedwell	SCROPHULARIACEAE	??
Vicia americana	American vetch	FABACEAE	?P
*Xanthium strumarium L.	Common cocklebur	ASTERACEAE	NA

FERN ALLIES

*Equisetum laevigatum A. Br.	Smooth scouringrush/horsetail	EQUISETACEAE	NP

GRASSES

*Agropyron cristatum (L.) Gaertn.	Crested wheatgrass	POACEAE	IP
*Agropyron spicatum (Pursh) Scribn. & Sm.= Elymus spicatus (Pursh) Gould	Bluebunch wheatgrass	POACEAE	NP
*Agropyron trachycaulum x Hordeum jubatum hybrid			
*Agrostis stolonifera L.	Redtop, Bentgrass	POACEAE	IP
Alopecurus aequalis Sobol.	Shortawn foxtail	POACEAE	NP
Alopecurus arundinaceus Poiret	Creeping foxtail (Garrison is a cultivar)	POACEAE	IP
*Alopecurus pratensis L.	Meadow foxtail	POACEAE	IP
*Beckmannia syzigachne (Steudel) Fern.	American sloughgrass	POACEAE	NA
*Bromus inermis Leyss.	Smooth brome	POACEAE	IP
Bromus tectorum L.	Cheatgrass brome	POACEAE	IA
[15]*Calamagrostis stricta (Timm) Koeler	Northern reedgrass	POACEAE	NP
*Deschampsia cespitosa (L.) Beauv.	Tufted hairgrass	POACEAE	NP
*Distichlis spicata (L.) Greene	Inland saltgrass	POACEAE	NP
*Elymus cinereus Scribn. & Merr.	Great Basin wildrye	POACEAE	NP
* Elymus hispidus (Opiz) Melderis = Agropyron intermedium (Host.)Beauv.	Intermediate wheatgrass	POACEAE	IP
*Elymus repens (L.) Gould =Agropyron repens (L.) Beauv.	Quackgrass	POACEAE	IP
Elymus smithii (Rydb.) Gould= Agropyron smithii Rydb.	Western wheatgrass	POACEAE	NP
[16]E lymus trachycaulus (Link) Gould ex Shinners var. andinus (Scribn. & Sm.) Dorn = Agropyron subsecundum.	Bearded wheatgrass	POACEAE	?P
Elymus trachycaulus (Link) Gould ex Shinners var. trachycaulus = Agropyron trachycaulum (Link) Malte	Slender wheatgrass	POACEAE	?P
*Festuca pratensis Huds. = F. elatior L.	Meadow fescue	POACEAE	IP
*Hilaria jamesii (Torr.) Benth	Galleta	POACEAE	??
*Hordeum jubatum L.	Foxtail barley	POACEAE	NP
Muhlenbergia asperifolia (Nees & Mey. Ex Trin) Parodi	Scratchgrass	POACEAE	NP
*Muhlenbergia richardsonis (Trin.) Rydb.	Mat Muhly	POACEAE	NP
*Oryzopsis hymenoides (R. & S.) Riker ex Piper	Indian ricegrass	POACEAE	NP
Phalaris arundinacea L.	Reed canarygrass	POACEAE	IP
Phleum pratense L.	Timothy	POACEAE	IP
Phragmites australis (Cav.) Trin. Ex Steudel	Common Reed	POACEAE	IP
Poa juncifolia Scribn.	Alkali bluegrass	POACEAE	NP
Poa nevadensis Vasey ex Scribn.	Nevada bluegrass	POACEAE	NP
Poa pratensis L.	Kentucky bluegrass	POACEAE	IP
*Sitanion hystrix (Nutt.) J.G. Smith	Bottlebrush squirreltail	POACEAE	*Spartina
gracilis Trin.	Alkali cordgrass	POACEAE	
*Sporobolus airoides (Torrey) Torrey	Alkali sacaton	POACEAE	NP
*Stipa comata Trin. & Rupr.	Needle and thread grass	POACEAE	NP

SEDGES

*Carex douglasii Boott	Douglas sedge	CYPERACEAE	
*Carex lanuginose Michx.	Wooly sedge	CYPERACEAE	
*Carex nebrascensis Dewey	Nebraska sedge	CYPERACEAE	
*Carex praegracilis Boott	Silver sedge	CYPERACEAE	
*Carex rostrata Stokes	Beaked sedge	CYPERACEAE	
*Carex simulata Mack.	Short-beaked sedge	CYPERACEAE	
*Eleocharis palustris (L.) R.&S.	Common spikerush	CYPERACEAE	NP
*Scirpus acutus Muhl. ex Bigelow	Tule bulrush	CYPERACEAE	NP
*Scirpus pungens Vahl.	Common threesquare	CYPERACEAE	NP

RUSHES

Juncus balticus Willd.	Wiregrass	JUNCACEAE	NP

WEED SPECIMENS IN HERBARIUM – NOT FOUND ON REFUGE (YET)

*Euphorbia esula L.	Leafy spurge	EUPHORBIACEAE	IP
*Centaurea solstitialis L.	Yellow starthistle	ASTERACEAE	IP
*Hypericum perforatum L.	St. John's-wort	HYPERICACEAE	IP
*Lythrum salicaria	Purple Loosestrife	LYTHRACEAE	IP

<Plant Type Codes: I = Introduced; N = Native; A = Annual; B = Biennial; P = Perennial
* Denotes plant specimen in herbarium.

NOTES:

[1]*Ribes oxyacanthoides L. var. setosum Lindl. Dorn Missouri/Redshoot gooseberry
Ribes setosum specimen in herbarium. Dorn lists Ribes oxyacanthoides L. var. setosum Lindl. Dorn.

[2]Abronia micrantha Torrey Sandpuffs
Tripterocalyx micranthus listed in "Plants of Seedskadee National Wildlife Refuge"
Dorn 92 – T. Micranthus not listed. A. micrantha is listed.
Uinta Basin Flora listed "T. Micranthus (Torr.) Hook. [T. pedunculatus (Jones) Stand.; Abronia micrantha Torr.]"

[3] Aster chilensis –
Specimum in herbarium A. chilensis. Uinta Basin Flora. Lists chilensis but spp. Referable to ascendens (Lindl.) Cronq.

[4] *Astragalus convallarius Greene Lesser Rushy milkvetch/Timber poisonvetch
Uinta Basin Flora. Reports A. diversifolius Gray is misapplied. No spp. for convallarius Greene in Dorn 92, only diversifolius var. diversifolius listed in the Green River Basin.

[5]*Cirsium foliosum (Hook.) DC. Elk thistle
Dorn 92 – C. foliosum recorded in Yellowstone Park, Sheridan. C. scariosum Nutt. Recorded in nw,nwc,nec,cw,c.
Weeds of West – Lists C. foliosum in picture but references C. scariosum in index.

[6]*Haplopappus nuttallii T. & G. Nuttall goldenweed
Machaeranthera grindelioides Nutt. Shinners specimen in herbarium. Uinta Basin Flora – lists M. grindelioides (Haplopappus nuttallii T. & G.). In Dorn's index lists M. grindelioides = H. nuttallii

[7]* Ipomopsis congesta (Hook.) Grant Common ball-head gilia
Gilia congesta specimen in herbarium. Uinta Basin Flora lists Gilia congesta Hook. [Ipomopsis congesta (Hook.) V. Grant]as common widespread desert shrub, sagebrush and pinyon-juniper communities.

[8]*Lupinus argenteus Pursh.[= L. caudatus} Silvery lupine

*Lupinus caudatus Kell. Tailcup lupine

[9]*Maianthemum stellatum (L.) Link Starry solomon plume
Dorn 92 - Smilacina = Maianthemum; Old name: Smilacina stellata

[10]*Oenothera hookeri T. & G. Hooker evening primrose
Uinta Basin Flora – O. elata H.B.K. [O. hookeri T. & G. var. angustifolia Gates]
Dorn 92 – No index listing for O. elata or hookeri. Is this maybe O. laciniata or villosa?

[11]*Oenothera pallida Lindl. Hairycalyx evening primrose
Oenothera trichocalyx specimen in herbarium. Dorn lists O. pallida with trichocalyx as a variety. Uinta Basin Flora lists O. pallida Lindl. Pale e. (O. trichocalyz Nutt. ex T. & G.)

[12]* Psoralidium lanceolatum (Pursh) Rydb Lemon scurf pea
Psoralea lanceolata Pursh in herbarium. Dorn 92 lists Psoralea changed to Pedimelum or Psoralidium. And lanceolata to lanceolatum. Uinta Basin Flora agrees.

[13]Salsola iberica Sennen Russian thistle
Name from Weeds of the West, Russian thistle synonyms include S. kali L. and S. pesitfer A. Nels. Dorn 92 lists two Salisola spp. – S. australis R. Br. and S. collina Palles.

[14]*Schoenocrambe linifolia (Nutt.) Greene Plains/Basin mustard
Uinta Basin Flora = [Sisymbrium linifolium (Nutt.) Nutt. in T. & G.]
Dorn 92 does not list Sisymbrium linifolium.

[15]*Calamagrostis stricta (Timm) Koeler Northern reedgrass
Calamagrostis neglecta (Ehrh.) Gaertn. in herbarium and in Hitchcock 2nd ed.
Dorn 92 – C. neglecta not listed
Uinta Basin Flora "C. stricta (Timm) Koeler Northern r. [C. inexpansa Gray; C. neglecta (ehrh.) Gaertn.]

[16]E lymus trachycaulus (Link) Gould ex Shinners var. andinus (Scribn. & Sm.) Dorn Bearded Wheatgrass
Agropyron subsecundum in herbarium as Bearded wheatgrass . Dorn 92 – A. subsecundum is now Elymus trachycaulus with Slender wheatgrass as var. trachycaulus and Bearded Wheatgrass as var. andinus.

Plants removed from list because of possible misidentification or unknown species.

A. Arabis perennans Wats. Dorn 92 – Records only in Albany county.	Rockcress	
B. Salix eriocephala Michauz var. watsonii (Bebb) Dorn	Yellow willow	SALICACEAE
Dorn 92 – Salix eriocephala Michx. Records for Black Hills; E, nec only. No variety for eriocephala		
C. Dracocephalum nuttallii D.nuttallii not listed in Dorn or Uinta Basin Flora	False dragonhead	LAMIACEAE
D. Epilobium spp. Unknown species	Willow-herb	ONAGRACEAE
E. Erigeron controversus E. controversus not listed in Dorn or Uinta Basin Flora	Fleabane; wild daisy	ASTERACEAE
F. Lathyrus sp. Unknown spp.	Pea-vine	FABACEAE
G. *Plantago tweedyi Dorn 92 – "moist places in mountains" nw,cw,c,sc	Tweedy plaintain	PLANTAGINACEAE
H. *Agropyron caninum Dorn 92 – not listed. Hitchcock - "This is the species [A. subsecundum] which has generally been called by American botanists A. caninum (L.) Beauv.; that is a European species, differing in having 3-nerved glumes. Uinta Basin Flora – Recognized as a diverse complex in which several species have similarities and intergradation including A. caninum by Cronquist and others (1977). Also "A. trachycaulum (Link) Malte Slender w. [A canium L. ssp. Majis (Vasey) C. L. Hichc.		POACEAE

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Goodrich, S. and E. Neese. 1986. Uinta Basin Flora. USDA Forest Service – Intermountain Region. Ogden, Utah. 320pp.

Hartman, R. L. and C. H. Refsdal. 1995. Status report on the general floristic inventory of southwest Wyoming and adjacent northeast Utah. Rocky Mountain Herbarium. University of Wyoming , Laramie.

Hitchcock, A. S. 1950. Manual of the grasses of the United States, 2nd edition, Volume 1 & 2. Dover publications, Inc. New York.

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List was complied from

- Seedskadee National Wildlife Refuge herbarium list,
- Seedskadee National Wildlife Refuge herbarium,
- "Plants of Seedskadee National Wildlife Refuge",
- "Survey for (Spiranthes diluvialis) Ute Ladies'-Tresses on the Seedskadee National Wildlife Refuge", P.E. Kung,
- Bitterroot Consultants, 1996, Riparian Revegetation Suitability Study Plant Species List – Appendix A.
- "Field guide to selected grasses and shruhb of Seedskadee National Wildlife Refuge", by Barbara J. Scott 1986

Appendix G. Mailing List

Federal Officials

- U.S. Congress Woman Representative, Barbara Cubin, Washington, D.C. and Rock Springs, WY
- U.S. Senator Craig Thomas, Washington, D.C. and Rock Springs, WY
- U.S. Senator Mike Enzi, Washington, D.C. and Jackson, WY

Federal Agencies

- Bureau of Land Management
  Andy Tenney, Rock Springs, WY
  Dave Vesterby, Rock Springs, WY
  Renee Dana, Rock Springs, WY
  Lorraine Keith, Rock Springs, WY
  Jeff Rawson, Kemmerer, WY
  Priscilla Mecham, Pinedale, WY
- Bureau of Reclamation
  Provo Area Office, Provo, UT
  Environmental Resources Group, Salt Lake City, UT
  Fontenelle Dam, Gary Butterfield, Fontenelle, WY
- Fossil Butte National Monument, Dave McGinnis, Kemmerer, WY
- National Resource Conservation Service, Farson, WY
- U.S. Corps of Engineers, Cheyenne, WY
- U.S. Environmental Protection Agency, Wes Wilson, Denver, CO
- U.S. Forest Service
  Don Duff , Salt Lake City, UT
  Bert Kaluza, Vernal, UT
  Bonnie Jacques, Ogden, UT
  Steve Sams, Manila, UT
  Kemmerer, WY
  Jackson, WY
  Green River, WY
- U.S. Fish & Wildlife Service
  Lee Carlson, Golden, CO; Mike Long, Cheyenne, WY; Shannon Heath, Helena, MT; Salt Lake City, UT; Lander, WY; Grand Island ES, Grand Island, NE; Ouray NWR, Vernal, UT; Browns Park NWR, Maybell, CO; National Elk Refuge, Jackson, WY; Portland, OR; Sherwood, OR; Sacramento, CA; Albuquerque, NM; Fort Snelling, MN; Atlanta, GA; Hadley, MA; Anchorage, AK; Juneau, AK; Arlington, VA; Shepherdstown, WV; Lakewood, CO; Alamosa/Monte Vista NWR, CO; Crescent Lake NWR, NE; Lost Trail NWR, MT; Rainwater Basin WMD, NE; Arapaho NWR, CO; Arrowwood NWR, ND; Sand Lake NWR, SD; Waubay NWR, SD; Medicine Lake NWR, MT
- U.S. Geological Survey
  Mike Scott and Greg Auble, Fort Collins, CO
  BRD, Rick Schroeder, Ft. Collins, CO

State Officials

- Governor Jim Geringer
- State Senate Dist. 14, Mark Harris
- State Senate Dist. 12, Rae Job
- State Rep. House Dist. 39, Chris Boswell
- State Rep. House Dist. 18, John L. Eyre
- State Rep. House Dist. 16, Larry Levitt
- State Rep. House Dist. 48, George 'Bud' Nelson
- State Rep. House Dist. 17, Fred Parady
- State Rep. House Dist. 60, Bill Thompson

State Agencies

- Illinois Department of Natural Resources, Springfield, IL
- Wyoming Game and Fish Department
  Bill Long, Jackson, WY
  Ron Lockwood, Kemmerer, WY
  Duane Kerr, Green River, WY
  Tom Christiansen, Green River, WY
  Steve DeCecco, Green River, WY
  Mark Fowden, Cheyenne, WY
  Neil Hymas, Cokeville, WY
  Lucy Diggins, Green River, WY
  Susan Patla, Jackson, WY
  Robert Keith, Green River, WY
  Ron Remmick, Green River, WY
  Superior, WY
  Casper, WY
  Pinedale, WY
- State Historic Preservation Office, Laramie, WY
- State Historic Preservation Office, Cheyenne, WY
- Utah Division of Wildlife, Vernal, UT
- Colorado Division of Wildlife, Maybell, CO

Tribes

- Shoshone Business Council, Fort Washakie, WY
- Arapaho Business Committee, Fort Washakie, WY
- Uintah & Ouray Tribal Bus. Council, Ft. Duchesne, UT

City/County/Local Governments

- City of Green River, City Hall, Green River, WY
- City of Pinedale, Pinedale, WY
- City of Kemmerer, Kemmerer, WY
- City of Rock Springs, Rock Springs, WY
- County Commission, Lincoln County, Kemmerer, WY
- Board of County Commissioners, Sweetwater County, Carl Maldonado, Ted Ware, John Pallesen
- Dist Mgr, Eden Valley Irrigation Dist, Farson, WY
- Green River Chamber of Commerce, Green River, WY
- Green River Police Dept., Greg Gillen, Green River, WY
- Lincoln County, Randy Wilson, Kemmerer, WY
- Rock Springs Chamber of Commerce, Dave Hanks, Rock Springs, WY
- Town of Cokeville, Cokeville, WY
- Town of Labarge, Labarge, WY
- Sweetwater County Fire Warden, Denny Washam, Rock Springs WY
- Sweetwater County Planner, Green River, WY
- Uinta County Commissioners, W. Robert Stoddard, Evanston, WY

Libraries

- Cokeville Branch Library, Cokeville, WY
- Lincoln County Library, Kemmerer, WY
- Rock Springs Library, Rock Springs, WY
- Sublette County Library, Pinedale, WY
- Sweetwater County Library, Green River, WY
- White Mountain Library, Rock Springs, WY

Newspapers/Radio

- Casper Star Tribune, Dave Boyd, Casper, WY
- Casper Star Tribune, Jeff Gearino, Green River, WY
- Green River Star, Keith Jantz, Green River, WY
- Kemmerer Gazette, Don Kiminski, Kemmerer, WY
- Pinedale Roundup, Janet Montgomery, Pinedale, WY
- Rocket-Miner, Greg Little, Rock Springs, WY
- Sublette Examiner, Cat Urbigkit, Pinedale, WY

Businesses

- Bear West Consulting, Salt Lake City, UT
- BHE Environmental, Cincinnati, OH
- Creative Fishing Adventures, Jim Willians, Manila, UT
- Crosson Ranch Inc, John Crosson, Green River, WY
- Flaming Gorge Lodge, Rock Springs, WY
- Fontenelle Services, Kemmerer, WY
- Four Seasons Fly Fishers, Murray, UT
- Good Sam's Club, Al Shedden, Rock Springs, WY
- Great Outdoor Shop, Rex Poulson, Pinedale, WY
- Highland Desert Flies, Bennie Johnson, Green River, WY
- Horne Engineering Services, Bel Air, MD
- Landmark Design, Jan Striefel, Salt Lake City, UT
- OCI Wyoming, IJ Rogers, Green River, WY
- Park City Fly Shop, Chris Kunkle, Park City, UT
- Sweet Dreams Inn, George and Tree, Green River, WY
- Sweetwater County TV, Paula Wannacott, Rock Springs, WY
- Sweetwater County Weed and Pest, Farson, WY
- Solitary Angler, Van Beacham, Kemmerer, WY
- Wind River Sporting Goods, Jack Ely, Green River, WY

Organizations

- Animal Protection Institute, Sacramento, CA
- Federation of Flyfishers, Larry Watson, Bozeman, MT
- Cheyenne High Plains Audubon Society, Cheyenne, WY
- Audubon Society, Gretchen Muller, Washington, D.C.
- Big Sandy Group, Farson, WY
- Central Wyoming Outfitters Assoc, Chris Peterson, Casper, WY
- Defenders of Wildlife, Washington, D.C.
- Friends of WY Deserts, Meridith Taylor, Dubois, WY
- KRA Corporation, Paul E. Wilson, Bethesda, MD
- National Trappers Assoc. Inc., New Martinsville, WV
- National Wildlife Refuge Assoc., Colorado Springs, CO
- North American Pronghorn Foundation, Casper, WY; Rawlins, WY
- People For The USA, Randy Shipman, Rock Springs, WY
- Rock Springs Grazing Assoc, Rock Springs, WY
- States West Water Resources Corp., Patrick Tyrrell, Cheyenne, WY
- Sweetwater County Wildlife Assoc, Dick Randall, Rock Springs, WY
- Trout Unlimited, Joe McGurrin, Arlington, VA
- The Nature Conservancy, Ben Pierce, Lander, WY; John Humke, Boulder, CO
- The Wilderness Society, Washington, D.C.
- The Wildlife Society, CMPS, Len Carpenter, Fort Collins, CO
- Water for Wildlife Foundation, Lander, WY
- Wildlife Management Institute, Washington, D.C. and Pratt, KS
- Wyoming Ducks Unlimited, Barry Floyd, Casper, WY
- Wyoming Native Plant Society, Phillip White, Laramie, WY
- Wyoming Trout Unlimited, Kathy Buckner, Jackson, WY
- Wyoming Outdoors Council, Dan Heilig, Lander, WY
- Wyoming Outfitters Assoc, Jane Chelberg, Cody , WY
- Wyoming Resource Council, John McGee, Cody, WY
- Wyoming Sportsmen's Assoc , John Burd, Casper, WY
- Wyoming Stock Growers Assoc, Cheyenne, WY
- Wyoming Wildlife Federation, Kim Floyd, Cheyenne, WY; Dan Chu, Cheyenne, WY
- Wyoming Woolgrowers Assoc, Casper, WY

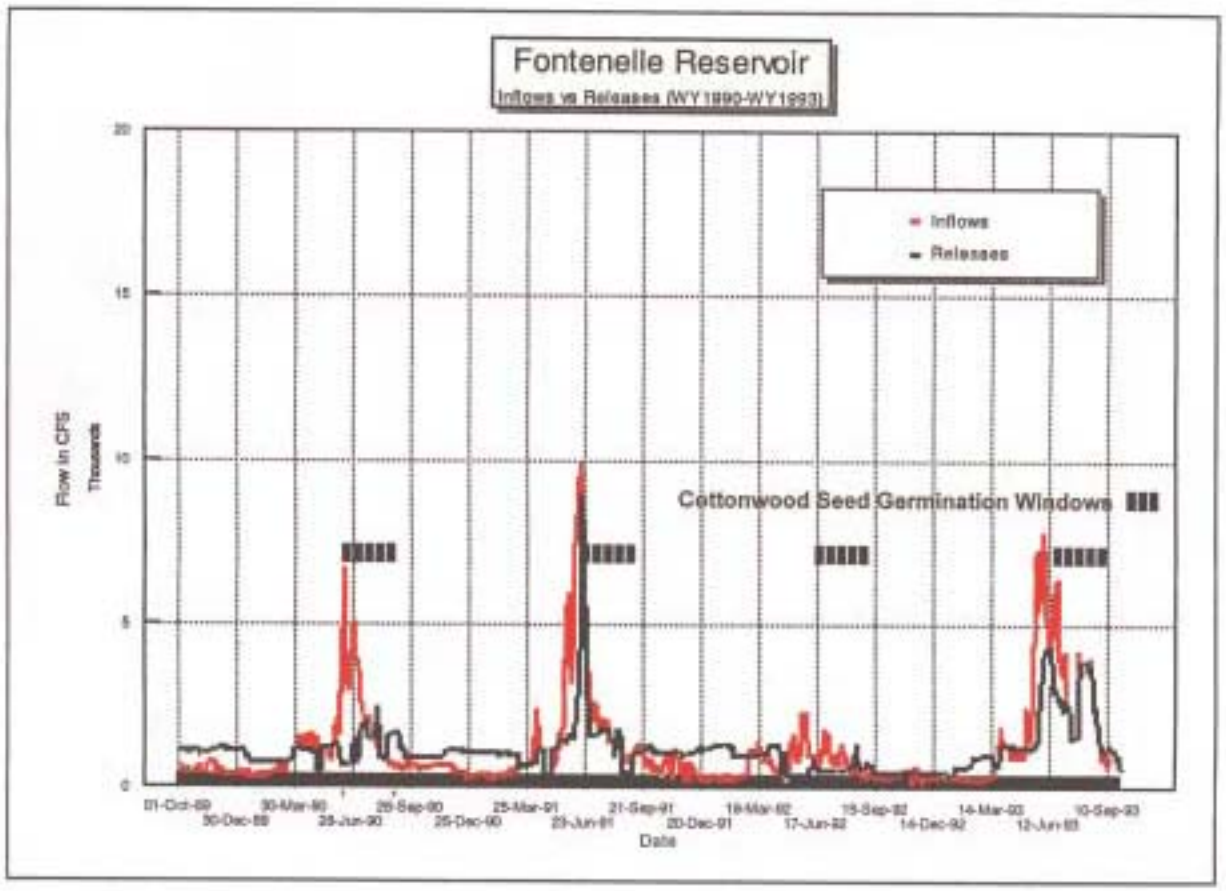
Schools/Universities

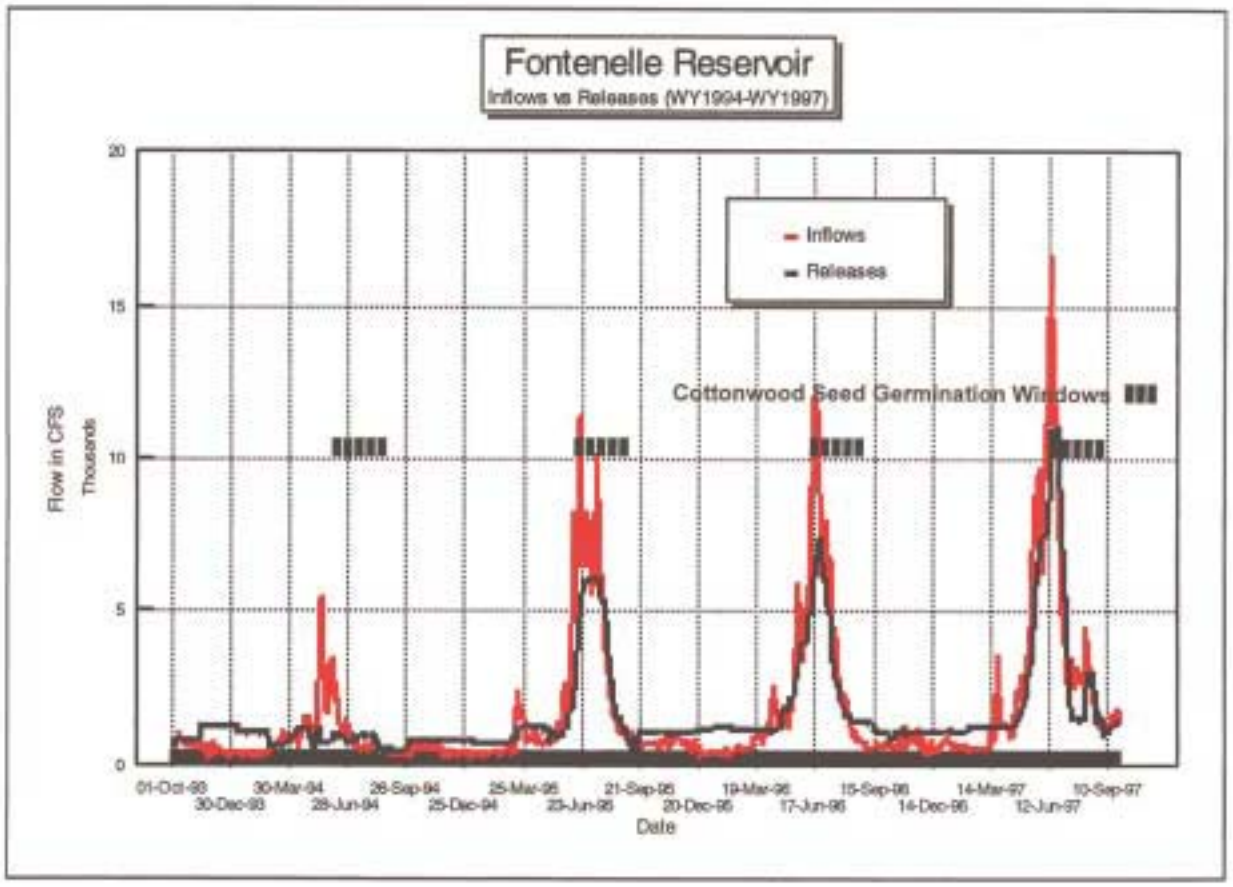
- Northwestern University, Prof. Paul Friesema, Evanston, IL
- Western WY Community College, Green River, WY
- Western WY Community College, Rock Springs, WY
- Colorado State University, Dept. of Fishery and Wildlife Biology, Ken Wilson, Ft. Collins, CO
- Utah State University, Rich Etchberger, Vernal, UT
- University of Wyoming, Department of Zoology, Laramie, WY

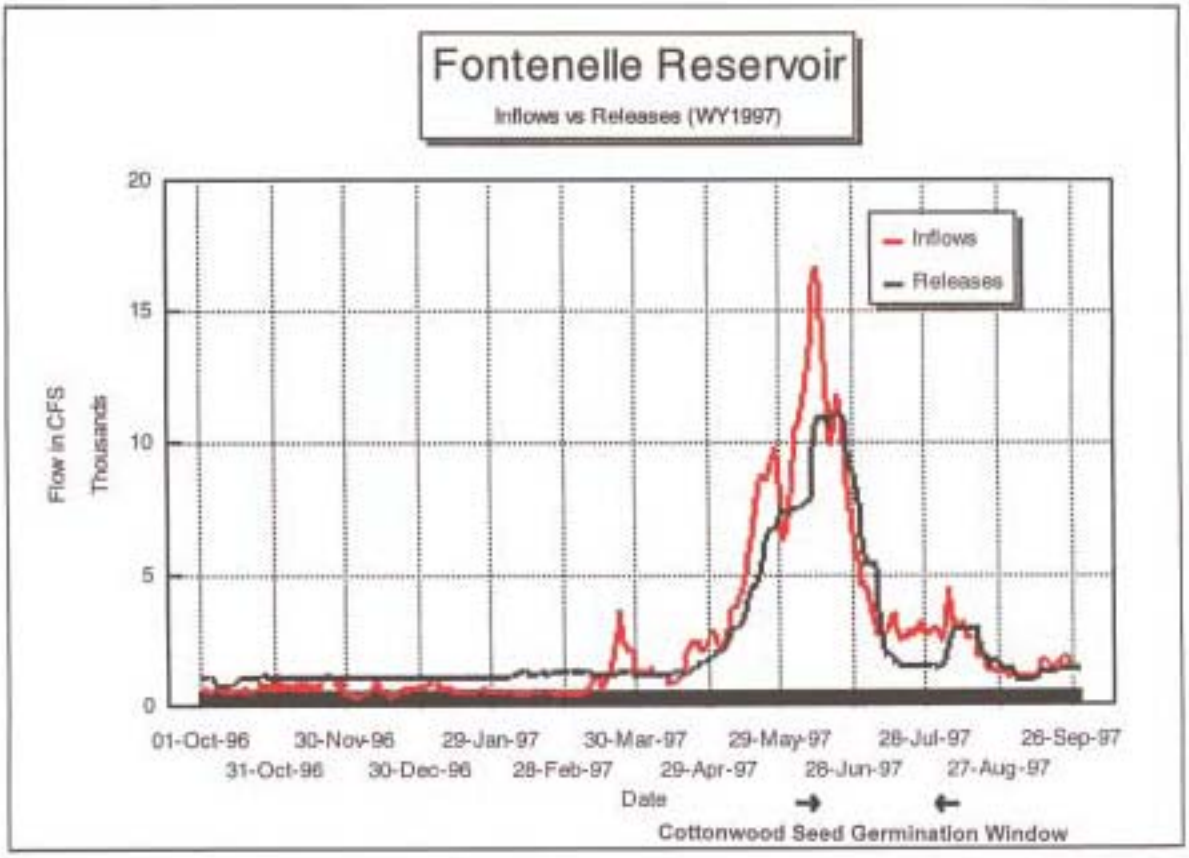
Individuals

Brian Allan
Sandra Banks
Bob Barwick
Mary Beery
Eric Berg
Dale Blakley
Ed Boese
Ron Boudan
Tom Brehim
Tim Buman
Lamont Clark
Craig Crompton
Bill Cummings
Keith Dana
Bob Doak
Terry Dockter
Fred Eales
Mike Ebert
John Faccio
John Freeman
Ray Frink
Nick Gillio
Brian Halpain
Doug Hamel
Chris Harbin
Joseph Harris Sr.
Howard Hart
Don Hartman
Jimmy Helmick
John Howard
Lyn Howe
Carlos Johnsen
Polly Karshner
Dave Kawvlok
Brad Keys
Joe Laird
Donald Lilley
Allison Lyon
John McDonnell
Larry Means
Pat Mehle
Darrel Melvin
Tim Merchant
Jim Metzer
Steve Mines
Robert Moore
Moe Morrow
Frederick Muller, M.D.
Patrick Newell
Mitch Nielson
Randy Nielson
Dan and Kristina Parson
Bruce Peterson
Vance Peterson
Vernon Phinney
Norm Piner
Kevin Quitberg
Ken Reed
Ted Remus
Pat Robbins
David Roose
Ed Sabourin
Matt Salitrik
Tara Salitrik
Dan Schmill
Dr. Ruth Shea
Les Skinneer
George Slonebraker
Dr. David Sowada
Bill Taliaferro
Thoman Ranch
Brad Thoren
Kathleen Tucker
Kent Vessels
Bill Weeks
Carl Williams
H. Ray Williams
Bruce Woodward
Robert Yonts
JoAnn Zakatruk

Appendix H. Hydrographs of Green River






Fontenelle Reservoir
Inflows vs Releases (WY1997)
Inflows
Releases
Flow in CFS
Thousands
20
15
10
5
0
01-Oct-96
31-Oct-96
30-Nov-96
30-Dec-96
29-Jan-97
28-Feb-97
30-Mar-97
29-Apr-97
29-May-97
28-Jun-97
28-Jul-97
27-Aug-97
28-Sep-97
Date
Cottonwood Seed Germination Window

Appendix I. List of Preparers

The Planning Team for the Seedskadee National Wildlife Refuge CCP included the following individuals.

U.S. Fish & Wildlife Service

Refuge Staff

- Seedskadee NWR Manager Carol Damberg and former Manager Anne Marie LaRosa

Region 6 Regional Office

- Michael Spratt, Chief, Division of Refuge Planning, R6
- Ty Berry, former Chief , Technical Services, Refuges and Wildlife, R6
- Jaymee Fojtik, GIS Specialist, Division of Refuge Planning, R6
- Sean Fields, GIS Specialist, Division of Refuge Planning, R6
- Shannon Heath, Outdoor Recreation Planner, EVS, R6
- Mary Jennings, Wyoming Field Office, Ecological Services, USFWS
- Wayne King, Regional Biologist, Refuges and Wildlife, R6
- Barbara Shupe, Editor, Division of Refuge Planning, R6
- Carol Taylor, former Chief, Branch of Land Acquisition and Refuge Planning, Division of Realty
- Bernardo Garza, Refuge Planner, Division of Refuge Planning, R6
- Cheryl Williss, Chief, Division of Water Resources, R6

Bear West Consulting Team

- Dennis Earhart, Bear West Team Manager
- Emilie Charles, Bear West
- Jan Striefel, Landmark Design
- Bob Nagel, AGRC
- Scott Evans and William Adair, Pioneer

Bureau of Reclamation

- Darrel Welch, Resource Management and Planning, Technical Service Center, Denver, CO
- Fred Liljegren, Resource Management and Planning, Upper Colorado Regional Office Salt Lake City, UT
- Al Simpson, Provo Area Office, UT

Bureau of Land Management

Rock Springs District, WY

- Renee Dana

Wyoming Game and Fish Department

Green River, WY

- Mark Fowden
- Ron Remmick

Written by: Primary authors are Carol Damberg, current refuge manager, and Anne Marie LaRosa, former refuge manager of Seedskadee NWR; and Dennis Earhart and Emilie Charles of Bear West Company.

The Refuge Planners assisting the Refuge staff in development of this Draft CCP are Bernardo Garza, current Refuge Planner, and Carol Taylor, former Chief of the branch of Land Acquisition and Refuge Planning.

In addition to members of the planning team, the following individuals provided valuable assistance in preparing this Plan: members of the Refuge staff including Edward Rodriguez, Doug Damberg, Gene Smith, Suzanne Beauchaine Halvorson, Lamont Glass, Adam Halvorson, Lorraine Keith, Tom Koerner, and Karl Stanford; Lou Ballard and Rhoda Lewis, USFWS Region 6; Greg Auble, Murray Laubhan and Mike Scott of the Biological Resources Division of the USGS; Mike Pucherelli, Manager of the Remote Sensing and Geographic Information for USBR at the Technical Service Center in Denver, CO; Leigh Fredrickson of Gaylord Memorial Laboratory; Rob Keith of the WYG&F; Andy Tienney and Dave Vesterby of the Rock Springs District (BLM); and Gustav F. Winterfeld, Ph.D. who provided assistance with the paleontological resource review.

Draft CCP Maps were prepared by: Jaymee Fojtik, GIS Specialist, Division of Refuge Planning, USFWS, R6 and Bob Nagel of Utah Automated Geographic Resource Center.

Final CCP Maps were prepared by: Sean Fields, GIS Specialist.

Draft Document (or portions of the document) were reviewed by Refuge staff and Ken McDermond, Patty Stevens, Michael Spratt, Bridget McCann, Linda Coe, Ty Berry, Wayne King, Rhoda Lewis, Bernardo Garza, Barbara Shupe, USFWS; Rick Schroeder, Liz Bellantoni, USGS; Dale Henry, National Wildlife Refuge Association; BLM, Rock Springs District; Darrel Welch, USBR, Upper Colorado Regional Office., Ron Remmick, Robert Keith, WYGF.

Appendix J. Intra-Service Section 7 Consultation Documentation

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

Originating Persons: Carol Darnberg
José Bernardo Garza

Telephone Numbers: (307) 875-2187 x 12
(303) 236-8145 x 672

Date: August 30, 2002

I. Region: 6

II. Service Activity (Program): Refuges & Wildlife, Seedskadee National Wildlife Refuge

III. Pertinent Species and Habitat:

A. Listed species and/or their critical habitat within the action area:

bald eagle, *Haliaeetus leucocephalus* (listed threatened and proposed delisting)

black-footed ferret, *Mustela nigripes* (listed endangered)

whooping crane, *Grus americana* (Experimental population; *RECENTLY LISTED AS EXTINCT*)

Ute ladies' tresses orchid, *Spiranthes diluvialis* (listed threatened)

Colorado pikeminnow, *Ptychocheilus lucius* (listed endangered)

humpback chub, *Gila cypha* (listed endangered)

razorback sucker, *Xyrauchen texanus* (listed endangered)

bonytail chub, *Gila elegans* (listed endangered)

There is no federally designated critical habitat on the action area (Seedskadee NWR)

B. Proposed species and/or proposed critical habitat within the action area:

Mountain plover *Charadrius montanus*

C. Candidate species within the action area:

Yellow-billed cuckoo, *Coccyzus americanus*

D. Include species/habitat occurrence on a map: see attachment

IV. Geographic area or station name and action.

Station: Seedskadee National Wildlife Refuge (Green River basin in southwestern Wyoming)
Action: Issuance and Implementation of Comprehensive Conservation Plan for Seedskadee NWR

V. Location (map attached):

A. Ecoregion Number and Name: Seedskadee NWR is located within the Service's Region 6, Mountain-Prairie Region, and specifically in the Upper Colorado River Ecosystem (Green River basin)

B. County and State: Sweetwater County, Wyoming

C. Section, township, and range:

Seedskadee NWR includes parts or all of Sections 14, 15, 16, 21, 22, 23, 25, 26, 27 & 36, Township 23 North, Range 111 West; Sections 30, 31, 32, 33 & 34, Township 23 North, Range 110 West; Sections 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 21, 22, 23, 25, 26, 27, 28, 33, 34, 35 & 36, Township 22 North, Range 110 West; Sections 1 & 2, Township 21 North, Range 110 West; Sections 6, 7, 17, 18, 19, 20, 28, 29, 31, 32 & 33, Township 22 North, Range 109 West; Sections 5, 6, 7, 8, 9, 15, 16, 17, 18, 20, 21, 22, 23, 26, 27, 35 & 36, Township 21 North, Range 109 West; and, Sections 4, 5, 8 & 9, Township 20 North, Range 109 West.

D. Distance & direction to nearest town: Seedskadee NWR is approximately 37 miles northwest of Green River, WY

E. Species/habitat occurrence:

bald eagle:	This species nests in (see map) and migrates through the Refuge along the riparian corridor of the Green River as it runs through the Refuge. Currently three bald eagle nests are known to occur in the Refuge (1 in Tallman management unit; 1 between McCullen and Yancy management units; and 1 between Pal and Lower Hawley management units).
whooping crane:	An experimental population of this species used to be an infrequent visitor to the Refuge during its migration, and had been observed on the Hawley wetland unit (1991). However, this population was recently determined to be extinct by the Service. Thus the Refuge will no longer address this species nor assess in this Biological Evaluation what could have been the impacts of the implementation of the CCP on this crane.

mountain plover:	This species is known to use the Dry Creek management unit of (and/or adjacent lands to) the Refuge. The Refuge staff monitors this management unit annually to look for breeding or migrating mountain plovers.
black-footed ferret:	The Refuge lies within the historical range of this listed species which was observed historically on the Refuge. While the Refuge encompasses white-tailed prairie dog colonies (within Dry Creek, Hay Farm, Johnson, Otterson, Tallman, and Yancy management units), it is unlikely that these colonies could currently sustain a ferret population on Refuge lands. However, at present it is unknown what is the prairie dog density at the Refuge, or if the prairie dog colonies within the Refuge are part of a larger prairie dog colonies complex (i.e., within 4.3 miles of another colony) extending outside of the Refuge.
Ute ladies'-tresses orchid:	While the Refuge lies in between areas known to have populations of this listed species (Colorado and Montana), there are no known populations of this species on the Refuge. An orchid survey, within suitable orchid habitat, recently performed during the blooming period of this species in the Refuge (2000) failed to locate this plant within the Refuge.
Colorado River Fishes:	The endangered bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*) inhabit the Colorado River and the Green River from the confluence with the Colorado River upstream to near the Willow Creek confluence (Swallow Canyon). The mainstem Green River and its tributary, the Yampa, contain the largest known riverine populations of Colorado pikeminnow and razorback sucker. Humpback chub have a limited, discontinuous distribution in canyon-bound habitats and persist in small numbers in Desolation and Whirlpool Canyons. The bonytail is extremely rare throughout the Upper Basin. The Refuge lies directly upstream from known stream habitats inhabited by these listed species. However, there are no known records of these species ever occurring at the site of the Refuge. Prior to the construction of the Fontenelle Dam, they may have occurred as far north as Green River, but this is unknown. Habitat and hydrologic conditions needed by these species no longer occur at the present site of the Refuge.

VI. Description of proposed action

The proposed action is: development and implementation of a Comprehensive Conservation Plan to guide the management of Seedskadee NWR for the next 15 years. Implementation of this Plan comprises implementation of all actions and activities to achieve the stated goals contained in the Plan that will ultimately lead to the fulfilment of the purposes for which Congress established Seedskadee NWR and assist in the fulfilment of the goals of the National Wildlife Refuge System.

VII. Determination of effects:

A. Explanation of effects of the action on species and critical habitats in items III. A, B & C

bald eagle:	Implementation of the CCP will have beneficial effects on this threatened species as the eagle's wintering habitat along the Green River will be enhanced and protected. The CCP calls for continued protection (as well as monitoring) of this species and its nesting and feeding habitats, as well as relocation of some Refuge roads (i.e., reduction of disturbance from vehicular traffic). The CCP calls for continued use of the Green River corridor along the Refuge for wildlife-dependent recreational activities (e.g., river floaters, hikers, fishermen, hunters, bird watchers, etc.). Refuge staff believes current yearly use of riparian habitats by visitors is approximately as follows: 500 hikers; 500 river craft; 2,000 hunters; 5,000 fishermen; and, 200 other river users. The Refuge staff has and will invoke its authority to protect bald eagles by disallowing and cordoning off all human activities within ½ mile of any bald eagle roosting or nesting site. All construction activities within a one-mile radius from an eagle's nest will be delayed until after the eaglets are able to fly. Any activity within the one-mile radius of an eagle's nest will be postponed until Section 7 consultation between the Refuge's and Ecological Service's staff's has been finalized and measures to avoid or mitigate impacts to bald eagles are agreed upon and implemented.
mountain plover:	This species is known to use the Refuge. The CCP calls for preservation of the Refuge habitats conducive to this species, as well as for the relocation of roads that could disturb this plover. Thus implementation of the CCP should have beneficial effects on this species. The Refuge staff currently monitors for presence, and possible nesting activities, of this species in the Refuge. Furthermore, if construction or concentrated human

activities occur on the Refuge in suitable nesting habitat, surveys will be conducted according to the Service's survey guidelines. If an active nest(s) is (are) located,. the staff will invoke all necessary authority to implement emergency closures (at a ¼ of a mile radius from April 10 through July 10) of sites where nesting occurs in order to eliminate human-related impacts that could adversely affect nesting success by plovers.

black-footed ferret: While there are historic observations of this species at the present site of the Refuge, this species has not been seen in Seedskadee NWR since it was federally listed (1970). None of the CCP's objectives or strategies calls for disturbance of habitats currently inhabited by the ferrets' main prey base (prairie dogs). Furthermore, the CCP proposes relocation of currently existing roads crossing prairie dog habitats away from this rodent's habitats. Therefore, implementation of the actions itemized in the CCP should have beneficial effects to the habitats and/or prey species of this federally listed species.

Ute ladies'-tresses orchid: This species has never been found on the Refuge despite a recent orchid-specific survey (2000) within suitable habitats. Nevertheless, the goals and objectives of the CCP call for enhancement and protection of habitats that could harbor now or in the future populations of this listed plant species. If this species is found in the Refuge, the Service will establish and enforce measures to protect this listed plant and its habitats, such as domestic grazing restrictions during the orchid's growing and blooming period (July and August), and/or closure of sites to areas susceptible to trampling by visitors (e.g., river floaters, fishermen, and/or hunters using riparian habitats or wetlands adjacent to the river corridor) as well as avoidance of land disturbance (e.g., fill or excavation of wetlands).

Colorado River Fishes: Water depletions in the Upper Colorado River Basin have been recognized as a major source of impact to endangered fish species. Where projects may lead to depletions of water to the Colorado river system, formal consultation is required concerning impacts to the endangered bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*).

The Service's Region 6 Division of Water Resources has calculated historic consumptive use of Green River basin water (see attached intra-Service memorandum) from evaporation on Refuge wetlands and other operations (e.g., impoundment,

small-scale irrigation, and river diversion practices). It is estimated that implementation of the CCP objectives will result in approximately 1,834.70 acre-feet of water per year being depleted from the Green River basin. Consequently, the average annual depletion of water from the Upper Colorado River Basin resulting from CCP operations, as described, is likely to jeopardize the continued existence of the endangered bonytail, Colorado pikeminnow, humpback chub, and razorback sucker, and will contribute to the destruction or adverse modification of their designated critical habitat.

There is no federally designated critical habitat on the action area (Seedskadee NWR) and the CCP does not find a need to propose designating critical habitat within the Refuge at this time.

B. Explanation of actions to be implemented to reduce adverse effects:

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) was initiated on January 22, 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy to the endangered fishes by depletions from the Upper Colorado River. Seedskadee NWR will participate in the Recovery Program in order to offset potential impacts to endangered Colorado River fishes associated with implementation of the CCP.

VIII. Effect determination and response requested: [* = optional]

A. Listed species/designated critical habitat:

Determination	Response requested
no effect/no adverse modification (species: NONE)	*Concurrence
may affect, but is not likely to adversely affect species/adversely modify critical habitat (species: bald eagle, black-footed ferret, Ute ladies'-tresses orchid)	Concurrence
likely to jeopardize the continued existence of species and adversely modify or destroy their critical habitat (bonytail, Colorado pikeminnow, razorback sucker, humpback chub)	Formal Consultation

B. Proposed species/proposed critical habitat: none at this time

Determination	Response requested
no effect on proposed species/no adverse modification of proposed critical habitat (species: mountain plover)	*Concurrence
Is likely to jeopardize proposed species/ adversely modify proposed critical habitat (species: NONE)	Conference

C. Candidate Species:

Determination	Response requested
is likely to jeopardize candidate species (species: NONE)	Conference

Carol Damberg, Refuge Manager.
Seedskadee National Wildlife Refuge

9/16/02
Date

IX Reviewing ESO Evaluation:

A. Concurrence _____ Nonconcurrence _____

B. Formal Consultation required: _____ (for Colorado River fishes)

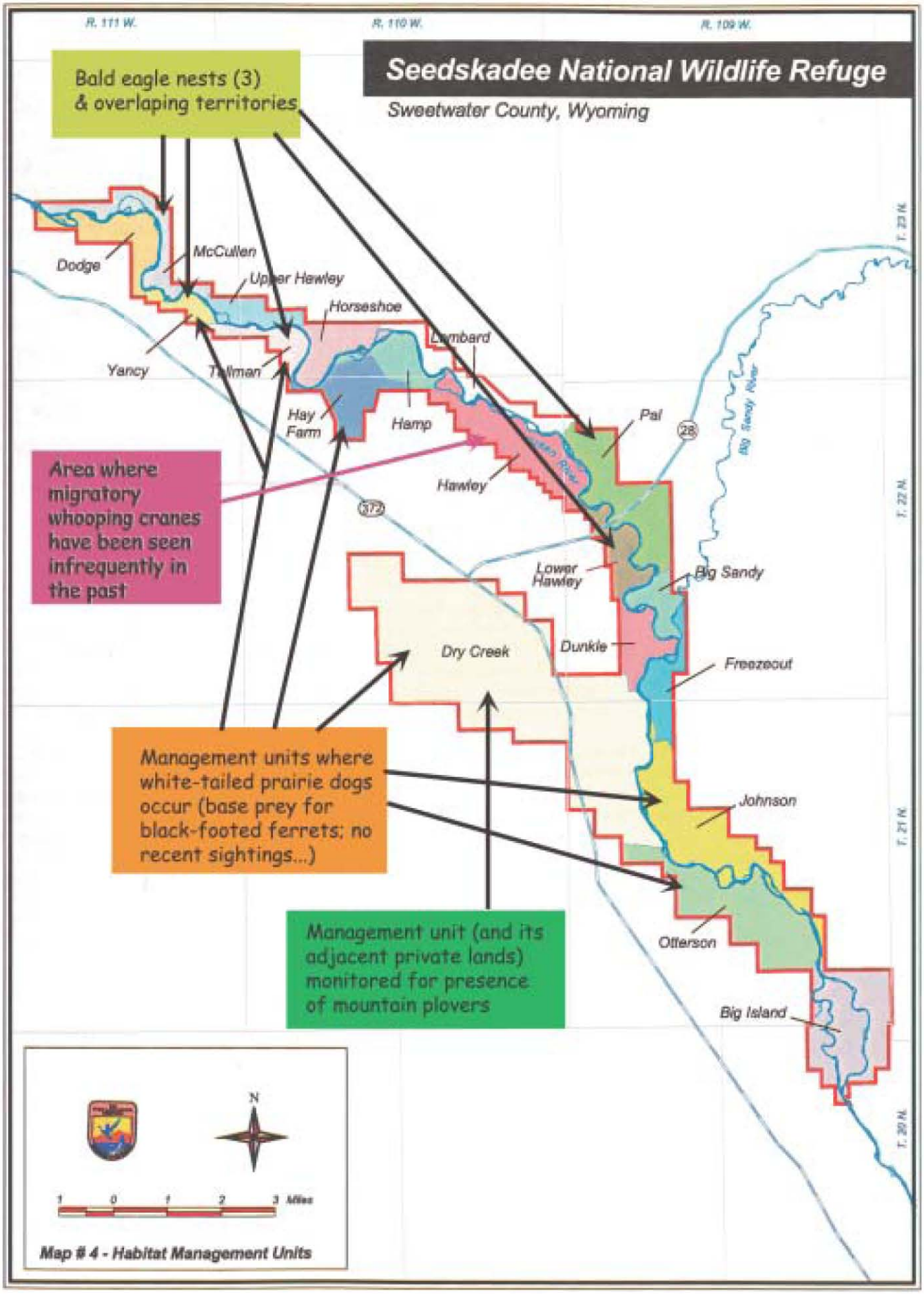
C. Conference required: ___

D Informal conference required: ___

E. Remarks:

Michael M.Long
Wyoming Field Supervisor, U.S. Fish & Wildlife Service

9/12/02
Date


R. 111 W.
R. 110 W.
R. 109 W.
Seedskadee National Wildlife Refuge
Sweetwater County, Wyoming
Bald eagle nests (3) & overlaping territories
Area where migratory whooping cranes have been seen infrequently in the past
Management units where white-tailed prairie dogs occur (base prey for black-footed ferrets; no recent sightings...)
Management unit (and its adjacent private lands) monitored for presence of mountain plovers
Dodge
McCullen
Upper Hawley
Horseshoe
Lambard
Yancy
Tallman
Hay Farm
Hamp
Pal
Hawley
Lower Hawley
Big Sandy
Dry Creek
Dunkle
Freezeout
Johnson
Otterson
Big Island
Big Sandy River
Green River
28
372
T. 23 N.
T. 22 N.
T. 21 N.
T. 20 N.
N
1 0 1 2 3 Miles
Map # 4 - Habitat Management Units

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

REPLY REFER TO:
BAWFR

Mail Stop 60189

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Blvd
Lakewood, Colorado 80228-1807

AUG 16 2002

Memorandum

To: Project Leader, Seedskadee NWR, Wyoming

From: Refuge Hydrologist, Division of Water Resources, Region 6

Subject: Consumptive Use Analysis for CCP

Enclosed is a spreadsheet of calculations done to quantify the consumptive use of water in Refuge wetlands. I utilized data we had in the office, data supplied by Refuge personnel and personal communication with Ed Rodriguez to try to quantify volumes and surface areas of impoundments, as well as to try to get a feel for water use (season). I listed my assumptions on the second page of the spreadsheet. The information presented is believed to be the most accurate that we currently have. Please review this information and contact me if you have any suggestions or changes.

If you have any questions, please feel free to give me a call at (303)236-5332 X232.

Enclosure

cc: Bernardo Garza

Hamp Units (Served by Hamp #1 Ditch)

Ponds	Area	Capacity	ET - ac-inches May	June	July	Aug	Sept	Oct		Total ET, af
Hamp No 1	1.8	1.25	15.576	16.92	19.857	17.252	11.055	7.182		
Hamp No 2	1.56	9.23	4.576	5.72	5.5055	5.959	3.781	2.457		
Hamp No 3	1.16	0.87	8.1484	10.556	12.1457	10.5325	6.7517	4.3946		
Hamp No 4	2.45	1.25	17.248	21.56	20.5515	22.248	14.350	9.251		
Hamp No. 5	25.40	20.12	179.2384	224.048	250.5562	231.1768	146.1772	96.2265		
	31.02	23.67	111.3074	278.256	319.5534	0	0	0		64.9254
									ac-ft	ac-ft/1.1
Wet Meadow	59		207.58	515.2	617.43	505.72	345.34	220.02	203.59	224.29
							Total Hamp CU			312.89

Hawley Units (Served by Hamp #2 Ditch)

Ponds	Area	Capacity	ET - ac-inches May	June	July	Aug	Sept	Oct		Total
Hawley Pool 1	51.32	92.35	301.2525	451.510	527.3304	405.5856	298.6424	197.5695		
Hawley Pool 2	38.37	40.23	199.7248	249.656	297.0029	257.5896	165.1134	107.3365		
Hawley Pool 3	9.45	11.34	66.528	83.16	95.9445	85.508	54.586	35.721		
Hawley Pool 4	7.95	14.76	51.744	64.68	74.5645	66.726	42.777	27.750		
Hawley Pool 5	3.52	5.53	24.7808	30.975	36.8544	31.9616	20.4864	13.3056		
Hawley Pool 6	5.51	6.73	39.4944	49.368	58.7367	50.9344	32.6502	21.2058		
Hawley Pool 7	14.34	22.75	100.2496	125.312	149.0528	129.2992	82.6708	53.5272		
										ac-ft
	119.86	198.85	840.8144	1054.768	1254.934	1088.329	697.5852	451.0708		449.30

Ponds	Area	Capacity	ET - ac-inches May	June	July	Aug	Sept	Oct		Total
Sage Brush 1	7	28	49.28	61.6	73.29	63.56	40.74	26.46		
Sage Brush 2	6	24	42.24	52.8	62.82	54.48	34.92	22.68		
Sage Brush 3	2	8	14.08	17.6	20.94	18.16	11.64	7.56		
Cottonwood Pool 3	5	15	35.2	44	52.35	45.4	29.1	18.9		
Cottonwood Pool 2	1	3	7.04	8.8	10.47	9.08	5.82	3.78		
Cottonwood Pool 1	3	9	21.12	26.4	31.41	27.24	17.46	11.34		
Dunkle Pool 3	20	60	140.8	176	209.4	181.6	116.4	75.6		
Dunkle Pool 2	8	24	56.32	70.4	83.76	72.64	46.56	30.24		
Dunkle Pool 1	8	24	56.32	70.4	83.76	72.64	46.56	30.24		
										ac-ft
	60	195	422.4	528	628.2	544.8	349.2	226.8		224.60
Headquarters Pond	9		63.36	79.2	94.23	81.72	52.38	34.02		
Pearl's and Slough	24		168.96	211.2	251.28	217.92	139.68	90.72		
Old Headquarters Wet Meadow	7		49.28	61.6	73.29	63.56	40.74	26.46		
									ac-ft	ac-ft/1.1
	40		281.6	352	418.8	363.2	232.8	151.2	149.97	164.95

	Served by Superior Ditch								ac-ft	ac-ft/1.1
Pal Unit	70		492.8	616	732.9	635.6	407.4	264.6	262.44	238.58

Total CU from Hamp #2 and Superior Ditch 1521.82

Total Consumptive Use based on crop ET and net evaporation from May-October 1834.79

Assumptions:

1. Only Hamp Units 1-5, Hawley Pools 1-7, Sage, Cottonwood, and Dunkle units are pools; all other units are considered to be wet meadow. Wet meadow is assumed to have an net ET of 1.1 times that of open water.

2. I considered Hawley Pools 8-10 to be part of the original seven pools. The areas I had for the ten pools were very close to the surface areas of the original seven pools. These must be subimpoundments of the original seven pools, and, since I had no new capacity information for 8-10, I just used the information for 1-7.

3. The consumptive use period must be assumed to be May through October because there is no evaporation data available outside of these months. Even though water is applied in the Hawley Units in March and November, it was assumed that consumptive use was negligible.

4. The Hamp Units are allowed to dry up at the end of July because the ditch cannot divert at river flows less than 4500 cfs. therefore, ET is considered to be zero in August-October.

5. The capacities for the Sage Brush, Cottonwood and Dunkle Units are based on the surface area times the average depth (Ed Rodriguez, Personal Communication, 8/13/02)

6. Consumptive use estimate is very conservative since it is assumed that all units served by the Hampff2 Ditch and Superior Ditch must be refilled each year. There is probably some carry over.

Appendix K. Summary of Public Involvement

Development of the final Seedskadee NWR Comprehensive Conservation Plan (and its associated Environmental Assessment included in the draft CCP/EA) was guided by the Refuge Planning Chapter of the Fish and Wildlife Service Manual, the Service's Final Comprehensive Conservation Planning Policy, and the National Environmental Policy Act. The involvement of the public, other Federal, State and Native American Tribal agencies, and non-governmental organizations, in accordance with Service guidelines and NEPA recommendations, is viewed by the Service as vital and was sought throughout the planning process. A time line of the different kinds of meetings, public outreach efforts, and events significant to the development of this management document follows.

Issues, concerns, and opportunities were developed early through a scoping process which began on May 31, 1996, and closed October 15, 1996.

On May 31, 1996, invitations and announcements of two open houses, an explanation of Seedskadee NWR directive and purpose, and a request for initial comments were mailed out to known interested parties. On June 6, 1996, press releases announcing the open houses were mailed to the appropriate media outlets such as KMER Radio, KRKK Radio, KUGR Radio, KSIT Radio, KUWR Radio, Sweetwater County TV, the Green River Star, the Casper Star Tribune, Rocket Miner, Kemmerer Gazette, and the Pinedale Roundup newspapers.

On June 8, 1996, an open house scoping meeting was held at the Seedskadee NWR headquarters; questionnaires and comment sheets were handed out and verbal comments were registered. The open house was held concurrently with the Refuge's "Take a Kid Fishing" day. Thirty-three people attended. On June 10, 1996, the second open house scoping meeting was held from noon to 8:00 pm at the Sweetwater County Library in Green River, Wyoming. Eight people attended.

On June 25, 1996, questionnaires and comment sheets were mailed out to all in the CCP mailing list. A complete list of all those who were sent information on the Plan can be found in the project file. On July 1, 1996, signs were posted for the Farson Open House. The open house was held on July 17, 1996 from 7:00 pm to 9:00 pm at the Farson Community Hall. Four people attended.

On July 17, 1996, the refuge manager met with the Sweetwater County Commissioners at the Courthouse. On September 3 and 4, 1996, the staffs of the Refuges located along the Green River drainage met to develop draft visions, goals, and objectives for their Refuges. On September 16, 1996, a press release announcing the final two open houses was mailed to the appropriate media outlets.

On September 25, 1996, an open house in Rock Springs at the White Mountain Library was held from 5:00 pm to 7:00 pm; six people attended.

On October 1, 1996, a meeting was held with the Lincoln County Commissioners followed by an open house from 5:00 pm to 7:00 pm at the Lincoln County Courthouse. One person (county planner), in addition to the three commissioners, attended. On November 11, 1996, Seedskadee NWR staff completed a set of "draft management goals and objectives;" these were then submitted to the Service's regional office for review and comments.

"Focus Group" meetings at Sweetwater County Library in Green River were held on January 9, 1997, from 7:00 pm to 9:00 pm to discuss commercial recreation use and public access. Twenty-one people attended including five permitted fishing guides, recreational fishermen, parties interested in public access, and other agency representatives.

On April 29, 1997, a workshop was conducted at the Refuge headquarters to identify potential alternative components for consideration in preparation of a CCP and EA for the Refuge. On April 30, 1997, a follow-up meeting was held with Service and Consulting Team personnel. Invitations to participate in the workshop were sent to selected resource specialists with Federal, State, and Tribal agencies involved or interested in resource management within or adjacent to the Refuge. The list included personnel from the Service, Bureau of Reclamation (Reclamation), U.S. Geological Survey, Bureau of Land Management, and the Wyoming Game and Fish Department. Those who accepted the invitation to participate were provided a notebook prior to the meeting containing the meeting's purpose, a meeting agenda, background on the planning process including the Service's planning context, and issues identified during scoping. The purpose of the meeting was to understand identified planning and NEPA issues, discuss draft CCP goals developed by the Refuge, and explore various alternative components that could achieve the goals and address identified issues.

Based on discussions in the workshop and subsequent discussion with Seedskadee NWR staff, the issues considered significant for the EA were identified by Refuge staff for analysis. Based on the issues, the Refuge staff developed alternatives to address the issues and the goals. The issues, as they were identified during the scoping process, are described in Chapter 2.

Between May 1997 and April 1999, Bear West Consulting, the company funded by Reclamation to prepare the CCP/EA, prepared and published the first draft CCP/EA for Seedskadee NWR. This document was circulated in the Service's Regional Office to obtain preliminary comments prior to releasing the document to the public. In October 1998, the refuge manager and assistant refuge manager departed Seedskadee NWR and the CCP/EA process halted while a new refuge manager was hired.

In May 1999, the new refuge manager arrived and began the long process of familiarization with the Refuge and the different components of the draft CCP/EA. In July 1999, the Planning Team Leader (and Chief of the Branch of Refuge Planning) met with the new refuge manager to renew the CCP/EA process.

In September 1999, the Seedskadee NWR CCP's Planning Team Leader departed the Planning Branch causing the CCP process to be placed temporarily on hold. In December 1999, a new Planning Team Leader was assigned to continue assisting the refuge manager in the CCP/EA process.

From January 2000 through January 2001, the preliminary draft CCP/EA was revised, trimmed down, and revamped according to comments received from the public, Regional Office personnel, the final guidelines and expectations set forth in the Service's final Planning Policy. Also playing a role was a new understanding of the complex issues surrounding the management of Seedskadee NWR.

From March through May 2001, an Internal Review draft CCP/EA for Seedskadee NWR was circulated among the Planning Team members and their agencies for a review period. From the comments generated during this period, the draft CCP/EA was modified and sent for printing and eventual disbursement to the public for comments.

From late October through early December 2001, the Service mailed out and solicited comments from the public during a public review period of the Draft Seedskadee NWR CCP/EA. The Notice of Availability was posted in the Federal Register on October 31, 2001. On that same day, a news release was sent out announcing the release of draft CCP/EA, the duration and details of the public comment period, and the dates for the upcoming open houses.

On November 4, 2001, Seedskadee NWR's refuge manager participated in a radio interview with local station KUGR (4:00 pm) which was aired throughout the day on November 15 and 16, 2001. The topic of the interview was to bring the draft CCP/EA to the attention of the neighbors of the Refuge and ensure that the three most controversial issues proposed in draft CCP - roads, camping, and commercial guided fishing, were known to the public.

On November 9, 2001, Refuge staff held an Open House at the White Mountain Library in Rock Springs. On November 12, 2001, the Refuge staff posted a news release in the Casper Star Tribune with the general description of proposed actions in the Draft CCP, the history behind the development of this management document, and an announcement that the Draft CCP was available for review. On that same afternoon and evening, the Refuge staff held an Open House at the Lincoln Count Library in Kemmerer.

On Nov. 13, 2001, a copy of the Casper Star Tribune news article appeared in the Rock Springs' Rocket Miner.

On February 7 and 19, 2002, personnel of the Refuge met with WYG&F in Green River, Wyoming to clarify certain elements of the draft CCP/EA - primarily the proposed road changes and proposed changes to the Refuge's closed area. These meetings were attended by Duane Kerr, Tom Christianson, Steve DeCecco, Robb Keith, Bill Rudd, Susan Patla, Bob Oakleaf, Steve Tessman, Reg Rothwell, and Joe Bohne of the WYG&F.

From January through March 2002, Seedskadee NWR's refuge manager reviewed and prepared an answer to public comments; found in Appendix L. Concurrently, the refuge manager and Regional Office personnel revised and updated the draft CCP/EA into a draft final document. Also, at this time, the Refuge staff conducted two meetings at Refuge headquarters with local citizens and volunteers to review proposed road changes.

On May 1 and 2, 2002, Seedskadee NWR's refuge manager and Division of Planning personnel held briefings with the Service's directorate on the draft Final CCP for Seedskadee NWR, and obtained concurrence to proceed with a final review of the CCP for the Refuge.

June 2002, final internal review (including State of Wyoming and Tribes) of Final CCP for Seedskadee NWR.

July-August 2002: Expected timing for the preparation of the final CCP (and FONSI) for Regional Director's signature and shipping to printer.

September 2002: Expected distribution of final CCP for Seedskadee NWR.

Planning Participants

All individuals that provided comments, oral or written, are listed below. Column 2 identifies the forum in which the commentators participated or submitted comments. The forum in which the commentators participated are identified in column 2 in the following manner:

1. Project Initiation Meeting (SNWR1)
2. Planning Group Meeting (SNWR2)
3. Alternatives Development Workshop (ALT)
4. Commercial Use/Access Meeting (CU)
5. Comment Form (C)

Name	Comment Reference[1]
Rob Keith, Green River, WY	CU
Bennie C. Johnson, Green River, WY	CU, C
Dennis Watts, Green River, WY	CU
Les Skinner, Green River, WY	CU
Van Beacham, Kemmerer, WY	CU, C
Ken Reed, Rock Springs, WY	CU
Patrick Nichols, Rock Springs, WY	CU
George Stonebreaker	CU
Katie Legerski, Rock Springs, WY	CU
Patti Smith, Rock Springs, WY	CU
Duane Kerr, Green River, WY	CU
Scott Talbott, Green River, WY	CU
Jim Pasboy, Superior, WY	CU
Jim Williams, Manilla, UT	CU
Terry Dockter, Green River, WY	CU
Carl Williams, Green River, WY	CU
Beverly Williams, Green River, WY	CU
Ron Remmick, Regional Fishery Supervisor, Game and Fish Department Green River, WY	CU, ALT
Tom Brannan, Rock Springs, WY	CU
Glen Sadler, Green River, WY	CU
Patricia Sadler, Green River, WY	CU
Bill Birmingham, Green River, WY	CU
Bureau of Land Mgmt, Rock Springs, WY	C
Thoman Ranch, Kemmerer, WY	C
M.K. Tucker, Rock Springs, WY	C
Bruce Woodward, Rock Springs, WY	C
John Roberts, Kemmerer, WY	C
Lucy Diggins, Green River, WY	C, ALT
Tim Habenbenger, Wyoming Outfitters & Guides Assoc., Alpine, WY	C
Mitch Nielson, Green River W	C
Dave Vesterby, BLM, Pinedale WY	C, ALT
Howard Hart, Green River, WY	C
Matt and Liz David, Pinedale, WY	C
Darrell Welch, Reclamation, Denver, CO	SNWR1, ALT, C, SNWR2
William Long, Jackson, WY	C
Gary Harvey, Evanston, WY	C
Ken Reed, City of Rock Springs, Family Recreation Center Rock Springs, WY	C
Barry Floyd, Casper, WY	C
Marci Fagnant, Kemmerer, WY	C
Barney Shrank, Lakewood CO	C
illegible	C
Carl T. Williams, Green River WY	C
Greg Auble, USGS Biological Resources Division, Midcontinent Ecological Science Ctr	ALT
Ty Berry, Refuge Supervisor, MT/WY, USFWS	ALT
Renee Dana, BLM, Rock Springs District	ALT
Jaymee Fojtik, USFWS	ALT
Mark Hatchel, BLM, Kemmerer Resource Area	ALT
Sally Haverly, BLM, Green River Resource Area	ALT
John Henderson, BLM, Rock Springs District	ALT
Patricia Hamilton, BLM, Green River Res. Area	ALT
Robb Keith, Wyoming Game and Fish Dept	ALT
Duane Kerr, Wyoming Game and Fish Dept	ALT
Rhoda Lewis, Regional Archaeologist, USFWS	ALT
Mike Misehledey, BLM	ALT
Mike L. Scott, Midcontinent Ecological Science Ctr, USGS	ALT
Al Simpson, Provo Area Office, Reclamation	ALT
Dave Skates, Project Leader, USFWS	ALT
Kevin Spence, Wyoming Game and Fish Dept	ALT
Andy Tenney, ORP, BLM, Rock Springs District	ALT
Anne Marie LaRosa, Seedskadee NWR Former Manager	SNWR1, ALT, SNWR2
Tom Koerner, Seedskadee NWR Former Deputy Manager	SNWR1, ALT, SNWR2
Adam Halverson, Seedskadee NWR	SNWR1, ALT, SNWR2
Suzanne Beauchaine, Seedskadee NWR	SNWR1, ALT, SNWR2
Carol Taylor, USFWS	SNWR1, ALT, SNWR2
Shannon Heath, USFWS	SNWR1, ALT, SNWR
Dennis Earhart, Bear West	SNWR1, ALT, SNWR2
Emilie Charles, Bear West	SNWR1, ALT, SNWR2
Jan Striefel, Landmark Design	SNWR1

[1] Project Initiation meeting 2/19-20/97(SNWR1)
Planning Group Meeting, 9/18-19/97 (SNWR2)
Alternatives Development Workshop 4/29/97 (ALT)
SNWR1 Commercial Use/Access Meeting 1/9/97 (CU)
Comment Form (C)

Appendix L. Public Comments

Planning Issues

Issues and concerns that were included in the Draft Comprehensive Conservation Plan (CCP) were identified through discussions with planning team members, key contacts, and through the public scoping process which began in 1996. Comments were received orally at the meetings, via e-mail messages and in writing, both before, during, and after the scoping, and during the public comment period phases of the CCP process. The final 30-day comment period on the Draft CCP ended December 1, 2001.

The following issues, concerns, and comments are a compilation and summary of those expressed during the Draft CCP comment period. Comments were provided by the public, other Federal and State agencies, local and county governments, private organizations, and individuals concerned about the natural resources of Seedskadee NWR. The section is organized by topics. Within each topic category the issues, comments, concerns, or questions are summarized. Individuals or groups that submitted comments are referenced at the end of this section. Some editorial comments were addressed by changes within the CCP document and are not addressed below.

Cokeville Meadows NWR

Comment: What about Cokeville Meadows NWR? Why is it not included in this plan?

Response: Cokeville Meadows NWR will have a separate Comprehensive Conservation Planning (CCP) document prepared. The CCP for Cokeville Meadows NWR is not planned to start until 2014. Refuge planning started at Cokeville Meadows NWR before the actual establishment of the Refuge. Refuge establishing documentation identified the approved refuge boundary, refuge purpose(s), goals, and general management direction. These initial planning documents and the development of a Conceptual Management Plan (CMP) will guide management at Cokeville Meadows NWR until the Refuge CCP is completed. The CMP will identify refuge purpose(s), interim goals, and pre-existing compatible wildlife-dependent recreational uses that the Service will allow to continue on a interim basis. Refuges functioning under CMP's also will develop step-down management plans, as appropriate.

Future Land Acquisition

Comment: Concern was expressed about the acquisition of any additional lands to Seedskadee NWR, especially surrounding the Big Sandy River area. If the Refuge acquired lands, it may impact critical water access for over 22 BLM permittees. The Big Sandy Working Group has developed a draft grazing plan to address problems associated with the Big Sandy River. In addition, fences would cause wildlife problems and there are numerous Wyoming State school sections that may be affected.

Response: As stated in the CCP, additional land acquisitions centering around the Big Sandy River would require a separate public involvement process. The Service actively participates in the Big Sandy Working Group and is aware of the issues and progress associated with the Big Sandy Working Group grazing management plans. Even though these lands are currently owned by the Department of the Interior; Bureau of Reclamation, any future land acquisition actions would fully involve the public via a National Environmental Policy Act (NEPA) process. Grazing, access, fencing, and other issues would be addressed during this NEPA process.

Habitat Management

Comments were provided that supported the Refuge's initiate for "preserving, restoring, and enhancing" the ecological diversity and abundance of migratory and resident wildlife with emphasis on native species.

Comments were provided that supported the Refuge's objective of preserving, restoring, and enhancing the ecological diversity of indigenous flora associated with the Great Basin upland desert shrub and grassland habitats to support native wildlife found in the Green River Basin.

River Management/Rock Sills/Water Rights/Water Quality

Comment: Concern was expressed that rock sills placed in the river are unstable and may be dangerous to visitors because of the deep water pockets which are created downstream of the structures and the shifting of rocks associated with the structures. A suggestion was made that irrigation of riparian areas via ditches is more effective. Concern was expressed that the Refuge's use of water rights may impose undue hardships or delays for private water users who apply for water rights from the river.

Response: The primary purpose of constructing a rock sill across the Green River is to restore water flows into river oxbows. As a result of Fontenelle Dam and the regulation of river flows, many of the river oxbows are only flooded seasonally (spring). Restoring the flows into oxbows year-round improves growing conditions for riparian vegetation by elevating water tables which in turn increases the availability of water to riparian vegetation. In addition, restored oxbows create excellent habitat for a variety of aquatic, wetland, and riparian-dependent wildlife/fish species. The creation of deep holes below sill structures are extremely beneficial to the fisheries providing critical summer and winter habitat. Sills are constructed to allow the passage of boats. The Refuge continues to monitor sill structures and conduct maintenance on sills which have shifted as a result of river flows or ice action. Most of the sills are very stable and require minimal maintenance. Irrigation of oxbow habitats via irrigation ditches is not practical and would not achieve the management objectives achieved with rock sills. The Refuge staff is unaware of any hardships created to downstream water users as result of the Refuge using their water rights. Most of the water used by the Refuge is returned to the river after passing through oxbows or wetlands. Some water will be lost to evaporation.

Comment: A comment was received which requested additional quantitative baseline data prior to constructing additional rock sills in the Green River (for example the proposed Big Island Sill).

Response: The Service agrees that adequate quantitative information is needed prior to proceeding with any rock sill or wetland project. Specific quantitative data for each proposal were not provided in the CCP because the full analysis of each project has not been completed. Detailed quantitative data would be submitted to the U.S. Corps of Engineers (USCOE) in order to acquire an appropriate permit for a project. The proposed Big Island Sill project is currently being evaluated and detailed data has been collected and will be evaluated by the Service to determine if the project would meet objectives. A quantitative data analysis would eventually be submitted to the USCOE if the project is approved by the Service.

Comment: The issue of salinity was not addressed in the document. There is concern that the wetland impoundments are causing problems for the cottonwood trees because of the increased concentrations of salty waters.

Response: The Service agrees that water quality monitoring should be conducted in the Green River and within Refuge wetland impoundments. Modifications to include monitoring were added to the CCP's "River and Wetland Objectives." From 1986 to 1994, water conductivity was monitored annually in the Green River and within the Refuge impoundments. Conductivity values are good indicators of salinity levels. Measurements were taken before diversion to the developed wetlands, within the developed wetlands, and downstream of the outflow from the developed wetlands. The data indicated that water diversion increased conductivity slightly within the developed wetlands, but not beyond a safe and acceptable level. Most levels remained well below 600 micromhos per centimeter (umhos/cm). The data also indicated that outflow from the developed wetlands had no adverse effect on the conductivity of the Green River. The U.S. Geologic Survey (USGS) sampled water quality and invertebrates at four sites on the Green River within the Refuge Boundary in 2000. Water test results at all stations indicated a healthy water system. Conductivity values ranged from 336 to 494 umhos/cm. A USGS reference site (best case scenario) for the area tested at 345 umhos/cm. Salinity was not identified during a recent review of scientific literature as a factor contributing to the mortality of cottonwoods along western river systems.

Fencing/Livestock Management/Water Gaps

Comment: Concerns were expressed about how new fences would be constructed relative to wildlife passage needs.

Response: The comment group provided an internet site and informational contact for guidance. The Service appreciates this guidance and will utilize it for future fencing projects. The Service will coordinate with WYG&F regarding fence construction and maintenance to ensure fences are wildlife friendly.
Website: www.sdvc.uwyo.edu/clearinghouse/fences.html http://www.sdvc.uwyo.edu Informational contact: Jackson Hole Wildlife Foundation (307-739-0968) for fencing pamphlet.

Comment: Concern was expressed that fences built for antelope standards may not be effective to keep cattle out in high stress point areas.

Response: The Service will continue to work with WYG&F to make boundary fences wildlife friendly, especially for antelope. The Service recognizes that cattle and sheep will occasionally jump fences given the right scenario and conditions. Livestock generally enter Refuge lands via cut fences, open gates, or water gaps. The Service is committed to maintaining the boundary fence to reduce livestock trespass and will continue to work with grazing permittees to reduce trespass occurrences and remove livestock as quickly as possible.

Comment: There were concerns about the use of grazing as a future management tool.

Response: Research demonstrates that livestock grazing can be effective in management of various habitats to improve conditions, for example reducing weed populations. As indicated in the CCP, the Service would only use grazing practices which are strictly controlled for the benefit of improving Refuge habitats. Other land management techniques will be considered in choosing the appropriate and most effective method to manage various habitats. The Service has recently conducted limited livestock grazing to evaluate its potential in the control of weeds. The Service will continue to explore grazing as a management tool.

Comment: The Refuge was encouraged to partner with other land management agencies and livestock permittees to reduce livestock trespass.

Response: The Refuge will continue to partner with other Federal/State land management agencies and livestock permittees to reduce livestock trespass. Livestock trespass has decreased over the past several years due to improvements to Refuge fencing and water gap structures.

Comment: Concern was expressed about the availability of clean water in water gaps for livestock and about the control of public use in water gaps.

Response: There are 17 water gaps located within the Refuge which provide livestock access to water. The construction of water gaps is complete and general maintenance is conducted as needed to keep water gaps functioning. Water gaps were designed to allow water to flow through them. Water gaps provide free flowing water which is of adequate quality for wildlife or livestock. The CCP proposes to further evaluate how the public utilizes water gaps for recreation and also design parking areas to minimize disturbance to watering livestock. The Service will maintain signs in water gaps informing visitors of the purpose of water gaps.

Fire Management

Comment: Concerns were expressed that the elimination of livestock grazing leads to increased fuels and therefore greater fire potential. Concern was expressed that in the past 2 to 3 years there have been more fires on the Refuge then in the past 100 years.

Response: In the past 2 years, there have been three natural wildfires (lightening strikes) and one man-made wildfire on the Refuge. Because of the severe drought conditions, the number and intensity of fires has increased throughout the west regardless if lands were grazed by livestock. Many areas which were consistently grazed for many years (BLM and USFS lands) also burned in the last 2 years because of the severe drought. Grazing will reduce understory fine fire fuels and could help decrease the intensity of some fires. Grazing, however, can also reduce the overall quality of habitat for some wildlife species depending on how it is managed. Grazing of Refuge habitats for management purposes (i.e. fire fuel reduction) may be utilized in the future. Annual grazing to significantly reduce understory riparian vegetation conflicts with Refuge management objectives. Grazing reduces the amount and density of vegetation available for wildlife to use for forage, nesting, and cover. During multi-year droughts it is especially important to protect forage and cover on Refuge lands because surrounding lands may only provide minimal forage due to the combination of drought stress and livestock grazing. The Service will continue to explore grazing as a management tool in riparian and upland habitats, as appropriate.

Weed Management

Comment: Concern was expressed about the extent of perennial pepperweed on the Refuge. Some individuals believe that intensive early spring grazing by sheep or goats is the best method to control this species.

Response: The Service is working extensively with the University of Wyoming and Sweetwater County Weed and Pest to address weed issues on the Refuge. Livestock grazing is a tool which is being evaluated along with chemical and mechanical controls in various combinations. Grazing, under certain conditions, can biologically suppress perennial pepperweed if native vegetation is available to recolonize the area. Current research, in other states, has had mixed results about the effectiveness of grazing. Perennial pepperweed reproduces by seed and also by creeping underground stems. Grazing will suppress the above ground biomass but will not kill the below ground tubers. Grazing also results in the consumption of native grasses, forbs, and shrubs, in addition to the target weed species, which may not be acceptable for reaching Refuge objectives. The Service will continue to evaluate grazing as a potential control technique. The most effective control is currently chemical control in combination with mowing (Beck 1999, Renz and DiTomzao 1999). Over the past 6 years the Service, in coordination with Sweetwater County Weed and Pest, has significantly reduced the weed population on several thousand acres using a combination of mowing, burning, and chemicals. The CCP states that the Refuge will continue to evaluate various control methods and partner with various agencies to improve weed management methods. New technology (Burch Wetblade Mower), currently being tested on the Refuge by the University of Wyoming, is showing great potential.

Wildlife Management

Big Game

Comment: A recommendation was made to work in partnership with other groups and agencies to restore historical migration routes of elk, where feasible.

Response: The Refuge added a strategy under the objective for "Other Indigenous Wildlife Species" which indicates the Refuge will support efforts to enhance or restore historic migration routes for migratory big game species like antelope, mule deer, and elk. Very few elk have been observed in the vicinity of the Refuge since it was established in 1965. The restoration of some historical elk migration routes may not be feasible due to the extensive amounts of fence, road, and urban home construction throughout their migratory route(s).

Predator Management

Comment: Statements were received that predator trapping is ineffective as evidence by increasing numbers of predators (skunks, raccoons, foxes, etc.). In the past, the Refuge allowed harvest of predator species. Arguments were made that hunters need reasonable access to permit harvest of species and that closing roads has created a predator problem on the Refuge.

Response: The Service is aware that populations of red fox, raccoon, and striped skunk exist on the Refuge, especially near riparian and wetland habitat types. The Service is also aware of the impacts predators have on a variety of wildlife species. The Service has allowed hunting of skunk, raccoon, and red fox in accordance with State and Refuge Regulations. Trapping of these species has been permitted under special authorization by the Refuge. The Service strictly regulates trapping operations to ensure visitor safety and to reduce the take of other non-target wildlife species. The trapping program used by the Refuge has been effective in reducing predator numbers as evidenced by the increase in waterfowl nest success in areas where trapping has occurred (see CCP Section on Predator Management and Nest Success). The Service objective has been to reduce predator numbers to levels which permit the Service to meet other wildlife objectives (i.e. production of ducks, geese, swans, etc). Hunters who wish to pursue predator species have full access to all portions of the Refuge except in areas designated as, "closed to all hunting." Reasonable access by roads was provided and access by foot was permitted throughout the Refuge. Reducing the fragmentation of Refuge habitats by roads will improve conditions for wildlife by improving the quality of habitat. Roads create easy travel corridors for predators and may actually increase predation in some habitats by facilitating access. The Service disagrees that reducing road access will result in a direct increase in predator populations. The Refuge is unaware of any studies which shows a direct correlation between road densities and the success of predator hunters.

Comment: Allowing hunting and control of some native species (such as predators of ground-nesting birds and beaver) for the limited benefit of other species works against the underlying ideals of the Refuge System.

Response: Collectively, the National Wildlife Refuge System mission, goals, and the specific Refuge purpose(s) define our duty for the administration and management of any unit of the System (see CCP Introduction & Background). The Refuge purpose(s) forms the foundation for developing goals and objectives for units during CCP preparation, and provide the basis for determining the appropriateness and compatibility of existing and proposed uses on Refuges. Refuge studies indicate that managing predator populations can significantly benefit ground-nesting birds (see CCP Section on Predator Management and Nest Success). Trapping and hunting have been used as management tools extensively throughout the Refuge System to manage lands and wildlife populations. In the past, Seedskadee NWR has had approved predator and beaver trapping management plans compatible with Refuge purposes. These plans were developed to assist the Refuge in meeting objectives for production of ground-nesting birds (waterfowl, geese, swans, rails, etc.) and restoration of riparian habitats. In certain specific cases, management of predator and beaver populations may not conflict with the purpose of the Refuge or the mission of the Refuge System. Conversely, these management actions have responded to past range expansions by certain predator species and to changes in river flows that have reduced natural cottonwood regeneration. Non-lethal methods of controlling predators and beaver populations have been explored and used in the past on the Refuge. If justified by nest success studies, the Refuge staff may continue to explore and utilize various non-lethal techniques in the future, as appropriate.

Threatened and Endangered Species (T&E)

Comment: The CCP states that monitoring for T&E species would occur on a regular basis - regular should be defined. Surveys for Utes ladies tresses should occur no farther than 5 years apart, instead of 5 to 10 years.

Response: Specific objectives are stated for each T&E species which may occur on the Refuge. Strategies for each objective specifically indicate the monitoring frequency and habitat protection efforts proposed by the Service (Management Direction Chapter). The Utes ladies tresses is a species which has never been documented on the Refuge or within western Wyoming. The Service disagrees that surveying for this species is required every 5 years. If major changes occur in river flow management, additional and more frequent surveys may be warranted.

Swan Management

Comment: There was objection to creating a wintering closed area or seasonal closure for trumpeter swans and wintering waterfowl. There was a request to justify this need for a closure given the Refuge has met its current objective of 20 to 40 wintering swans and there is no current closure.

Response: The trumpeter swan is a species of special concern for the USFWS and also for the State of Wyoming (State). The Refuge has been identified by the USFWS and the State as a breeding and wintering area for Trumpeter Swans. The current wintering objective of 20 to 40 swans has been sustained on the Refuge/Green River for the past several years. The actual wintering carrying capacity for trumpeter swans and waterfowl has not been determined for the Refuge and additional birds may be supported within the Refuge. The number of wintering swans on the Green River will vary depending on the severity of the winter and availability of forage.

The basis for establishing a new closed area (in lieu of the existing one) is not specific to trumpeter swans. The intent of creating a new closed area is to provide an area of low disturbance where swans, waterfowl, and other wildlife may feed and rest during the energy demanding winter months. There are currently two types of closed areas on the Refuge (Map 6). The current Refuge "closed area system" encompasses wetland impoundments which are generally drained or frozen by mid-October and therefore provide no resting or feeding habitat for wintering water birds. The open-water river habitat becomes the primary area where waterfowl and swans can rest and feed during the winter. There are no sections of the river which are encompassed by the current closed areas.

The CCP proposes to explore the potential establishment of a new closed area via a separate public process. This could establish a closed area to include a segment of the river which, in most years, would remain partially open or contain significant pockets of open water. This process would attempt to address the need for the Refuge to provide a sanctuary area to provide open water, forage, and low disturbance through winter months for a variety of wintering wildlife species.

Justification for the change in closed areas is to provide a quality habitat area which is low in disturbance for wintering wildlife, especially water birds and raptors. The Refuge has acquired preliminary data which indicates birds using the river during winter months are very sensitive to disturbance from vehicles and people. Waterfowl and raptors often flush from the river corridor at the first site of a vehicle. Creating a new closed area system, which encompasses a portion of the river, would create a secure area which provides feeding and resting areas that are currently lacking. General observations from Refuge staff, local hunters, and anglers indicate an increase in hunting and fishing pressure on the Refuge. Given the general trend in recreational use of the Refuge and within the State (WYGF 2001 - A Quiet Crisis), it is reasonable to assume that hunting and angling pressure will continue to increase. Proactive measures to secure and protect habitat and wildlife during critical periods of the year is justifiable within the context of the Refuge and the mission of the National Wildlife Refuge System.

Comment: A comment was received which indicated that a major objective of the swan restoration program (Trumpeter Swam Implementation Plan) is to establish a predominately migratory rather then sedentary flock of swans. Because the river may freeze up more in low flow years or very cold years, it may not be biologically appropriate to encourage larger concentrations of swans or waterfowl to winter within the Refuge.

Response: The primary purpose of the Refuge and the NWRS is to provide for the needs of wildlife. The Refuge's goal is not to short-stop the migration of swans or any other waterfowl. Eventually, waterfowl and swans need to winter at some location. Seedskadee NWR provides one such quality location. Seedskadee NWR is a natural site for the Service and State to target as a wintering area for swans and other waterfowl. Providing wintering habitat for some water birds is biologically appropriate, regardless of the number of waterfowl and swans utilizing the Refuge. Continued monitoring of wintering populations in coordination with the Wyoming Game & Fish will determine if population levels reach unacceptable levels before or after a new closed area is established. If established, a closed area on the Refuge could be changed or re-opened in the future.

The amount of ice forming on the River will vary between years depending on winter temperatures and the amount of water released by Fontenelle Dam. Based on information gathered by the Refuge via conversations with various long-time residents, the River usually does not freeze above the Refuge headquarters, unless river flows are extremely low.

Comment: Concern was expressed that Seedskadee is lacking substantial agricultural food resources nearby for maintaining wintering swan populations.

Response: The Refuge does not feel this is biologically important to birds wintering within the Refuge. The Green River provides aquatic forage, which explains why the River has been identified by swans and waterfowl as an acceptable wintering location. If forage were not available, the birds would likely not remain on the Refuge.

Comment: At the Flyway level, production and migration are the most important functions sustained by the refuge for migratory waterfowl. Managing portions of the refuge as winter terminus may benefit a handful of cold-tolerant species such as goldeneyes, mergansers, mallards, geese, and some trumpeter swans. However, dependable winter habitat is also available to these species down range.

Response: At a flyway level, the Service agrees that migration is the most important function sustained by the Refuge for migratory waterfowl. Production of waterfowl at the Refuge does not significantly contribute to the Flyway population, but may be very important relative to State and local populations. The ability to winter larger populations of waterfowl may be possible with a change in the current closed area system. Providing areas where waterfowl can rest and feed may improve hunting opportunities by encouraging birds to remain in the area over the hunt season. Presently, hunting pressure throughout the hunt season is so intense and widespread that only limited numbers of waterfowl remain in the area.

Production of trumpeter swans on the Refuge is important at the Flyway and State level. Providing wintering habitat on the Refuge for swans is a goal of the Refuge and Service. The amount of dependable winter habitat for trumpeter swans located further south of the Refuge is still being evaluated. If there is an abundance of suitable wintering habitat south of Flaming Gorge Reservoir, then such areas need to be identified and protected to expand the overall winter distribution of swans.

Roads/Access

Comment: Why is the Service closing roads on the Refuge? What is the reason behind each road closure?

Response: The decisions regarding opening and closing roads on Seedskadee NWR are driven by the mission of the National Wildlife Refuge System as directed by Congress and by the specific purposes of Seedskadee NWR. All 540+ national wildlife refuges in the System, including Seedskadee NWR, are managed first and foremost for protection of wildlife species and their habitats. Human uses are secondary to wildlife and habitat management objectives. Human uses are only allowed when they are compatible with, and don't interfere with, wildlife and habitat management objectives. More details regarding the mission of the System and Seedskadee NWR can be found in the Introduction/Background sections of this CCP document.

Vehicle use is one of the largest contributors to wildlife disturbance and habitat damage on Seedskadee NWR. Most of the existing roads on the Refuge are concentrated in or adjacent to the same areas that wildlife are dependent on, such as the river and associated riparian zone. Disturbance from vehicles in these areas is especially extreme during the fall and winter because hunting seasons are open, Refuge marshes that are closed to hunting are frozen and do not provide a sanctuary area for many migratory birds, and energy demands are the highest for wildlife. Because of the degree of disturbance to wildlife from vehicle use, the road system that has evolved over time on land tracts that are now part of Seedskadee NWR is in direct conflict with the mission and purposes of the Refuge and the Refuge System. In addition, many members of the general public strive to find locations on the Refuge where they can hunt, fish, observe wildlife, or otherwise enjoy Refuge resources without disturbance from vehicles. The Refuge does recognize, however, that responsible and controlled vehicle use is a reasonable and legitimate way to access the Refuge to enjoy the variety of activities that are allowed on the Refuge.

To minimize wildlife disturbance and habitat damage, yet still provide access for the public to Refuge resources, various road system alternatives were formulated for the draft CCP. While for some these represent a change from some of the traditional vehicle routes and access points on the Refuge, we believe it still affords the public, including disabled people, with the ability to enjoy most of the same traditional Refuge uses, albeit sometimes in different locations. The entire Refuge remains open to foot travel. Under the Refuge's preferred road alternative, the vast majority of the Green River is less than a half mile from any road via foot, with only a few exceptions. Under the preferred alternative, the farthest anyone would have to walk from a designated road to reach the Green River is about one mile. Refuge staff consulted with the National Center on Accessibility while developing road alternatives to ensure all proposals were consistent with the Americans with Disabilities Act guidelines.

General criteria that were used to develop a Refuge road system that met the needs described above include the following: (1) remove some roads from the rivers edge to reduce disturbance to wildlife (for example, waterfowl will flush when they see a vehicle); (2) if roads are immediately adjacent to both sides of the river, remove a road from at least one side of the river to minimize disturbance to wildlife; (3) create larger blocks of wildlife habitat associated with the riparian zone that do not have roads transecting them; (4) create areas for members of the public to enjoy Refuge resources without disturbance from vehicles; (5) provide a road system that is easy to understand and follow by the public (the current matrix of roads, particularly south of Highway 28, is confusing to follow); (6) provide a road system that is safe for the public (some roads follow the edge of cliffs or are in very soft soils vehicles can get stuck in); (7) provide a road system that is not subject to excessive erosion (for example, erosive roads along the river's edge that slough into the river and force vehicles to create new tracks over standing vegetation) or extreme rutting in wet conditions; (8) provide a road system that minimizes the opportunity for off-road violations (repeated off-road violations every year require additional staff time to monitor, repair, and patrol); (9) reduce the potential to introduce weed seeds into new areas on the refuge; (10) and reduce the likelihood of wildfires resulting from vehicles or other human activities.

Because of existing roads and other improvements on Seedskadee NWR north of Highway 28, there were fewer opportunities to alter roads in this region. However, much of the area south of Highway 28 does not have improvements and provides a unique opportunity to enhance the area to benefit wildlife through road management. Changes in the preferred alternative from the draft to the final CCP were the result of constructive, specific comments from the public.

In 1996, the Refuge completed and made available a 'Travel Map' that identified roads open for vehicle use. However, this was never fully implemented on the ground by posting all the closed roads. In addition, many signs that were posted were stolen or vandalized. As a result, there has been some confusion regarding the number of roads closed through the CCP process. Many roads that have been used since 1996 have technically not been open to vehicle travel. The Refuge will update this Travel Map and post all closed roads as soon as possible after the final CCP is published.

The following table is a summary of the road closures that will take place when the CCP is finalized. A brief summary of the reasons for each closure is included. The summary includes roads closed during the 1996 administrative closures that were never posted in the field but will be posted when the CCP is finalized. Please refer to Map A to identify roads being discussed.

Table: Road Closures and Justifications

Road Number	Action	Justification
1	Close access road in the Refuge on the north side of the Green River from the Refuge boundary to McCullen Bluff.	1) Roads currently exist on both sides of the river increasing disturbance to wildlife. 2) An alternative BLM road exists that parallels the Refuge's north boundary fence that provides reasonable foot access within ¼ mile of the river. 3) There is access to this area south of the river from the Dodge Bottoms road. 4) Closure will provide a block of relatively undisturbed habitat. Much of the road is immediately adjacent to the river or the riparian zone which results in significant disturbance to wildlife. 5) Provides an area where visitors can enjoy Refuge resources without vehicle disturbance.
2	Seasonal road closure from November 15th to March 15th of approximately 5 miles of road on the east side of the river starting approximately 1 mile north of Highway 28.	1) Much of the road is immediately adjacent to the river or the riparian zone which results in significant vehicle disturbance to wildlife. The seasonal closure would eliminate vehicle disturbance to wildlife during critical wintering period when all other sanctuary areas (marshes) are frozen and no other sanctuary areas exist on or off the Refuge. 2) Big game hunts, including the late season doe deer hunt, are concluded by mid-November. 3) Impacts to anglers during this period would be minimal. 4) This provides a seasonal block of relatively undisturbed habitat. 5) Area remains open to foot traffic.
3	Close existing road that loops through the riparian forest. However, allow vehicle access on the north side to the 'gravel pit' and one-way (non-loop) access on the south side to the confluence of the Big Sandy and the Green Rivers.	1) Eliminate loop road to lessen disturbance to wildlife on the river and in a significant riparian habitat block. 2) Much of the loop road is in poor condition due to the soils and is therefore prone to continual widening and degradation, particularly in wet weather. 3) Reduces likelihood of continued off-road vehicle violations and resulting habitat damage in the area. 4) Access to the confluence area can also be obtained by following a BLM road on the east side of the Big Sandy or from the west side of the Green River from the Refuge Auto Tour Route. 5) Provides block of relatively undisturbed habitat. 6) Area remains open to foot traffic. 7) Provides an area where visitors can enjoy Refuge resources without vehicle disturbance.
4	1) Open up new road in upland area that follows the historic Oregon Trail from approximately one mile above the 6-mile hill boat ramp northerly approximately 3 miles to the Dunkle Ranch area. 2) Close all roads between the Dunkle Ranch area south to the junction with the new road on the Oregon Trail. 3) Close 2 additional spur roads that drive through wash north of 6-mile boat ramp.	1) New road will maintain a through route for vehicles and an opportunity to travel on parts of the historic trail. 2) Closure of roads will reduce disturbance to wildlife in wetland units and on the Green River. 3) Closure of roads will reduce erosion along the Green River and damage to vegetation as road sloughs into the river. 4) Roads to be closed are very susceptible to vehicle damage due to soil types. Vehicles often get stuck when road is wet, especially in the vicinity of Shute Creek. 5) Provides block of relatively undisturbed habitat. 6) Area remains open to foot traffic. 7) Provides an area where visitors can enjoy Refuge resources without vehicle disturbance.
5	1) Road will terminate at the river bend ½ mile downstream of Johnson Ranch. 2) Burned over (2000) area in vicinity of Telephone Island will remain closed to vehicles. 3) Spur roads will be closed.	1) Closure of road to Johnson Ranch will reduce erosion along the Green River and damage to vegetation as road sloughs into the river. 2) Continued closure of Telephone Island area will allow the area to continue to recover from wildfire and may provide cottonwood regeneration research site. 3) Closure of Telephone Island area will provide large block of relatively undisturbed habitat. 4) Closures to Johnson Ranch and Telephone Island area will reduce disturbance to wildlife on the Green River. 5) Spur road closures will reduce damage to vegetation and reduce disturbance to wildlife. 6) Area remains open to foot traffic. 7) Provides an area where visitors can enjoy Refuge resources without vehicle disturbance.

Road Number	Action	Justification
6	The road will remain open from 6-mile hill boat ramp south to Palmer crossing (about 3/4 mile). The road from County Highway 4 (Big Island Bridge road) north to Shell Ranch (about 1.5 miles) will remain open. All roads between these two roads will be closed.	1) Current roads are in extremely poor condition and difficult for the public to follow. 2) Provides a large block of habitat not disturbed by vehicles in conjunction with habitat on the east side of the river. 3) Area remains open to foot traffic. 4) Provides an area where visitors can enjoy Refuge resources without vehicle disturbance.
7	1) Open the road that travels from County Road 8 (OCI road) north along the river through the south boundary of Refuge that is currently closed at the Refuge boundary. 2) Close western north-south through road but leave parallel road open. 3) Close all spur loop roads on the west side of Big Island that travel to and follow the rivers edge.	1) Re-establishes public access and through route from County Road 8 north to County Road 4. 2) Eliminates one of two parallel roads to minimize habitat disturbance. 3) Spur road closures will reduce damage to vegetation and reduce disturbance to wildlife. 4)Area remains open to foot traffic.

Comment: There was support for the Refuge mandate to "provide opportunities for compatible wildlife-dependent recreation while maintaining the primitive, uncrowded nature of the area."

Comment: There was support for the Refuge objective to "provide a variety of quality river fishing opportunities and hunting opportunities on portions of the Refuge."

Comment: Concern was expressed that senior citizens are fenced out of favorite fishing and camping areas.

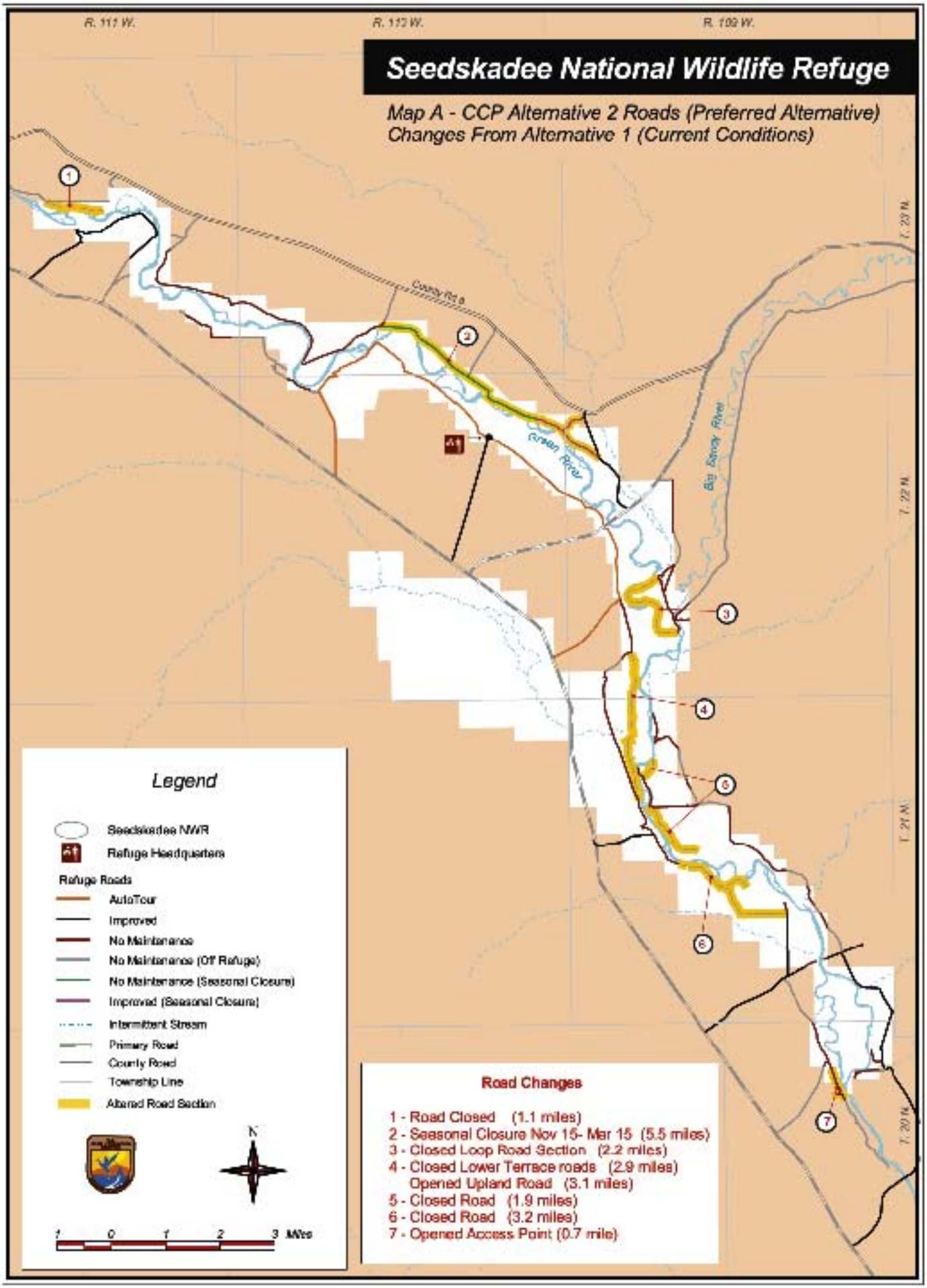
Response: The purpose of the fencing is to keep livestock off the Refuge. The only way the Refuge could keep livestock from grazing and trampling Refuge habitat was to fence its boundary. The preferred alternative maintains 28 Refuge access points and over approximately 50 miles of roads that are open to the public. Camping is not permitted on the Refuge regardless of visitor age (see justification CCP Appendix D Compatibility Determination for Camping). Fences were not erected to exclude visitors from fishing areas. The entire River is open to fishing through the Refuge. Visitors may access fishing locations by designated roads, foot, or boat. Individuals who are unable to walk long distances may fish at locations which are closer to designated Refuge roads. The primary purpose of the Refuge is to provide quality habitat for wildlife, and where compatible, provide for hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation experiences. The Refuge cannot accommodate the special requests of every user group/individual which uses the Refuge and still meet Refuge objectives for wildlife. Providing a road to every favorite fishing spot is not practical nor compatible with the purposes of the Refuge. However, the Service is very aware of the special needs of individuals who are physically challenged and will continue to explore potential opportunities to provide opportunities for these individuals.

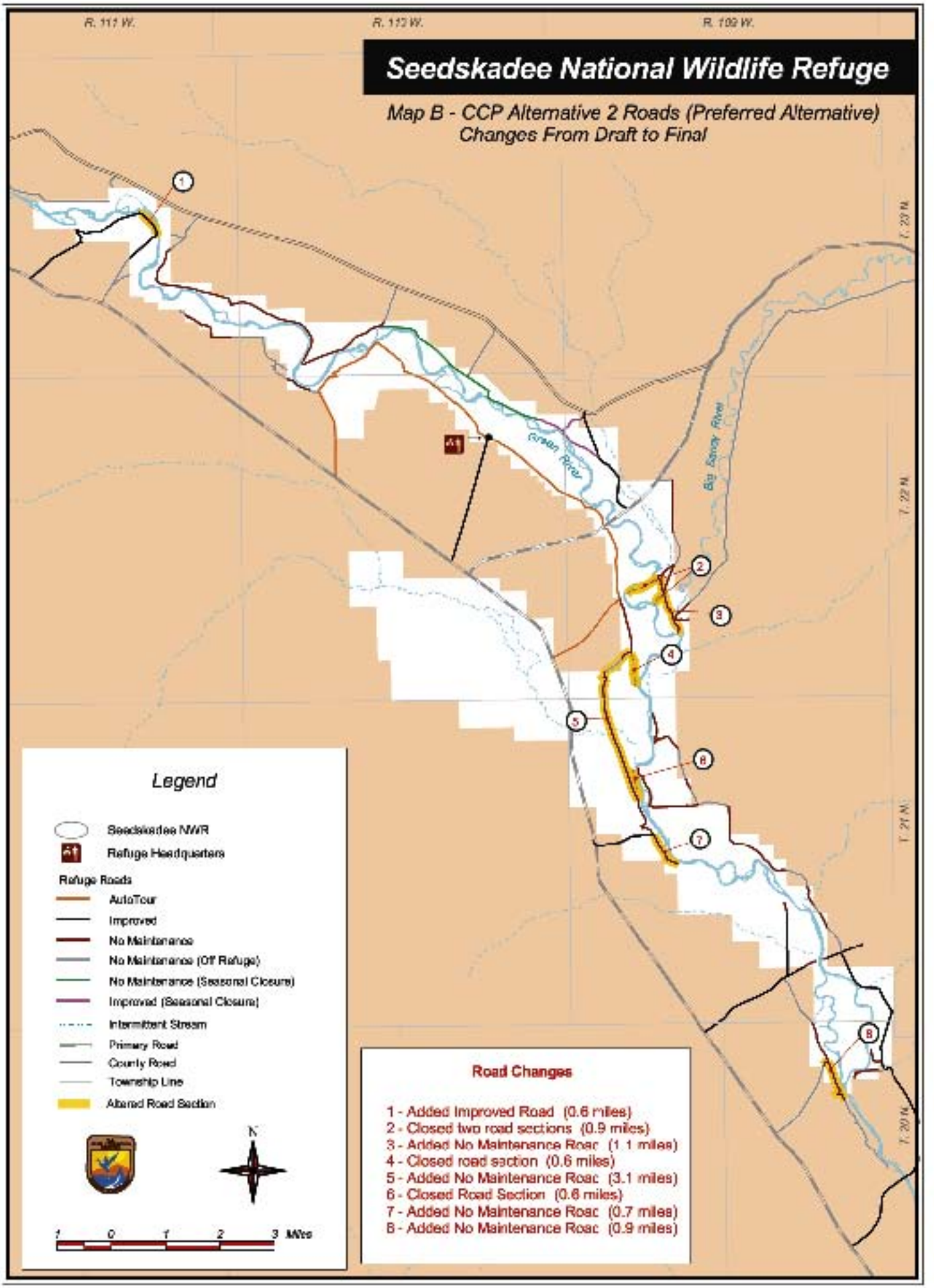
Comment: To be a good guardian, the Refuge needs to consider all aspects of management, including the people.

Response: Seedskadee provides a wide variety of recreational opportunities for visitors and will seek to provide quality opportunities in the future which remain compatible with the needs of wildlife. Visitors recreating on any national wildlife refuge must remember that the Refuge System is the only national network of public lands dedicated to fish, wildlife, and plant conservation. The Mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United State for the benefit of present and future generations of Americans. Providing recreational opportunities is also a primary focus of Refuges but only when they are compatible with the needs of wildlife. The management of recreational uses and visitor access is necessary not only to protect wildlife and habitat but also to provide a variety of quality recreational experiences.

Comment: The Service has closed off the refuge to a majority of the public (bank fisherman) and the Refuge wants only commercial guides and birders. Concern was expressed that the Refuge receives money from allowing commercial guides and birders on the Refuge.

Response: The preferred alternative proposed a reduction in the amount of commercial guide use. The Refuge does not benefit economically from allowing commercial guiding or birders. The local communities benefit economically from visitors which require hotel accommodations, fishing supplies, gas, food, etc. The Refuge continues to permit some commercial guiding to provide opportunities for visitors who prefer to fish the Refuge with a guide. The commercial guides also provide potential recreational opportunities for people with disabilities. In the preferred alternative, the Refuge acknowledges the need to regulate commercial guide use relative to the needs of wildlife and other visitor uses.


R. 111 W.
R. 110 W.
R. 109 W.
Seedskadee National Wildlife Refuge
Map A - CCP Alternative 2 Roads (Preferred Alternative)
Changes From Alternative 1 (Current Conditions)
T. 23 N.
T. 22 N.
T. 21 N.
County Rd 8
Green River
Big Sandy River
1
2
3
4
5
6
7
Legend
Seedskadee NWR
Refuge Headquarters
Refuge Roads
AutoTour
Improved
No Maintenance
No Maintenance (Off Refuge)
No Maintenance (Seasonal Closure)
Improved (Seasonal Closure)
Intermittent Stream
Primary Road
County Road
Township Line
Altered Road Section
N
1 0 1 2 3 Miles
Road Changes
1 - Road Closed (1.1 miles)
2 - Seasonal Closure Nov 15- Mar 15 (5.5 miles)
3 - Closed Loop Road Section (2.2 miles)
4 - Closed Lower Terrace roads (2.9 miles)
Opened Upland Road (3.1 miles)
5 - Closed Road (1.9 miles)
6 - Closed Road (3.2 miles)
7 - Opened Access Point (0.7 mile)


R. 111 W.
R. 110 W.
R. 109 W.
Seedskadee National Wildlife Refuge
Map B - CCP Alternative 2 Roads (Preferred Alternative)
Changes From Draft to Final
T. 23 N.
T. 22 N.
T. 21 N.
T. 20 N.
Green River
Big Sandy River
Legend
Seedskadee NWR
Refuge Headquarters
Refuge Roads
AutoTour
Improved
No Maintenance
No Maintenance (Off Refuge)
No Maintenance (Seasonal Closure)
Improved (Seasonal Closure)
Intermittent Stream
Primary Road
County Road
Township Line
Aband Road Section
N
1 0 1 2 3 Miles
Road Changes
1 - Added Improved Road (0.6 miles)
2 - Closed two road sections (0.9 miles)
3 - Added No Maintenance Road (1.1 miles)
4 - Closed road section (0.6 miles)
5 - Added No Maintenance Road (3.1 miles)
6 - Closed Road Section (0.6 miles)
7 - Added No Maintenance Road (0.7 miles)
8 - Added No Maintenance Road (0.9 miles)

Comment: What good is re-seeding two-track roads? Several roads have been closed but the refuge has not attempted to re-vegetate these two-tracks - Why not?

Response: Re-seeding or re-vegetating two-track roads will improve habitats by converting bare ground to desirable native vegetation and will also improve the visual aesthetics of the area by reducing obvious land scars. Although two-track roads are two strips of bare ground, the cumulative acreage of area which is stripped of vegetation by a two-track road is significant. Future restoration of closed roads will enhance wildlife habitat quality by reducing fragmentation, providing additional cover, increasing forage, reducing the potential for weed infestations, and decreasing predator travel corridors.

Some closed two-track roads will be allowed to naturally re-vegetate over time. Many roads, that have been closed have already started the process of re-vegetating naturally. Other two-track roads which are closed may be ripped and seeded. The Refuge must receive a cultural resource clearance on every road section it plans to rip and seed because of the numerous historical trails which traverse the Refuge. A cultural resource survey was recently completed on the Refuge (2000) to indicate which roads are considered contributing segments to historical trails. The cultural resource survey will enable the Refuge to pursue future road restoration efforts and avoid important trail segments. The future ripping and re-seeding of some roads will be completed over many years as time and money permit. Simple elimination of traffic on some roads will facilitate and may enable full re-vegetation.

Comment: Refuge gates and fences have been cut or removed at traditional well-worn two-track roads. More specifically a road located in the southern portion of the Refuge was gated and locked. The Refuge should not have closed this road and instead put in a cattle guard or at least erect a sign indicating the road is a dead end road. More local input should have been received on road closures.

Response: The Refuge has decided to open the Road referenced in this comment letter based on public input. Within the next couple of years, a cattle guard will be installed and the gate will be removed to improve access. In the interim, a sign will be posted to inform the public of current conditions and future proposed changes. The Refuge will post "No Outlet" or "Dead End Road in X miles" at all other roads which dead end within the Refuge.

Specific constructive public comments were received regarding the proposed preferred road system (Draft CCP Alternative 2). As a result of these comments, some roads proposed for closure were re-opened and other roads modified to better accommodate wildlife and public access needs (See Map B). See Map 9 for the final road system which will be implemented on the Refuge.

Comment: Will additional roads be improved?

Response: The CCP plans to improve a segment of the loop road between Upper and Lower Dodge Bottoms. Additional gravel will be added to this segment to stabilize the road. There are several roads which have already been improved and are depicted on the Refuge roads map as "auto tour" or "improved." The Refuge staff plans to maintain only the improved roads and the auto tour route. Additional road base and mag water treatments may be applied to improved roads to reduce maintenance requirements. Improved roads will be graded several times a year as needed. The two-track roads depicted as "non-maintenance roads" will remain as is, except for minor maintenance when absolutely necessary.

Comment: Concern was expressed that too many roads will remain open on the Refuge in relation to the size of the Refuge.

Response: The CCP designated 49 miles of roads as open for public travel. The Refuge is seeking to find a balance between recreational vehicle access demands, wildlife requirements, and the need to provide the public with areas where vehicles are not allowed, e.g., areas only open to foot travel. Reducing roads in certain portions of the Refuge will create areas which are less disturbed by vehicles, less fragmented, and visually more aesthetic. The Refuge recognizes that some visitors enjoy going into areas where vehicles are not allowed. Areas where roads are reduced and disturbance is decreased may improve the quality of a visitors hunting or fishing experience or increase opportunities for wildlife observation/photography. Fewer roads in a area directly benefit wildlife by reducing human disturbance and habitat fragmentation. The CCP provides a road plan based on current use levels, wildlife needs, and recreational demands. In the future, additional roads may be closed to protect habitat or opened to provide for certain recreational opportunities.

Comment: Why has access been restricted in livestock access lanes (water gaps)? Why can't drift boats be launched from certain water gaps?

Response: The purpose of a water gap is to provide livestock, which graze adjacent lands, access to water. Many of the water gaps fulfill a legal agreement between the Refuge and the Rock Springs Grazing Association. The physical design of a water gap is not conducive to launching boats from trailers because of the rock structures which were placed in the River. The strategic placement of large rocks in a U-shape formation prevents cattle trespass onto Refuge lands and, since their completion in 2001, create a barrier that prevents launching of boats. While some water gaps were used for boat launches before 2000, the intention of the Refuge was to close the water gaps to boat launching after all of the formal boat ramps were completed. All Refuge boat ramps were completed in 2000 and the water gaps have been closed to launching boats. Launching boats from trailers is now permitted only at the four designated boat launches on the Refuge.

Visitors may still use livestock access lanes to access the River for some recreation. However, water gaps are subject to all Refuge regulations. They cannot be used to exercise dogs, camp, or picnic, in order to reduce livestock and visitor use conflicts. The Refuge seeks to balance the use in water gaps between visitors and ranchers needs. Frequent problems occurring in water gaps involve dogs off-leash near livestock, camping, and parking vehicles in areas that block livestock access to water. The Refuge requests visitors to park vehicles near water gap fences to reduce physical barriers between livestock and water. Future plans are to designate parking areas near water gaps which will better facilitate use of water gaps by visitors and livestock.

Disabilities

Comment: Road closures are the single most discriminating act against the handicapped in America today. What actions will be taken in the future for access for handicap? Concern was expressed that citizens with disabilities are discriminated against. Closure of roads limits older peoples ability to use lands set-aside as "public use."

Response: The current facilities which are fully accessible include the Refuge office, the new Refuge visitor and education center, and the Lombard Ferry Trail. An additional interpretative trail and outdoor rest room is proposed in the CCP. Both would be fully accessible. In the CCP, the Refuge staff also proposes to work with local community members to explore the potential development of special recreational opportunities for people with disabilities (i.e. special hunts, fishing events, etc.) and provide public use plans which will incorporate the needs of people with disabilities. Refuge staff consulted with the National Center on Accessibility while developing road alternatives to ensure all proposals were consistent with the Americans with Disabilities Act guidelines.

The Refuge recognizes the needs of people with disabilities, but cannot provide opportunities for every user group in all locations. The proposed road plan provides reasonable access to Refuge resources and activities for people with disabilities. However, it does represent a change from accessing all the same locations by road that people may be used to. National wildlife refuge lands are set-aside to provide for the needs of "wildlife first" and where compatible, provide for public recreational uses. Seedskadee provides for a variety of recreational uses but recognizes the need to manage uses to maintain quality habitat for wildlife and provide for a quality visitor experience. The Refuge is seeking to find a balance between the needs of wildlife and demands from different recreational users. The roads that will be closed as a result of this Plan will close access to some areas for visitors who are dependent on vehicles for traveling. However, these same activities can still be done on the Refuge, albeit in different locations. For all roads to remain open to allow access for persons with disabilities is not practical or compatible with Refuge resource objectives. Over 49 miles of roads will remain open in the CCP road plan.

Recreation

Camping

Comment: An individual commented that it was not fair to close all traditional camping sites along the river from below Fontenelle to the city of Green River. The result of eliminating campground sites on the Refuge has resulted in undue resource stress and competition in the existing livestock water access lanes or on adjacent BLM lands. The overall ecosystem involving lands outside of the Refuge is being adversely affected by this action.

Response: Camping is only restricted on Refuge lands which begin 7 miles south of Fontenelle Dam and extend 37 miles to the southern tip of Big Island. Three developed campgrounds are located between Fontenelle Dam and the north Refuge boundary. Primitive camping is permitted on all BLM lands surrounding the Refuge. Camping is not permitted within livestock water access lanes (water gaps) on the Refuge. The Service will continue to monitor water access lanes and improve signing to reduce conflicts between user groups. The Refuge has not been approached by the BLM regarding the increased impacts to the surrounding BLM landscape as a result of the Refuge prohibition of camping. If adverse impacts have been documented by the BLM, then future monitoring and communication by both agencies is encouraged to reduce future impacts.

Comment: A comment was received that camping is no longer allowed, something which has been enjoyed for generations - the commentor would like us to rethink the camping policy.

Response: See below response regarding the national policy on determining appropriate uses on Refuges.

Comment: A request was made for the Refuge to reconsider having a campground or a boat-in campsite on the Refuge using a permit or pilot fee system. Camping on surrounding BLM lands is not practical because it is not accessible or convenient for the users. Because the Refuge is so long, the visitor cannot fully enjoy the fishing and wildlife opportunities without being rushed to be out of the areas by night time. An argument could be made that people floating the river are observing wildlife and/or fishing and these activities are wildlife-dependent. Impact analysis should consider what effects encouraging camping on BLM and private land will have to these lands.

Response: National Policy provides Refuge Managers with procedures for determining when uses other than the six priority wildlife-dependent recreational uses (hunting, fishing, wildlife observation and photography, and environmental education and interpretation) are appropriate or not appropriate on a unit of the National Wildlife Refuge System. Service policy requires a screening process or "appropriate use" test, which is a decision process refuge managers use to systematically decide which uses are appropriate on a Refuge. Some recreational activities, while enjoyable and wholesome, are not dependent on the presence of fish and wildlife, nor dependent on the expectation of encountering fish and wildlife. Camping is a use which is enjoyable but not dependent on the presence of fish and wildlife. Camping is an activity which is often disruptive or harmful to fish, wildlife or plants, and may interfere with the use and enjoyment of a refuge by others engaged in wildlife-dependent recreation. In addition, camping is a use which would require additional budget and staff to administer, would not be easy to control, is not consistent with refuge goals and objectives, and is a use which can be accommodated on other nearby public lands. Camping is more appropriately conducted within designated BLM campgrounds located just north of the Refuge or on adjacent BLM lands, which are lands not specifically dedicated for wildlife conservation. For additional justification see Appendix D of the CCP - Compatibility Determinations.

The Refuge currently manages one fee program. This requires extensive staff time to administer. Another fee program is not feasible and not desirable for permitting a use which is not considered appropriate or compatible with the purpose, mission, or goals of the Refuge. Camping on BLM lands surrounding the Refuge may or may not be convenient or assessable depending on the visitor. The proximity of the Refuge to camp sites and lodging facilities provides visitors with easy and reasonable day trips to the Refuge. A day float on the Refuge is considered a compatible use on the Refuge because it facilitates several wildlife-dependent uses such as fishing and wildlife observation. A visitor to the Refuge does not have to float the river to enjoy wildlife, hunt, and/or fish. However, floating the River provides a visitor with a different type of fishing, hunting, or observation experience. A visitor does not have to float consecutive days and camp on the Refuge to enjoy fishing, hunting, or wildlife observation opportunities. The Refuge recognizes that camping may increase on BLM lands in the future as a result of increased visitation to the Refuge and the Green River area. If additional impacts occur on BLM lands as a result of future demands, the Refuge and BLM should work together to reduce such impacts.

Fishing

Comment: A comment was made that fishing was much better historically.

Response: The Wyoming Game and Fish (WYG&F) is the agency responsible for managing the fisheries in coordination with the Refuge. Concerns about the Green River fisheries should be directed to the WYG&F. The Refuge has worked in cooperation with the WYG&F to improve the fisheries via in-stream improvements, stocking programs, and changes in regulations. Unpublished data (WYG&F) from anglers and electro-shocking indicates that fishing has improved over the past 10 to 15 years.

Commercial River Guide Permits

Comment: To not allow a river guide to transfer his/her permit or to obtain any more than a one-year "special use permit" seems unfair. How might this restriction on outfitting affect adjacent property values? Why are commercial outfitters restricted on use and not the general public?

Response: The Refuge has drafted a "Commercial Outfitting For Sport Fishing Plan" which outlines the rational for the current restrictions. The legal restrictions regarding transfer of permits is a nationwide policy. The issuance of a one-year permit is to facilitate Refuge regulation and control of activities by commercial outfitters. Many citizens would like to see all commercial river permits denied while others would like to see more permits issued. The number of outfitters currently permitted by the Refuge is based on a variety of factors including impacts to wildlife and habitat, demand for non-commercial (guided) fishing, and fishery habitat and populations. Most importantly, Refuge staff must evaluate the impacts of all fishing and other recreational uses on wildlife and habitat to ensure Refuge objectives are met. The Green River is a narrow corridor which provides tremendous wildlife habitat and recreational opportunities. Excessive use of the River by unlimited users could easily diminish the wildlife values and the recreational experience. The Refuge is not aware that restrictions on commercial outfitting would negatively affect adjacent landowner property values. Based on land values along the Upper Green River, the protection of the fishery and wildlife resources would likely increase land values.

Hunting

Comment: Concern was expressed about the potential for closing the waterfowl season on the Refuge on December 1 if other practical alternatives could not be implemented.

Response: The intent of the Refuge is to eventually provide an area of very low disturbance for wintering wildlife. The preferred method of achieving this objective would be to evaluate the existing closed area system and make changes to this system to better accommodate the needs of wintering wildlife. The Refuge has the authority to restrict the species of wildlife hunted on the Refuge and to modify season dates. Closing the waterfowl hunt season on December 1 would only partially meet the Refuge's objective to provide a low disturbance area because other recreational users, besides duck hunters, also create disturbance. The mention of the early season closure was to make the public aware that this is a plausible action if no other alternative is feasible. The potential modification of the current Refuge closed area system may be a better solution and is the preferred direction the Service would seek to meet Refuge objectives.

Comment: To reduce disturbance to wintering trumpeter swans, it was suggested that the Refuge educate hunters and provide buffer areas around swans.

Response: The Service currently requests visitors to maintain a distance of > 400 yards from trumpeter swans to reduce disturbance. This voluntary request is written in Refuge brochures. The effectiveness of this voluntary distance restriction is questionable based on observations by Refuge officers and staff. The Refuge staff has also posted signs throughout the Refuge informing visitors that trumpeter swans occur on the Refuge. The CCP calls for the Service to provide additional informational signs to increase public awareness, knowledge, and appreciation for this species. Providing additional signs and information may help facilitate the protection of this species.

Comment: A comment was made that hunters are not the only users that disturb swans.

Response: The Service agrees. However, waterfowl hunters are likely the primary disturbance factor during the late winter months when fishing and wildlife viewing pressures diminish.

Comment: Proposing additional restrictions on hunting and fishing are unjustifiable. The principal impetus of the restrictions is to eliminate disturbance to wintering swans. Neither the EA nor the CCP provide a biological foundation to justify the need for expanded restrictions. The objective for the wintering swans (20 to 40 swans) on the Refuge has been achieved and sustained, and does not require additional restrictions. Commentor supports the concept of moving the closed areas around.

Response: This comment was in reference to the CCP's proposal to explore the modification of the current closed area system to accommodate the needs of wintering wildlife. The future creation of a new closed area in lieu of the existing closed area as proposed in the CCP is to better accommodate the needs of <u>all</u> wintering wildlife. Trumpeter swans would be just one of the benefactors, along with numerous other water birds, raptors, and other species. The current closed area system does not include any River habitat which is the primary habitat used by <u>wintering</u> birds when backwater wetlands are drained and frozen. The Service has gathered preliminary data which indicates that disturbance is very high for birds on the River between October 1 to January 15 (duck hunt season/fishing). General observations from local hunters and Refuge staff also indicate that hunting and fishing pressure are increasing on the Refuge. This is somewhat corroborated by the recent Wyoming Game and Fish publication "Wildlife in Crisis" that says "between 1995-1999 non-resident fish licences increased 64 percent and between 1996-1999 non-resident small game licences increased 63 percent." Seedskadee's proximity to Utah and Colorado has made it a destination location for many out-of-state anglers and hunters. Changes in the existing closed area system may improve hunting opportunities if existing areas are opened to hunting and the new closed zones (which would include river areas) entice more birds to remain in the area throughout the winter hunt period. The future establishment of a new closed area system would also better meet the needs of wintering wildlife. The objective of wintering 20 to 40 trumpeter swans was established on the Refuge's historical winter count data. The actual number of wintering swans which may be sustained has not been determined and the Refuge may be able to support more swans than the stated objective. Future monitoring and research are required to determine the desirable wintering carrying capacity for swans and waterfowl. In the interim, the current swan use levels of 20 to 40 were selected because the Refuge has been able to sustain these populations over the past 4 years. Currently, the Service is not necessarily discussing further use restrictions, but rather a modification to existing restrictions to improve conditions for wintering wildlife and recreationists. These future changes are proposed based on preliminary disturbance data and the increase in winter recreational activities.

Comment: Concern was expressed that the restrictions for hunting grouse, snipe, rail, and dove proposed in alternative 3 are in direct conflict with Congressional direction regarding the National Wildlife Refuge System Improvement Act (NWRSIA).

Response: The NWRSIA supports hunting where compatible with the purpose of the Refuge and mission of the Service. The Act does not say that all hunting opportunities will be supported on all Refuges. The Service supports hunting of abundant species which are important to the local hunting public or assist in management of Refuge resources (habitats and populations). Hunting of mule deer, moose, antelope, and waterfowl are important towards meeting population and habitat management objectives either locally or nationally. Populations of all these big game species are abundant and can sustain current hunting pressures. Cottontail rabbit hunting is a popular local pursuit which is sustainable. Cottontail rabbits are not a species in decline. Hunting of racoon, skunk, and fox has been conducted as a means to reduce predators which negatively impact numerous other species. These species are also very abundant. Alternative 3 suggested the elimination of hunting for snipe, rail, dove, and sage grouse because hunting of these species is not necessary to manage Refuge habitats or maintain certain desired population levels. Hunting of these species is currently allowed to provide recreational hunting. Hunting of sage grouse continues to be a popular sport, but current concerns over declining populations and decreasing habitat make the closure of a sage grouse season very justifiable on a national wildlife refuge. Sage grouse are a species of concern for the Federal Government and State. The same argument can be made for mourning dove hunting. Mourning dove populations are in decline. The take of these species is not necessary to improve habitats or to manage populations. The population status of snipe and rail are basically unknown locally, and little information is available nationally. Identification of these species is different and there is concern other marsh birds may be harvested by accident. There are no local biological data which support why the Refuge should permit take of these species. Refuge Officers have contacted zero snipe or rail hunters on the Refuge in the past 3 years. Eliminating hunting of grouse, snipe, rail, and dove on the Refuge would, therefore, not have a negative impact on local hunting opportunities. Opportunities for hunting grouse, snipe, rail, and dove would still be available on surrounding public lands. Many refuges do not permit the take of these species.

Comment: Native wildlife and their habitats should take precedent over recreational opportunities. Therefore, hunting of waterfowl should be completely eliminated.

Response: Hunting is recognized as one of the priority public uses on national wildlife refuges when it is found to be compatible with the purpose(s) of the Refuge. The National Wildlife Refuge System Improvement Act of 1997 directs the Service to consider hunting as a priority public use if that use is compatible with the purpose of the Refuge. The Service has determined that the hunting of waterfowl, big game, and some upland game species is compatible with the purposes of the Refuge and Refuge System. Continental waterfowl populations are generally healthy and can sustain a certain level of recreational hunting. The Service recognizes that hunting of waterfowl on Seedskadee NWR provides an important recreational opportunity for many local waterfowl hunters. Future hunting and recreational use plans will strive to provide adequate protection within the Refuge to provide for the needs of waterfowl and still provide quality hunting opportunities.

Comment: The EA does not specifically address prairie dog shooting. The EA must specifically state that no prairie dog shooting will be allowed in Seedskadee NWR (SNWR).

Response: The EA states which species are currently open for hunting. It is not necessary to list all species which are closed to hunting. Prairie dog hunting is not allowed on SNWR and the CCP does not propose to change hunting with regards to this species.

Priority Public Uses

Comment: The Congressional finding that "hunting, fishing, and other priority wildlife-dependent uses are generally compatible uses of national wildlife refuges" was not acknowledged in the document.

Response: On pages 13 and 84 of the draft CCP these uses are fully acknowledged. Some additional text was added on page 84 of the draft.

Comment: A request was made for the Service to acknowledge Congressional direction for the National Wildlife Refuge System Improvement Act (NWRSIA), which found that hunting, fishing, and other priority, wildlife-dependent uses are generally compatible uses of the national wildlife refuges.

Response: The NWRSIA indicates these uses have been found to be appropriate uses of Refuges and shall receive priority consideration in Refuge planning and management. These six appropriate uses will be allowed on any Refuge where they are found to be compatible with the purpose and mission of the Refuge and Refuge System.

Public Use Figures

Comment: Public use figures are not statistically verifiable; how were numbers derived? The CCP stated that only 36.3 percent of all visitors are anglers - gross underestimate. Future numbers must be based on sound scientific methodology. Many visitors partake in more then one activity - how is it accounted for?

Response: The Service agrees that the numbers reflected in the Public Use estimates may be inaccurate. Data was gathered from historical annual narrative reports and recent numbers were derived from general observations and local use trends. There is no "scientific method" currently used to estimate numbers. The Service has improved its public use reporting forms to try and account for visitors which partake in multiple activities but the "science" is still being developed. In the near future, the Service would like to install traffic counters and other monitoring devices to provide a more accurate reflection of public use. The comments received regarding public use figures were very helpful and will be considered when deriving future public use estimates.

Public Facilities

Comment: A suggestion was made to provide rest rooms at the Highway 28 Lombard Site, at all boat ramps, and possibly other key locations.

Comment: Why provide a toilet at Upper Dodge Bottoms versus Lombard Ferry? A toilet should be installed at the Lombard Ferry Site because of the interpretative area and proximity to Highway 28. Suggest a single vault toilet.

Response: The Service will consider the installation of a rest room at the Highway 28 Lombard Site because of its proximity to Highway 28. This site is one of the most frequently visited sites on the Refuge. The number of rest rooms on the Refuge will remain limited to reduce maintenance needs and to maintain the primitive nature of the area. Additional signing and brochure information will direct visitors to indoor facilities and may request that visitors utilize indoor facilities or practice the "leave-no-trace" philosophy.

Cultural Resources

Comment: Concern was expressed because the plan did not mention all the cultural resource sites which would be protected or restored. What are the plans for the Big Island Bridge and does the Refuge own the bridge?

Response: The Refuge plans to develop a step-down management plan which would detail the location of historical sites on the Refuge and what future protection and restoration measures would be taken to preserve these features. The primary emphasis for all sites on the Refuge is to protect structures from fire and vandalism. Additional measures may involve interpretation of sites, stabilization, general protection, or restoration. The Refuge will continue to partner with interested parties to protect and restore important cultural resources. The Big Island Bridge and the associated right-of-way are owned by the Refuge. The immediate future plans are to maintain the structure and stabilize the walkway by repairing broken boards. The bridge is closed to vehicle traffic but open to pedestrian traffic.

Water Jurisdication

Comment: Concern was expressed about the Service's ability to regulate all uses upon the surface waters of the Green River; believe this is in conflict with State Water Law. There was disagreement with the Service's interpretation regarding its authority to regulate public uses upon the waters of the Green River. Authority to regulate boating, floating, hunting, or fishing on the waters of the Green River properly rests with the State. The case laws referenced (in the CCP) have not been applied in Wyoming. Issues regarding jurisdiction on national wildlife refuges are currently before the U.S. 10th Circuit Court.

Comment: What authority do we have to restrict the number of users and access on and near the River?

Response: There are many uses by the public of the Green River within the boundaries of Seedskadee National Wildlife Refuge. These include boating, floating, hunting, fishing, wildlife observation, and others. The actual and potential impacts from these activities on Refuge lands can have major ramifications on the Fish and Wildlife Service's ability to manage Refuge lands as Congress directs. We stand by our previous statements in the CCP on Refuge River Jurisdiction. Future court decisions may help further clarify this complex issue. However, we again wish to emphasize that the Refuge's first priority is to work with appropriate departments within the State of Wyoming to meet Refuge management goals and objectives.

Comment: Concern was expressed that the Service would "establish with USBR" a "prescriptive flow regime for the Green River through the Refuge." All water uses within the Refuge must be consistent with and accomplished under Wyoming Water Law and valid permits for the Seedskadee Project.

Response: The Service has funded several riparian and riverine studies which indicate that developing a prescriptive flow regime on the Green River may greatly enhance habitat for wildlife and fish. The Service will continue to explore this concept as additional data is gathered and will eventually conduct future meetings to discuss concepts with regulatory agencies and interested parties. The Service recognizes that any future proposals would need approval and support from Wyoming State Engineer's office, Bureau of Reclamation, Wyoming Game and Fish and other vested interest groups.

Comment: The discussion of the area's history does not mention use of the Green River for transportation of furs and goods by canoe, raft, barge, or other conveyances, or for floating timber and ties. Such commerce and transportation have relevance to the actual navigability of the River and should be discussed.

Response: Historically, the Green River was almost undoubtedly used for the transportation of a variety of goods that may have included items such as furs and timbers. Any reference material pertinent to this issue that readers can share with the Refuge would be a welcome addition to the Refuge's library and historic files. In all practicality, this type of historic commerce would be a reflection of past navigability of the Green River. In the legal sense, the Supreme Court of Wyoming concluded in a 1961 decision (Platte River Boating Supreme Court Decision) that there are no navigable water bodies in the State.

CCP Planning

Comment: All of the Service's policies for implementing the National Wildlife Refuge System Improvement Act (NWRSIA) have not been adopted in final form. These policies will serve as the principal guidance for CCP's and other Refuge management activities. There was a question whether the Seedskadee CCP should be released for public review prior to the completion and adoption of these policies.

Response: The National Wildlife Refuge System Improvement Act (NWRSIA) states that the "Secretary shall prepare a CCP within 15 years after the date of enactment of the NWRSIA of 1997. Upon completion of a CCP for a refuge, the Secretary shall manage the refuge in a manner consistent with the plan and shall revise the plan at any time if the Secretary determines that conditions that affect the refuge or planning unit have changed significantly." The recently developed CCP does not conflict with current draft policies. If future policy changes occur, the CCP would be amended to reflect those changes. The most important policy has been completed, which is the CCP Planning Policy. Within the CCP Planning Policy it specifically states that the Service will use the best available information to complete the CCP document at the time it is produced.

Comment: Concern was expressed that the CCP review period was too short.

Response: The Refuge Planning Policy (Fish and Wildlife Service Manual Part 602 Chapters 1, 3, and 4) requires a minimum of a 30-day review period for the public draft CCP. If an extension of the review time were requested the Service would have extended the review period. An extension of time was not requested and therefore the period of review remained at 30-days. Thirty days is the standard review period provided for most CCP's.

Wilderness Designation

Comment: There was a question if any sections of the Refuge could be designated as Wilderness because the River is hydrologically altered, the Refuge is very narrow, and there are many visual impacts due to roads and oil and gas wells.

Response: An area of Wilderness is defined to mean an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which; 1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; 3) has at least 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition and 4) may also contain ecological, geological or other features of scientific, educational, scenic, or historical value (16 U.S.C. 1131). The Service must complete an evaluation to make a final determination. There are tracts which may be suitable, despite recent impacts.

Wild & Scenic River Designation

Comment: A comment was received that the Green River running through the Refuge had already been evaluated for potential designation as a Wild & Scenic River in the Green River Resource Area Management Plan (GRRAMP) (BLM 1996).

Response: The GRRAMP only evaluated sections of the Green River for which the BLM had jurisdiction (2.85 miles total). The section evaluated by the BLM was determined as eligible, but was not considered suitable, for designation because of the lack of their jurisdiction. The GRRAMP indicated the BLM would be willing to participate in future cooperative studies with the BOR, USFWS, and other landowners to determine the eligibility and suitability of the Green River (Green River Area Management Plan Volume 2 of 2 1996 pg. 568-69).

Funding

Comment: It is unclear how future funding tables in section 5.1 will support management strategies like browse transects and funding for big game flights.

Response: Projects within Table 5.1 which support a seasonal biological technician and a full- time ecologist would facilitate collection of browse transect data and provide staff to direct the Refuge biological monitoring programs. Aerial flight funds could be provided from writing grants or from base funding. Additional funding may also be available from the Refuge Operations Needs (RONS) program (Table 5.2). The RONS projects database is constantly changing and is upgraded annually to reflect the most recent needs of the Refuge.

Enabling Legislation

Comment: In defining the purpose of Seedskadee NWR, the CCP cites a provision of the Colorado River Storage Project Act (CRSPA), which authorizes acquisition of facilities to mitigate losses of wildlife. It should be clarified whether there is a specific connection between the purpose of Seedskadee NWR and habitats that were impacted by Fontenelle Reservoir, or whether the Refuge was created to generically mitigate habitat impacted within the Colorado River Basin?

Response: Public Law 85-797 from August 28, 1958, specifically authorized the Secretary of the Interior to acquire lands for the U.S. in the Seedskadee Reclamation Project. The CRSPA specifically authorized the Seedskadee Project which was considered a "participating Project." Section 8 of the CRSPA (1956) states: "In connection with the development of the Colorado River Storage project and of the participating projects, the Secretary is authorized and directed to investigate, plan, construct, operate, and maintain: 1) public recreational facilities on lands withdrawn or acquired for the development of said project or of said participating projects, to conserve the scenery, the natural, historic, and archaeologic objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects by such means as are consistent with primary purposes of said projects; and 2) facilities to mitigate losses of, and improve conditions for, the propagation of fish and wildlife." The Seedskadee Project Definite Plan Report 1959 - Page 9 states: "The Seedskadee project will provide for the storage and regulation of the flows of the Green River and use of the water for irrigation, fish and wildlife, and recreational purposes . . . . The remaining 32,000 acre-feet of the project water supply will be provided for the potential Seedskadee National Wildlife Refuge that will be developed and operated by the Fish and Wildlife Service for the benefit of wildlife. Recreational facilities and measures for the preservation of fish also will be provided in connection with the project . . . . Features of the Seedskadee project will include the Fontenelle Dam and Reservoir along with basic recreational facilities on the Green River, the Seedskadee National Wildlife Refuge, ..."

The purpose of Seedskadee Refuge is directly linked to Fontenelle Reservoir as the Reservoir and the Refuge were both established as a result of the Seedskadee Project. Based on conversations with the BOR, Seedskadee NWR was also to be mitigation for other projects associated with the CRSPA, which included Flaming Gorge Reservoir.

Refuge Purpose

Comment: What was the original purpose of the Refuge - waterfowl?

Response: The purpose of the Refuge has not changed since it was established in 1965 and was defined by the enabling legislation (see Refuge Purpose Section). The early master plan for the Refuge (1967) had a greater emphasis on the development of wetlands throughout the Refuge which was dependent on the full development of the Seedskadee Irrigation Project. The Seedskadee Irrigation Project was never completed because it was not economically or logistically feasible to implement, and subsequently, the early Refuge Management Plan (1967) was not fully implemented. For example, the Dry Creek Upland unit was originally supposed to receive irrigation return water, transforming the habitat from upland to wetland. This project was never completed because the Seedskadee irrigation project was never completed. The management of the Refuge has always focused on protection of habitat types for native species, including upland and wetland species. There have been changes to habitat management programs on the Refuge because of changes in the Seedskadee Project and also because of Congressional modifications in Refuge legislation, which guide management for all Refuges. This legislation has directed Refuges to evaluate habitats relative to local, regional, and national landscape needs. Healthy riparian and wetland habitats have become rare in Wyoming and their protection is now a priority. Quality upland sagebrush steppe habitat is also a unique habitat which is beginning to show signs of trouble. The current habitat objectives focus on preserving, restoring, and enhancing the Green River riparian corridor and associated uplands as habitat for migratory birds and other indigenous wildlife. Existing wetland habitats will be maintained and enhanced in the future, benefitting waterfowl and a variety of other wetland-dependent species.

List of Public Comments - Draft CCP Seedskadee: December 2001

Written
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Wyoming Game & Fish Department, Gregg Arthur, Deputy Director, Cheyenne, WY - C
Wyoming Wildlife Federation, Loyd Dorsey, Field Representative, Jackson, WY - D
Wyoming State Engineers Office, Patrick Tyrrell, State Engineer, Cheyenne, WY - F
Audubon Wyoming, Vicki Spencer, Vice President, WY - G
Jack Krmpotich, Rock Springs, WY - H
Biodiversity Associates, Angie Young, Laramie, WY - I
Wyoming Association of Conservation Districts, Bobbie K. Framk, Executive Director, Cheyenne, WY - J
Big Sandy Conservation District Board of Supervisors, - J
USFWS, John Esperance, Regional Planner, USFWS Denver, CO- K
Bill Weeks, J. Milk?, Randy Pui??, Rock Springs, WY - L
Dave Nelson, Green River, WY - M
Kathleen Tucker, Rock Springs, WY - N
Bureau of Land Management, Rock Springs, WY - O
W & M Thoman Ranches, LLC, Green River, WY - P
Defenders of Wildlife, Washington, D.C - Q
Flaming Gorge People For The USA, Rock Springs, WY - R
Wyoming Outdoor Council, Lander, WY - S
USFWS, Migratory Bird Office, Suzanne Fellows, Denver, CO - T
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Joseph Perry, Green River, WY - X
Jim Metziner, Green River, WY - Y
Humane Society of America, Elizabeth Stallman, Washington, D.C. - Z
Larry Means, Lander, WY - AA
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Department of the Army, Corps of Engineers, Matthew Bilodeau, Cheyenne, WY, CC
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