

FOREST SERVICE ALLOCATION PROBLEM

The LP Procedure
RHS Range Analysis

ORIGINAL RHS VALUE	Row	-----Minimum Phi-----		-----Maximum Phi-----	
		Rhs Leaving	Objective	Rhs Leaving	Objective
75	ALLOC1	58.789474 X52	266864.26	81.105263 X53	343474.37
90	ALLOC2	62 X52	251255	100.54545 X53	349353.18
140	ALLOC3	105.77778 X52	248595	152.88889 X53	350355
60	ALLOC4	42.888889 X52	265107.22	66.444444 X53	344136.11
212	ALLOC5	190 X52	267515	221.66667 X53	346681.67
98	ALLOC6	77.466667 X52	266459	105.73333 X53	343627
113	ALLOC7	96.789474 X52	263670.79	119.10526 X53	344677.11
40,000	TIMBER	-INFINITY .	.	52148 TIMBER	322515
5	GRAZING	-INFINITY .	.	20.62 GRAZING	322515
55,160	WILDRNS	54580 X53	342235	56700 X52	270155

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The LP Procedure
Price Range Analysis

ORIGINAL OBJ FUNC VALUE	Variable Col Name	-----Minimum Phi----- Price Entering Objective	-----Maximum Phi----- Price Entering Objective
503	1 X11	-INFINITY .	322515
140	2 X12	-INFINITY .	322515
203	3 X13	-370 X12	279540 INFINITY .
675	4 X21	385 X23	296415 INFINITY .
100	5 X22	-INFINITY .	322515
45	6 X23	-INFINITY .	322515
630	7 X31	550 X33	311315 INFINITY .
105	8 X32	-INFINITY .	322515
40	9 X33	-INFINITY .	322515
330	10 X41	-INFINITY .	322515
40	11 X42	-INFINITY .	322515
295	12 X43	-1710 X41	202215 INFINITY .
105	13 X51	-INFINITY .	322515
460	14 X52	197.5 X61	282090 513.33333 X33
120	15 X53	66.666667 X33	319421.67 382.5 X61
490	16 X61	-INFINITY .	322515
55	17 X62	-INFINITY .	322515
180	18 X63	-795 X62	226965 INFINITY .
705	19 X71	-INFINITY .	322515
60	20 X72	-INFINITY .	322515
400	21 X73	-1165 X71	145670 INFINITY .
0	22 TIMBER	-0.493827 X33	316515.99 11.716418 X11
0	23 GRAZING	-3500 X61	267845 1000 X33
0	24 WILDRNS	-INFINITY .	322515 34 WILDRNS

TUBULAR PRODUCTS OPERATIONS PLANNING PROBLEM

The LP Procedure
RHS Range Analysis

ORIGINAL RHS VALUE	Row	-----Minimum Phi----- Rhs Leaving	Objective	-----Maximum Phi----- Rhs Leaving	Objective
100	DEMAND1	0 X1-4	371999.11	195.22222 X4-4	385469.44
630	DEMAND2	0 X2-3	337949.11	1175.2222 CAPCTY3	414338.56
500	DEMAND3	0 X3-3	337399.11	1045.2222 CAPCTY3	424152.56
980	DEMAND4	95.222222 X4-3	308116.89	1525.2222 CAPCTY3	422516.89
720	DEMAND5	0 X5-4	303299.11	815.22222 X4-4	388897.44
240	DEMAND6	0 X6-4	357299.11	335.22222 X4-4	387469.11
75	DEMAND7	0 X7-4	367949.11	170.22222 X4-4	392801.56
22	DEMAND8	0 X8-4	375907.11	117.22222 X4-4	391849.33
50	DEMAND9	0 X9-2	372549.11	97.611111 X4-4	384945.72
22	DEMAND10	0 X10-2	376413.11	69.611111 X4-4	384279.17
353	DEMAND11	214.11111 X11-4	358065.78	400.61111 X4-4	386040.78
55	DEMAND12	0 X12-1	371034.11	533.33333 CAPCTY1	447300.78
125	DEMAND13	0 X13-2	358024.11	172.61111 X4-4	386850.17
35	DEMAND14	0 X14-4	373579.11	82.611111 X4-4	386136
100	DEMAND15	0 X15-2	358010.22	142.85 X4-4	387850
10	DEMAND16	0 X16-2	376960.22	52.85 X4-4	387207.25
800	CAPCTY1	82.5 CAPCTY1	378899.11	INFINITY .	.
480	CAPCTY2	437.15 X4-4	379708.5	605 X11-4	376538
1280	CAPCTY3	1007.3889 CAPCTY3	378899.11	INFINITY .	.
960	CAPCTY4	902.86667 X4-4	379470.44	1490.8667 X4-3	373590.44

TUBULAR PRODUCTS OPERATIONS PLANNING PROBLEM

The LP Procedure
Price Range Analysis

ORIGINAL OBJ FUNC VALUE	Variable Col Name	-----Minimum Phi----- Price Entering Objective	-----Maximum Phi----- Price Entering Objective
90	1 X1-1	69 X1-1 378899.11	INFINITY . 378899.11
75	2 X1-2	55.777778 X1-2 378899.11	INFINITY . 378899.11
70	3 X1-3	69 X1-3 378899.11	INFINITY . 378899.11
63	4 X1-4	-6 DEMAND1 371999.11	64 X1-3 378999.11
	5 X10-1	113 X10-1 378899.11	INFINITY . 378899.11
	6 X10-2	-17 DEMAND10 376413.11	96 X10-4 378899.11
	7 X10-4	101 X10-4 378899.11	INFINITY . 378899.11
	8 X11-1	150 X11-1 378899.11	INFINITY . 378899.11
	9 X11-2	133 X10-4 378899.11	134 X12-2 379113.22
	10 X11-4	137 X12-2 378760.22	138 X10-4 378899.11
	11 X12-1	0 DEMAND12 371034.11	144 X12-2 378954.11
	12 X12-2	126 X12-2 378899.11	INFINITY . 378899.11
	13 X12-4	131 X12-4 378899.11	INFINITY . 378899.11
	14 X13-1	167 X13-1 378899.11	INFINITY . 378899.11
	15 X13-2	-17 DEMAND13 358024.11	155 X13-4 379524.11
	16 X13-4	155 X13-4 378899.11	INFINITY . 378899.11
	17 X14-1	152 X14-1 378899.11	INFINITY . 378899.11
	18 X14-2	135 X14-2 378899.11	INFINITY . 378899.11
	19 X14-4	-12 DEMAND14 373579.11	146 X14-2 379109.11
	20 X15-2	-18.88889 DEMAND15 358010.22	216.11111 X15-4 381510.22
	21 X15-4	193.88889 X15-4 378899.11	INFINITY . 378899.11
	22 X16-2	-18.88889 DEMAND16 376960.22	196.11111 X16-4 379110.22
	23 X16-4	178.88889 X16-4 378899.11	INFINITY . 378899.11
	24 X2-1	65 X2-1 378899.11	INFINITY . 378899.11