

PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project WDFW Habitat Unit Acquisition	
BPA project number	9609400
Contract renewal date (mm/yyyy)	10/2003
Multiple actions? (indicate Yes or No)	No
Business name of agency, institution or organization requesting funding Washington Department of Fish and Wildlife	
Business acronym (if appropriate)	WDFW
Proposal contact person or principal investigator:	
Name	Jenene Ratassepp
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NPPC Program Measure Number(s) which this project addresses 11.3D.6 and 11.3E	
FWS/NMFS Biological Opinion Number(s) which this project addresses N/A	
Other planning document references Washington Wildlife Mitigation Projects Final Programmatic Environmental Assessment (DOE/EA-1096) and Finding of No Significant Impact. Scotch Creek Wildlife Area Mitigation Management Plan, 1997. Sunnyside Wildlife Area Implementation Work Plan, 1998.	
Short description Restore and enhance 27,600 acres of wildlife habitat in Washington to mitigate for losses associated with the construction of Grand Coulee, Chief Joseph, McNary, and John Day dams. By funding this project, BPA will receive an estimated minimum 17,500 Habitat Unit credits.	
Target species Sharp-tailed Grouse, Mule Deer, White-tailed Deer, Lewis Woodpecker, Mink, Sage Grouse, Morning Dove, Mallard (nesting), Western Meadowlark, Canada Goose, Yellow Warbler, Downy Woodpecker, California Quail, Great Blue Heron, and Black-capped Chickadee.	

Section 2. Sorting and evaluation

Subbasin
Upper Mid-Columbia Mainstem, Lower Mid-Columbia Mainstem, Upper Columbia Mainstem

Evaluation Process Sort

CBFWA caucus	CBFWA eval. process	ISRP project type
X one or more caucus	If your project fits either of these processes, X one or both	X one or more categories
Anadromous fish	Multi-year (milestone-based evaluation)	Watershed councils/model watersheds
Resident Fish	Watershed project eval.	Information dissemination
X Wildlife		X Operation & maintenance
		New construction
		Research & monitoring
		X Implementation & mgmt
		X Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
91-061	Swanson Lakes Wildlife Area	Sharp-tailed grouse recovery

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
	Scotch Creek Wildlife Area	
1997	A five year Mitigation Management Plan was developed and approved by BPA	N/A
1997	Project Staff hired April 1997	N/A
1997-1998	Cultural Resource Survey was completed	N/A
1997	Twelve miles of fence was repaired on the Chesaw Unit to protect property from trespass livestock.	Prevention of trespass livestock is critical to the protection of habitat enhancements and existing habitat.
1997	Planted 5,000 shrubs.	Provided wintering habitat for the sharp-tailed grouse.
1997	Completed the Habitat Evaluation Procedure (HEP) to determine baseline habitat units. HEP report was published.	N/A
1998	Completed range weed control (400 acres)	Habitat enhancements have been designed to meet the biological objective to stabilize and increase sharp-tailed grouse populations.
1998	Planted 17,000 shrubs.	Habitat enhancements have been designed to meet the biological objective to stabilize and increase sharp-tailed grouse populations.
1998	Shrub pruning and fertilization on Scotch Creek, Pogue Mountain and Chesaw management units was completed for deer winter range enhancement.	Habitat enhancements have been designed to respond to HEP findings for deficiencies in deer winter range.
1998	Completed 4.5 miles fence replacement. Completed 12 miles fence repair.	Prevention of trespass livestock is critical to the protection of habitat enhancements and existing habitat.
1998	Conducted sharp-tailed grouse surveys on Scotch Creek and Happy Hill management units.	Six were discovered on Scotch Creek lek. None found on Happy Hill lek.
	Sunnyside Wildlife Area:	
1997	Conducted HEP and tabulated results.	N/A
1997	Planted 662 acres to native grasses on the Thornton Unit under the Conservation Reserve Program (CRP).	Replaced dryland cropping with permanent grass/forbs to provide cover, nesting, and forage for sage grouse.
1997	Weed control.	Over 1,000 acres have been sprayed to control Russian knapweed, perennial pepperweed and Canada thistle.
1998	At BPA's request the Sunnyside Wildlife Area Mitigation Management Plan was	N/A

	reformatted and submitted to BPA for approval. BPA approved the Management Plan in April, 1998.	
1998	Converted expiring CRP contracts to Production Flexibility Contracts and started the CRP enrollment of another 683 acres on the Thornton Unit.	Replaced dryland cropping with permanent grass/forbs to provide cover, nesting, and forage for sage grouse.
1998	Began shrub/tree planting on the Sunnyside Management Unit.	Shrub/tree plantings are to reestablish native cottonwood galleries in areas adjacent to the Yakima River to eventually provide black-capped chickadee, downy woodpecker, mink and heron habitat.
1998	Completed a Cultural Resource Survey	N/A

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
	Scotch Creek Wildlife Area:		
1	Operation and Maintenance		
		a	Project Administration
		b	Infrastructure Maintenance
		c	Administrative Supplies
		d	Fixed Costs and Utilities
		e	Vehicle Expenses
		f	Maintenance of Enhancements/Weed Control - Scotch Creek Management Unit
		g	Equipment Maintenance
		h	Fire Control Contract - Scotch Creek Management Unit
		i	Fence Maintenance - Tunk Valley Management Unit
		j	Maintenance of Enhancements/Weed Control - Tunk Valley Management Unit
		k	Fire Control Contract - Chesaw Management Unit
		l	Fence Maintenance - Chesaw Management Unit
		m	Maintenance of Enhancement/Weed Control - Chesaw Management Unit

Obj 1,2,3	Objective	Task a,b,c	Task
2	Enhancement		
		a	Scotch Creek - Sharp-tailed Grouse - Grassland Seedings
		b	Scotch Creek - Sharp-tailed Grouse - Shrub/Tree Planting
		c	Scotch Creek - Mule Deer - Grassland Seedings
		d	Scotch Creek - Mule Deer - Pruning, Fertilization
		e	Tunk Valley - Sharp-tailed Grouse - Grassland Seeding
		f	Chesaw - Sharp-tailed Grouse - Grassland Seeding
		g	Chesaw - Deer Winter Range - Shrub Pruning/Fertilization
3	Monitoring and Evaluation		
4	Administrative Overhead		
	Sunnyside Wildlife Area		
5	Operation and Maintenance		
		a	Project Administration
		b	Water Delivery Operation and Maintenance
		c	Fire Control
		d	Herbicide Training
		e	Administrative Supplies
		f	Equipment Maintenance
		g	Infrastructure Maintenance and Utilities
		h	Maintenance of Roads, Signs, Grass/Shrub Plantings
		i	Vehicle Costs and Bulk Fuel
		j	DNR Lease - Thornton Unit
		k	Fence Maintenance
		l	Miscellaneous Tools
		m	WA State Patrol Radio Fees
6	Enhancement		
		a	Giffin/Morgan Lake - Aquatic Vegetation Control
		b	Grass Seeding

Obj 1,2,3	Objective	Task a,b,c	Task
		c	Fencing
		d	Wood Duck Nest Boxes
		e	Weed Control
		f	Temporary Food Plots
7	Monitoring and Evaluation		
8	Administrative Overhead		
9	Shrub-steppe Acquisition		

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measurable biological objective(s)	Milestone	FY2000 Cost %
1	1/1997	Life of Project			9.7
2	5/1997	9/2001			6.3
3	9/1997	Life of Project			.1
4	1/1997	Life of Project			3.0
5	9/1997	Life of Project			8.6
6	9/1997	9/2001			5.1
7	9/1998	Life of Project			.1
8	9/1997	Life of Project			2.7
9	10/1999	10/2000			64.4
				Total	100.0

Schedule constraints

Completion date

Enhancement activities are scheduled for completion 9/30/2001, operation and maintenance activities will continue for the life of the project.

Section 5. Budget

FY99 project budget (BPA obligated):	\$3,130,100
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FY2000 budget by line item

Item	Note	% of total	FY2000 (\$)
Personnel		9.4	181,800
Fringe benefits		2.5	47,200

Supplies, materials, non-expendable property			
Operations & maintenance		6.3	120,650
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		64.4	1,231,335
NEPA costs			
Construction-related support			
PIT tags	# of tags:		
Travel		.1	1,200
Indirect costs		5.7	108,908
Subcontractor			
Other	Habitat Enhancement	11.4	218,042
	Monitoring and Evaluation	.2	3,200
TOTAL BPA REQUESTED BUDGET			1,912,335

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
US Fish and Wildlife Service	North American Wetlands Conservation Act Grant - funding for aquatic vegetation control	15.8	364,000
Pheasants Forever and the South Yakima Conservation District	Funding for aquatic vegetation control	.8	17,600
Total project cost (including BPA portion)			2,293,935

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	2,400,000	2,400,000	2,400,000	2,400,000

Section 6. References

Watershed?	Reference
	House Bill 1309, Ecosystems Standards for State-Owned Agricultural and Grazing Land, December 1994.
	Management Recommendations for Washington Priority Habitats and Species, Washington Department of Fish and Wildlife, May 1991.
	Tirhi, M.I. 1995. Washington State Management Plan for Sage Grouse, Washington Department of Fish and Wildlife, Olympia
	Ashley, P.A. 1992, Grand Coulee Dam Wildlife Mitigation Program

	Implementation, Sharp-tailed Grouse Programmatic Management Plan, Tracy Rock Vicinity, Lincoln County, Washington. Washington Department of Wildlife and Department of Energy Bonneville Power Administration.
	Miller, G.C. and W.D. Graul, 1980. Status of Sharp-tailed Grouse in North America, Prairie Grouse Symp. Oklahoma State University, Stillwater.
	Tirhi, M.I. 1995. Management of Columbian Sharp-tailed Grouse (<i>Tympanuchus phasianellus columbianus</i>) in Washington. Washington Department of Fish and Wildlife, Olympia.
	Sunnyside Wildlife Area Mitigation Management Plan, 1997.
	Sunnyside Wildlife Area Mitigation Management Plan, 1998.
	Scotch Creek Wildlife Area Mitigation Management Plan, 1997.
	Washington Wildlife Mitigation Projects, Final Programmatic Environmental Assessment (DOE/EA1096) and Finding of No Significant Impact. Bonneville Power Administration. 1996

PART II - NARRATIVE

Section 7. Abstract

The BPA and other entities, including WDFW, have entered into a Washington Wildlife Mitigation Agreement which obligates BPA to make available to WDFW \$21,840,000. WDFW uses its share for protection, mitigation, and enhancement of wildlife and wildlife habitat that has been adversely affected by the construction of Federal hydroelectric dams on the Columbia River or its tributaries. As a result of this Agreement, the final payment to WDFW from BPA occurs in FY2000. All enhancement activities are scheduled to be completed by 2003. This funding agreement allows WDFW to assist BPA in partially meeting its responsibilities under the Power Act.

The funding identified for FY 2000 will fund enhancement, operation and maintenance activities on the Sunnyside and Scotch Creek Wildlife Areas as well as acquisition of approximately 1,600 acres of shrub-steppe habitat.

Section 8. Project description

a. Technical and/or scientific background **Scotch Creek Wildlife Area**

In 1991, The Washington Department of Fish and Wildlife (WDFW) purchased what is now the Scotch Creek Wildlife Area, primarily for protecting critical Columbian sharp-tailed grouse habitat. Funding was provided through the Washington Wildlife and Recreation Coalition (WWRC). The sharp-tailed grouse is a candidate for state listing on WDFW species of concern list and is a candidate for federal listing. The primary management objective for the Wildlife Area is the recovery of sharp-tailed grouse habitats and the remnant grouse populations, however, mule deer habitat is also a major focus. The area encompasses 15,469 acres in three separate areas,

Scotch Creek, Tunk Valley and Chesaw.

Scotch Creek Wildlife Area is located in north-central Washington, approximately ten miles northwest of Omak and Okanogan, both are geographic population centers of Okanogan County. The area lies approximately 40 miles south of the Canadian Border and 100 miles north of Wenatchee. Mean precipitation of the area is 12.2 inches, with average annual snowfall about 28 inches.

Over the past 60 years, the area now known as Scotch Creek has undergone significant changes. As a working cattle ranch, much of the uplands were originally converted from native shrub-steppe grassland to grain fields of rye or wheat. Later these fields were seeded to crested and intermediate wheatgrass for livestock grazing. The native rangeland has been severely overgrazed, allowing the encroachment of diffuse knapweed and Russian knapweed. Another significant vegetation change was the removal of deciduous trees (primarily water birch) along the riparian corridor to accommodate alfalfa production. This practice drastically reduced critical wintering habitat for sharp-tailed grouse.

Sunnyside Wildlife Area

The Sunnyside mitigation project area encompasses approximately 10,538 acres along the floodplain of the Yakima River in the lower Yakima Valley and the upland area along Rattlesnake Ridge. The area is located between Union Gap and Mabton in Yakima County, and north of Prosser in Benton County on the Columbia Plateau. These properties lie between two major population bases in south-central Washington, Yakima and the Tri-Cities (Pasco, Kennewick and Richland). Several smaller communities lie between Yakima and the Tri-Cities and, along with the larger population bases, directly affect wildlife, fish habitat and water resources on lands owned and/or managed by WDFW. The Sunnyside Wildlife Area properties were acquired by WDFW between 1947 and 1994.

The Sunnyside Management Unit was purchased and is presently managed for waterfowl production and to increase upland bird habitat within the Lower Yakima Valley. In addition, migratory waterfowl use the area extensively during fall and spring migration periods and depending on climatic conditions, will also winter on the unit. Prior to WDFW's ownership of the Sunnyside Management Unit, it was farmed and grazed for years. As a result, WDFW inherited a significant weed infestation problem consisting of knapweed, pepperweed, and cheatgrass to name a few. There are six ponds or lakes varying in size from 15 surface acres to 100 surface acres on this Unit. Most surface water sites are saturated with lily pads and/or cattails, sedges, and rushes resulting in degraded waterfowl brood rearing habitat, poor water quality, and reduced recreational opportunities.

Although technically not a weed, Russian Olive has taken over many riparian shrub areas and upland sites to the detriment of native shrubs and trees.

The Byron Management Unit of the Sunnyside Wildlife area is punctuated by numerous ephemeral wetlands and permanent ponds that provide waterfowl brood rearing habitat. Uplands

are composed primarily of shallow soils, and occasional basalt rock outcrops with deeper soils occurring in the bottom of swales. Topography is relatively flat with low, rolling hills leading down to wetland basins. Elevation varies from approximately 685 feet in the southeast portion of the Unit to 700 feet on the north side of the area.

With the exception of annual flooding, the Byron Management Unit is plagued by the same weed problems as the Sunnyside. Knapweed, pepperweed, and cheatgrass are prevalent throughout the area along with a host of other exotic weed species. Although cheatgrass is found on most cover types, knapweed and pepperweed infestations are concentrated primarily along wetland shorelines, with ephemeral ponds, and other sub-irrigated/wet micro sites. Riparian shrub areas are dominated by Russian Olive trees. Limited soil depth also eliminates establishment of cottonwood trees on most of the site.

Unlike the Sunnyside Unit, palustrine and lacustrine cover types exhibit near optimum open water to cover ratios for waterfowl brood rearing. These cover types are most likely being under utilized at present due to poor waterfowl nesting habitat conditions on uplands. Historically this area was heavily grazed prior to WDFW's ownership and like the Sunnyside Unit WDFW inherited a significantly altered vegetaton landscape.

The Thornton Management Unit was purchased to protect shrub-steppe habitat in the Snipes Creek drainage and to increase recreational opportunities in this area. The primary management objective is to maintain/increase the shrub-steppe habitat component while eliminating the agricultural cover type for the benefit of mule deer, sage grouse, upland birds, and elk. Aproximately 1,346 acres of agricultural land has been converted into the Conservation Reserve Program and planted to native grass/forbs.

The Rattlesnake Slope Management Unit was purchased to protect, from further degration, some of the most ecologically sound shrub-steppe habitat remaining outside of the Arid Land Ecology and Hanford sites, and to increase recreational opportunities in the area. The primary management objective is to maintain and/or increase shrub-steppe habitat quality for the benefit of mule deer, sage grouse, upland birds, and elk. This Unit is composed of grassland and shrubgrass cover types. A wildfire in the early 1980's destroyed almost the entire sagebrush canopy layer leaving only 113 acres of sagebrush intact.

The I-82 Management Unit is comprised of small disjunct parcels extending approximately 13 miles between I-82 and the Yakima River. This Management Unit is subject to annual flooding events which influence future habitat conditions far more than WDFW management practices. BPA mitigation funds will only be used to pay for weed control on 40 acres of grassland within this unit.

The shub-steppe acquisition portion of this project proposal is indended to benefit sage and sharp-tailed grouse as well as other shrub-steppe dependant species. In eastern Washinton, sage grouse were historically common in the sagebrush flats bordering river tributaries. Numbers declined from the late 1800's to the early 1900's because of habitat conversion, grazing, and unrestricted hunting. In the 1920's and 1930's, grazing restrictions and the change from horse-plow to tractor farming reduced grazing by horses and allowed some recovery of rangeland. This resulted in

more sage grouse during the 1940's and 1950's. However, the population likely remained depressed in comparison to historic descriptions.

An indication of long-term sage grouse population trends in Washington was obtained through an analysis of lek counts. (Leks are areas where grouse gather for courtship rituals.) Lek counts performed since 1961 show annual fluctuations in the population. Efforts to perform standardized lek counts increased in 1970. The average number of males per lek indicates long-term population trend and is useful in monitoring local populations. The total number of leks used by sage grouse can remain the same even though the population is declining. A decline in the number of males per lek indicates a declining population. Although biologists visited more leks after 1970 to perform lek counts, the number of males per lek continually declined in Washington.

Reduction in the population and range of sage grouse in Washington is primarily attributed to habitat loss. Most shrub-steppe has been sprayed, plowed, mechanically treated, burned, cut or flattened to grow crops or forage for livestock. Approximately 50% of the shrub-steppe was converted for settlement and development of the western United States and Canada. Grazing of cattle, sheep, and horses by settlers and Native Americans began the era of rangeland degradation. Where shrub-steppe vegetation was grazed excessively by domestic animals, the density and canopy cover of native grasses was reduced allowing adapted alien species to invade.

Sage and Sharp-tail Grouse Acquisition

Remaining sage grouse range is severely fragmented because of land use practices. Without conservation effort the sage grouse population will not increase substantially over current levels and may continue to decline. Sagebrush removal and habitat conversion in Douglas County jeopardizes sage grouse stability. Priority management sites have been identified for Douglas County based on number of active leks and abundance of nesting and wintering habitat. Habitat features on priority sites must be protected and enhanced in the future. Criteria used to establish priority acquisition areas for sage grouse:

1. overlapping leks and winter-use areas on remaining shrub-steppe.
2. key wintering area.
3. areas of high-quality shrub-steppe currently occupied by sage grouse.
4. shrub-steppe less than or equal to 5 miles from active leks.
5. historic use areas and travel corridors.
6. areas supporting many shrub-steppe obligates.

BPA is obligated to mitigate for habitat and wildlife that were impacted by the construction of federal dams on the Columbia River. Sage grouse are one species that were impacted by those dams.

Columbian sharp-tailed grouse numbers have drastically declined in Washington over the past 100 years. Sharp-tails were plentiful in eastern Washington according to early explorers. A total number of 112 sharp-tailed grouse leks were documented between 1954 and 1994. Lek counts (total number of males) are used to estimate population size and stability. The number of males per lek and active leks also indicate stability of the population. Males per lek declined from 13 in 1954 to 5 in 1994. In Douglas County, 46% of active leks disappeared, 65% disappeared in

Okanogan County, and 61% disappeared in Lincoln County from 1954 to 1994.

The breeding population of sharp-tailed grouse in Washington is currently estimated at 380. These sharp-tails reside in scattered groups in Douglas, Lincoln, and Okanogan counties. Areas supporting the most sharp-tails include West Foster Creek, East Foster Creek, Cold Springs Basin, and Dyer Hill in Douglas County; Swanson Lakes Wildlife Area in Lincoln County; and the Tunk Valley and Chesaw Units of the Scotch Creek Wildlife Area in Okanogan County.

Sharp-tailed grouse decline in Washington is primarily attributed to loss of habitat. Before settlers arrived, climax shrub/meadow steppe communities in eastern Washington consisted of native brush species with an understory of native bunchgrass. Excessive livestock grazing, agriculture, and brush control using herbicides and fire are primarily responsible for loss of habitat. The meadow steppe of the Palouse and the shrub-steppe of the Columbia Basin were replaced with cultivated fields. Many brushy draws and creek bottoms were replaced with ditches and gullies. Pastures and fences formed of brush that provided food and cover for sharp-tails were removed. Sharp-tailed grouse experienced the greatest decline in numbers at approximately the same time cultivation peaked. It is estimated that shrub-steppe in eastern Washington covered an estimated 10.4 million acres before settlers arrived; approximately 40% remains. Remaining sharp-tail habitat is severely fragmented and is in poor condition, especially in Okanogan County where winter habitat has been removed. The following criteria are used to establish priority acquisition areas for sharp-tailed grouse:

1. seasonal use areas less than or equal to 1.6 miles of active leks.
2. areas of high-quality shrub/meadow steppe currently occupied by sharp-tails.
3. historic use areas and travel corridors.
4. areas supporting many shrub/meadow-steppe obligates.

BPA is obligated to mitigate for habitat and wildlife that were impacted by the construction of federal dams on the Columbia River. Sharp-tailed grouse is a species that was impacted by those dams.

This project proposal includes acquisition of approximately 1,600 acres of shrub-steppe habitat. Parcels have been identified in Douglas County which meet the priority acquisition criteria for both sage and sharp-tailed grouse.

b. Rationale and significance to Regional Programs

Pursuant to the Washington Wildlife Mitigation Agreement and Memorandum of Agreement between WDFW and BPA, BPA is obligated to fund the portion of the Agreement pertaining to wildlife habitat mitigation activities undertaken by WDFW. This Agreement serves to establish a monetary budget funded by BPA for projects proposed by WDFW and approved by BPA to protect, mitigate, and improve wildlife and/or wildlife habitat within the State of Washington that have been affected by the construction of Federal dams along the Columbia River.

WDFW has prepared management plans for individual wildlife areas that address existing habitat types and wildlife species, life history data, and species and habitat specific management

objectives. These management plans have been approved by BPA and guide habitat improvement activities that WDFW will conduct on its existing lands and as applicable on newly acquired lands. Mitigation project sites (wildlife areas) were selected because habitat types and species found there matched those impacted by the construction of the federal hydropower system.

The Habitat Evaluation Procedure (HEP), developed by the US Fish and Wildlife Service is the method used to document the quality and quantity of available habitat for selected wildlife species. HEP surveys have been conducted on existing sites and will be conducted on the proposed acquisition site. These surveys serve to document baseline conditions as well as identifying what is needed to develop optimum habitat conditions for the species. The results of the HEP survey are used to develop habitat specific management objectives. HEP will also be used to monitor and evaluate site specific results.

c. Relationships to other projects

In addition to the Scotch Creek Wildlife Area, one other project is being funded by BPA and managed for sharp-tailed grouse recovery. The Swanson Lakes and Scotch Creek Wildlife Areas were both selected by an inter-disciplinary team, using HEP, as a key areas for grouse recovery. Both areas were also identified in the WDFW Sharp-tailed Grouse Management Plan (see references). Management strategies on both areas are similar.

Monitoring and evaluation for both areas will be using the same protocol. HEP derived enhancement and maintenance activities will be monitored in some cases on an annual basis, using photo plots and HEP baseline habitat evaluation survey techniques, i.e. Visual Obstruction Readings (VOR) for grassland seedings and line intercepts for shrub canopy closure measurements.

Photo plots and vegetation transects will be established on a permanent basis to facilitate future replications. Plot/transect methods and results will be recorded and maintained as a "stand alone" document. Additionally, the baseline HEP transects will be replicated in areas not directly effected by enhancement activities every five years for habitat trend analysis purposes. Progress towards the desired future condition will be assessed every five years using field visits and annual monitoring data. This information will be used to determine whether the evaluaton results provide a basis for change in management emphasis.

Sharp-tail lek surveys will continue annually to assess grouse population response to habitat enhancements.

d. Project history (for ongoing projects)

The Scotch Creek Wildlife Mitigation project began in 1997 and the Sunnyside Wildlife Mitigation project began in 1998. BPA conducted an Environmental Assessment (DOE/EA-1096) with a Finding of No Significant Impact in August 1996. This Assessment covered the Scotch Creek and Sunnyside Wildlife Areas as well as proposed shrub-steppe acquisitions.

e. Proposal objectives

BPA will receive 17,500 Habitat Unit credit towards their mitigation debt by funding the Scotch Creek and Sunnyside Wildlife Areas and the acquisition of approximately 1,600 acres of shrub-steppe habitat.

The management objective for the Scotch Creek Wildlife Area is to permit habitat recovery and allow sharp-tailed grouse numbers to stabilize or increase.

The management objective for the Sunnyside Wildlife Area is to perform habitat restoration activities to benefit Mallard, Western Meadowlark, Canada Goose, Yellow Warbler, Downy Woodpecker, Mink, California Quail, Black-capped Chickadee, Great Blue Heron, Mule Deer and Sage Grouse.

Acquisition of shrub-steppe habitat primary objective is to protect sharp-tailed and sage grouse habitat.

f. Methods

Acquisition of approximately 1,600 acres of shrub-steppe habitat.

Scotch Creek Wildlife Area Habitat Enhancement Activities:

Scotch Creek Management Unit:

Sharp-tailed Grouse:

145 acres grassland planting

9,075 riparian shrub/shrubgrass planting

Mule Deer:

22 acres shrub pruning/fertilization

1 acre grassland planting

Tunk Valley Management Unit:

Sharp-tailed Grouse:

100 acres grassland planting

Chesaw Management Unit:

Sharp-tailed Grouse:

10,000 riparian shrub planting

Mule Deer:

12 acres shrub pruning/fertilization

Sunnyside Wildlife Area Habitat Enhancement Activities:

Sunnyside Management Unit:

Weed Control - 550 acres

Spot Weed Control - 150 acres
 Grass Seedings - 135 acres
 Russian Olive Removal - 40 acres
 Goose Pasture Maintenance - 80 acres
 Temporary Food Plots - 10 acres
 Aquatic Vegetation Control - Giffin/Morgan Lakes

Byron Management Unit:

Weed Control - 70 acres
 Russian Olive Removal - 10 acres
 Grass Seedings - 15 acres

Thornton Management Unit:

Develop Firebreaks - 5.25 miles
 Install Fence - 3 miles
 Weed Control - 693 acres

Rattlesnake Slope Management Unit:

Develop Firebreaks - 9.5 miles
 Weed Control (spot spray) - 5 acres

I-82 Management Unit:

Weed Control - 40 acres

g. Facilities and equipment

BPA has already provided funding for the necessary equipment for these projects. No equipment purchases are being proposed.

h. Budget

Obj 1,2,3	Objective	Task a,b,c	Budget	Task
	Scotch Creek Wildlife Area:			
1	Operation and Maintenance			
		a	119,000	Project Administration: Wildlife Area Manager, Assistant Manager, 9-month seasonal employee
		b	15,000	Infrastructure Maintenance: buildings, irrigation system, signs, roads
		c	2,000	Administrative supplies: maps, film, computer supplies, postage, office supplies
		d	7,000	Fixed Costs and Utilities
		e	12,000	Vehicle Expenses
		f	15,000	Maintenance of Enhancements/Weed

Obj 1,2,3	Objective	Task a,b,c		Task
				Control - Scotch Creek Management Unit
		g	8,000	Equipment Maintenance
		h	1,200	Fire Control Contract - Scotch Creek Management Unit
		i	500	Fence Maintenance - Tunk Valley Management Unit
		j	500	Maintenance of Enhancements/Weed control - Tunk Valley Management Unit
		k	500	Fire Control Contract - Chesaw Management Unit
		l	1,000	Fence Maintenance - Chesaw Management Unit
		m	4,000	Maintenance of Enhancement/Weed Control - Chesaw Management Unit
2	Enhancement			
		a	27,600	Scotch Creek - Sharp-tailed Grouse - Grassland Seedings
		b	29,494	Scotch Creek - Sharp-tailed Grouse - Shrub/Tree Planting
		c	300	Scotch Creek - Mule Deer - Grassland Seedings
		d	4,200	Scotch Creek - Mule Deer - Pruning, Fertilization
		e	23,848	Tunk Valley - Sharp-tailed Grouse - Grassland Seeding
		f	32,500	Chesaw - Sharp-tailed Grouse - Shrub/Tree Planting
		g	2,000	Chesaw - Deer Winter Range - Shrub Pruning/Fertilization
3	Monitoring and Evaluation		1,200	
4	Administrative Overhead		58,158	
	Sunnyside Wildlife Area		Budget	
5	Operation and Maintenance			
		a	110,000	Project Administration: Wildlife Area Manager, 24 months temporary Habitat Assistants
		b	2,750	Water Delivery Operation and Maintenance

Obj 1,2,3	Objective	Task a,b,c		Task
		c	2,700	Fire Control Contract
		d	1,000	Herbicide Training
		e	1,000	Administrative Supplies: maps, film, computer supplies, postage, office supplies
		f	10,000	Equipment Maintenance
		g	11,000	Infrastructure Maintenance and Utilities
		h	10,000	Maintenance of Roads, Signs, Grass/Shrub Plantings
		i	12,000	Vehicle Costs and Bulk Fuel
		j	300	DNR Lease - Thornton Unit-400 acres
		k	700	Fence Maintenance
		l	500	Misc. Tools
		m	2,000	Wash. State Patrol Radio Fees
6	Enhancement			
		a	25,000	Giffin/Morgan Lake - Aquatic Vegetation Control
		b	15,300	Grass Seeding
		c	22,500	Fencing
		d	500	Wood Duck Nest Boxes
		e	34,500	Weed Control
		f	300	Temporary Food Plots
7	Monitoring and Evaluation		2,000	
8	Administrative Overhead		50,750	
9	Shrub-steppe Acquisition		1,231,335	Acquisition of approximately 1,600 acres of shrub-steppe habitat.
	Total		1,912,335	

Section 9. Key personnel

Scotch Creek Wildlife Area: Wildlife Area Manager (Biologist 3), Assistant Manager (Habitat Tech. 2), 9 months seasonal assistants.

Sunnyside Wildlife Area: Wildlife Area Manager (Biologist 3), 24 months temporary Habitat Assistants.

All project personnel meet or exceed specific qualifications necessary to implement the management plans approved by BPA.

Section 10. Information/technology transfer

The Wildlife Caucus of the Columbia Basin Fish and Wildlife Authority is in the process of developing standard protocols for monitoring, evaluation and species response data. Once this system is in place all data derived from these projects will be made available.

Congratulations!