

Appendix J. Implementation

J.1 Overview

Implementation of the CCP will require increased funding, which will be sought from a variety of sources. This plan will depend on additional Congressional allocations, partnerships and grants. There are no guarantees that additional Federal funds will be made available to implement any of these projects. Other sources of funds will need to be obtained (both public and private). Activities and projects identified will be implemented as funds become available.

Operational management of Refuge lands is accomplished by permanent and temporary staffing, volunteers and partnerships. Operational management includes managing public use, law enforcement, biology, fire, maintenance, administration, and habitat management programs on the Refuge.

Many of the infrastructure and facility projects will be eligible for funding through construction or Transportation Equity Act (TEA 21) funds (i.e. Refuge Roads).

The CCP proposes several projects to be implemented over the next 15 years. All of these projects are included in either the Refuge Operational Needs System (RONS) or the Service Asset Management System (SAMMS). Both are used to request funding from Congress. Currently, a large backlog of maintenance needs exists on the Refuges. In 2007, the deferred maintenance backlog for Julia Butler Hansen and Lewis and Clark Refuges was \$2.5 million. Reduction of the backlog is an ongoing goal and is included here in the analysis of funding needs. The Refuge Operational Needs System (RONS) documents proposed new projects to implement the CCP to meet Refuge goals and objectives and legal mandates.

Annual revenue sharing payments to Clatsop and Columbia County, Oregon and Wahkiakum County, Washington will continue. Total revenue sharing payments made in 2007 were \$18,000, to Clatsop County, \$6,000 to Columbia County and \$12,000 to Wahkiakum County.

Monitoring activities will be conducted on a percentage of all new and existing projects and activities to document wildlife populations and changes across time, habitat conditions, and responses to management practices. Actual monitoring and evaluation procedures will be detailed in step-down management plans.

J.2 Costs to Implement CCP, by Alternative

The following sections detail both one time and recurring costs for various projects, by alternative. One time costs reflect the initial costs associated with a project whether it is purchase of equipment, contracting services, or construction. Recurring costs reflect the future operational and maintenance costs associated with the project.

One Time Costs

One time costs are project costs that have a start up cost associated with them, such as purchasing a new vehicle for wildlife and habitat monitoring or designing and installing an interpretive sign. These projects are usually projects that can be completed in three years or less. These projects do not include permanent operational costs (staff salary and support). They can, however, include the cost of temporary or term salary associated with a short term project. Salary for new positions and operational costs are reflected in operational or recurring costs.

Funds for one time costs will be sought through increases in Refuge base funding, special project funds, grants, Refuge Roads or Transportation Equity Act (TEA3) funding, and fire funds. Projects listed in Tables J-1 through J-5 show one time costs, such as those associated with refuge facilities such as offices, public use facilities, road improvements, and new signs. One time costs are also associated with habitat restoration and protection projects such as specific riparian and wetland projects or research. New research projects, because of their short term nature are considered one time projects, and include costs of contracting services or hiring a temporary employee for the short term project. Tables J-1 and J-2 compare the one time costs between the various alternatives for the Lewis and Clark Refuge while Tables J-3, J-4, and J-5 do the same for the Julia Butler Hansen Refuge.

Lewis and Clark Refuge

Table J-1. One Time Costs (in thousands) for Research, Monitoring, and Planning

Research and Monitoring Projects	Priority	Unit	Unit Cost (in dollars)	Alt 1	Alt 2	Potential Fund Source
Monitor species composition, distribution, and timing of migratory bird use of the refuge, including mid-winter waterfowl survey, bald eagle survey, and dusky Canada goose survey Obj 2.8.7.1A	H	Project	20	20	20	*
Work with graduate programs to conduct research/monitoring studies	M	Project	10	0	10	*
Monitor species composition, distribution, and life history attributes of fishery resources	H	Project	30	30	30	*
Identify high-priority, wilderness-related research and monitoring needs for the Refuge Islands WSA	M	Project	10	0	10	*
Monitor the status of wilderness character within the Refuge Islands WSA and its conduct avoids generally prohibited uses	M	Project	10	0	10	*
All Research, Monitoring and Planning Projects Subtotal (thousands)				\$50	\$80	
High Priority Research, Planning, and Monitoring Only (thousands)				\$50	\$50	

* Projects will be funded as opportunities arise.

Table J-2. One Time Costs (in thousands) for Habitat Management

Habitat Projects	Priority	Unit	Unit cost (in dollars)	Alt 1	Alt 2	Fund Source
Protect Scrub-Shrub Swamp Habitat on Refuge over 15 years - Obj 2.8.1.1						
<i>number of acres</i>				2,360	2,360	*
total cost	H	ac	\$5	\$12	\$12	
Protect Sitka Spruce Swamp Habitat on Refuge over 15 years - Obj 2.8.1.2						
<i>number of acres</i>				285	285	*
total cost	H	ac	\$25	\$9	\$9	
Protect Cottonwood/Willow Swamp Habitat on Refuge over 15 years - Obj 2.8.1.3						
<i>number of acres</i>				127	127	*
total cost	H	ac	\$25	\$3	\$3	
Protect Emergent Tidal Marsh Habitat on Refuge over 15 years - Obj 2.8.2.1						
<i>number of acres</i>				4,000	4,000	*
total cost	H	ac	\$5	\$20	\$20	
Protect Mudflats and Sandbars on Refuge over 15 years - Obj 2.8.3.1						
<i>number of acres</i>				7,610	7,610	*
total cost	H	ac	\$5	\$38	\$38	
Protect Upland Forest on Refuge over 15 years Obj 2.8.4.1						
<i>number of acres</i>				80	80	*
total cost	M	ac	\$50	\$4	\$4	
Protect Riparian Forest on Refuge over 15 years Obj 2.8.4.2						
<i>number of acres</i>				470	470	*
total cost	H	ac	\$50	\$24	\$24	
Protect riverine and estuarine open water and slough habitats Obj 2.8.5.1						
<i>number of acres</i>				7,775	7,775	*
total cost	H	ac	\$5	\$39	\$39	
All Habitat Projects Subtotal (in thousands)				\$148	\$148	
High Priority Habitat only Subtotal (in thousands)				\$144	\$144	

* Projects will be funded as opportunities arise.

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Table J-3. One Time Costs (in thousands) for Research and Monitoring Projects

Research and Monitoring Projects	Priority	Unit	Unit Cost (in dollars)	Alt 1	Alt 2	Alt 3	Fund Source
Monitor migratory bird species composition, distribution, and timing of refuge use including surveys of mid-winter waterfowl, bald eagles, and dusky Canada geese.	H	Project	\$20	\$20	\$20	20	*
Work with graduate school programs to conduct research and monitoring studies.	M	Project	\$10	\$10	\$10	10	*
Monitor fish species composition, distribution, and life history attributes.	H	Project	\$30	\$30	\$30	30	*
Identify high-priority, wilderness-related research and monitoring needs for the Refuge Islands WSA.	M	Project	\$10	\$0	\$10	0	*
Monitor the status of wilderness character within the Refuge Islands WSA and its conduct avoids generally prohibited uses	M	Project	\$10	\$0	\$10	0	*
All Research, Monitoring, and Planning Projects Subtotal (thousands)				\$60	\$80	60	*
High Priority Research, Planning, and Monitoring Only (thousands)				\$50	\$50	\$50	*

* Projects will be funded as opportunities arise.

Table J-4. One Time Costs (in thousands) for Facilities

Facilities Projects	Priority	Unit	Unit Cost (in dollars)	Alt 1	Alt 2	Alt 3	Fund Source
Enhance Hwy 4 wildlife viewing site by Obj 8.1A	M	Mainland	\$70	\$0	\$70	\$70	*
Auto pull-outs for wildlife observation on Steamboat Slough Road Obj 2.8.8.1 B	M	Mainland	\$120	\$0	\$120	\$120	*
Install spotting scopes at two additional viewing areas Obj 2.8.8.1 C	M	Mainland	\$20	\$0	\$0	\$20	*
Add mile markers on auto tour route and trails Obj 2.8.8.1 D	M	Mainland	\$10	\$0	\$0	\$10	*
Develop an all-season hiking and cycling route Obj 2.8.8.1 E	H	Mainland	\$150	\$0	\$150	\$150	*
Install interpretive panel/map at Steamboat Slough Road Tennesillahe Island viewpoint Obj 2.8.8.1 F	M	Mainland	\$40	\$0	\$40	\$40	*
Improve signage to better delineate refuge hunt boundaries Obj 2.8.8.2 A	H	Refuge	\$60	\$60	\$60	\$60	*
Improve signage to more clearly delineate fishing opportunities Obj 2.8.8.3 A	M	Mainland	\$10	\$0	\$10	\$10	*
All Facilities Subtotal (thousands)				\$60	\$450	\$480	*
High Priority Facilities Subtotal (thousands)				\$60	\$210	\$210	*

* Projects will be funded as opportunities arise.

Table J-5. One Time Costs (in thousands) for Habitat Management

Habitat Projects	Priority	Unit	Unit Cost (in dollars)	Alt 1	Alt 2	Alt 3	Fund Source
Manage Short Grass Fields on Refuge over 15 years - Obj 2.8.1.1							
<i>number of acres</i>				790	950	790	*
total cost	H	ac	\$90	\$32	\$38	\$32	
Restore and Maintain Early Successional Riparian Forest on Refuge over 15 years - Obj 2.8.2.1							
<i>number of acres</i>				210	400	210	*
total cost	H	ac	\$900	\$9	\$9	\$9	
Maintain Mid-successional Riparian Forest on Refuge over 15 years - Obj 2.8.2.2							
<i>number of acres</i>				90	90	90	*
total cost	H	ac	\$40	\$0	\$0	\$0	
Maintain Late-successional Riparian Forest on Refuge over 15 years - Obj 2.8.2.3							
<i>number of acres</i>				875	875	875	*
total cost	H	ac	\$10	\$10	\$10	\$10	
Restore and Maintain Non-tidal Wetland Habitat on Refuge over 15 years - Obj 2.8.3.1							
<i>number of acres</i>				132	172	132	*
total cost	H	ac	\$5	\$12	\$15	\$12	
Maintain and Protect Existing Sloughs on Refuge over 15 years Obj 2.8.3.2							
<i>number of acres</i>				156	156	156	*
total cost	M	ac	\$5	\$140	\$140	\$140	
Maintain and Protect Scrub-Shrub Swamp on Refuge over 15 years Obj 2.8.4.1							
<i>number of acres</i>				865	865	865	*
total cost	H	ac	\$5	\$35	\$35	\$35	
Maintain and Protect Sitka-Spruce Swamp on Refuge over 15 Years Obj 2.8.4.2							
<i>number of acres</i>				356	356	356	*
total cost	H	ac	\$5	\$4	\$4	\$4	
Maintain and Protect Cottonwood/Willow Swamp on Refuge over 15 Years Obj 2.8.4.3							

Habitat Projects	Priority	Unit	Unit Cost (in dollars)	Alt 1	Alt 2	Alt 3	Fund Source
<i>number of acres</i>				625	625	625	*
total cost	H	ac	\$5	\$56	\$56	\$56	
Maintain and Protect Emergent Tidal Marsh on Refuge over 15 Years Obj 2.8.4.4							
<i>number of acres</i>				330	330	330	*
total cost	H	ac	\$5	\$30	\$30	\$30	
Maintain and Protect Open Water and Tidal Slough Habitat on Refuge over 15 Years Obj 2.8.4.5							
<i>number of acres</i>				300	300	300	*
total cost	H	ac	\$5	\$27	\$27	\$27	
All Habitat Projects Subtotal (in thousands)				\$354	\$364	\$354	
High Priority Habitat only Subtotal (in thousands)				\$214	\$308	\$214	

* Projects will be funded as opportunities arise.

Operational and Maintenance (Recurring) Costs

Operational and maintenance costs reflect Refuge spending of base funds allocated each year. These are also known as recurring costs and are usually associated with day to day operations and projects that last longer than three years. Operational costs use base funding in Service fund codes 1261, 1262, 1263, 1264, 1265, 9131, 9263, and 9264.

Maintenance includes preventative maintenance; cyclic maintenance; repairs; replacement of parts, components, or items of equipment; adjustments, lubrication, and cleaning (non janitorial) of equipment, painting; resurfacing; rehabilitation; special safety inspections; and other actions to assure continuing service and to prevent breakdown. Alternatives 1, 2, and 3 reflect the backlog and chart the increased maintenance need associated with new facilities and additional acquisitions.

Tables J-6 and J-7 displays operating and maintenance costs by alternative by refuge. Alternatives 1, 2, and 3 reflect increased funding needs for proposed increases in public uses and facilities, increased habitat restoration and conservation activities, and new monitoring needs. This table includes such things as salary, operational expenditures such as travel, training, supplies, utilities and annual maintenance costs.

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Table J-6. Operational (Recurring) costs (in thousands).

Project	Action	Resources Needed	Alt 1	Alt 2
1.a Survey and Censuses	All methods of enumerating fish and wildlife populations, vegetative habitats, analysis, interpretation and reporting.	1260- Biologist & Bio Techs and Volunteers	\$20	\$20
1.b Studies and Investigations	Research projects for managing fish and wildlife populations and habitats.	1260 - Biologist & Cooperators	\$10	\$10
2.a Wetland Restoration	The conversion of altered or degraded on-refuge wetland habitats, including riparian zones back to their original conditions.	1260, Special project funds	\$0	\$0
2.b Upland/ island/cliff Mgmt	The conversion of altered or degraded refuge upland habitats back to their original condition by such actions as replanting native species.	1260 & special project funds	\$0	\$0
3.a Wetland Management	Manipulating water bodies to affect vegetation and/or create desired wildlife conditions.	1260 funds	\$0	\$0
3.b Riparian Habitat Management	Planting of native trees and brush to mimic historic conditions.	1260 funds	\$0	\$0

Project	Action	Resources Needed	Alt 1	Alt 2
3.c Graze/Mow/Hay Crop Management	The management of grasslands and other habitats for the benefit of wildlife by cropland, grazing, mowing, or haying.	1260 funds	\$0	\$0
3.f Fire Management	Prescribed burning and wildfire preparedness activities. Follow-up monitoring and reporting.	1260 funds	\$0	\$0
3.g Native Pest Plant Control		1260 & special project funds	\$10	\$10
3.h Invasive Plant Management	The eradication, reduction, or control of invasive or exotic plants. Includes monitoring.	1260, special project funds	\$25	\$25
4.a Bird Banding	Marking and banding of birds.		\$0	\$0
5.a Interagency Coordination	Interacting with other Federal, State and local governments to share information, resolve problems, develop cooperative efforts, and manage species and habitats.	1260 funds	\$50	\$50
5.b Tribal Coordination	Activities associated with the development of cooperative agreements, MOUs, annual funding agreements and similar cooperation/coordination/communications efforts with tribes.	*	0	0
5.c Private Lands Activities	Assist private landowners with habitat improvement and wildlife issues (Initiate stewardship).	1260, Special project funds	\$50	\$50
5.d Wildlife Population Management		1260, Special Project Funds, Biologist	\$10	\$10
6.a Law Enforcement	Public Safety, Resource Protection, Hunt Program	1260, Law Enforcement Officer	\$100	\$100
7.a Visitor Services and Outreach	Providing access, facilities, and programs for refuge visitors. Planning, construction, operation and maintenance of visitor facilities such as roads, trails, signs. Interpretation, environmental education, hunting and other recreation. Off-site presentations, exhibits, news releases, and radio/TV spots.		\$10	\$10
TOTALS	Subtotals Annual Operational Costs (in thousands)		\$285	\$285
	Operational Costs over 15 years (in thousands)		\$4,275	\$4,275

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Table J-7. Operational (Recurring) costs (in thousands).

Project	Action	Resources Needed	Alt 1	Alt 2	Alt 3
1.a Survey and Censuses	All methods of enumerating fish and wildlife populations, vegetative habitats, analysis, interpretation and reporting.	1260-Biologist /Bio Techs and Volunteers	\$20	\$30	\$20
1.b Studies & Investigations	Research projects for managing fish and wildlife populations and habitats.	1260-Biologist & Cooperators	\$10	\$20	\$10
2.a Wetland Restoration	The conversion of altered or degraded on-refuge wetland habitats, including riparian zones back to their original conditions.	1260, Special project funds	\$0	\$30	\$0
2.b Upland/island/cliff Mgmt	The conversion of altered or degraded on-refuge upland habitats back to their original condition by such actions as replanting native species.	1260, special project funds	\$10	\$15	\$10
3.a Wetland Management	The manipulation of water bodies to affect vegetation and/or create desired wildlife conditions.	1260, special project funds	\$20	\$25	\$20

Project	Action	Resources Needed	Alt 1	Alt 2	Alt 3
3.b Riparian Habitat Management	Planting native trees and brush to mimic historic conditions.	1260, special project funds	\$50	\$80	\$50
3.c Graze/Mow /Hay Crop Management	The management of grasslands and other habitats to benefit wildlife by cropland grazing, mowing, or haying.	1260, special project funds	\$10	\$10	\$10
3.f Fire Management	Prescribed burning and wildfire preparedness activities. Follow-up monitoring and reporting.	*	\$0	\$0	\$0
3.g Native Pest Plant Control		1260, special project funds	\$10	\$10	\$10
3.h Invasive Plant Management	The eradication, reduction, or control of invasive or exotic plants. Includes monitoring.	1260, special project funds	\$25	\$25	\$25
4.a Bird Banding	Marking and banding birds.	*			
5.a Interagency Coordination	Coordinate with Federal/State/local governments to share information, resolve issues, develop cooperative efforts, and manage species/habitats.	1260 funds	\$10	\$10	\$10
5.b Tribal Coordination	Activities associated with the development of cooperative agreements, MOU's, annual funding agreements and similar cooperation/coordination/communications efforts with tribes.	*			
5.c Private Lands Activities	Efforts to assist private landowners with habitat improvement and wildlife issues. (Initiate Stewardship Mgt.)	1260, Special project funds	\$10	\$10	\$10
Wildlife Population Management		1260, Special Project Funds, Biologist	\$25	\$50	\$25
6.a Law Enforcement	Public Safety, Resource Protection, Hunt Program.	1260, Law Enforcement Officer	\$100	\$100	\$100
6.e Water Rights Managements	Compliance with state and Federal laws to protect and achieve adequate supplies of water. Reading, maintaining and installing measurement devices and gauging stations, preparing water mgt. plans, also monitoring off-refuge water uses.	1260, Special project funds	\$5	\$5	\$5
6.f Cultural Resource Management	Supporting the study and protection of significant prehistoric and historic sites. Evaluation and management of cultural resources and property.	Special Project Funds	\$5	\$5	\$5
6.g Land Acquisition Support	Staff participation in land acquisition activities, including development of acquisition proposals, appraisals, meetings, inventories and surveys.	*			
7.a Visitor Services	Providing access, facilities, and programs for refuge visitors. Planning, construction, operation and maintenance of visitor facilities such as roads, trails, signs. Interpretation, environmental education, hunting and other recreation.	1260 funds	\$20	\$20	\$40
7.b Outreach	Off-site education of public about Service activities through presentations, exhibits, news releases, and radio/TV spots.	1260 funds	\$5	\$5	\$10
TOTALS	Subtotals Annual Operational Costs (in thousands)		\$335	\$450	\$360
	Operational Costs over 15 years (in thousands)		\$5,025	\$6,750	\$5,400

Staffing

Table J-8 includes costs for permanent and seasonal staff for both refuges needed each year. It does not include staff costs associated with special projects; these are summarized in Tables J-1 through J-5.

Table J-8. Annual costs of staff salaries and benefits by alternative

Staff – Refuge Operations	Status	Positions	Salary
Project Leader (Supported From Willapa Complex HQ)	PFT	GS-0485-14	96,690
Deputy Project Leader (Supported From Willapa Complex HQ)	PFT	GS-0485-13	81,823
Visitor Services Specialist (Supported From Willapa Complex HQ)	PFT	GS-0023-11	57,408
Administrative Officer (Supported From Willapa Complex HQ)	PFT	GS-0341-09	47,448
Refuge Manager	PFT	GS-0485-11	57,408
Wildlife Biologist	PFT	GS-0486-12	57,408
Law Enforcement Officer	PFT	GS-0025-09	47,448
Engineering Equipment Operator	PFT	WG-5716-10	42,655
Total Positions/Salaries	8	8	488,288.00

PFT: Permanent Full Time, PS: Permanent Seasonal, Temp: Temporary Position, Term: Term Position, GS: General Schedule Federal Employee, WG: Wage Grade Scale

Budget Summary

Tables J-9 and 10 summarize the data from the above tables and display the overall annual funding need, by alternative, for each refuge.

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Table J-9. Summary of Refuge Annual Funding Need, by CCP Alternative (in thousands)

	Alt 1	Alt 2
All projects - One time expenditures (total costs over 15 years), in thousands		
Research and Monitoring	50	80
Facilities	0	0
Habitat Management	148	148
A. Subtotal One Time Expenditures – All	198	228
High Priority Projects - One time expenditures (total costs over 15 years), in thousands		
Research and Monitoring	50	50
Facilities	0	0
Habitat Management	144	144
B. Subtotal One Time Expenditures high priority projects only	194	194
Recurring Costs – all (total costs over 15 years), in thousands		
C. Recurring Costs – all projects/salaries/Maintenance	4,275	4,275
Total Annual Need – All projects. (In thousands) (A + C)/15		
	298	300
Total Annual Need – High Priority Projects Only (In thousands) (B + C)/15		
	298	298

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Table J-10. Summary of Refuge Annual Funding Need, by CCP Alternative

	Alt 1	Alt 2	Alt 3
All projects - One time expenditures (total costs over 15 years), in thousands			
Research and Monitoring	60	80	60
Facilities	60	450	480
Habitat Management	354	364	354
A. Subtotal One Time Expenditures--All	474	884	894
High Priority Projects - One time expenditures (total costs over 15 years), in thousands			
Research and Monitoring	50	50	60
Facilities	60	210	210
Habitat Management	214	308	214
B. Subtotal One Time Expenditures high priority projects only	760	568	484
Recurring Costs – all (total costs over 15 years), in thousands			
C. Recurring Costs – all projects/salaries/Maintenance	5,025	6,750	5,400
Total Annual Need – All projects. (In thousands) (A + C)/15			
	409	563	420
Total Annual Need – High Priority Projects Only (In thousands) (B + C)/15			
	386	589	392

