Former Fort Ord Habitat Management Plan Cost Estimate

Habitat Working Group February 21, 2020

> Aaron Gabbe, Ph.D. ICF Bernadette Clueit, ICF Ellen Martin, EPS Erin Harwayne, DD&A

Agenda

Draft Cost Estimates for each Jurisdiction to Implement the HMP

- HMP responsibilities
- Methods and assumptions to estimate HMP costs
- Draft cost estimate, by jurisdiction
- Conclusions

HMP Responsibilities

- Develop Resource Management Plans (RMPs) for Habitat
 Management Areas (HMAs)
- Annual reporting to USFWS, CDFW, BLM
- Environmental Compliance

HMP Responsibilities

- Habitat enhancement and maintenance
 - Non-native species control
 - Erosion control
 - Vegetation management (controlled burns, grazing, mechanical)
 - Road and trail maintenance
 - Security and access control

Methods and Assumptions 1

RMPs have not been developed!

 Not enough details about "what will be done" and "how much" to manage & restore to accurately estimate cost of HMP implementation

Methods and Assumptions 1

- Costs for tasks extrapolated from the HCP cost model
 - Beyond scope to create new cost estimates and model for HMP
 - HCP cost model best guide HCP based on HMP
 - 50 + linked Excel worksheets
 - Assumptions inform extrapolations
- Eliminated HCP-specific tasks (e.g., restore E. Garrison pond for CTS, HCP contingency fund)
- Reduced cost of some HCP tasks with less per unit effort under HMP (e.g., monitoring & adaptive management)

Cost Inflation Factor

Table N-7a Plant Monitoring

"Baseline uses 1st year estimates from HCP only
"No statistical analysis for baseline, some assumed after during monitoring
"All plant surveys require same effort other than piperia

ner journ au verys require barrie einst some tilbar jupetta.

"Source of species and habitat data exoel workbook "OF HMP Data Request", Land Cover by HMA and HMP Species by HMA from Erin H.

"Plots are assumed to be 1 acre in size per Worksheet M-7a Plant Monitor Jupin
"For abundsone sampling, assume 10% of habitat is surveyed very year."

Acreage total MOCO Marina MPC MRPD SP UC

			"For a	oundance :	sampling, a	assume 1	0% of habitat is s	surveyed every year						UC	606													
				\bot													Monterey Cour	nty					Marina		Penninsula College	Regional Park Dist	UC	Stat
Cost item	Notes	Unit	Unit/yr	r \$/Unit	Avg Anr Cost (\$/ (Unit/y \$/Unit	/yr) Inter	rval Frequency ry x (permit rs) term/interval	Total 50 Year Cost	t Frequency Codes	Fixed cost	Annual Cost	Percent of acreage t surveyed per year	East Garrison North E11a		Habitat Corridor L20.2.1	Travel Camp L20.2.2	Oak Oval E19a.2 (borderlands)	Parker Flats E19a.1 and E21b.1 (borderlands)	Landfill E8a.1 and E8a.2	Wolf Hill L20.3	Lookout Ridge L20.5	Salinas River L5.1.12	Airport Reserve L5.1.11	Northwest Corner E2a	Range 45 E39, E39, E41, E42	Expansion	FONR \$2.1.2, \$2.1.3, \$2.1.5, \$2.3.2, \$2.4	Dune \$3.5
	Ivotes	Olik	Onley	- FOIR		, ,	,	, (-,,,			,	,																#
Monitoring CSUMB/ Covered Plants Reconnaissance Studies (annually for 1st 10																												
years)																												
Species or Habitat Present? Yadon's Pipena (2 people)	114	nours	70	\$ 170	\$ 11,0	900 1	1	10 \$ 119,000) r	\$ 11,900															5 11.900	\leftarrow		+
Robust Spineflower (2 people)		nours	70	\$ 170	\$ 11,0	900 1	1	10		\$ 11,900																		\$
Areal Mapping Group 1: Sand Gilia, Monterey spineflower,				-				_																		\longrightarrow		4
seaside bird's-beak											acres		292	308	184	84	71	340	510	154	7	8	127	66	569	38		4
Species or Habitat Present? Pilot (year 1 only) (2 people)			120	1 8 17/	1 8 22	100 1		1 8 22.10	2 01		5 44		S 12.906	x \$ 13.614	x S 8.133	x 5 3.713	x S 3.138	x 5 15.028	x S 22.542	x \$ 6.807	x S 309	x \$ 354	x \$ 5.613	x S 2.917	x \$ 25,150	x \$ 1.680		#
Every 10 years (2 people)	-	nours	500	\$ 170	\$ 22,	000 10	0	5 \$ 425,000	0 p1 0 am9		\$ 4		\$ 1,241	\$ 1,309	\$ 782	\$ 357	\$ 302	\$ 1,445	\$ 2,168	\$ 655	\$ 30		\$ 540	\$ 281	\$ 2,418	\$ 162		+
statistical analysis hours Group 2: Maritime Chaparral		nours	20	\$ 170	\$ 3,4	400 10)	5 \$ 17,000) am9		\$ 0.17		\$ 50	\$ 52 203	\$ 31	\$ 14	\$ 12	\$ 58	\$ 87	\$ 26	\$ 1	\$ 1	\$ 22	\$ 11 55	\$ 97	2 6		工
Species or Habitat Present?				-				_					X	203 X				X	36 X	x	X			X	206 X	X		
GIS mapping (every 10 years) statistical analysis hours		nours			\$ 3,4			6 \$ 20,400 6 \$ 30,600	10		\$ 0.02 \$ 0.03		\$ 0.12 \$ 0.18	\$ 4.08				\$ 3.40 \$ 5.10	\$ 0.72 \$ 1.08	\$ 1.54 \$ 2.31	\$ 0.02 \$ 0.03			\$ 1.10 \$ 1.65	\$ 4.12 \$ 6.18	\$ 0.36 \$ 0.54		\pm
Group 3: Coast Wallflower		nours	30	\$ 170	\$ 5,1	100 10)	6 \$ 30,600	10		\$ 0.03	-	\$ 0.18	\$ 6.09				\$ 5.10	\$ 1.08	\$ 2.31	\$ 0.03			\$ 1.00 53	\$ 0.18 157	\$ 0.54		+
Species or Habitat Present?																		х	x					х	X			
Pilot (year 1 only) (2 people) Every 10 years (2 people)		nours	40	\$ 170	\$ 6,0	800 1 800 1)	+	+		\$ 27 \$ 3							\$ 2,666 \$ 267	\$ 299					\$ 1,442 \$ 144	\$ 4,270 \$ 427	+		+
statistical analysis hours		nours	20	\$ 170	\$ 3,4	400 10	5				\$ 1							\$ 133	\$ 15					\$ /2	\$ 214			\pm
Abundance Sampling Sand Gilia (45 plots)													146	127	30	36		99	284	77			2	24	206		562	4
Acres surveyed per year												10%	15	13	3	4		10	28	8			0.2	2	21		56	
Pilot (year 1 only) (2 people) Annual (2 people)		nours	180	\$ 170	\$ 30,6	800 1		1 \$ 30,600 48 \$ 1,305,600			\$ 680 \$ 604		\$ 9,928 \$ 8,825	\$ 8,636 \$ 7,676	\$ 2,040 \$ 1.813	\$ 2,448 \$ 2,176		\$ 6,732 \$ 5,984	\$ 19,312 \$ 17,166	\$ 5,236 \$ 4,654			\$ 138 \$ 121	\$ 1,632 \$ 1,451	\$ 14,008 \$ 12,452	- 3	\$ 38,216 \$ 33,970	
statistical analysis hours	-	nours			\$ 3,4		4	48 \$ 163,200			\$ 76		\$ 1,103	\$ 960	\$ 227	\$ 272		\$ 748	\$ 2,146				\$ 15		\$ 1,556	 	\$ 4,248	6 \$
Monterey Spineflower (45 plots) Acres surveyed per year												4094	146 15	75	154 15	48	71	240	226 23	0.02	7	8	125 13	42	206	19	590 59	4
Pilot (year 1 only) (2 people)		nours			\$ 30,6			1 \$ 30,600) p1		\$ 680	10%	\$ 9,928	\$ 5,100	\$ 10,472	\$ 3,284	\$ 4,828		\$ 15,368		\$ 476	\$ 544	\$ 8,500		\$ 14,008	\$ 1,292	\$ 40,120	5
Annual (2 people)		nours	160	\$ 170	\$ 27,2	200 1		1,305,600	as48		\$ 604		\$ 8,825		\$ 9,308 \$ 1,164	\$ 2,901								\$ 2,539 \$ 317	\$ 12,452 \$ 1,556		\$ 35,682 \$ 4,458	2 \$
Seaside Bird's Beak	_	nours	20	\$ 170	\$ 3,4	400 1	4	48 \$ 163,200	as48		\$ 76	1	\$ 1,103	\$ 507	\$ 1,104	\$ 383	\$ 536	\$ 1,813	\$ 1,708	\$ 0 77	\$ 53	\$ 60	\$ 944	\$ 317	\$ 1,000 157	5 144 3	\$ 4,408 87	3 3
Acres surveyed per year												10%		11				0.1		8					16	2	9	
Pilot (year 1 only) (2 people) Annual (2 people)		nours	180	\$ 170	\$ 30,6	800 1 200 1	4	1 \$ 30,600 48 \$ 1,305,600	0 p1 0 as48		\$ 680 \$ 604			\$ 7,208 \$ 6,407				\$ 68		\$ 5,238 \$ 4,654					\$ 10,676 \$ 9,490	\$ 1,292 \$ \$ 1,148 \$	\$ 5,916 \$ 5,259	4
statistical analysis hours		nours	20	\$ 170	\$ 3,4	400 1		48 \$ 163,200	as48		\$ 76			\$ 801				\$ 8		\$ 582					\$ 1,188	\$ 144 \$	\$ 657	1
Eastwood's Encamena Acres surveyed per year												10%	6	170				100						32	205 21	19	101	#
Pilot (year 1 only) (2 people)		nours	180	\$ 170	\$ 30,6	800 1		1 \$ 30,600) p1		\$ 680		\$ 408	\$ 11,560				\$ 6,800						\$ 2,176	\$ 13,940	\$ 1,292 \$	\$ 6.868	3
Annual (2 people) statistical analysis hours		nours	180	\$ 170	\$ 27,2	200 1 400 1		48 \$ 1,305,600 48 \$ 163,200	D as48		\$ 604 \$ 76		\$ 363 \$ 45	\$ 10,276 \$ 1,284				\$ 6,044						\$ 1,934 \$ 242		\$ 1,148 \$	\$ 6,105 \$ 763	
Hooker's Manzanita		iours	20	\$ 170	3 3,4	100	-	0 \$ 103,200	J a540		* 10		9 40	58				170			1			9 242	9 1,040	<u> </u>	0.36	+
Acres surveyed per year Pilot (year 1 only) (2 people)			400			800 1		4.0	0 p1		S 680	10%		S 3,944				17 \$ 11.560			0.1 S 68						0.036 S 24	#
Annual (2 people)	-	nours		3 \$ 170	\$ 30,6	200 1	4	48 \$ 1,305,600	as48		\$ 604			\$ 3,508				\$ 10,276			\$ 60						\$ 22	
statistical analysis hours Toro Manzanita	ı	nours	20	\$ 170	\$ 3,4	400 1	4	48 \$ 163,200	as48		\$ 76	1		\$ 438 220				\$ 1,284 169		77	\$ 8					,	\$ 3 23	5
Acres surveyed per year				-				_				10%		22				17		8	0.1					-	2.3	#
Pilot (year 1 only) (2 people) Annual (2 people)		nours	180	\$ 170	\$ 30,0	800 1 200 1		1 \$ 30,600	p1 as48		\$ 680 \$ 604			\$ 14,980 \$ 13,298				\$ 11,492 \$ 10,215		\$ 5,238 \$ 4.654	\$ 68 \$ 60					7	\$ 1,584 \$ 1,390	
statistical analysis hours		nours	20	\$ 170	\$ 27,	400 1		48 \$ 1,305,000 48 \$ 163,200	as48		\$ 76			\$ 1,662				\$ 1,277		\$ 582						 	\$ 174	4
Coast Wallflower												400/						98	11					53	157		185 19	
Acres surveyed per year Pilot (year 1 only) (2 people)		nours	180	\$ 170	\$ 30,6	800 1		1 \$ 30,600) p1		\$ 680							\$ 6,664	\$ 748					\$ 3,604	16 \$ 10,676	!	\$ 12,580	5
Annual (2 people) statistical analysis hours		nours	160	S 170	\$ 27,	200 1	4	48 \$ 1,305,600	as48		\$ 604 \$ 76							\$ 5,924 \$ 740	\$ 665					\$ 3,204 \$ 400	\$ 9,490 \$ 1,186		\$ 11,182 \$ 1398	2 \$
Monterey Ceanothus	1	nours	20	\$ 170	\$ 3,4	+00 1	4	8 3 163,200	as48		76		6	204				143	139	77	1			57	\$ 1,180 206	19	\$ 1,398 418	1 3
Acres surveyed per year			400			200		1 8 2222			\$ 680	10%	1 408	20 \$ 13.872				14 \$ 0.724	14 \$ 0.452	8 5 5228	0.1			6 \$ 3,876	21 \$ 14,008	2 5 1,292 5	42 \$ 28,424	Ţ,
Pilot (year 1 only) (2 people) Annual (2 people)		nours	160	\$ 170	\$ 30,0	200 1	4	1 \$ 30,600 48 \$ 1,305,600	as48		\$ 680 \$ 604		\$ 363	\$ 12,331				\$ 8,644	\$ 8,402	\$ 4,654	\$ 60			\$ 3,445	\$ 12,452	\$ 1,148 \$	\$ 25,266	8 \$
statistical analysis hours		nours	20	\$ 170	\$ 3,4	400 1	4	48 \$ 163,200	as48		\$ 76		\$ 45		248	448	70	\$ 1,080		\$ 582	\$ 8	- 18	188	\$ 431		\$ 144 \$		3 \$
Sandmat Manzanita Acres surveyed per year												10%	146 15	274 27	248 25	142 14	7	369	304 30	8	49 5	43	129 13	6 6	206 21	19	590 59	
Pilot (year 1 only) (2 people)		nours			\$ 30,0			1 \$ 30,600			\$ 680		\$ 9,928	\$ 18,632	\$ 16,864	\$ 9,656	\$ 4,898		\$ 20,672						\$ 14,008	\$ 1,292	\$ 40,120	J \$
Annual (2 people) statistical analysis hours		nours	160	\$ 170	\$ 27,2	200 1 400 1	4	48 \$ 1,305,600 48 \$ 163,200	0 as48 0 as48		\$ 604 \$ 76		\$ 8,825 \$ 1,103		\$ 14,990 \$ 1,874												\$ 35,682 \$ 4,458	8 8
Maritime Chaparral (100 plots)					1		1	.50,200					6	203				170	36	77	1			55	206	18	337	Ť
Acres surveyed per year Fire History map		nap	1	\$ 34 42	\$ 34,4	427 1		1 \$ 34,427	7 p1	\$ 34,427		10%	3 186	\$ 6,298				17 \$ 5,2/3	\$ 1.117	\$ 2,388	0.1 \$ 31			6 5 1,706	21 \$ 6,389	\$ 558	34 \$ 10,452	1
Pilot (year 1) (2 people)	H	nours	840	\$ 170	\$ 142,0	900 1		1 \$ 142,800) p1	- 04,421	\$ 1,428		\$ 857	\$ 28,988				\$ 24,276	\$ 5,141	\$ 10,996	\$ 143			\$ 7,854	\$ 29,417		\$ 48,124	4
5-year interval (2 people) statistical analysis hours	1	nours	500	\$ 170	\$ 85,0	000 5 400 5		11 \$ 935,000	0 as10 0 as10		\$ 170 \$ 7		\$ 102 \$ 4					\$ 2,890						\$ 935 \$ 37				
Other costs (both plants and wildlife)		10413	20	- 170	3,	100		37,400	asiu		,		148		253	145	73	372	308		196	43	130	63			606	
Project management (including team meetings, organizing team client meetings, progress																												Т
reports, etc.)		nours	320		\$ 44,0		50	\$ 2,203,356		\$ 44,067	\$ 11		\$ 1,632			\$ 1,599					\$ 2,161							
		nours	80	\$ 138	\$ 11,0 8 \$ 11.0	017 1 017 1	50	\$ 550,839 \$ 550,839	PM D PM	\$ 11,017 \$ 11,017	\$ 3		\$ 408 \$ 408	\$ 758 \$ 758	\$ 698	\$ 400 \$ 400	\$ 201 \$ 201	\$ 1,026 \$ 1,026	\$ 849 \$ 849	\$ 218 \$ 218	\$ 540 \$ 540	\$ 119 \$ 119	\$ 358 \$ 358	\$ 1/4 \$ 174	\$ 568 \$ 568	\$ 52 \$	\$ 1,871 \$ 1,871	1 5
Data organization Creating/refining field forms				4 9 138	11,1	017 1	50 50	\$ 550,839	PM	\$ 11.017	5 3	+	\$ 408	\$ 758	\$ 698	\$ 400	\$ 201	\$ 1,026	\$ 849	\$ 218	\$ 540	\$ 119	\$ 358	\$ 174	\$ 568	\$ 52 \$	\$ 1,671	1 5
Creating/refining field forms Training field staff	H	nours		\$ 138				a 000,030																				
Creating/refining field forms	ŀ		10	\$ 6,885	\$ 5 11,0 \$ 68,0 \$ 13,7	855 1	1	\$ 68,855	5 PM1	\$ 6,885 \$ 13,771			\$ 1,53U \$ 1,530				\$ 1,530 \$ 1,530										\$ 6,885 \$ 13,771	5 \$

Methods and Assumptions II

- Most costs not readily extractable from HCP cost model
 - HCP costs estimated base-wide
 - HCP cost model assumes extensive sharing of resources
 - Staffing
 - Knowledge (i.e., land management experts)
 - Capital
- Extensive assumptions made and documented to allocate HMP costs to individual jurisdictions from HCP cost model line-items

Methods and Assumptions III

- Costs estimated for HMAs and development parcels with management responsibilities
- HCP cost categories used for HMP cost estimates
 - Allows direct comparison of relative costs
- Cost estimated per acre or linear feet, where feasible
- Cost allocated based on size of HMAs

DRAFT

Table 1
Program Administration Cost Summary
HCP Cooperative

Cost Item	Start Up Costs	Average Annual Costs
Staff Costs	\$0	\$352,881
Insurance	\$0	\$35,736
Office Space and Utilities	\$0	\$36,464
General Office Equipment [1]	\$47,785	\$11,600
GIS and Database Equipment	\$0	\$6,706
Vehicles and Fuel [2] [3]	\$55,084	\$7,436
Staff Training	\$0	\$900
Legal assistance	\$0	\$20,656
Financial analysis assistance	\$0	\$2,314
Education/ Outreach/ Public Relations	\$0	\$17,214
Total	\$102,869	\$491,907

UC cell phones (within General Office Equipment) to the sum of \$1,377 not included in total capital costs Years 1-50.

HMP Implementation Cost Estimates

 HCP start-up costs not included in HMP cost estimate

^[2] Reflects gas and utilization costs assuming each vehicle is driven 10,000 miles per year.

^[3] Includes vehicle costs not anticipated until years 21-50.



Table 1
Program Administration Cost Summary
HCP Cooperative

Cost Item	Start Up Costs	Average Annual Costs
		*
Staff Costs	\$0	\$352,881
Insurance	\$0	\$35,736
Office Space and Utilities	\$0	\$36,464
General Office Equipment [1]	\$47,785	\$11,600
GIS and Database Equipment	\$0	\$6,706
Vehicles and Fuel [2] [3]	\$55,084	\$7,436
Staff Training	\$0	\$900
Legal assistance	\$0	\$20,656
Financial analysis assistance	\$0	\$2,314
Education/ Outreach/ Public Relations	\$0	\$17,214
Total	\$102,869	\$491,907

^[1] UC cell phones (within General Office Equipment) to the sum of \$1,377 not included in total capital costs Years 1-50.

^[2] Reflects gas and utilization costs assuming each vehicle is driven 10,000 miles per year.

^[3] Includes vehicle costs not anticipated until years 21-50.

Table 2
Estimate of Program Administration Costs by Jurisdiction
HMP Program Administration Estimate

						Estimated Costs by Jurisdiction					
Cost Item	HMP Cost Estimate Method	Start Up Costs	HCP Average Annual Costs	Monterey County	Marina	Peninsula College	Regional Park District	Del Rey Oaks			
	20% of HCP costs for county;										
Staff Costs	10% for JDs with HMA, 5% for dev parcel JDs.		\$352,881	\$70,576	\$35,288	\$35,288	\$35,288	\$35,288			
Insurance	0%		\$35,736	\$0	\$0	\$0	\$0	\$0			
Office Space and Utilities	0%		\$36,464	\$0	\$0	\$0	\$0	\$0			
General Office Equipment	0%		\$11,600	\$0	\$0	\$0	\$0	\$0			
GIS and Database Equipment	50% of HCP costs for each jurisdiction		\$6,706	\$3,353	\$3,353	\$3,353	\$3,353	\$3,353			
Vehicles and Fuel [2] [3]	100% of HMA costs allocated by HMA acreage; see Table 3	Excluded [1]	\$7,436	\$5,922	\$756	\$660	\$61	\$38			
Staff Training	20% of HCP costs for county; 10% for all others		\$900	\$180	\$90	\$90	\$90	\$90			
Legal assistance	75% of HCP costs for each jurisdiction		\$20,656	\$15,492	\$15,492	\$15,492	\$15,492	\$15,492			
Financial analysis assistance	100% of HCP costs for each jurisdiction		\$2,314	\$2,314	\$2,314	\$2,314	\$2,314	\$2,314			
Education/ Outreach/ Public Relations	100% of HMA costs allocated by HMA acreage; see Table 3		\$17,214	\$13,707	\$1,750	\$1,527	\$141	\$89			
TOTAL			\$491,907	\$111,544	\$59,043	\$58,724	\$56,739	\$56,665			

^[1] Assumes jurisdictions will use their own vehicles and office equipment.

^[2] Reflects gas and utilization costs assuming each vehicle is driven 10,000 miles per year.

^[3] Includes vehicle costs not anticipated until years 21-50.

Table 3 Summary of Management and Monitoring Cost by HMA

			Start-L		Average Annual Costs						
urisdiction / HMA	Habitat Restoration	HMA Management and Maintenance	Plant Monitoring	Wildlife Monitoring	Project Management	TOTAL	HMA Management and Maintenance	Plant Monitoring	Wildlife Monitoring	Project Management & Annual Reporting	тот
onterey County											
East Garrison North E11a	\$0	\$0	\$44,549	\$1,041	\$1,530	\$47,121	\$6,933	\$31,997	\$173	\$4,386	\$43,48
East Garrison South E11b.1-E11b.8 and E11b.11	\$0	\$0	\$132,810	\$3,143	\$1,530	\$137,483	\$119,292	\$88,873	\$4,370	\$6,837	\$219,37
Habitat Corridor L20.2.1	\$0	\$0	\$37,509	\$7,447	\$1,530	\$46,486	\$230,949	\$30,189	\$9,740	\$6,413	\$277,29
Travel Camp L20.2.2	\$0	\$25,000	\$19,081	\$2,557	\$1,530	\$48,168	\$120,494	\$15,739	\$4,285	\$4,328	\$144,84
Oak Oval E19a.2 (borderlands)	\$0	\$0	\$12,862	\$663	\$1,530	\$15,056	\$38,996	\$10,038	\$232	\$2,939	\$52,20
Parker Flats E19a.1 and E21b.1 (borderlands)	\$0	\$0	\$139,029	\$2,596	\$1,530	\$143,155	\$97,757	\$98,969	\$328	\$8,709	\$205,76
Landfill E8a.1 and E8a.2	\$207,253	\$0	\$94,351	\$6,268	\$1,530	\$309,403	\$8,854	\$68,444	\$1,147	\$7,474	\$85,92
Wolf Hill L20.3	\$0	\$0	\$46,372	\$2,132	\$1,530	\$50,034	\$73,542	\$28,227	\$4,572	\$3,055	\$109,39
Lookout Ridge L20.5	\$0	\$0	\$4,495	\$7,334	\$1,530	\$13,360	\$41,365	\$4,061	\$4,100	\$5,313	\$54,83
Resource Management Plan											
(Encompasses all HMAs - update every 10 years)	\$0	\$200,000	\$0	\$0		\$200,000	\$20,000	\$0	\$0		\$20,00
Annual Monitoring Report						\$0				\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0		\$0	\$179,023	\$0	\$0		\$179,02
btotal Monterey County	\$207,253	\$225,000	\$531,059	\$33,182	\$13,771	\$1,010,264	\$937,206	\$376,537	\$28,947	\$74,242	\$1,416,93
rina											
Salinas River L5.1.12	\$0	\$0	\$3,822	\$303	\$2,295	\$6,419	\$814	\$3,503	\$99	\$5,420	\$9,83
Airport Reserve L5.1.11	\$0	\$0	\$23,021	\$908	\$2,295	\$26,224	\$2,090	\$17,969	\$264	\$7,099	\$27,42
Northwest Corner E2a	\$0	\$0	\$30,905	\$3,475	\$2,295	\$36,675	\$13,785	\$19,695	\$770	\$5,806	\$40,05
Resource Management Plan											
(Encompasses all HMAs - update every 10 years)	\$0	\$90,000	\$0	\$0		\$90,000	\$9,000	\$0	\$0		\$9,00
Annual Monitoring Report				\$0		\$0				\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0	40.005	\$0	\$89,511	\$0	\$0	010.110	\$89,51
ıbtotal Marina	\$0	\$90,000	\$57,748	\$4,685	\$6,885	\$159,319	\$115,200	\$41,168	\$1,133	\$43,113	\$200,61
nninsula College											
Range 45	\$183,154	\$0	\$152,280	\$1,449	\$6,885	\$343,769	\$140,536	\$109,391	\$214	\$17,747	\$267,88
Resource Management Plan											
(Encompasses all HMAs - update every 10 years)	\$0	\$50,000	\$0			\$50,000	\$5,000	\$0	\$0	_	\$5,00
Annual Monitoring Report						\$0	_			\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0		\$0	\$89,511	\$0	\$0		\$89,51
ubtotal Penninsula College	\$183,154	\$50,000	\$152,280	\$1,449	\$6,885	\$393,769	\$235,047	\$109,391	\$214	\$42,534	\$387,18
egional Park Dist											
Natural Area Expansion L6	\$0	\$38,534	\$11,268	\$2,791	\$6,885	\$59,479	\$19,535	\$6,947	\$8,054	\$14,138	\$48,67
Resource Management Plan		A=0.000	***	***		450.000	65.000				
(Encompasses all HMAs - update every 10 years)	\$0	\$50,000	\$0	\$0		\$50,000	\$5,000	\$0	\$0		\$5,00
Annual Monitoring Report				\$0		\$0				\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0	40.005	\$0	\$89,511	\$0	\$0	400.005	\$89,51
btotal Regional Park Dist	\$0	\$88,534	\$11,268	\$2,791	\$6,885	\$109,479	\$114,046	\$6,947	\$8,054	\$38,925	\$167,97
l Rey Oaks											
Office Park E31a,b,c	\$0	\$13,534	\$0	\$0	\$0	\$13,534	\$17,103	\$0	\$0	\$0	\$17,10
Resource Management Plan											
(Encompasses all HMAs - update every 10 years)	\$0	\$50,000	\$0	\$0		\$50,000	\$5,000	\$0	\$0		\$5,00
Annual Monitoring Report				\$0		\$0	_			\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0		\$0	\$89,511	\$0	\$0	****	\$89,51
btotal Del Rey Oaks	\$0	\$63,534	\$0	\$0	\$0	\$63,534	\$111,614	\$0	\$0	\$24,788	\$136,40
FONR S2.1.2, S2.1.3, S2.1.5, S2.3.2, S2.4	\$159,055	\$0	\$232,408	\$4,660	\$6,885	\$403,009	\$177,351	\$179,791	\$786	\$25,466	\$383,39
Resource Management Plan							_				
(Encompasses all HMAs - update every 10 years)	\$0	\$200,000	\$0	\$0		\$200,000	\$20,000	\$0	\$0		\$20,00
Annual Monitoring Report				\$0		\$0	_			\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0		\$0	\$89,511	\$0	\$0		\$89,51
btotal UC	\$159,055	\$200,000	\$232,408	\$4,660	\$6,885	\$603,009	\$286,862	\$179,791	\$786	\$50,254	\$517,69
te Parks [3]											
Fort Ord Dunes S3.1.2, S3.1.1 and S3.1.3	\$1,761,176	\$26,601	\$133,824	\$8,678	\$6,885	\$1,937,164	\$62,192	\$133,824	\$83,444	\$32,664	\$312,12
Resource Management Plan											
(Encompasses all HMAs - update every 10 years)	\$0	\$200,000	\$0	\$0		\$200,000	\$20,000	\$0	\$0		\$20,00
Annual Monitoring Report				\$0		\$0				\$24,788	\$24,78
Contracted Labor [2]	\$0	\$0	\$0	\$0		\$0	\$89,511	\$0	\$0		\$89,51
btotal State Parks	\$1,761,176	\$226,601	\$133,824	\$8,678	\$6,885	\$2,137,164	\$171,703	\$133,824	\$83,444	\$57,452	\$446,42
tal	\$2,310,638	\$943,670	\$1,118,587	\$55,445	\$48,198	\$4,476,538	\$1,971,678	\$847,658	\$122,578	\$331,308	\$3,273,22

Does not include capital costs or vegetation management at this time.
 Assumes 2 FTEs for Monterey County and 1 FTE for all others.
 Restoration assumptions reflect reduction for restoration and restoration planning on 210 acres that has occurred to date.

Table 4. HCP Permit Term Average Annual Costs for Cooperative-managed HMAs (HCP Table 9-3) and Average Annual Costs under an HMP

Cost Cotogowy	Average A	Annual Cost	- HCP (incl.	capital &	operational)	Average Annual Cost - HMP (incl. monitorting)					
Cost Category	County	Marina	MPC	MPRPD	Total	County	Marina	MPC	MPRPD	Total	
Program Administration*	\$399,805	\$49,976	\$44,978	\$4,998	\$499,757	\$185,786	\$102,156	\$101,258	\$95,664	\$484,864	
Habitat Restoration**	\$4,263	\$533	\$480	\$53	\$5,329	\$0	\$0	\$0	\$0	\$0	
HMA Management and Maintenance***	\$313,809	\$39,226	\$35,304	\$3,923	\$392,262	\$1,342,690	\$157,501	\$344,652	\$129,047	\$1,973,890	
Contingency and Remedial Measures	\$141,364	\$17,671	\$15,904	\$1,767	\$176,706	\$0	\$0	\$0	\$0	\$0	
Total Costs	\$859,243	\$107,405	\$96,665	\$10,741	\$1,074,054	\$1,528,476	\$259,657	\$445,910	\$224,711	\$2,458,754	

^{*} Program Administration - Capital Costs from Table 2 plus Project Management & Annual Reporting

^{**}HMP habitat restoration costs are included as start-up costs in Table 4

^{***} HCP cost does not include HCP which is covered by Cooperative. HMP cost includes monitoring

HMP Implementation Cost Estimates

Development Parcels

- Costs harder to estimate
- Fewer Borderland tasks with costs in HCP cost model
- Less known about what will be done under HMP

Table 5. Jurisdictions with Development Parcels - Start-up Cost

		Juris	sdictions		
		Del Rey		City of	_
	Peninsula College	Oaks	Seaside	Monterey	CSUMB
HMP Responsibilities					
Develop/arrange for management and conservation in consultation with BLM	\$0 - included in HMA management	\$30,000	\$30,000	\$30,000	\$30,000
Vehicle Access control	\$147,782				
Total	\$147,782	\$30,000	\$30,000	\$30,000	\$30,000

 Table 6. Jurisdictions with Development Parcels - Average Annual Cost

_		Jur	isdiction		
_		Del Rey		City of	
Jurisdiction	Peninsula College	Oaks	Seaside	Monterey	CSUMB
Size (ac)	335	206	423	31	333
Interface with FONM					
(linear feet	20,290	6,260	14,740	0	2,617
HMP Responsibilities					
Non-native species					
control	\$11,390	\$7,004	\$14,382	\$1,054	\$11,322
Fuel breaks – construct					
and maintain	\$91,305	\$28,170	\$66,330	\$0	\$11,777
Vehicle access control	\$55,200				
Status reports for					
borderlands	\$12,000	\$12,000	\$12,000	\$0	\$12,000
Erosion control	\$15,351	\$5,766	\$11,559	\$0	\$3,277
HMP - Line item Total	\$130,046 -				
Annual Cost	\$185,246*	\$52,940	\$104,271	\$1,054	\$38,376
HCP - Estimated					
Annual Cost Borderland					
Management	\$29,510	\$10,872	\$21,744	\$777	\$16,308
*range without and include	ling vehicle access contr	ol			

HMP Cost Savings

- HCP-specific mitigation measures not needed
- Fewer annual reporting requirements than HCP No:
 - Covered activities
 - Impacts
 - HCP compliance
- No/lower program administration start-up costs
 Jurisdictions use existing facilities and equipment

HMP Cost Increases

Loss of economies of scale

- Develop own RMP & negotiates with USFWS, CDFW, BLM
- Individual environmental compliance
- No shared staffing in-house and contractor
 - CSUMB provides affordable staffing to HCP Cooperative
- No shared equipment

HMP Cost Increases

- HMP addresses 10 more species than HCP More:
 - Planning
 - Monitoring
 - Management
 - Annual reporting
- HMA monitoring responsibilities shift from HCP Cooperative to local jurisdictions
- No incidental take permits for habitat management or development activities

Conclusions

- Working together saves money
 - More efficient for most or all jurisdictions to share habitat management responsibilities under the HMP
- Cost savings of implementing HMP as individual jurisdictions not likely to outweigh associated increases

Questions?

- We can walk you through assumptions and cost estimates for your jurisdiction
- Update assumptions and estimates ,as needed