

## Estimating O&M Cost for Lands Managed by WDFW – K. Merg



The cost of managing natural lands varies widely by parcel, making it crucial to estimate and to secure sufficient O&M funding when WDFW acquires additional lands. Accordingly, below we have improved the historic baseline cost estimate for WDFW land management (\$13/acre\*) by including several costs formerly excluded. The result concurs with baseline estimates from two published cost analyses of natural lands management (CNLM 2004, Mann et al. 2007).

The two major costs of operating WDFW WLAs are 1) the cost of maintaining infrastructure against depreciation, and 2) the scope-dependent cost of executing a specific management plan, which determines staffing need. WDFW is unable to fund fully either in its current Lands portfolio. We improve our overall baseline estimate below by ranking costs of depreciation and needed staff as low, medium or high for each of our BPA-funded WLAs\*\*. We add the ranks (1=low, 2=medium, 3=high) to get a five-level, combined rank (Cost Category) ranging from least expensive scenario (rank [1+1]=2), to most expensive scenario (rank [3+3]=6). We deconstruct these full-cost scenarios in Figure 1.

Cost Category Rank 3 (\$52/acre) is comparable to the weighted, average cost per acre (\$46.66) for our BPA-funded portfolio, and while 52\$/acre is four times our historic figure of \$13/acre, Cost Category Rank 3 also represents costs on more of WDFW's total acres than any other rank. Our historic figure has never included costs of Infrastructure Maintenance, especially of buildings, roads and fences and of replacing large equipment; Enforcement; Administration and Technical Support or Biological Monitoring. The historic figure also has constrained us from fully staffing our Wildlife Areas and has been insufficient for us to pay costs driven up by climate change, primarily for accelerating weed invasions and for increasing frequency and scope of wildfires. Finally, Cost Category Rank 3 (\$52) compares favorably to the \$51 and \$48 (in 2004 dollars) reported by CNLM (2004) and adjusted from Mann et al. (2007), respectively. This suggests that our new, \$52/acre baseline is more accurate than the historic baseline that it replaces.

Wildlife Area	Acres	Current Annual Spending	Current Annual Spending, \$/ac.	Needed Additions			Enforce, Admin/Tech Support, Monitor	Annual Need, \$/ac.	Cost Category	Average Cost of Rank
				Additional staff	Depreciation					
Wenas	74,953	\$ 572,656	\$ 7.64	\$ 290,528	\$ 125,707	\$ 734,539	\$ 22.99	2	\$ 32.00	
Swanson Lakes	20,065	\$ 294,346	\$ 14.67	\$ 138,862	\$ 181,263	\$ 196,637	\$ 40.42	2		
Asotin	11,323	\$ 254,598	\$ 22.49	\$ 98,744	\$ 69,938	\$ 110,965	\$ 47.18	3	\$ 52.00	
Scotch Creek	22,208	\$ 499,163	\$ 22.48	\$ 308,584	\$ 236,318	\$ 217,638	\$ 56.81	3		
Sagebrush Flat	12,470	\$ 384,621	\$ 30.84	\$ 206,408	\$ 240,721	\$ 122,206	\$ 76.50	4	\$ 101.00	
Sunnyside	8,391	\$ 687,438	\$ 81.93	\$ 98,744	\$ 169,688	\$ 82,232	\$ 123.72	4		
Desert	1,744	\$ 183,810	\$ 105.40	\$ 70,465	\$ 40,828	\$ 17,091	\$ 179.01	5	\$ 180.00	
Shillapoo	2,371	\$ 312,152	\$ 131.65	\$ 58,675	\$ 135,067	\$ 23,236	\$ 223.17	6	\$ 224.00	
	<b>153,525</b>	<b>\$ 3,188,785</b>	<b>\$ 20.77</b>	<b>\$ 1,271,010</b>	<b>\$ 1,199,529</b>	<b>\$ 1,504,545</b>	<b>\$ 46.66</b>			

Figure 1. Enumeration of projected whole costs of operating BPA-funded, WDFW wildlife areas.

\* The \$13/acre figure was based on the sum of existing wildlife area budgets at a specific point in time divided by the number of acres managed. This number did not capture funds needed including administrative costs, enforcement costs, costs for more comprehensive weed management, etc.

\*\* We are basing this statewide estimate of O/M need on our BPA funded wildlife areas because we have done the most research on the management needs of these lands. We are using this as an average to extrapolate needs to our entire system.

#### Literature Cited

CNLM. 2004. Natural Lands Management Cost Analysis: 28 Case Studies. Page 22. Environmental Protection Agency, Arizona, California.

Mann, R., N. R. Netusil, H. Radtke, J. Duffield, J. R. Hamilton, and S. S. Hanna. 2007. Investigation of Wildlife O&M Costs. Page 42. Independent Economic Analysis Board, Portland, OR.