
Appendix D
Diamond Project Economic Analysis

Table D-1. Diamond economic analysis for alternative B.

Value – Groups					
Total Acres = 11,498 acres			Low mbf/ac deduction \$0		
Total Acres = 1,129					
PP 23 inch–29.9 inch sawtimber ^a	7.0%	1,099 mbf	×	(\$470/mbf + \$0/mbf)	\$516,303
SP 23 inch–29.9 inch sawtimber ^a	4.3%	675 mbf	×	(\$470/mbf + \$0/mbf)	\$317,158
WF 23 inch–29.9 inch sawtimber ^a	13.6%	2,134 mbf	×	(\$210/mbf + \$0/mbf)	\$448,195
DF 23 inch–29.9 inch sawtimber ^a	6.6%	1,036 mbf	×	(\$420/mbf + \$0/mbf)	\$435,013
IC 23 inch–29.9 inch sawtimber ^a	4.6%	722 mbf	×	(\$440/mbf + \$0/mbf)	\$317,628
All 10 inch–22.9 inch sawtimber ^b	63.9%	10,028 mbf	×	(\$160/mbf + \$0/mbf)	\$1,604,463
		15,693 mbf		13.9 mbf / acre	
Biomass value when removed		1,129 acres × 13.1 tons/acre × \$16.00 / ton =			\$236,638
Value – DFPZ (40% CC, 30 inch UDL)					
Total Acres = 3,369			Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)	\$36,217
SP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)	\$36,217
WF 23 inch–29.9 inch sawtimber ^a	6.0%	505 mbf	×	(\$210/mbf + (\$40)/mbf)	\$85,910
DF 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$420/mbf + (\$40)/mbf)	\$32,006
IC 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$440/mbf + (\$40)/mbf)	\$33,690
All 10 inch–22.9 inch sawtimber ^b	90.0%	7,580 mbf	×	(\$160/mbf + (\$40)/mbf)	\$909,630
		8,423 mbf		13.9 mbf / acre	
Biomass value when removed		3,369 acres × 7.7 tons/acre × \$16.00 / ton =			\$415,061
Value – Area Thin (50% CC, 30 inch UDL)					
Total Acres = 5,321			Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$470/mbf + (\$53)/mbf)	\$3,327
SP 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$470/mbf + (\$53)/mbf)	\$3,327
WF 23 inch–29.9 inch sawtimber ^a	3.0%	48 mbf	×	(\$210/mbf + (\$53)/mbf)	\$7,509
DF 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$420/mbf + (\$53)/mbf)	\$2,928
IC 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$440/mbf + (\$53)/mbf)	\$3,087
All 10 inch–22.9 inch sawtimber ^b	95.0%	1,516 mbf	×	(\$160/mbf + (\$53)/mbf)	\$161,961
		1,596 mbf		0.3 mbf / acre	
Biomass value when removed		5,321 acres × 2.5 tons/acre × \$16.00 / ton =			\$212,840
Value – RHCA (50% CC, 20 inch UDL)					
Total Acres = 1,139			Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0
SP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0

Table D-1. Diamond economic analysis for alternative B (continued).

WF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$210/mbf + (\$53)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$420/mbf + (\$53)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$440/mbf + (\$53)/mbf)	\$0
All 10 inch–22.9 inch sawtimber ^b	100.0%	342 mbf	×	(\$160/mbf + (\$53)/mbf)	\$36,506
		342 mbf		0.3 mbf / acre	
Biomass value when removed		1,139 acres × 2.5 tons/acre × \$16.00 / ton =			\$45,576
Value – Baker Cypress					
Total Acres = 131			Low mbf/ac deduction (\$0)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
SP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
WF 23 inch–29.9 inch sawtimber ^a	6.0%	91 mbf	×	(\$210/mbf + (\$0)/mbf)	\$19,147
DF 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$420/mbf + (\$0)/mbf)	\$6,382
IC 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$440/mbf + (\$0)/mbf)	\$6,686
All 10 inch–22.9 inch sawtimber ^b	90.0%	1,368 mbf	×	(\$160/mbf + (\$0)/mbf)	\$218,822
		1,520 mbf		0.3 mbf / acre	
Biomass value when removed		131 acres × 4.0 tons/acre × \$16.00 / ton =			\$8,384
Value – Aspen					
Total Acres = 409			Low mbf/ac deduction (\$4)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$470/mbf + (\$40)/mbf)	\$4,397
SP 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$470/mbf + (\$40)/mbf)	\$4,397
WF 23 inch–29.9 inch sawtimber ^a	6.0%	61 mbf	×	(\$210/mbf + (\$40)/mbf)	\$10,430
DF 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$420/mbf + (\$40)/mbf)	\$3,886
IC 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$440/mbf + (\$40)/mbf)	\$4,090
All 10 inch–22.9 inch sawtimber ^b	90.0%	920 mbf	×	(\$160/mbf + (\$40)/mbf)	\$110,430
		1,023 mbf		2.5 mbf / acre	
Biomass value when removed		409 acres × 7.7 tons/acre × \$16.00 / ton =			\$50,389
Total Value		28,596 mbf			\$6,362,910
	Acres	Total biomass	61 1,000 tons	5.3 Average tons/acre	
Costs	121	(Assumes harvesting sawtimber and biomass in one operation)			
Add sawtimber skyline cost (45+121)	45	1,695 mbf	×	\$72/mbf +	\$121,984
Additional cost (heli GS)	130	1,807 mbf	×	\$250/mbf +	\$451,750
Additional cost (long skid)		1,000 mbf	×	\$20/mbf +	\$20,000
Additional cost (Sporax treatment)		26,054 mbf	×	\$1/mbf +	\$34,651
		Average unit size = 50 acres		\$16/acre	
		Contract length = 2 years		(\$16)/acre	
		Months operation = 5 months		\$0/acre	

Table D-1. Diamond economic analysis for alternative B (continued).

Acres of 6 inch–9.9 inch biomass-tractor		0 acres	×	(\$162/acre + \$0/acre)			\$0
Acres of 3 inch–9.9 inch biomass-tractor		11,202 acres	×	(\$204/acre + \$0/acre)			\$2,285,915
Acres of 6 inch–9.9 inch biomass-Heli		130 acres	×	(\$210/mbf + \$0/acre)			\$130,000
Acres of 3 inch–9.9 inch biomass-skyline		166 acres	×	(\$2,000/acre + \$0/acre)			\$332,000
		11,498	Biomass acres				
No. of sawtimber loads		28,596	mbf/	4 mbf/truck = 7,149			
Additional haul cost (4 hr avg)		1	hours/trip	×	\$75/hour	×	7,149 trips
							\$536,175
No. of biomass loads		11,498	acres	×	5.3 tons/acre	25 tons/truck = 2,422	
Haul cost biomass		5.5	hours/trip	×	\$75/hour	×	2,422 trips
							\$999,075
Surface replacement-sawtimber		28,596	mbf	×	\$10.00/mbf =		\$285,958
Surface replacement-biomass		11,498	acres	×	5.3 tons/acre	×	1.43/ ton =
							\$86,508
Subsoiling costs		1,680	acres	×	\$230/acre		\$386,483
BD costs		28,596	mbf	×	\$2.00/mbf		\$57,192
Road construction							\$450,218
Temporary road construction		5.7	miles	×	5,000/mile		\$28,500
Advertised rate-sawtimber		28,596	mbf	×	\$64.04/mbf		\$1,831,209
Advertised rate-biomass		11,498	acres	×	5.3 tons/acre	×	\$0.20/ton
							\$12,111
Yield tax		6,362,910		×	2.9%		\$184,524
Scaling sawtimber		7,149	trips		\$17/trip		\$121,533
Scaling Biomass		2,422	trips		\$3/trip		\$7,266
Total Cost							\$8,363,053
Net Value							(\$2,000,142)
						Percent Above Value	-31%
Groups:				Acre/	job	Full-	time
						jobs	
Reforestation costs	1,129	acres	×	\$450/acre	110	23	\$508,050
Grapple pile & burn	954	acre	×	\$550/acre	120	17	\$524,700
Hand thin, pile, and burn	45	acre	×	\$700/acre	400	0	\$31,500
Hand thin, pile, and burn-Heli (GS)	130	acre	×	\$1,100/acre	400	1	\$143,000
Hand line and underburn	0	acre	×	\$450/acre	400	0	\$0
							\$1,207,250
WO/RO/SO overhead costs	50.5% of above costs						\$609,661
Total Costs							\$1,816,911
Groups:				Acre/	job	Full-	time
						jobs	
DFPZ:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	63	acre	×	\$700/acre	120	1	\$44,310
Hand line and underburn	701	acre	×	\$150/acre	400	4	\$105,150
Mastication	458	acre	×	\$450/acre	120	8	\$206,100
							\$355,560
Area Thin:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	63	acre	×	\$700/acre	120	1	\$44,310
Hand line and underburn	1,763	acre	×	\$150/acre	400	10	\$264,450
Mastication	329	acre	×	\$450/acre	120	6	\$148,050
Baker Cypress:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	0	acre	×	\$700/acre	120	0	\$0
Hand line and underburn	131	acre	×	\$150/acre	400	1	\$19,650
Mastication	0	acre	×	\$450/acre	120	0	\$0

Table D-1. Diamond economic analysis for alternative B (continued).

Aspen:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	138	acre	×	\$700/acre	120	3	\$96,600
Hand line and underburn	0	acre	×	\$150/acre	400	0	\$0
Mastication	0	acre	×	\$450/acre	120	0	\$0
Noxious Weed Treatments:							
Chemical treatment	131	acre	×	\$239/acre	120	2	\$31,309
Mechanical treatment		acre	×	\$780/acre	120	0	\$0
Fire treatment		acre	×	\$150/acre	120	0	\$0
Road decommissioning	9.6	miles	×	\$5,000/mile	40	1	\$48,000
							\$652,369
Total Non-Harvest Cost							-\$1,007,929
Total Project Value							-\$3,008,071
Fire reduction benefits				\$1,186/acre	3,909 acres		\$4636,074
Harvest & biomass (Employment)						442	
Total Full-Time Jobs							520
Total Employee-Related Income							\$22,356,033

Table D-2. Diamond economic analysis for alternative C.

Value – Groups						
Total Acres = 11,498 acres				Low mbf/ac deduction \$0		
Total Acres = 1,129						
PP 23 inch–29.9 inch sawtimber ^a	7.0%	1,099 mbf	×	(\$470/mbf + \$0/mbf)		\$516,303
SP 23 inch–29.9 inch sawtimber ^a	4.3%	675 mbf	×	(\$470/mbf + \$0/mbf)		\$317,158
WF 23 inch–29.9 inch sawtimber ^a	13.6%	2,134 mbf	×	(\$210/mbf + \$0/mbf)		\$448,195
DF 23 inch–29.9 inch sawtimber ^a	6.6%	1,036 mbf	×	(\$420/mbf + \$0/mbf)		\$435,013
IC 23 inch–29.9 inch sawtimber ^a	4.6%	722 mbf	×	(\$440/mbf + \$0/mbf)		\$317,628
All 10 inch–22.9 inch sawtimber ^b	63.9%	10,028 mbf	×	(\$160/mbf + \$0/mbf)		\$1,604,463
		15,693 mbf		13.9 mbf / acre		
Biomass value when removed		1,129 acres × 13.1 tons/acre × \$16.00 / ton =				\$236,638
Value – DFPZ (40% CC, 30 inch UDL)						
Total Acres = 3,369				Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)		\$36,217
SP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)		\$36,217
WF 23 inch–29.9 inch sawtimber ^a	6.0%	505 mbf	×	(\$210/mbf + (\$40)/mbf)		\$85,910
DF 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$420/mbf + (\$40)/mbf)		\$32,006
IC 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$440/mbf + (\$40)/mbf)		\$33,690
All 10 inch–22.9 inch sawtimber ^b	90.0%	7,580 mbf	×	(\$160/mbf + (\$40)/mbf)		\$909,630
		8,422.5 mbf		2.5 mbf / acre		
Biomass value when removed		3,369 acres × 7.7 tons/acre × \$16.00 / ton =				\$415,061
Value – Area Thin (50% CC, 30 inch UDL)						
Total Acres = 5,321				Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$470/mbf + (\$53)/mbf)		\$3,327
SP 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$470/mbf + (\$53)/mbf)		\$3,327
WF 23 inch–29.9 inch sawtimber ^a	3.0%	48 mbf	×	(\$210/mbf + (\$53)/mbf)		\$7,509
DF 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$420/mbf + (\$53)/mbf)		\$2,928
IC 23 inch–29.9 inch sawtimber ^a	0.5%	8 mbf	×	(\$440/mbf + (\$53)/mbf)		\$3,087
All 10 inch–22.9 inch sawtimber ^b	95.0%	1,516 mbf	×	(\$160/mbf + (\$53)/mbf)		\$161,961
		1,596 mbf		0.3 mbf / acre		
Biomass value when removed		5,321 acres × 2.5 tons/acre × \$16.00 / ton =				\$212,840
Value – RHCA (50% CC, 20 inch UDL)						
Total Acres = 1,139				Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)		\$0
SP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)		\$0

Table D-2. Diamond economic analysis for alternative C (continued).

WF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$210/mbf + (\$53)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$420/mbf + (\$53)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$440/mbf + (\$53)/mbf)	\$0
All 10 inch–22.9 inch sawtimber ^b	100.0%	342 mbf	×	(\$160/mbf + (\$53)/mbf)	\$36,506
		342 mbf		0.3 mbf / acre	
Biomass value when removed		1,139 acres × 2.5 tons/acre × \$16.00 / ton =			\$45,576
Value – Baker Cypress					
Total Acres = 131			Low mbf/ac deduction (\$0)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
SP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
WF 23 inch–29.9 inch sawtimber ^a	6.0%	91 mbf	×	(\$210/mbf + (\$0)/mbf)	\$19,147
DF 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$420/mbf + (\$0)/mbf)	\$6,382
IC 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$440/mbf + (\$0)/mbf)	\$6,686
All 10 inch–22.9 inch sawtimber ^b	90.0%	1,368 mbf	×	(\$160/mbf + (\$0)/mbf)	\$218,822
		1,519.6 mbf		0.3 mbf / acre	
Biomass value when removed		131 acres × 4.0 tons/acre × \$16.00 / ton =			\$8,384
Value – Aspen					
Total Acres = 409			Low mbf/ac deduction (\$4)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$470/mbf + (\$40)/mbf)	\$4,397
SP 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$470/mbf + (\$40)/mbf)	\$4,397
WF 23 inch–29.9 inch sawtimber ^a	6.0%	61 mbf	×	(\$210/mbf + (\$40)/mbf)	\$10,430
DF 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$420/mbf + (\$40)/mbf)	\$3,886
IC 23 inch–29.9 inch sawtimber ^a	1.0%	10 mbf	×	(\$440/mbf + (\$40)/mbf)	\$4,090
All 10 inch–22.9 inch sawtimber ^b	90.0%	920 mbf	×	(\$160/mbf + (\$40)/mbf)	\$110,430
		1,023 mbf		2.5 mbf / acre	
Biomass value when removed		409 acres × 7.7 tons/acre × \$16.00 / ton =			\$50,389
Total Value		28,596 mbf			\$6,362,910
	Acres	Total biomass	61 1,000 tons	5.3 Average tons/acre	
Costs	121	(Assumes harvesting sawtimber and biomass in one operation)			
Add sawtimber skyline cost (45+121)	45	1,695 mbf	×	\$72/mbf +	\$121,984
Additional cost (heli GS)	130	1,807 mbf	×	\$250/mbf +	\$451,750
Additional cost (long skid)		1,000 mbf	×	\$20/mbf +	\$20,000
Additional cost (Sporax treatment)		26,054 mbf	×	\$1/mbf +	\$34,651
		Average unit size = 50 acres		\$16/acre	
		Contract length = 2 years		(\$16)/acre	
		Months operation = 5 months		\$0/acre	

Table D-2. Diamond economic analysis for alternative C (continued).

Acres of 6 inch–9.9 inch biomass-tractor	0	acres	×	(\$162/acre	+	\$0/acre)	\$0
Acres of 3 inch–9.9 inch biomass-tractor	11,202	acres	×	(\$204/acre	+	\$0/acre)	\$2,285,915
Acres of 6 inch–9.9 inch biomass-Heli	130	acres	×	(\$1,000/mbf	+	\$0/acre)	\$130,000
Acres of 3 inch–9.9 inch biomass-skyline	166	acres	×	(\$2,000/acre	+	\$0/acre)	\$332,000
	11,498	Biomass acres					
No. of sawtimber loads	28,596	mbf/		4 mbf/truck	=	7,149	
Additional haul cost (4 hr avg)	1	hours/trip	×	\$75/hour	×	7,149 trips	\$536,175
No. of biomass loads	11,498	acres	×	5.3 tons/acre	25 tons/truck	= 2,422	
Haul cost biomass	5.5	hours/trip	×	\$75/hour	×	2,422 trips	\$999,075
Surface replacement-sawtimber	28,596	mbf	×	\$10.00/mbf	=		\$285,958
Surface replacement-biomass	11,498	acres	×	5.3 tons/acre	×	1.43/ ton	= \$86,508
Subsoiling costs	1,680	acres	×	\$230/acre			\$386,483
BD costs	28,596	mbf	×	\$2.00/mbf			\$57,192
Road construction							\$450,218
Temporary road construction	5.7	miles	×	5,000/mile			\$28,500
Advertised rate-sawtimber	28,596	mbf	×	\$64.04/mbf			\$1,831,209
Advertised rate-biomass	11,498	acres	×	5.3 tons/acre	×	\$0.20/ton	\$12,111
Yield tax	6,362,910		×	2.9%			\$184,524
Scaling sawtimber	7,149	trips		\$17/trip			\$121,533
Scaling Biomass	2,422	trips		\$3/trip			\$7,266
Total Cost							\$8,363,053
Net Value							(\$2,000,142)
				Percent Above Value			-31%
Groups:				Acre/	job	Full-	time
				jobs			
Reforestation costs	1,129	acres	×	\$450/acre	110	23	\$508,050
Grapple pile & burn	954	acre	×	\$550/acre	120	17	\$524,700
Hand thin, pile, and burn	45	acre	×	\$700/acre	400	0	\$31,500
Hand thin, pile, and burn-Heli (GS)	130	acre	×	\$1,100/acre	400	1	\$143,000
Hand line and underburn	0	acre	×	\$450/acre	400	0	\$0
							\$1,207,250
WO/RO/SO overhead costs	50.5% of above costs						\$609,661
Total Costs							\$1,816,911
Groups:				Acre/	job	Full-	time
				jobs			
DFPZ:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	63	acre	×	\$700/acre	120	1	\$44,310
Hand line and underburn	701	acre	×	\$150/acre	400	4	\$105,150
Mastication	461	acre	×	\$450/acre	120	8	\$207,450
							\$356,910
Area Thin:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	63	acre	×	\$700/acre	120	1	\$44,310
Hand line and underburn	1,763	acre	×	\$150/acre	400	10	\$264,450
Mastication	329	acre	×	\$450/acre	120	6	\$148,050
Baker Cypress:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	0	acre	×	\$700/acre	120	0	\$0
Hand line and underburn	131	acre	×	\$150/acre	400	1	\$19,650
Mastication	0	acre	×	\$450/acre	120	0	\$0

Table D-2. Diamond economic analysis for alternative C (continued).

Aspen:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	138	acre	×	\$700/acre	120	3	\$96,600
Hand line and underburn	0	acre	×	\$150/acre	400	0	\$0
Mastication	0	acre	×	\$450/acre	120	0	\$0
Noxious Weed Treatments:							
Chemical treatment	0	acre	×	\$239/acre	120	0	\$0
Mechanical treatment	20	acre	×	\$780/acre	120	0	\$15,912
Fire treatment		acre	×	\$150/acre	120	0	\$0
Road decommissioning	9.6	miles	×	\$5,000/mile	40	1	\$48,000
							\$636,972
Total Non-Harvest Cost							-\$1,743,882
Total Project Value							-\$3,744,024
Fire reduction benefits				\$1,186/acre	3,909 acres		\$4,636,074
Harvest & biomass (Employment)						442	
Total Full-Time Jobs							518
Total Employee-Related Income							\$22,271,208

Table D-3. Diamond economic analysis for alternative D.

Value – Groups					
Total Acres = 9,280 acres			Low mbf/ac deduction \$0		
Total Acres = 939					
PP 23 inch–29.9 inch sawtimber ^a	7.0%	927 mbf	×	(\$470/mbf + \$0/mbf)	\$435,816
SP 23 inch–29.9 inch sawtimber ^a	4.3%	570 mbf	×	(\$470/mbf + \$0/mbf)	\$267,716
WF 23 inch–29.9 inch sawtimber ^a	13.6%	1,802 mbf	×	(\$210/mbf + \$0/mbf)	\$378,326
DF 23 inch–29.9 inch sawtimber ^a	6.6%	874 mbf	×	(\$420/mbf + \$0/mbf)	\$367,199
IC 23 inch–29.9 inch sawtimber ^a	4.6%	609 mbf	×	(\$440/mbf + \$0/mbf)	\$268,113
All 10 inch–22.9 inch sawtimber ^b	63.9%	8,465 mbf	×	(\$160/mbf + \$0/mbf)	\$1,354,343
		13,247 mbf		13.9 mbf / acre	
Biomass value when removed				953 acres × 13.1 tons/acre × \$16.00 / ton =	\$199,749
Value – DFPZ (40% CC, 30 inch UDL)					
Total Acres = 3,012			Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)	\$36,152
SP 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$470/mbf + (\$40)/mbf)	\$36,152
WF 23 inch–29.9 inch sawtimber ^a	6.0%	504 mbf	×	(\$210/mbf + (\$40)/mbf)	\$85,757
DF 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$420/mbf + (\$40)/mbf)	\$31,949
IC 23 inch–29.9 inch sawtimber ^a	1.0%	84 mbf	×	(\$440/mbf + (\$40)/mbf)	\$33,630
All 10 inch–22.9 inch sawtimber ^b	90.0%	7,567 mbf	×	(\$160/mbf + (\$40)/mbf)	\$908,010
		8,408 mbf		13.9 mbf / acre	
Biomass value when removed				3,363 acres × 7.7 tons/acre × \$16.00 / ton =	\$414,322
Value – Area Thin (40% CC, 30 inch UDL)					
Total Acres = 2,649			Low mbf/ac deduction (\$42)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	58 mbf	×	(\$470/mbf + (\$42)/mbf)	\$24,955
SP 23 inch–29.9 inch sawtimber ^a	1.0	58 mbf	×	(\$470/mbf + (\$42)/mbf)	\$24,955
WF 23 inch–29.9 inch sawtimber ^a	6.0%	350 mbf	×	(\$210/mbf + (\$42)/mbf)	\$58,814
DF 23 inch–29.9 inch sawtimber ^a	1.0%	58 mbf	×	(\$420/mbf + (\$42)/mbf)	\$22,041
IC 23 inch–29.9 inch sawtimber ^a	1.0%	58 mbf	×	(\$440/mbf + (\$42)/mbf)	\$23,206
All 10 inch–22.9 inch sawtimber ^b	90.0%	5,245 mbf	×	(\$160/mbf + (\$42)/mbf)	\$619,961
		5828 mbf		2.2 mbf / acre	
Biomass value when removed				1,722 acres × 5.9 tons/acre × \$16.00 / ton =	\$162,543
Value – Area Thin (CWHR 5: 50% CC, 30 inch UDL)					
Total Acres = 1,266			Low mbf/ac deduction (\$54)		
PP 23 inch–29.9 inch sawtimber ^a	0.5%	1 mbf	×	(\$470/mbf + (\$54)/mbf)	\$527
SP 23 inch–29.9 inch sawtimber ^a	0.5%	1 mbf	×	(\$470/mbf + (\$54)/mbf)	\$527
WF 23 inch–29.9 inch sawtimber ^a	3.0%	8 mbf	×	(\$210/mbf + (\$54)/mbf)	\$1,186
DF 23 inch–29.9 inch sawtimber ^a	0.5%	1 mbf	×	(\$420/mbf + (\$54)/mbf)	\$464
IC 23 inch–29.9 inch sawtimber ^a	0.5%	1 mbf	×	(\$440/mbf + (\$54)/mbf)	\$489
All 10 inch–22.9 inch sawtimber ^b	95.0%	241 mbf	×	(\$160/mbf + (\$54)/mbf)	\$25,545
		253 mbf		0.3 mbf / acre	
Biomass value when removed				823 acres × 2.5 tons/acre × \$16.00 / ton =	\$32,916
Value – RHCA (50% CC, 20 inch UDL)					
Total Acres = 1,028			Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0
SP 23 inch–29.9 inch sawtimber ^a	0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0
WF 23 inch–29.9 inch sawtimber ^a	0%	0 mbf	×	(\$210/mbf + (\$53)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0%	0 mbf	×	(\$420/mbf + (\$53)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0%	0 mbf	×	(\$440/mbf + (\$53)/mbf)	\$0
All 10 inch–22.9 inch sawtimber ^b	100.0%	320 mbf	×	(\$160/mbf + (\$53)/mbf)	\$34,199
		320 mbf		0.3 mbf / acre	
Biomass value when removed				1,067 acres × 2.5 tons/acre × \$16.00 / ton =	\$42,696

Table D-3. Diamond economic analysis for alternative D (continued).

Value – Baker Cypress					
Total Acres = 131			Low mbf/ac deduction (\$0)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
SP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
WF 23 inch–29.9 inch sawtimber ^a	6.0%	91 mbf	×	(\$210/mbf + (\$0)/mbf)	\$19,147
DF 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$420/mbf + (\$0)/mbf)	\$6,382
IC 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$440/mbf + (\$0)/mbf)	\$6,686
All 10 inch–22.9 inch sawtimber ^b	90.0%	1,368 mbf	×	(\$160/mbf + (\$0)/mbf)	\$218,822
		1,520 mbf		11.6 mbf / acre	
Biomass value when removed				131 acres × 4.0 tons/acre × \$16.00 / ton =	\$8,384
Value – Aspen					
Total Acres = 255			Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	6 mbf	×	(\$470/mbf + (\$40)/mbf)	\$2,741
SP 23 inch–29.9 inch sawtimber ^a	1.0%	6 mbf	×	(\$470/mbf + (\$40)/mbf)	\$2,741
WF 23 inch–29.9 inch sawtimber ^a	6.0%	38 mbf	×	(\$210/mbf + (\$40)/mbf)	\$6,503
DF 23 inch–29.9 inch sawtimber ^a	1.0%	6 mbf	×	(\$420/mbf + (\$40)/mbf)	\$2,423
IC 23 inch–29.9 inch sawtimber ^a	1.0%	6 mbf	×	(\$440/mbf + (\$40)/mbf)	\$2,550
All 10 inch–22.9 inch sawtimber ^b	90.0%	574 mbf	×	(\$160/mbf + (\$40)/mbf)	\$68,850
		638 mbf		2.5 mbf / acre	
Biomass value when removed				255 acres × 7.7 tons/acre × \$16.00 / ton =	\$31,416
Total Value			29,129 mbf		\$6,070,922
	Acres	Total biomass	55 1,000 tons	6.6 Average tons/acre	
Costs	0	(Assumes harvesting sawtimber and biomass in one operation)			
Add sawtimber skyline cost	0	0 mbf	×	\$0/mbf +	\$0
Additional cost (heli GS)	0	0 mbf	×	\$250/mbf +	\$0
Additional cost (long skid)		1,000 mbf	×	\$20/mbf +	\$20,000
Additional cost (Sporax treatment)		28,055 mbf	×	\$1/mbf +	\$37,314
				Average unit size = 50 acres	\$16/acre
				Contract length = 2 years	(\$16)/acre
				Months operation = 5 months	\$0/acre
Acres of 6 inch–9.9 inch biomass-tractor		0 acres	×	(\$162/acre + \$0/acre)	\$0
Acres of 3 inch–9.9 inch biomass-tractor		8314 acres	×	(\$216/acre + \$0/acre)	\$1,795,203
Acres of 6 inch–9.9 inch biomass-Heli		0 acres	×	(\$1,000/mbf + \$0/acre)	\$0
Acres of 3 inch–9.9 inch biomass-skyline		0 acres	×	(\$2,000/acre + \$0/acre)	\$0
		8,314	Biomass acres		
No. of sawtimber loads		30,213 mbf/	4 mbf/truck	=	7,553
Additional haul cost (4 hr avg)		1 hours/trip	×	\$75/hour × 7,553 trips	\$566,475
No. of biomass loads		8,314 acres	×	6.6 tons/acre 25 tons/truck = 2,192	
Haul cost biomass		5.5 hours/trip	×	\$75/hour × 2,192 trips	\$904,200
Surface replacement-sawtimber		30,213 mfb	×	\$10.00/mfb =	\$302,125
Surface replacement-biomass		8,314 acres	×	6.6 tons/acre × 1.43/ ton =	\$78,297
Subsoiling costs		1,453 acres	×	\$230/acre	\$334,112
BD costs		30,213 mbf	×	\$2.00/mbf	\$60,425
Road construction					\$353,214
Temporary road construction		5.5 miles	×	5,000/mile	\$27,500
Advertised rate-sawtimber		30,213 mbf	×	\$33.26/mbf	\$1,004,749
Advertised rate-biomass		8,314 acres	×	6.6 tons/acre × \$0.20/ton	\$10,962
Yield tax		\$6,283,186	×	2.9%	\$182,212
Scaling sawtimber		7,553 trips	×	\$17/trip	\$128,401
Scaling Biomass		2,192 trips	×	\$3/trip	\$6,576
Total Cost					\$5,592,342
Net Value					\$478,580
				Percent Above Value	8%

Table D-3. Diamond economic analysis for alternative D (continued).

Groups:					Acre/ job	Full-time jobs	
Reforestation costs	762	acres	×	\$450/acre	110	15	\$343,080
Grapple pile & burn	572	acre	×	\$550/acre	120	10	\$314,490
Hand thin, pile, and burn	0	acre	×	\$700/acre	400	0	\$0
Hand thin, pile, and burn-Heli (GS)	0	acre	×	\$1,100/acre	400	0	\$0
Hand line and underburn	0	acre	×	\$450/acre	400	0	\$0
							\$657,570
WO/RO/SO overhead costs	50.5% of above costs						\$332,073
Total Costs							\$989,643
DFPZ:							
Watershed Mitigation Work							\$80,000
Hand pile and burn	59	acre	×	\$700/acre	120	1	\$41,510
Hand line and underburn	716	acre	×	\$150/acre	400	4	\$107,400
Mastication	477	acre	×	\$450/acre	120	9	\$214,650
							\$443,560
Area Thin:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	59	acre	×	\$700/acre	120	1	\$41,510
Hand line and underburn	1,763	acre	×	\$150/acre	400	10	\$264,450
Mastication	329	acre	×	\$450/acre	120	6	\$148,050
Baker Cypress:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	0	acre	×	\$700/acre	120	0	\$0
Hand line and underburn	131	acre	×	\$150/acre	400	1	\$19,650
Mastication	0	acre	×	\$450/acre	120	0	\$0
Aspen:							
Grapple pile	0	acre	×	\$550/acre	120	0	\$0
Hand pile and burn	131	acre	×	\$700/acre	120	2	\$91,700
Hand line and underburn	0	acre	×	\$150/acre	400	0	\$0
Mastication	0	acre	×	\$450/acre	120	0	\$0
Noxious Weed Treatments:							
Chemical treatment	131	acre	×	\$239/acre	120	2	\$31,309
Mechanical treatment		acre	×	\$780/acre	120	0	\$0
Fire treatment		acre	×	\$150/acre	120	0	\$0
Road decommissioning	9.6	miles	×	\$5,000/mile	40	1	\$48,000
							\$644,669
Total Non-Harvest Cost							-\$1,088,229
Total Project Value							-\$609,649
Fire reduction benefits				\$1,186/acre	6,398 acres		\$7,171,742
Harvest & biomass (Employment)							439
Total Full-Time Jobs							501
Total Employee-Related Income							\$21,548,224

Table D-4. Diamond economic analysis for alternative F.

Value – Groups					
Total Acres = 7,678 acres			Low mbf/ac deduction \$0		
Total Acres = 609					
PP 23 inch–29.9 inch sawtimber ^a	7.0%	593 mbf	×	(\$470/mbf + \$0/mbf)	\$278,502
SP 23 inch–29.9 inch sawtimber ^a	4.3%	364 mbf	×	(\$470/mbf + \$0/mbf)	\$171,080
WF 23 inch–29.9 inch sawtimber ^a	13.6%	1,151 mbf	×	(\$210/mbf + \$0/mbf)	\$241,763
DF 23 inch–29.9 inch sawtimber ^a	6.6%	559 mbf	×	(\$420/mbf + \$0/mbf)	\$234,653
IC 23 inch–29.9 inch sawtimber ^a	4.6%	389 mbf	×	(\$440/mbf + \$0/mbf)	\$171,334
All 10 inch–22.9 inch sawtimber ^b	63.9%	5,409 mbf	×	(\$160/mbf + \$0/mbf)	\$865,472
	100%	8,465 mbf		13.9 mbf / acre	
Biomass value when removed		609 acres × 13.1 tons/acre × \$16.00 / ton =			\$127,646
Value – DFPZ (40% CC, 30 inch UDL)					
Total Acres = 2,045			Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	51 mbf	×	(\$470/mbf + (\$40)/mbf)	\$21,984
SP 23 inch–29.9 inch sawtimber ^a	1.0%	51 mbf	×	(\$470/mbf + (\$40)/mbf)	\$21,984
WF 23 inch–29.9 inch sawtimber ^a	6.0%	307 mbf	×	(\$210/mbf + (\$40)/mbf)	\$52,148
DF 23 inch–29.9 inch sawtimber ^a	1.0%	51 mbf	×	(\$420/mbf + (\$40)/mbf)	\$19,428
IC 23 inch–29.9 inch sawtimber ^a	1.0%	51 mbf	×	(\$440/mbf + (\$40)/mbf)	\$20,450
All 10 inch–22.9 inch sawtimber ^b	90.0%	4,601 mbf	×	(\$160/mbf + (\$40)/mbf)	\$552,150
	100.0%	5,113 mbf		13.9 mbf / acre	
Biomass value when removed		2,045 acres × 7.7 tons/acre × \$16.00 / ton =			\$251,944
Value – DFPZ (CWHR 5M & 5D: 50% CC, 20 inch UDL)					
Total Acres = 976			Low mbf/ac deduction (\$54)		
PP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$54)/mbf)	\$0
SP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$54)/mbf)	\$0
WF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$210/mbf + (\$54)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$420/mbf + (\$54)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$440/mbf + (\$54)/mbf)	0
All 10 inch–22.9 inch sawtimber ^b	100.0%	195 mbf	×	(\$160/mbf + (\$54)/mbf)	\$20,730
	100.0%	195 mbf		0.2 mbf / acre	
Biomass value when removed		976 acres × 2.8 tons/acre × \$16.00 / ton =			\$43,725
Value – Area Thin (40% CC, 30 inch UDL)					
Total Acres = 2,103			Low mbf/ac deduction (\$42)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	46 mbf	×	(\$470/mbf + (\$42)/mbf)	\$19,811
SP 23 inch–29.9 inch sawtimber ^a	1.0%	46 mbf	×	(\$470/mbf + (\$42)/mbf)	\$19,811
WF 23 inch–29.9 inch sawtimber ^a	6.0%	278 mbf	×	(\$210/mbf + (\$42)/mbf)	\$46,692
DF 23 inch–29.9 inch sawtimber ^a	1.0%	46 mbf	×	(\$420/mbf + (\$42)/mbf)	\$17,498
IC 23 inch–29.9 inch sawtimber ^a	1.0%	46 mbf	×	(\$440/mbf + (\$42)/mbf)	\$18,423
All 10 inch–22.9 inch sawtimber ^b	90.0%	4,164 mbf	×	(\$160/mbf + (\$42)/mbf)	\$492,178
		4,627 mbf		2.2 mbf / acre	
Biomass value when removed		1,367 acres × 5.9 tons/acre × \$16.00 / ton =			\$129,040
Value – Area Thin (CWHR 5M & 5D: 50% CC, 20 inch UDL)					
Total Acres = 976			Low mbf/ac deduction (\$54)		
PP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$54)/mbf)	\$0
SP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$54)/mbf)	\$0
WF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$210/mbf + (\$54)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$420/mbf + (\$54)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$440/mbf + (\$54)/mbf)	\$0
All 10 inch–22.9 inch sawtimber ^b	100.0%	195 mbf	×	(\$160/mbf + (\$54)/mbf)	\$20,730
	100.0%	195 mbf		2.5 mbf / acre	
Biomass value when removed		634 acres × 2.5 tons/acre × \$16.00 / ton =			\$25,376

Table D-4. Diamond economic analysis for alternative F (continued).

Value – RHCA (50% CC, 20 inch UDL)					
Total Acres = 705			Low mbf/ac deduction (\$53)		
PP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0
SP 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$470/mbf + (\$53)/mbf)	\$0
WF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$210/mbf + (\$53)/mbf)	\$0
DF 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$420/mbf + (\$53)/mbf)	\$0
IC 23 inch–29.9 inch sawtimber ^a	0.0%	0 mbf	×	(\$440/mbf + (\$53)/mbf)	\$0
All 10 inch–22.9 inch sawtimber ^b	100.0%	211 mbf	×	(\$160/mbf + (\$53)/mbf)	\$22,579
	100.0%	211 mbf		11.6 mbf / acre	
Biomass value when removed				705 acres × 2.5 tons/acre × \$16.00 / ton =	\$28,188
Value – Baker Cypress					
Total Acres = 131			Low mbf/ac deduction (\$0)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
SP 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$470/mbf + (\$0)/mbf)	\$7,142
WF 23 inch–29.9 inch sawtimber ^a	6.0%	91 mbf	×	(\$210/mbf + (\$0)/mbf)	\$19,147
DF 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$420/mbf + (\$0)/mbf)	\$6,382
IC 23 inch–29.9 inch sawtimber ^a	1.0%	15 mbf	×	(\$440/mbf + (\$0)/mbf)	\$6,686
All 10 inch–22.9 inch sawtimber ^b	90.0%	1,368 mbf	×	(\$160/mbf + (\$0)/mbf)	\$218,822
	100.0%	1,520 mbf		11.6 mbf / acre	
Biomass value when removed				131 acres × 4.0 tons/acre × \$16.00 / ton =	\$8,384
Value – Aspen					
Total Acres = 133			Low mbf/ac deduction (\$40)		
PP 23 inch–29.9 inch sawtimber ^a	1.0%	3 mbf	×	(\$470/mbf + (\$40)/mbf)	\$1,430
SP 23 inch–29.9 inch sawtimber ^a	1.0%	3 mbf	×	(\$470/mbf + (\$40)/mbf)	\$1,430
WF 23 inch–29.9 inch sawtimber ^a	6.0%	20 mbf	×	(\$210/mbf + (\$40)/mbf)	\$3,392
DF 23 inch–29.9 inch sawtimber ^a	1.0%	3 mbf	×	(\$420/mbf + (\$40)/mbf)	\$1,264
IC 23 inch–29.9 inch sawtimber ^a	1.0%	3 mbf	×	(\$440/mbf + (\$40)/mbf)	\$1,330
All 10 inch–22.9 inch sawtimber ^b	90.0%	299 mbf	×	(\$160/mbf + (\$40)/mbf)	\$35,910
		333 mbf		2.5 mbf / acre	
Biomass value when removed				133 acres × 7.7 tons/acre × \$16.00 / ton =	\$16,386
Total Value		20,658 mbf			\$4,270,162
	Acres	Total biomass	39 1,000 tons	6.0 Average tons/acre	
Costs	0	(Assumes harvesting sawtimber and biomass in one operation)			
Add sawtimber skyline cost	0	0 mbf	×	\$0/mbf +	\$0
Additional cost (heli GS)	0	0 mbf	×	\$250/mbf +	\$0
Additional cost (long skid)		1,000 mbf	×	\$1/mbf +	\$20,000
Additional cost (Sporax treatment)		18,806 mbf	×	\$1/mbf +	\$25,012
				Average unit size = 50 acres	\$16/acre
				Contract length = 2 years	(\$16)/acre
				Months operation = 5 months	\$0/acre
Acres of 6 inch–9.9 inch biomass-tractor		0 acres	×	(\$162/acre + \$0/acre)	\$0
Acres of 3 inch–9.9 inch biomass-tractor		6,600 acres	×	(\$210/acre + \$0/acre)	\$1,384,188
Acres of 6 inch–9.9 inch biomass-Heli		0 acres	×	(\$1,000/mbf + \$0/acre)	\$0
Acres of 3 inch–9.9 inch biomass-skyline		0 acres	×	(\$2,000/acre + \$0/acre)	\$0
		6,600		Biomass acres	
No. of sawtimber loads		20,658 mbf/	4 mbf/truck	=	5,165
Additional haul cost (4 hr avg)		1	hours/trip × \$75/hour × 5,165 trips		\$387,375
No. of biomass loads		6,600	acres × 6.0 tons/acre	25 tons/truck =	1,577
Haul cost biomass		5.5	hours/trip × \$75/hour × 1,577 trips		\$650,513
Surface replacement-sawtimber		20,658	mbf × \$10.00/mbf =		\$206,581
Surface replacement-biomass		686004	acres × 6.0 tons/acre × 1.43/ ton =		\$56,312
Subsoiling costs		1,152	acres × \$230/acre		\$264,881
BD costs		20,658	mbf × \$2.00/mbf		\$41,316
Road construction					\$352,891

Table D-4. Diamond economic analysis for alternative F (continued).

Temporary road construction		4.0 miles × 5,000/mile				\$20,000
Advertised rate-sawtimber		20,658 mbf × \$33.26/mbf				\$642,745
Advertised rate-biomass		6,600 acres × 6.0 tons/acre × \$0.20/ton				\$7,884
Yield tax		\$4,270,162 × 2.9%				\$123,835
Scaling sawtimber		5,165 trips \$17/trip				\$87,805
Scaling Biomass		1,577 trips \$3/trip				\$4,731
Total Cost						\$4,276,067
Net Value						(\$5,905)
					Percent Above Value	0
Groups:				Acre/ job	Full-time jobs	
Reforestation costs	487 acres ×	\$450/acre	110	10		\$219,240
Grapple pile & burn	365 acre ×	\$550/acre	120	7		\$200,970
Hand thin, pile, and burn	0 acre ×	\$700/acre	400	0		\$0
Hand thin, pile, and burn-Heli (GS)	0 acre ×	\$1,100/acre	400	0		\$0
Hand line and underburn	0 acre ×	\$450/acre	400	0		\$0
						\$420,210
WO/RO/SO overhead costs	50.5% of above costs					\$212,206
Total Costs						\$632,416
DFPZ						
Grapple pile	0 acre ×	\$550/acre	120	0		\$0
Hand pile and burn	39 acre ×	\$700/acre	120	1		\$27,405
Hand line and underburn	714 acre ×	\$150/acre	400	4		\$107,100
Mastication	465 acre ×	\$450/acre	120	9		\$209,250
						\$343,755
Area Thin:						
Grapple pile	0 acre ×	\$550/acre	120	0		\$0
Hand pile and burn	39 acre ×	\$700/acre	120	1		\$27,405
Hand line and underburn	1,724 acre ×	\$150/acre	400	9		\$258,600
Mastication	329 acre ×	\$450/acre	120	6		\$148,050
Baker Cypress:						
Grapple pile	0 acre ×	\$550/acre	120	0		\$0
Hand pile and burn	0 acre ×	\$700/acre	120	0		\$0
Hand line and underburn	131 acre ×	\$150/acre	400	1		\$19,650
Mastication	0 acre ×	\$450/acre	120	0		\$0
Aspen:						
Grapple pile	0 acre ×	\$550/acre	120	0		\$0
Hand pile and burn	100 acre ×	\$700/acre	120	20		\$70,000
Hand line and underburn	0 acre ×	\$150/acre	400	0		\$0
Mastication	0 acre ×	\$450/acre	120	0		\$0
Noxious Weed Treatments:						
Chemical treatment	131 acre ×	\$239/acre	120	2		\$31,309
Mechanical treatment	acre ×	\$780/acre	120	0		\$0
Fire treatment	acre ×	\$150/acre	120	0		\$0
Road decommissioning	9.6 miles ×	\$5,000/mile	40	1		\$48,000
						\$603,014
Total Non-Harvest Cost						-\$946,769
Total Project Value						-\$952,674
Fire reduction benefits		\$1,186/acre	4,412 acres			\$5,232,632
Harvest & biomass (Employment)				315		
Total Full-Time Jobs						366
Total Employee-Related Income						\$15,732,446

Assumptions:

- a. Harvest Value Schedules, CA State Board of Equalization, Table 4, Area 7, Tractor, 23 inch–29.9 inch dbh
- b. Harvest Value Schedules, CA State Board of Equalization, Misc. Harvest Values, Small Sawlogs, 14 inch–22.9 inch dbh
- c. Deduction if average volume per acre under 5 mbf/ac -\$25, under 2 mbf/ac -\$50
Skyline Yarding \$30/mbf for 23 inch–29.9 inch (25% of Volume) \$80/mbf for 14 inch–22.9 inch (75% of Volume)
Cost/ac for unit size increases 0% for 400 ac to 20% for 5 ac
Cost/ac for contract length decreases 10% every year after one year
Cost/ac for months of operation decreases 10% for 10 months or more and increases 10% for 4 months or less

Based on historical relationships between employment and harvest in California during the 1980's, each million board feet harvested supports 6.5 year-around jobs (1 in logging, 4 in sawmill, and 1.5 in US Forest Service employment). In regional economic models of employment for California and the Pacific Northwest, and estimate of one indirect or induced job for every direct timber job is added. Indirect jobs result from the employment created by the local purchase of materials for the sawmill, local expenditures by workers, and the demand for local government employees. Each million board feet harvested supports a total of 13 jobs that are timber related. The restoration and fuel work would support additional direct and indirect employment. There are approximately 1.4 indirect jobs for every full time field job. All jobs are equivalent to year-around employment.

C. Larry Mason et al. Jan / Feb 2006. Investment in Fuel Removals to Avoid Forest Fires Result in Substantial Benefits. Journal of Forestry: 27-31.