

Appendix 13-1 Shadow Wage Rate for Unskilled Labour

In the benefit area, the opportunity cost of unskilled labour is well below the actual wage rate due to the recent economic slowdown and the chronic excess supply of labour especially in rural areas. In the evaluation of agricultural impacts, therefore, the shadow price of unskilled agricultural labour in the beneficial area has been calculated at 55% of the average wage in accordance with the under-mentioned formula.

With well awareness of the fact that unemployment in the construction sector is higher than that in agriculture; it could be argued that the shadow wage rate and the conversion factor are lower in the construction sector. However, the negligible share of unskilled labour in the total project cost and thus the negligible impact of such conversion factor on the economic project cost would be deemed justifiable.

$$SWR = m \cdot p + (w - m) \cdot (1 - 1/V) \cdot c$$

Where m = marginal productivity of labour at domestic price. It may be derived from gross margin calculations as productivity of family labour, i.e. 65 Baht/day.

p = border/domestic price ratio for labour's product, i.e. 0.92

w = actual wage rate, i.e. 110 Bhat/day.

v = social value of consumption relative to investment. This was assumed to be 1 as such information was not available for its estimation. At the assigned value it will have no impact on the overall evaluation.

c = ratio of border price to domestic price for labour's consumption, i.e. 0.95.

Based on the adopted parameter values, the SWR has been estimated to be 60 Bhat/day, while the conversion factor for unskilled labour is 0.55.

Table 13-12 Construction Conversion Factors

Item	(1) Proportion (%)	Traded Goods			Unskilled Labour	Non-traded Goods	Transfer Payment	(2) Item-wise	
		1.0*	0.92*	0.55*				Conversion Factors	(1) x (2)
1. Kok-Ing-Nan Project**							0	100.0	
(1) Kok Intake, Kok Canal and Kok-Ing No.1 Tunnel	6.9	73.4 (0.734)	0.4 (0.004)	0.9 (0.005)	25.3 (0.233)	0	0	0.976	0.07
(2) Tak Canal	6.4	79.3 (0.793)	0.3 (0.003)	0.7 (0.004)	19.7 (0.181)	0	0	100.0	0.06
(3) Kok-Ing No.2 Tunnel	5.6	78.5 (0.785)	0.3 (0.003)	0.8 (0.004)	20.4 (0.188)	0	0	100.0	0.05
(4) Ing Canal and Ing Weir/Intake	6.0	73.5 (0.735)	0.4 (0.004)	0.9 (0.005)	25.2 (0.232)	0	0	100.0	0.06
(5) Ing-Yot Canal and Ing-Yot No.1 Tunnel	8.1	80.1 (0.801)	0.3 (0.003)	0.7 (0.004)	18.9 (0.174)	0	0	100.0	0.08
(6) Ing-Yot Culvert and Ing-Yot No.2 Tunnel (Div. 1)	10.6	79.4 (0.794)	0.3 (0.003)	0.7 (0.004)	19.6 (0.180)	0	0	100.0	0.10
(7) Ing-Yot No.2 Tunnel (Div. 2 & 3)	11.9	78.2 (0.782)	0.3 (0.003)	0.8 (0.004)	20.7 (0.190)	0	0	100.0	0.12
(8) Ing-Yot No.2 Tunnel (Div. 4 & 5)	14.6	79.4 (0.794)	0.3 (0.003)	0.7 (0.004)	19.6 (0.180)	0	0	100.0	0.14
(9) Ing-Yot No.2 Tunnel (Div. 6 & 7)	13.9	79.3 (0.793)	0.3 (0.003)	0.7 (0.004)	19.7 (0.181)	0	0	100.0	0.14
(10) Ing-Yot No.2 Tunnel (Div. 8 & 9)	10.4	78.1 (0.781)	0.3 (0.003)	0.8 (0.004)	20.8 (0.191)	0	0	100.0	0.10
(11) Yao Dam and Yot & Yao River Training	5.6	65.1 (0.651)	0.5 (0.005)	1.2 (0.007)	33.2 (0.305)	0	0	100.0	0.05
Total	100.0	-	-	-	-	-	-	0.968	0.97
2. Associate Irrigation Projects***	100.0	65.6 (0.656)	0.5 (0.005)	1.1 (0.006)	26.3 (0.242)	6.5 (0)	6.5	100.0	0.91
3. Environmental Impact Mitigation Works***	100.0	47.5 (0.475)	0.8 (0.007)	1.8 (0.010)	43.4 (0.399)	6.5 (0)	6.5	100.0	0.89
4. Phitsanulok Irrigation Project (Stage 1) & Existing DEDP Pumping Scheme***	100.0	0 (0)	1.4 (0.013)	3.3 (0.018)	88.8 (0.817)	6.5 (0)	6.5	100.0	0.85
5. Phitsanulok Irrigation Project (Stage 2) & New DEDP Pumping Scheme***	100.0	65.9 (0.659)	0.5 (0.005)	1.1 (0.006)	26.0 (0.239)	6.5 (0)	6.5	100.0	0.91

Note: 1) Figures in parenthesis indicate proportions multiplied by respective conversion factors.

2) * indicates conversion factors.

3) ** indicates the direct construction cost excluding taxes.

4) *** indicates the construction cost including taxes and others.

Table 13-13 Crop Budget of Agricultural Products for Chao Phraya Upper West Delta in Economic Terms (Future Without Project Case)

Item	Unit	Paddy			Field Crops			Other Field Crops			Vegetables		
		Dry Season		Amount	Sugarcane		Amount	Mungbean		Amount	Soybeans		Amount
		Value	Value		Value	Value		Value	Value		Value	Value	Value
Value of Output													
(1) Yield	kg/rai	753	9,470	160									1,300
(2) Unit Price	Baht/kg	4.6	1,048	11.0									5.4
(3) Production Value	Baht/rai	3,464	9,925	1,760									8,674
Total	Baht/rai	3,464	9,925	1,760									8,674
Input Costs													
(1) Seeds	Baht/rai	23kg	164	529	5kg	82	24kg	237	3kg	118	0.15kg	1,359	449
(2) Fertilizer	Baht/rai	46kg	299	45kg	239	10kg	71	6kg	43	48kg	341	231kg	524
(3) Agro-chemicals	Baht/rai	150	150	88	70	77	70	77	222	222	1,207	394	647
(4) Land Preparation*	Baht/rai	523	449	449	167	219	250	220	214	499	214	499	214
(5) Labour	Baht/rai	9.1md	563	26.8md	1,644	5.8md	367	5.5md	349	7.1md	450	19.1md	595
(6) Others	Baht/rai	100	70	70	74	34	74	184	75	92	184	75	92
Total	Baht/rai	1,799	3,019	831									2,268
Net Value	Baht/rai	1,665	6,906	929									6,406

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-14 Crop Budget of Agricultural Products for Chao Phraya Upper West Delta in Economic Terms (Future With Project Case)

Item	Unit	Paddy			Field Crops			Other Field Crops			Vegetables		
		Dry Season		Amount	Sugarcane		Amount	Mungbean		Amount	Soybeans		Amount
		Value	Value		Value	Value		Value	Value		Value	Value	Value
Value of Output													
(1) Yield	kg/rai	850	10,580	200									1,490
(2) Unit Price	Baht/kg	4.6	1,048	11.0									5.4
(3) Production Value	Baht/rai	3,910	11,088	2,200									10,318
Total	Baht/rai	3,910	11,088	2,200									10,318
Input Costs													
(1) Seeds	Baht/rai	25kg	165	517	6kg	90	10kg	141	5kg	188	0.16kg	1,340	440
(2) Fertilizer	Baht/rai	52kg	338	35kg	186	10kg	71	15kg	107	90kg	639	260kg	666
(3) Agro-chemicals	Baht/rai	141	141	75	75	35	35	70	70	220	1,141	367	647
(4) Land Preparation*	Baht/rai	466	466	428	147	162	247	200	189	499	200	189	499
(5) Labour	Baht/rai	9.4md	568	27.8md	1,681	6.4md	388	6.1md	368	7.8md	470	20.6md	613
(6) Others	Baht/rai	115	74	74	43	46	46	184	72	86	184	72	86
Total	Baht/rai	1,793	2,961	774									2,361
Net Value	Baht/rai	2,117	8,127	1,426									7,957

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-15 Crop Budget of Agricultural Products for Chao Phraya Upper East Delta in Economic Terms (Future Without Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops						Vegetables									
		Dry Season		Sugarcane		Mungbean	Soybean	Sweet Corn	Water Melon												
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value								
Value of Output																					
(1) Yield	kg/rai	800		10,020		130		200		1,950		2,430		1,300							
(2) Unit Price	Baht/kg	4.6		1,048		11.0		14.1		5.6		7.9		5.4							
(3) Production Value	Baht/rai	3,680		10,501		1,430		2,820		10,920		19,197		8,592			7,020				
Total	Baht/rai	3,680		10,501		1,430		2,820		10,920		19,197		8,592			7,020				
Input Costs																					
(1) Seeds	Baht/rai	20kg	138		553	4kg	63	24kg	237	3kg	118	0.15kg	1,359	444	3kg	208					
(2) Fertilizer	Baht/rai	32kg	208		106	7kg	50	6kg	43	48kg	341	231kg	1,640	519	112kg	717					
(3) Agro-chemicals	Baht/rai		108		70		23		77		222		1,207	382		647					
(4) Land Preparation	Baht/rai		453		539		160		219		250		220	212		499					
(5) Labour	Baht/rai	8.5md	537		1,624	5.8md	370	5.5md	349	7.1md	450	19.1md	1,213	596	18.2md	1,155					
(6) Others	Baht/rai		68		68		24		34		184		75	79		290					
Total	Baht/rai		1,512		2,960		690		959		1,565		5,714	2,232		3,516					
Net Value	Baht/rai		2,168		7,541		740		1,861		9,355		13,483	6,360		3,504					

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-16 Crop Budget of Agricultural Products for Chao Phraya Upper East Delta in Economic Terms (Future With Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops								Vegetables		
		Dry Season		Sugarcane	Mungbean	Soybean	Sweet Corn	Water Melon	Average		Vegetables					
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value			
Value of Output																
(1) Yield	kg/rai	850	10,580		200	300	2,300		2,780				1,490			
(2) Unit Price	Baht/kg	4.6	1,048		11.0	14.1	5.6		7.9				5.4			
(3) Production Value	Baht/rai	3,910	11,088		2,200	4,230	12,880		21,962				10,318	8,046		
Total	Baht/rai	3,910	11,088		2,200	4,230	12,880		21,962				10,318	8,046		
Input Costs																
(1) Seeds	Baht/rai	25kg	165	517	6kg	90	10kg	141	5kg	188	0.16kg	1,340	440	48kg	263	
(2) Fertilizer	Baht/rai	52kg	338	35kg	186	10kg	71	15kg	107	90kg	639	260kg	1,846	666	120kg	768
(3) Agro-chemicals	Baht/rai		141		75		35		70	220		1,141	367	647		
(4) Land Preparation	Baht/rai		466		428		147		162	247		200	189	499		
(5) Labour	Baht/rai	9.4md	567	27.7md	1,673	6.3md	381	5.9md	354	7.8md	472	20.6md	1,223	608	19.2md	1,162
(6) Others	Baht/rai		115		74		43		46	184		72	86	290		
Total	Baht/rai	1,792	2,953		767		880		1,950	5,822		2,356	3,629			
Net Value	Baht/rai	2,118	8,135		1,433		3,350		10,930	16,140		7,962	4,417			

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-17 Crop Budget of Agricultural Products for Chao Phraya Lower West Delta in Economic Terms (Future Without Project Case)

Item	Unit	Paddy				Field Crops				Other Field Crops				Vegetables			
		Dry Season		Wet Season		Sugarcane		Mungbean		Soybeans		Sweet Corn		Water Melon		Average	
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value
Value of Output																	
(1) Yield	kg/rai	753		9,470				160		200		1,950		2,430		1,300	
(2) Unit Price	Baht/kg	4.6		1,051				11.0		14.1		5.6		7.9		5.4	
(3) Production Value	Baht/rai		3,464		9,953		1,760		2,820		2,820		10,920		19,197		8,674
Total	Baht/rai		3,464		9,953		1,760		2,820		2,820		10,920		19,197		8,674
Input Costs																	
(1) Seeds	Baht/rai	23kg	164		529		5kg		82		24kg		3kg		118		0.15kg
(2) Fertilizer	Baht/rai	46kg	299		45kg		10kg		71		6kg		48kg		341		231kg
(3) Agro-chemicals	Baht/rai		150		88				70		77				222		1,207
(4) Land Preparation*	Baht/rai		523		449				167		219		220		220		214
(5) Labour	Baht/rai	9.1md	563		26.8md		5.8md		367		5.5md		7.1md		450		19.1md
(6) Others	Baht/rai		100		70				74		34		184		75		92
Total	Baht/rai		1,799		3,019		831		929		1,861		9,355		13,483		6,406
Net Value	Baht/rai		1,665		6,934												3,504

Note: 1) * Indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-18 Crop Budget of Agricultural Products for Chao Phraya Lower West Delta in Economic Terms (Future With Project Case)

Item	Unit	Paddy				Field Crops				Other Field Crops				Vegetables			
		Dry Season		Wet Season		Sugarcane		Mungbean		Soybeans		Sweet Corn		Water Melon		Average	
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value
Value of Output																	
(1) Yield	kg/rai	850		10,580				200		300		2,300		2,780		1,490	
(2) Unit Price	Baht/kg	4.6		1,051				11.0		14.1		5.6		7.9		5.4	
(3) Production Value	Baht/rai		3,910		11,120		2,200		4,230		4,230		12,880		21,962		10,318
Total	Baht/rai		3,910		11,120		2,200		4,230		4,230		12,880		21,962		10,318
Input Costs																	
(1) Seeds	Baht/rai	25kg	165		517		6kg		90		10kg		5kg		188		0.16kg
(2) Fertilizer	Baht/rai	52kg	338		186		10kg		71		15kg		90kg		639		260kg
(3) Agro-chemicals	Baht/rai		141		75				35		70				220		1,141
(4) Land Preparation*	Baht/rai		466		428				147		162		247		200		189
(5) Labour	Baht/rai	9.4md	568		27.8md		6.4md		388		6.1md		7.8md		470		20.6md
(6) Others	Baht/rai		115		74				43		46				72		86
Total	Baht/rai		1,793		2,961		774		894		894		1,948		5,826		2,361
Net Value	Baht/rai		2,117		8,159		1,426		3,336		3,336		10,932		16,136		7,957

Note: 1) * Indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-19 Crop Budget of Agricultural Products for Chao Phraya Lower East Delta in Economic Terms (Future Without Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops						Vegetables	
		Dry Season		Sugarcane	Mungbean	Soybean	Sweet Corn	Water Melon	Average	Vegetables			
		Amount	Value								Amount	Value	Amount
Value of Output													
(1) Yield	kg/rai	800		10,020	130	200		1,950		2,430		1,300	
(2) Unit Price	Baht/kg	4.6		1,051	11.0	14.1		5.6		7.9		5.4	
(3) Production Value	Baht/rai		3,680	10,531	1,430		2,820		10,920		19,197		8,592
Total	Baht/rai		3,680	10,531	1,430		2,820		10,920		19,197		8,592
Input Costs													
(1) Seeds	Baht/rai	20kg	138	553	4kg	63	24kg	237	3kg	118	0.15kg	1,359	444
(2) Fertilizer	Baht/rai	32kg	208	20kg	106	7kg	50	6kg	43	48kg	341	231kg	1,640
(3) Agro-chemicals	Baht/rai		108		70		23		77		222		1,207
(4) Land Preparation *	Baht/rai		453		539		160		219		250		220
(5) Labour	Baht/rai	8.5md	537	26.4md	1,624	5.8md	370	5.5md	349	7.1md	450	19.1md	1,213
(6) Others	Baht/rai		68		68		24		34		184		75
Total	Baht/rai		1,512	2,960		690		959		1,565		5,714	2,232
Net Value	Baht/rai		2,168	7,571		740		1,861		9,355		13,483	6,360
													3,504

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-20 Crop Budget of Agricultural Products for Chao Phraya Lower East Delta in Economic Terms (Future With Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops						Vegetables	
		Dry Season		Sugarcane	Mungbean	Soybean	Sweet Corn	Water Melon	Average	Vegetables			
		Amount	Value								Amount	Value	Amount
Value of Output													
(1) Yield	kg/rai	850		10,580	200		300	2,300		2,780		1,490	
(2) Unit Price	Baht/kg	4.6		1,051	11.0		14.1	5.6		7.9		5.4	
(3) Production Value	Baht/rai		3,910	11,120	2,200		4,230	12,880		21,962		10,318	8,046
Total	Baht/rai		3,910	11,120	2,200		4,230	12,880		21,962		10,318	8,046
Input Costs													
(1) Seeds	Baht/rai	25kg	165	517	6kg	90	10kg	141	5kg	188	0.16kg	1,340	440
(2) Fertilizer	Baht/rai	52kg	338	35kg	186	10kg	71	15kg	107	90kg	639	260kg	666
(3) Agro-chemicals	Baht/rai		141		75		35		70		220	1,141	367
(4) Land Preparation	Baht/rai		466		428		147		162		247	200	189
(5) Labour	Baht/rai	9.4md	567	27.7md	1,673	6.3md	381	5.9md	354	7.8md	472	20.6md	608
(6) Others	Baht/rai		115		74		43		46		184	72	86
Total	Baht/rai		1,792	2,953		767		880		1,950		5,822	2,356
Net Value	Baht/rai		2,118	8,167		1,433		3,350		10,930		16,140	7,962
													4,417

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-21 Crop Budget of Agricultural Products for Whole Chao Phraya Delta in Economic Terms (Future Without Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops				Vegetables	
		Dry Season Amount Value	Wet Season Amount Value	Sugarcane Amount Value	Mungbean Amount Value	Soybean Amount Value	Sweet Corn Amount Value	Water Melon Amount Value	Average Amount Value	Vegetables Amount Value	Vegetables Amount Value
Value of Output											
(1) Yield	kg/rai	777	9,745	145	200	1,950	2,430	7.9		1,300	
(2) Unit Price	Baht/kg	4.6	1.05	11.0	14.1	5.6	10,920	19,197	8,633	5.4	7,020
(3) Production Value	Baht/rai	3,574	10,232	1,595	2,820	10,920	19,197	8,633			
Total		3,574	10,232	1,595	2,820	10,920	19,197	8,633			
Input Costs											
(1) Seeds	Baht/rai	22kg	151	541	72	24kg	237	3kg	118	0.15kg	1,359
(2) Fertilizer	Baht/rai	39kg	254	33kg	64	6kg	43	48kg	341	231kg	1,640
(3) Agro-chemicals	Baht/rai		129	79	47		77		222	1,207	388
(4) Land Preparation*	Baht/rai		488	494	163		219		250	220	499
(5) Labour	Baht/rai	8.8md	551	26.6md	369	5.5md	349	7.1md	450	19.1md	1,213
(6) Others	Baht/rai		85	69	49		34		184	75	86
Total		1,658	2,992	764	959	1,565	5,714	2,251			3,516
Net Value	Baht/rai	1,916	7,240	831	1,861	9,355	13,483	6,382			3,504

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-22 Crop Budget of Agricultural Products for Whole Chao Phraya Delta in Economic Terms (Future With Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops				Vegetables	
		Dry Season Amount Value	Wet Season Amount Value	Sugarcane Amount Value	Mungbean Amount Value	Soybean Amount Value	Sweet Corn Amount Value	Water Melon Amount Value	Average Amount Value	Vegetables Amount Value	Vegetables Amount Value
Value of Output											
(1) Yield	kg/rai	850	10,580	200	300	2,300	2,780	7.9		1,490	
(2) Unit Price	Baht/kg	4.6	1.05	11.0	14.1	5.6	12,880	21,962	10,318	5.4	8,046
(3) Production Value	Baht/rai	3,910	11,109	2,200	4,230	12,880	21,962	10,318			
Total		3,910	11,109	2,200	4,230	12,880	21,962	10,318			
Input Costs											
(1) Seeds	Baht/rai	25kg	165	517	90	10kg	141	5kg	188	0.16kg	1,340
(2) Fertilizer	Baht/rai	52kg	338	35kg	71	15kg	116	90kg	639	260kg	1,846
(3) Agro-chemicals	Baht/rai		141	75	35		92		220	1,141	367
(4) Land Preparation*	Baht/rai		466	428	147		162		247	200	499
(5) Labour	Baht/rai	9.4md	568	27.8md	384	6.0md	471	20.6md	1,225	610	19.3md
(6) Others	Baht/rai		115	74	43		380		72	86	290
Total		1,793	2,957	770	1,430	4,185	10,931	16,138	2,358		3,634
Net Value	Baht/rai	2,117	8,152	1,430	4,185	10,931	16,138	7,960			4,412

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-23 Crop Budget of Agricultural Products for Phisanulok Irrigation Project and DEDP Pumping Scheme in Economic Terms
(Future Without Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops								Vegetables		
		Dry Season		Sugarcane		Mungbean		Soybean		Sweet Corn		Water Melon		Average		
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	
Value of Output																
(1) Yield	kg/rai	765		9,608		153		200		1,950		2,430		1,300		
(2) Unit Price	Baht/kg	4.6		1,041		10.9		14.0		5.5		7.8		5.3		
(3) Production Value	Baht/rai		3,519		10,002		1,668		2,800		10,725		18,954		8,537	
Total	Baht/rai		3,519		10,002		1,668		2,800		10,725		18,954		8,537	
Input Costs																
(1) Seeds	Baht/rai	22kg	157		535	5kg	77	24kg	237	3kg	118	0.15kg	1,359	448	3kg	208
(2) Fertilizer	Baht/rai	42kg	277	39kg	211	9kg	65	6kg	43	48kg	346	231kg	1,663	529	112kg	728
(3) Agro-chemicals	Baht/rai		140		84		59		77		222		1,207	391		647
(4) Land Preparation	Baht/rai		505		472		165		219		250		220	214		499
(5) Labour	Baht/rai	8.9md	557	26.7md	1,639	5.8md	368	5.5md	349	7.1md	450	19.1md	1,213	595	18.2md	1,155
(6) Others	Baht/rai		92		69		62		34		184		75	89		290
Total	Baht/rai		1,728		3,010		796		959		1,570		5,737	2,266		3,527
Net Value	Baht/rai		1,791		6,992		872		1,841		9,155		13,217	6,271		3,363

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

Table 13-24 Crop Budget of Agricultural Products for Phisanulok Irrigation Project and DEDP Pumping Scheme in Economic Terms
(Future With Project Case)

Item	Unit	Paddy		Field Crops		Other Field Crops								Vegetables	
		Dry Season		Sugarcane		Mungbean		Soybean		Sweet Corn		Water Melon		Average	
		Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value	Amount	Value
Value of Output															
(1) Yield	kg/rai	850		10,580		200		300		2,300		2,780		1,490	
(2) Unit Price	Baht/kg	4.6		1,041		10.9		14.0		5.5		7.8		5.3	
(3) Production Value	Baht/rai	3,910		11,014		2,180		4,200		12,650		21,684		10,179	
Total	Baht/rai	3,910		11,014		2,180		4,200		12,650		21,684		10,179	
Input Costs															
(1) Seeds	Baht/rai	25kg	165	517	6kg	90	10kg	141	5kg	188	0.16kg	1,340	440	4kg	263
(2) Fertilizer	Baht/rai	52kg	343	35kg	189	10kg	72	15kg	108	90kg	648	260kg	1,872	780	780
(3) Agro-chemicals	Baht/rai		141	75		35		70		220		1,141	367		647
(4) Land Preparation	Baht/rai		466	428		147		162		247		200	189		499
(5) Labour	Baht/rai	9.4md	568	27.8md	1,679	6.4md	386	6.0md	365	7.8md	471	20.6md	1,225	612	19.3md
(6) Others	Baht/rai		115	74		43		46		184		72	86		290
Total	Baht/rai		1,798	2,962		773		892		1,958		5,850	2,369		3,648
Net Value	Baht/rai		2,112	8,052		1,407		3,308		10,692		15,834	7,810		4,249

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

**Table 13-25 Crop Budget of Agricultural Products for Associate Irrigation Projects
in Economic Terms (Future Without Project Case)**

Item	Unit	Field Crops						Vegetables	
		Mungbean		Soybean		Average		Vegetables	
		Amount	Value	Amount	Value	Amount	Value	Amount	Value
Value of Output				1.05					
(1) Yield	kg/rai	170		200				1,300	
(2) Unit Price	Baht/kg	10.8		13.9				5.2	
(3) Production Value	Baht/rai		1,836		2,780		2,308		6,760
Total	Baht/rai		1,836		2,780		2,308		6,760
Input Costs									
(1) Seeds	Baht/rai	5kg	81	24kg	237		159	3kg	208
(2) Fertilizer	Baht/rai	8kg	59	6kg	44		52	112kg	728
(3) Agro-chemicals	Baht/rai		53		77		65		647
(4) Land Preparation*	Baht/rai		155		219		187		499
(5) Labour	Baht/rai	5.8md	370	5.5md	349		360	18.2md	1,155
(6) Others	Baht/rai		59		34		47		290
Total	Baht/rai		777		960		870		3,527
Net Value	Baht/rai		1,059		1,820		1,438		3,233

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

**Table 13-26 Crop Budget of Agricultural Products for Associate Irrigation Projects
in Economic Terms (Future With Project Case)**

Item	Unit	Paddy		Field Crops				Vegetables	
		Dry Season		Mungbean		Soybean		Average	
		Amount	Value	Amount	Value	Amount	Value	Amount	Value
Value of Output									
(1) Yield	kg/rai	850		200		300			1,490
(2) Unit Price	Baht/kg	4.5		10.8		13.9			5.2
(3) Production Value	Baht/rai		3,825		2,160		4,170		3,165
Total	Baht/rai		3,825		2,160		4,170		3,165
Input Costs									
(1) Seeds	Baht/rai	25kg	165	6kg	90	10kg	141		116
(2) Fertilizer	Baht/rai	52kg	343	10kg	73	15kg	110		92
(3) Agro-chemicals	Baht/rai		141		35		70		53
(4) Land Preparation*	Baht/rai		466		147		162		155
(5) Labour	Baht/rai	9.4md	568	6.4md	386	6.2md	373		380
(6) Others	Baht/rai		115		43		46		45
Total	Baht/rai		1,798		774		902		841
Net Value	Baht/rai		2,027		1,386		3,268		2,324

Note: 1) * indicates dependence on mechanization, including fuel cost.

2) Vegetables include cucumber, long beans, etc.

Source: Farm household survey.

**Table 13-27 Crop Budget of Fruit Trees for Whole Benefit Area
in Economic Terms**

Item	Unit	Future Without Project		Future With Project	
		Mango*		Mango**	
		Amount	Value	Amount	Value
Value of Output					
(1) Yield	kg/rai	1,084		884	
(2) Unit Price	Baht/kg	11.3		22.0	
(3) Production Value	Baht/rai		12,249		19,448
Total	Baht/rai		12,249		19,448
Input Costs					
(1) Initial Investment Cost	Baht/rai				
(a) Pump	Baht/rai		1,058		1,210
(b) Sprinkler	Baht/rai		282		323
(c) Sprayer	Baht/rai		229		262
(d) Others	Baht/rai		184		59
(2) Opreation Cost	Baht/rai				
(a) Fertilizer	Baht/rai	247kg	1,778	139kg	1,001
(b) Agro-chemicals	Baht/rai		832		375
(c) Labour	Baht/rai	7.5md	475	9.1md	578
(d) Others	Baht/rai		302		640
Total	Baht/rai		5,140		4,448
Net Value	Baht/rai		7,109		15,000

Note : * indicates local varieties.

 ** indicates an export-type variety.

Source: Farm household survey.

Table 13-28 Fish Culture Budget for Whole Benefit Area in Economic Terms

Item	Unit	Future Without Project	Future With Project
Value of Output			
(1) Yield	t/rai	0.37	1.33
(2) Unit Price	Baht/t	16,327	16,327
(3) Production Value	Baht/rai	6,041	21,715
Total	Baht/rai	6,041	21,715
Input Costs			
(1) Initial Investment Cost			
(a) Pond Digging*	Baht/rai	12,696	12,696
(b) Pump Cost**	Baht/rai	4,313	4,313
(2) Operation Cost			
(a) Flingerlings	Baht/rai	321.48	662.7
(b) Labour	Baht/rai	793	302.5
(c) Feed	Baht/rai	36.66	2,297
(d) Limestone	Baht/rai	123.28	2,371
(e) Fuel	Baht/rai	118.68	310.96
(f) Others	Baht/rai	2,171	0
Total	Baht/rai	3,564	5,944
Net Value	Baht/rai	2,477	15,771

Note: 1) * indicates negligible value due to semi-permanent utilization of the digged pond.

2) ** indicates negligible value due to multifarious utilization of a pump.

Source: Farm household survey.

Table 13-29 Scenarios for Agricultural Development in Benefit Area

Scenario	Water Availability for Agricultural Development (MCM)	Crop	Chao Phraya Delta				Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme				Associate Irrigation Projects				Total	
			Cropped Area		Cropped Area		Cropped Area		Cropped Area		Cropped Area					
			FW/O Case (1,000 rai)	FW Case Increment (1,000 rai)	FW/O Case (1,000 rai)	FW Case Increment (1,000 rai)	FW/O Case (1,000 rai)	FW Case Increment (1,000 rai)	FW/O Case (1,000 rai)	FW Case Increment (1,000 rai)	FW/O Case (1,000 rai)	FW Case Increment (1,000 rai)				
Plan A-1	1,707	Dry Paddy	2,208.7	2,279.9	71.2	569.8	397.5	-172.3	0	224.0	224.0	0	31.5	2,778.5	2,932.9	154.4
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	351.5	259.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	237.0	190.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	683.7	360.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	224.7	87.5
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	3,643.9	691.3	600.5	615.8	15.3	0	360.5	360.5	0	157.0	3,553.1	4,777.2	1,224.1		
Plan A-2	1,985	Dry Paddy	2,208.7	2,388.1	179.4	569.8	439.6	-130.2	0	224.0	224.0	0	31.5	2,778.5	3,083.2	304.7
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	351.5	259.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	237.0	190.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	683.7	360.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	224.7	87.5
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	3,752.1	799.5	600.5	657.9	57.4	0	360.5	360.5	0	157.0	3,553.1	4,927.5	1,374.4		
Plan A-3	2,232	Dry Paddy	2,208.7	2,484.1	275.4	569.8	477.1	-92.7	0	224.0	224.0	0	31.5	2,778.5	3,216.7	438.2
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	351.5	259.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	237.0	190.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	683.7	360.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	224.7	87.5
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	3,848.1	895.5	600.5	695.4	94.9	0	360.5	360.5	0	157.0	3,553.1	5,061.0	1,507.9		
Plan B-1	1,707	Dry Paddy	2,208.7	2,628.6	419.9	569.8	397.5	-172.3	0	0	0	0	31.5	2,778.5	3,057.6	279.1
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	295.5	203.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	216.0	169.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	634.7	311.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	214.2	77.0
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	3,992.6	1,040.0	600.5	615.8	15.3	0	360.5	360.5	0	157.0	3,553.1	4,765.4	1,212.3		
Plan B-2	1,985	Dry Paddy	2,208.7	2,769.0	560.3	569.8	439.6	-130.2	0	0	0	0	31.5	2,778.5	3,240.1	461.6
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	295.5	203.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	216.0	169.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	634.7	311.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	214.2	77.0
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	4,133.0	1,180.4	600.5	657.9	57.4	0	360.5	360.5	0	157.0	3,553.1	4,947.9	1,394.8		
Plan B-3	2,232	Dry Paddy	2,208.7	2,893.7	685.0	569.8	477.1	-92.7	0	0	0	0	31.5	2,778.5	3,402.3	623.8
		Sugarcane	175.2	290.4	115.2	0	0	0	0	0	0	0	0	175.2	290.4	115.2
		Field Crops	66.9	181.0	114.1	25.3	89.5	64.2	0	56.0	56.0	0	25.0	92.2	295.5	203.3
		Vegetables	41.7	170.4	128.7	5.1	33.6	28.5	0	21.0	21.0	0	12.0	46.8	216.0	169.2
		Fruit Trees	323.2	531.3	208.1	0	78.4	78.4	0	49.0	49.0	0	25.0	323.2	634.7	311.5
		Fish Pond	136.9	190.9	54.0	0.3	16.8	16.5	0	10.5	10.5	0	6.5	137.2	214.2	77.0
		Reservoir Fish	0	0	0	0	0	0	0	0	0	0	57.0	57.0	57.0	
Total	2,952.6	4,257.7	1,305.1	600.5	695.4	94.9	0	360.5	360.5	0	157.0	3,553.1	5,110.1	1,557.0		

Note: 1) Double cropping in vegetation for the whole benefit area is assumed in the FW case.
2) The Associate Irrigation Projects include reservoir fish culture.

Table 12-30 Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan A-1)

Item	Achievement of Target Yields (%)	Chao Phraya Delta				Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme				Phitsanulok Irrigation Project (Stage 2) and New DEDP Pumping Scheme				Associate Irrigation Projects			
		Net Value	Incremental Cropped Area	Total Net Value	Total Net Value	Net Value	Incremental Cropped Area	Total Net Value	Total Net Value	Net Value	Incremental Cropped Area	Total Net Value	Total Net Value	Net Value	Incremental Cropped Area	Total Net Value	Total Net Value
		(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)
1. Increment (FW Case - FW/O Case)	80																
(1) Dry Paddy		1,335	71.2	95,052	1,330	-229,159	1,330	224.0	297,920	1,262	31.5	39,753	154.4	203,566			
(2) Sugarcane		5,930	115.2	683,136	5,849	0	5,849	0	0	0	0	0	115.2	683,136			
(3) Other Field Crops		5,897	114.1	672,848	5,775	370,755	5,775	56.0	323,400	1,691	25.0	42,275	259.3	1,409,278			
(4) Vegetables		2,803	128.7	360,746	2,670	76,095	2,670	21.0	56,070	2,530	12.0	30,600	190.2	523,511			
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	870,710	11,106	49.0	544,194	11,106	25.0	277,650	360.5	4,003,713			
(6) Fish Pond		11,428	54.0	617,112	11,428	188,562	11,428	10.5	119,994	11,428	6.5	74,282	87.5	999,950			
(7) Reservoir Fish		5,714	0	0	5,714	0	5,714	0	0	5,714	57.0	325,698	57.0	325,698			
Total		-	691.3	4,740,053	-	1,276,963	-	360.5	1,341,578	-	157.0	790,258	1,224.1	8,148,852			
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	112,457	772	59.5	45,934	855	31.5	26,933	563.2	632,425			
3. Net Incremental Value				4,292,952		1,164,506			1,295,644			763,325		7,516,427			
1. Increment (FW Case - FW/O Case)	90																
(1) Dry Paddy		1,726	71.2	122,891	1,721	-296,528	1,721	224.0	385,504	1,645	31.5	51,818	154.4	263,685			
(2) Sugarcane		7,041	115.2	811,123	6,950	0	6,950	0	0	0	0	0	115.2	811,123			
(3) Other Field Crops		6,928	114.1	790,485	6,793	436,111	6,793	56.0	380,408	2,008	25.0	50,200	259.3	1,657,204			
(4) Vegetables		3,607	128.7	464,221	3,459	98,582	3,459	21.0	72,639	3,325	12.0	39,900	190.2	675,342			
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	1,024,218	13,064	49.0	640,136	13,064	25.0	326,600	360.5	4,709,572			
(6) Fish Pond		13,599	54.0	734,346	13,599	224,384	13,599	10.5	142,790	13,599	6.5	88,394	87.5	1,189,914			
(7) Reservoir Fish		6,799	0	0	6,799	0	6,799	0	0	6,799	57.0	387,543	57.0	387,543			
Total		-	691.3	5,641,684	-	1,486,767	-	360.5	1,621,477	-	157.0	944,455	1,224.1	9,694,383			
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	112,457	772	59.5	45,934	855	31.5	26,933	563.2	632,425			
3. Net Incremental Value				5,194,583		1,374,310			1,575,543			917,522		9,061,958			
1. Increment (FW Case - FW/O Case)	100																
(1) Dry Paddy		2,117	71.2	150,730	2,112	-363,898	2,112	224.0	473,088	2,027	31.5	63,851	154.4	322,771			
(2) Sugarcane		8,152	115.2	930,110	8,052	0	8,052	0	0	0	0	0	115.2	930,110			
(3) Other Field Crops		7,960	114.1	908,236	7,810	501,402	7,810	56.0	437,360	2,324	25.0	58,100	259.3	1,905,098			
(4) Vegetables		4,412	128.7	567,824	4,249	121,097	4,249	21.0	89,229	4,100	12.0	49,200	190.2	827,350			
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	1,176,000	15,000	49.0	735,000	15,000	25.0	375,000	360.5	5,407,500			
(6) Fish Pond		15,771	54.0	851,634	15,771	260,222	15,771	10.5	165,596	15,771	6.5	102,512	87.5	1,379,964			
(7) Reservoir Fish		7,885	0	0	7,885	0	7,885	0	0	7,885	57.0	449,445	57.0	449,445			
Total		-	691.3	6,539,034	-	1,694,823	-	360.5	1,900,273	-	157.0	1,098,108	1,224.1	11,232,238			
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	112,457	772	59.5	45,934	855	31.5	26,933	563.2	632,425			
3. Net Incremental Value				6,091,933		1,582,366			1,854,339			1,071,175		10,599,813			

Table 13-31. Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan A-2)

Item	Achievement of Target Yields (%)	Chao Phraya Delta				Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme				Phitsanulok Irrigation Project (Stage 2) and New DEDP Pumping Scheme				Associate Irrigation Projects			
		Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Total Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Total Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Total Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)	Total Net Value (Bath/rat) (1,000 Bath)	Incremental Cropped Area (1,000 rat)
80																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,335	179.4	239,499	1,330	-130.2	-173,166	1,330	224.0	297,920	1,262	31.5	39,753	304.7	404,006		
(2) Sugarcane		5,930	115.2	683,136	5,849	0	5,849	0	0	0	0	0	0	115.2	683,136		
(3) Other Field Crops		5,897	114.1	672,848	5,775	64.2	370,755	5,775	56.0	323,400	1,691	25.0	42,275	259.3	1,409,278		
(4) Vegetables		2,803	128.7	360,746	2,670	28.5	76,095	2,670	21.0	56,070	2,550	12.0	30,600	190.2	523,511		
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	78.4	870,710	11,106	49.0	544,194	11,106	25.0	277,650	360.5	4,003,713		
(6) Fish Pond		11,428	54.0	617,112	11,428	16.5	188,562	11,428	10.5	119,994	11,428	6.5	74,282	87.5	999,950		
(7) Reservoir Fish		5,714	0	0	5,714	0	0	5,714	0	0	5,714	57.0	325,698	57.0	325,698		
Total		1,185	377.3	4,884,500	1,185	94.9	1,332,956	1,185	59.5	1,341,578	855	31.5	790,258	1,374.4	8,349,292		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				4,437,399			1,220,499			1,295,644			763,325		7,716,867		
90																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,726	179.4	309,644	1,721	-130.2	-224,074	1,721	224.0	385,504	1,645	31.5	51,818	304.7	522,892		
(2) Sugarcane		7,041	115.2	811,123	6,950	0	6,950	0	0	0	0	0	0	115.2	811,123		
(3) Other Field Crops		6,928	114.1	790,485	6,793	64.2	436,111	6,793	56.0	380,408	2,008	25.0	50,200	259.3	1,657,204		
(4) Vegetables		3,607	128.7	464,221	3,459	28.5	98,582	3,459	21.0	72,639	3,325	12.0	39,900	190.2	675,342		
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	78.4	1,024,218	13,064	49.0	640,136	13,064	25.0	326,600	360.5	4,709,572		
(6) Fish Pond		13,599	54.0	734,346	13,599	16.5	224,384	13,599	10.5	142,790	13,599	6.5	88,394	87.5	1,189,914		
(7) Reservoir Fish		6,799	0	0	6,799	0	0	6,799	0	0	6,799	57.0	387,543	57.0	387,543		
Total		1,185	377.3	4,471,101	1,185	94.9	1,559,221	1,185	59.5	1,621,477	855	31.5	944,455	1,374.4	9,953,590		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				5,381,336			1,446,764			1,575,543			917,522		9,321,165		
100																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		2,117	179.4	379,789.80	2,112	-130.2	-274,982	2,112	224.0	473,088	2,027	31.5	63,851	304.7	641,747		
(2) Sugarcane		8,152	115.2	939,110	8,052	0	8,052	0	0	0	0	0	0	115.2	939,110		
(3) Other Field Crops		7,960	114.1	908,236	7,810	64.2	501,402	7,810	56.0	437,360	2,324	25.0	58,100	259.3	1,905,098		
(4) Vegetables		4,412	128.7	567,824	4,249	28.5	121,097	4,249	21.0	89,229	4,100	12.0	49,200	190.2	827,350		
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	78.4	1,176,000	15,000	49.0	735,000	15,000	25.0	375,000	360.5	5,407,500		
(6) Fish Pond		15,771	54.0	851,634	15,771	16.5	260,222	15,771	10.5	165,596	15,771	6.5	102,512	87.5	1,379,964		
(7) Reservoir Fish		7,885	0	0	7,885	0	0	7,885	0	0	7,885	57.0	449,445	57.0	449,445		
Total		1,185	377.3	6,768,094	1,185	94.9	1,783,739	1,185	59.5	1,900,273	855	31.5	1,098,108	1,374.4	11,550,214		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				6,320,993			1,671,282			1,854,339			1,071,175		10,917,789		

Table 13-32 Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan A-3)

Item	Achievement of Target Yields (%)	Chao Phraya Delta				Phitsnulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme				Phitsnulok Irrigation Project (Stage 2) and New DEDP Pumping Scheme				Associate Irrigation Projects			
		Net Value	Incremental Cropped Area	Total Net Value	Value	Net Value	Incremental Cropped Area	Total Net Value	Value	Net Value	Incremental Cropped Area	Total Net Value	Value	Net Value	Incremental Cropped Area	Total Net Value	
		(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	(1,000 Baht)	(Baht/rai)	(1,000 rai)	(1,000 Baht)	
80																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,335	275.4	367,659	1,330	-92.7	-123,291	1,330	224.0	297,920	1,262	31.5	39,753	438.2	582,041		
(2) Sugarcane		5,930	115.2	683,136	5,849	0	0	5,849	0	0	0	0	0	115.2	683,136		
(3) Other Field Crops		5,897	114.1	672,848	5,775	64.2	370,755	5,775	56.0	323,400	1,691	25.0	42,275	259.3	1,409,278		
(4) Vegetables		2,803	128.7	360,746	2,670	28.5	76,095	2,670	21.0	56,070	2,550	12.0	30,600	190.2	523,511		
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	78.4	870,710	11,106	49.0	544,194	11,106	25.0	277,650	360.5	4,003,713		
(6) Fish Pond		11,428	54.0	617,112	11,428	16.5	188,562	11,428	10.5	119,994	11,428	6.5	74,282	87.5	999,950		
(7) Reservoir Fish		5,714	0	0	5,714	0	0	5,714	0	0	5,714	57.0	325,698	57.0	325,698		
Total		1,185	377.3	4,471,101	1,185	94.9	1,382,831	1,185	360.5	1,341,578	855	157.0	790,258	1,507.9	8,527,327		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				4,565,559			1,270,374			1,295,644		31.5	26,933	563.2	632,425		
90																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,726	275.4	475,340	1,721	-92.7	-159,537	1,721	224.0	385,504	1,645	31.5	51,818	438.20	753,125		
(2) Sugarcane		7,041	115.2	811,123	6,950	0	0	6,950	0	0	0	0	0	115.20	811,123		
(3) Other Field Crops		6,928	114.1	790,485	6,793	64.2	436,111	6,793	56.0	380,408	2,008	25.0	50,200	259.30	1,657,204		
(4) Vegetables		3,607	128.7	464,211	3,459	28.5	98,582	3,459	21.0	72,639	3,325	12.0	39,900	190.20	675,332		
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	78.4	1,024,218	13,064	49.0	640,136	13,064	25.0	326,600	360.50	4,709,572		
(6) Fish Pond		13,599	54.0	734,346	13,599	16.5	224,384	13,599	10.5	142,790	13,599	6.5	88,394	87.50	1,189,914		
(7) Reservoir Fish		6,799	0	0	6,799	0	0	6,799	0	0	6,799	57.0	387,543	57.00	387,543		
Total		1,185	377.3	4,471,101	1,185	94.9	1,623,758	1,185	360.5	1,621,477	855	157.0	944,455	1,507.90	10,183,813		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				5,547,022			1,511,301			1,575,543		31.5	26,933	563.2	632,425		
100																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		2,117	275.4	583,022	2,112	-92.7	-195,782	2,112	224.0	473,088	2,027	31.5	63,851	438.2	924,179		
(2) Sugarcane		8,152	115.2	939,110	8,052	0	0	8,052	0	0	0	0	0	115.2	939,110		
(3) Other Field Crops		7,960	114.1	908,236	7,810	64.2	501,402	7,810	56.0	437,360	2,324	25.0	58,100	259.3	1,905,098		
(4) Vegetables		4,412	128.7	567,824	4,249	28.5	121,097	4,249	21.0	89,229	4,100	12.0	49,200	190.2	827,350		
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	78.4	1,176,000	15,000	49.0	735,000	15,000	25.0	375,000	360.5	5,407,500		
(6) Fish Pond		15,771	54.0	851,634	15,771	16.5	260,222	15,771	10.5	165,596	15,771	6.5	102,512	87.5	1,379,964		
(7) Reservoir Fish		7,885	0	0	7,885	0	0	7,885	0	0	7,885	57.0	449,445	57.0	449,445		
Total		1,185	377.3	4,471,101	1,185	94.9	1,862,939	1,185	360.5	1,900,273	855	157.0	1,098,108	1,507.9	11,832,646		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value				6,524,225			1,750,482			1,854,339		31.5	26,933	563.2	632,425		
													1,071,175		11,200,221		

Table 13-33 Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan B-1)

Item	Achievement of Target Yields (%)	Chao Phraya Delta					Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme					Associate Irrigation Projects					Total
		Net Value		Incremental Cropped Area		Total Net Value	Net Value		Incremental Cropped Area		Total Net Value	Net Value		Incremental Cropped Area		Total Net Value	
		(Baht/rai)	(1,000 rai)	(Baht/rai)	(1,000 rai)		(Baht/rai)	(1,000 rai)	(Baht/rai)	(1,000 rai)		(Baht/rai)	(1,000 rai)	(Baht/rai)	(1,000 rai)		
80																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,335	419.9	560,567	1,330	-172.3	-229,159	1,330	0	0	1,262	31.5	39,753	279.1	371,161		
(2) Sugarcane		5,930	115.2	683,136	5,849	0	0	5,849	0	0	0	0	0	115.2	683,136		
(3) Other Field Crops		5,897	114.1	672,848	5,775	64.2	370,755	5,775	0	0	1,691	25.0	42,275	203.3	1,085,878		
(4) Vegetables		2,803	128.7	360,746	2,670	28.5	76,095	2,670	0	0	2,550	12.0	30,600	169.2	467,441		
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	78.4	870,710	11,106	0	0	11,106	25.0	277,650	311.5	3,459,519		
(6) Fish Pond		11,428	54.0	617,112	11,428	16.5	188,562	11,428	0	0	11,428	6.5	74,282	77.0	879,956		
(7) Reservoir Fish		5,714	0	0	5,714	0	0	5,714	0	0	5,714	57.0	325,698	57.0	325,698		
Total		1,185	377.3	4,738,467	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value																	
4,758,467																	
90																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		1,726	419.9	724,747	1,721	-172.3	-296,528	1,721	0	0	1,645	31.5	51,818	279.1	480,037		
(2) Sugarcane		7,041	115.2	811,123	6,950	0	0	6,950	0	0	0	0	0	115.2	811,123		
(3) Other Field Crops		6,928	114.1	790,485	6,793	64.2	436,111	6,793	0	0	2,008	25.0	50,200	203.3	1,276,796		
(4) Vegetables		3,607	128.7	464,221	3,459	28.5	98,582	3,459	0	0	3,325	12.0	39,900	169.2	602,703		
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	78.4	1,024,218	13,064	0	0	13,064	25.0	326,600	311.5	4,069,436		
(6) Fish Pond		13,599	54.0	734,346	13,599	16.5	224,384	13,599	0	0	13,599	6.5	88,394	77.0	1,047,124		
(7) Reservoir Fish		6,799	0	0	6,799	0	0	6,799	0	0	6,799	57.0	387,543	57.0	387,543		
Total		1,185	377.3	4,738,467	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value																	
5,796,439																	
100																	
1. Increment (FW Case - FW/O Case)																	
(1) Dry Paddy		2,117	419.9	886,928	2,112	-172.3	-363,898	2,112	0	0	2,027	31.5	63,851	279.1	588,881		
(2) Sugarcane		8,152	115.2	939,110	8,052	0	0	8,052	0	0	0	0	0	115.2	939,110		
(3) Other Field Crops		7,960	114.1	908,236	7,810	64.2	501,402	7,810	0	0	2,324	25.0	58,100	203.3	1,467,738		
(4) Vegetables		4,412	128.7	567,824	4,249	28.5	121,097	4,249	0	0	4,100	12.0	49,200	169.2	738,121		
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	78.4	1,176,000	15,000	0	0	15,000	25.0	375,000	311.5	4,672,500		
(6) Fish Pond		15,771	54.0	851,634	15,771	16.5	260,222	15,771	0	0	15,771	6.5	102,512	77.0	1,214,368		
(7) Reservoir Fish		7,885	0	0	7,885	0	0	7,885	0	0	7,885	57.0	449,445	57.0	449,445		
Total		1,185	377.3	4,738,467	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491		
2. Loss of Wet Season Paddy Production																	
3. Net Incremental Value																	
1,071,175																	
9,483,672																	

Table 13-34 Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan B-2)

Item	Achievement of Target Yields (%)	Chao Phraya Delta					Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme					Phitsanulok Irrigation Project (Stage 2) and New DEDP Pumping Scheme					Associate Irrigation Projects					Total	
		Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	Net Value (Baht/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Baht)	
80																							
1. Increment (FW Case - FW/O Case)																							
(1) Dry Paddy		1,335	560.3	748,001	1,330	-130.2	-173,166	1,330	0	0	1,262	31.5	39,753	461.6	614,588								
(2) Sugarcane		5,930	115.2	683,136	5,849	0	0	5,849	0	0	0	0	0	115.2	683,136								
(3) Other Field Crops		5,897	114.1	672,848	5,775	64.2	370,755	5,775	0	0	1,691	25.0	42,275	203.3	1,085,878								
(4) Vegetables		2,803	128.7	360,746	2,670	28.5	76,095	2,670	0	0	2,450	12.0	30,600	169.2	467,441								
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	78.4	870,710	11,106	0	0	11,106	25.0	277,650	311.5	3,459,519								
(6) Fish Pond		11,428	54.0	617,112	11,428	16.5	188,562	11,428	0	0	11,428	6.5	74,282	77.0	879,956								
(7) Reservoir Fish		5,714	0	0	5,714	0	0	5,714	0	0	5,714	57.0	325,698	57.0	325,698								
Total		1,185	377.3	447,101	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491								
2. Loss of Wet Season Paddy Production																							
3. Net Incremental Value				4,945,901			1,220,499			0			763,325		6,929,725								
90																							
1. Increment (FW Case - FW/O Case)																							
(1) Dry Paddy		1,726	560.3	967,078	1,721	-130.2	-224,704	1,721	0	0	1,645	31.5	51,818	461.6	794,192								
(2) Sugarcane		7,041	115.2	811,123	6,930	0	0	6,930	0	0	0	0	0	115.2	811,123								
(3) Other Field Crops		6,928	114.1	790,485	6,793	64.2	436,111	6,793	0	0	2,008	25.0	50,200	203.3	1,276,796								
(4) Vegetables		3,607	128.7	464,221	3,459	28.5	98,582	3,459	0	0	3,325	12.0	39,900	169.2	602,703								
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	78.4	1,024,218	13,064	0	0	13,064	25.0	326,600	311.5	4,069,436								
(6) Fish Pond		13,599	54.0	734,346	13,599	16.5	224,384	13,599	0	0	13,599	6.5	88,394	77.0	1,047,124								
(7) Reservoir Fish		6,799	0	0	6,799	0	0	6,799	0	0	6,799	57.0	387,543	57.0	387,543								
Total		1,185	377.3	447,101	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491								
2. Loss of Wet Season Paddy Production																							
3. Net Incremental Value				6,038,770			1,446,134			0			917,522		8,402,426								
100																							
1. Increment (FW Case - FW/O Case)																							
(1) Dry Paddy		2,117	560.3	1,186,155	2,112	-130.2	-274,982	2,112	0	0	2,027	31.5	63,851	461.6	975,024								
(2) Sugarcane		8,152	115.2	939,110	8,052	0	0	8,052	0	0	0	0	0	115.2	939,110								
(3) Other Field Crops		7,960	114.1	908,236	7,810	64.2	501,402	7,810	0	0	2,324	25.0	58,100	203.3	1,467,738								
(4) Vegetables		4,412	128.7	567,824	4,249	28.5	121,097	4,249	0	0	4,100	12.0	49,200	169.2	738,121								
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	78.4	1,176,000	15,000	0	0	15,000	25.0	375,000	311.5	4,672,500								
(6) Fish Pond		15,771	54.0	851,634	15,771	16.5	260,222	15,771	0	0	15,771	6.5	102,512	77.0	1,214,368								
(7) Reservoir Fish		7,885	0	0	7,885	0	0	7,885	0	0	7,885	57.0	449,445	57.0	449,445								
Total		1,185	377.3	447,101	1,185	94.9	112,457	772	0	0	855	31.5	26,933	503.7	586,491								
2. Loss of Wet Season Paddy Production																							
3. Net Incremental Value				7,127,358			1,671,282			0			1,071,175		9,869,815								

Table 13-35 Net Incremental Value of Agricultural Products at Full Development in Economic Terms for Whole Benefit Area (Plan B-3)

Item	Achievement of Target Yields (%)	Chao Phraya Delta				Phitsanulok Irrigation Project (Stage 1) and Existing DEDP Pumping Scheme				Associate Irrigation Projects				Total	
		Net Value (Bath/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Bath)	Total Net Value (1,000 Bath)	Net Value (Bath/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Bath)	Total Net Value (1,000 Bath)	Net Value (Bath/rai)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Bath)	Total Net Value (1,000 Bath)	Incremental Cropped Area (1,000 rai)	Total Net Value (1,000 Bath)
80															
1. Increment (FW Case - FW/O Case)															
(1) Dry Paddy		1,335	685.0	914,475	1,330	-92.7	-123,291	1,330	0	1,262	31.5	39,753	623.8	830,937	
(2) Sugarcane		5,930	115.2	683,136	5,849	0	0	5,849	0	0	0	0	115.2	683,136	
(3) Other Field Crops		5,897	114.1	672,848	5,775	64.2	370,755	5,775	0	1,691	25.0	42,275	203.3	1,085,878	
(4) Vegetables		2,803	128.7	360,746	2,670	28.5	76,095	2,670	0	2,550	12.0	30,600	169.2	467,441	
(5) Fruit Trees		11,106	208.1	2,311,159	11,106	78.4	870,710	11,106	0	11,106	25.0	277,650	311.5	3,459,519	
(6) Fish Pond		11,428	54.0	617,112	11,428	16.5	188,562	11,428	0	11,428	6.5	74,282	77.0	879,956	
(7) Reservoir Fish		5,714	0	0	5,714	0	0	5,714	0	5,714	57.0	325,698	57.0	325,698	
Total		-	1,305.1	5,559,476	-	94.9	1,382,831	-	0	-	157.0	790,258	1,557.0	7,732,565	
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	94.9	112,457	772	0	855	31.5	26,933	503.7	586,491	
3. Net Incremental Value				5,112,375	1,270,374				0			763,325		7,146,074	
90															
1. Increment (FW Case - FW/O Case)															
(1) Dry Paddy		1,726	685.0	1,182,310	1,721	-92.7	-159,537	1,721	0	1,645	31.5	51,818	623.8	1,074,591	
(2) Sugarcane		7,041	115.2	811,123	6,950	0	0	6,950	0	0	0	0	115.2	811,123	
(3) Other Field Crops		6,928	114.1	790,485	6,793	64.2	436,111	6,793	0	2,008	25.0	50,200	203.3	1,276,796	
(4) Vegetables		3,607	128.7	464,221	3,459	28.5	98,582	3,459	0	3,325	12.0	39,900	169.2	602,703	
(5) Fruit Trees		13,064	208.1	2,718,618	13,064	78.4	1,024,218	13,064	0	13,064	25.0	326,600	311.5	4,069,436	
(6) Fish Pond		13,599	54.0	734,346	13,599	16.5	224,384	13,599	0	13,599	6.5	88,394	77.0	1,047,124	
(7) Reservoir Fish		6,799	0	0	6,799	0	0	6,799	0	6,799	57.0	387,543	57.0	387,543	
Total		-	1,305.1	6,701,103	-	94.9	1,623,758	-	0	-	157.0	944,455	1,557.0	9,269,316	
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	94.9	112,457	772	0	855	31.5	26,933	503.7	586,491	
3. Net Incremental Value				6,254,002	1,511,301				0			917,522		8,682,825	
100															
1. Increment (FW Case - FW/O Case)															
(1) Dry Paddy		2,117	685.0	1,450,145	2,112	-92.7	-195,782	2,112	0	2,027	31.5	63,851	623.8	1,318,214	
(2) Sugarcane		8,152	115.2	939,110	8,052	0	0	8,052	0	0	0	0	115.2	939,110	
(3) Other Field Crops		7,960	114.1	908,236	7,810	64.2	501,402	7,810	0	2,324	25.0	58,100	203.3	1,467,738	
(4) Vegetables		4,412	128.7	567,824	4,249	28.5	121,097	4,249	0	4,100	12.0	49,200	169.2	738,121	
(5) Fruit Trees		15,000	208.1	3,121,500	15,000	78.4	1,176,000	15,000	0	15,000	25.0	375,000	311.5	4,672,500	
(6) Fish Pond		15,771	54.0	851,634	15,771	16.5	240,222	15,771	0	15,771	6.5	102,512	77.0	1,214,368	
(7) Reservoir Fish		7,885	0	0	7,885	0	0	7,885	0	7,885	57.0	449,445	57.0	449,445	
Total		-	1,305.1	7,838,449	-	94.9	1,862,939	-	0	-	157.0	1,098,108	1,557.0	10,799,496	
2. Loss of Wet Season Paddy Production		1,185	377.3	447,101	1,185	94.9	112,457	772	0	855	31.5	26,933	503.7	586,491	
3. Net Incremental Value				7,391,348	1,750,482				0			1,071,175		10,213,005	

Table 13-36 Net Loss Value of Wet Season Paddy Production (Future Without Project Case)

Item	Unit	Chao Phraya Delta, Phitsanulok Irrigation Project (Stage 1) & Existing DEDP Pumping Scheme				Phitsanulok Irrigation Project (Stage 2) & New DEDP Pumping Scheme				Associate Irrigation Projects			
		Financial		Economic	Amount	Financial		Economic	Amount	Financial		Economic	
		Value	Value	Value		Value	Value	Value					
Value of Output													
(1) Yield	kg/rai	584			431			481					
(2) Unit Price	Baht/kg	4.2			4.2			4.1					
(3) Production Value	Baht/rai		2,453	2,686		1,810	1,983		1,972	2,165			
Total	Baht/rai		2,453	2,686		1,810	1,983		1,972	2,165			
Input Costs													
(1) Seeds	Baht/rai	18kg	132	124	13kg	97	91	15kg	109	102			
(2) Fertilizer	Baht/rai	32kg	169	209	24kg	125	157	27kg	139	181			
(3) Agro-chemicals	Baht/rai		81	71		60	53		67	59			
(4) Land Preparation*	Baht/rai		561	533		414	393		462	439			
(5) Labour	Baht/rai	8.0md	918	505	7.5md	861	474	7.6md	872	480			
(6) Others	Baht/rai		64	59		47	43		53	49			
Total	Baht/rai		1,925	1,501		1,604	1,211		1,702	1,310			
Net Value	Baht/rai		528	1,185		206	772		270	855			

Note: * indicates dependence on mechanization, including fuel cost.

Source: Farm household survey.

Table 13-37 Net Economic Benefit of Hydropower Generation under Plans A and B

1) Additional Power Generation

Newly Available Water (MCM) ①	Water Required for Electric Generation of 1 kWh (m ³ /kWh) ②	Power Generation Losses (%) ③	Additional Power Generation (GWh) ④=①/②x(1-③)	Opportunity Cost of Power Generation (Baht/kWh) ⑤	Annual Net Economic Benefit (Million Baht) ⑥=④x⑤
2,000	5.8	15	293.1	1.12	328.3

2) Reduction of Carbon Dioxide Emissions

Additional Power Generation (GWh) ①	Value of CO ₂ Emissions per MWh (t/MWh) ②	Annual Emission of CO ₂ (1,000 t) ③=①x②	Cost of CO ₂ Abatement Measures (US\$/t) ④	Conversion Factor of Capital Goods ⑤	Annual Net Economic Benefit (Million Baht) ⑥=③x④x⑤
293.1	0.43	126.0	20 (=Baht 729)	0.84	77.2

3) Total

Additional Power Generation (Million Baht) ①	Reduction of Carbon Dioxide Emissions (Million Baht) ②	Annual Net Economic Benefit (Million Baht) ③=①+②
328.3	77.2	405.5

Table 13-38 Net Economic Benefit of Water Supply for Domestic, Industrial and Livestock Uses under Plans A and B

Plan	Year	Newly Available Water (MCM) ①	Water Supply Losses (%) ②	Additional Water Supply (MCM) ③=①x(1-②)	Opportunity Cost of Water Supply (Baht/m ³) ④	Annual Net Economic Benefit (Million Baht) ⑤=③x④
A-1 & B-1	~2015	276	30	193.2	4.79	925.4
	2016~	1,103	30	772.1	4.79	3,698.4
A-2 & B-2	~2015	206	30	144.2	4.79	690.7
	2016~	825	30	577.5	4.79	2,766.2
A-3 & B-3	~2015	145	30	101.5	4.79	486.2
	2016~	578	30	404.6	4.79	1,938.0

Table 13-39 Flow of Project Benefit in Economic Terms (Plan A-1)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	4,292,952	0	0	1,071,175	5,364,127	925,400	405,500	6,695,027
2015	5,194,583	1,164,506	1,295,644	1,071,175	8,725,908	925,400	405,500	10,056,808
2016	6,091,933	1,374,310	1,575,543	1,071,175	10,112,961	3,698,400	405,500	14,216,861
2017	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2018	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2019	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2020	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2021	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2022	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2023	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2024	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2025	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2026	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2027	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2028	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2029	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2030	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2031	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2032	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2033	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2034	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2035	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2036	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2037	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2038	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2039	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2040	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2041	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2042	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2043	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2044	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2045	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2046	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2047	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2048	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2049	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2050	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2051	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2052	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2053	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2054	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2055	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2056	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2057	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2058	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2059	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2060	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713
2061	6,091,933	1,582,366	1,854,339	1,071,175	10,599,813	3,698,400	405,500	14,703,713

Table 13-40 Flow of Project Benefit in Economic Terms (Plan A-2)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	4,437,399	0	0	1,071,175	5,508,574	690,700	405,500	6,604,774
2015	5,381,336	1,220,499	1,295,644	1,071,175	8,968,654	690,700	405,500	10,064,854
2016	6,320,993	1,446,764	1,575,543	1,071,175	10,414,475	2,766,200	405,500	13,586,175
2017	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2018	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2019	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2020	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2021	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2022	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2023	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2024	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2025	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2026	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2027	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2028	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2029	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2030	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2031	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2032	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2033	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2034	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2035	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2036	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2037	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2038	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2039	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2040	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2041	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2042	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2043	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2044	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2045	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2046	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2047	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2048	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2049	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2050	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2051	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2052	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2053	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2054	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2055	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2056	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2057	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2058	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2059	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2060	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489
2061	6,320,993	1,671,282	1,854,339	1,071,175	10,917,789	2,766,200	405,500	14,089,489

Table 13-41 Flow of Project Benefit in Economic Terms (Plan A-3)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	4,565,559	0	0	1,071,175	5,636,734	486,200	405,500	6,528,434
2015	5,547,022	1,270,374	1,295,644	1,071,175	9,184,215	486,200	405,500	10,075,915
2016	6,524,225	1,511,301	1,575,543	1,071,175	10,682,244	1,938,000	405,500	13,025,744
2017	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2018	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2019	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2020	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2021	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2022	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2023	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2024	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2025	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2026	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2027	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2028	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2029	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2030	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2031	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2032	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2033	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2034	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2035	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2036	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2037	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2038	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2039	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2040	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2041	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2042	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2043	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2044	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2045	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2046	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2047	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2048	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2049	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2050	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2051	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2052	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2053	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2054	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2055	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2056	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2057	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2058	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2059	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2060	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721
2061	6,524,225	1,750,482	1,854,339	1,071,175	11,200,221	1,938,000	405,500	13,543,721

Table 13-42 Flow of Project Benefit in Economic Terms (Plan B-1)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage 1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	4,758,467	0	0	1,071,175	5,829,642	925,400	405,500	7,160,542
2015	5,796,439	1,164,506	0	1,071,175	8,032,120	925,400	405,500	9,363,020
2016	6,830,131	1,374,310	0	1,071,175	9,275,616	3,698,400	405,500	13,379,516
2017	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2018	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2019	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2020	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2021	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2022	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2023	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2024	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2025	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2026	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2027	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2028	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2029	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2030	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2031	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2032	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2033	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2034	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2035	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2036	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2037	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2038	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2039	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2040	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2041	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2042	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2043	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2044	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2045	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2046	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2047	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2048	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2049	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2050	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2051	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2052	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2053	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2054	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2055	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2056	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2057	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2058	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2059	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2060	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572
2061	6,830,131	1,582,366	0	1,071,175	9,483,672	3,698,400	405,500	13,587,572

Table 13-43 Flow of Project Benefit in Economic Terms (Plan B-2)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	4,945,901	0	0	1,071,175	6,017,076	690,700	405,500	7,113,276
2015	6,038,770	1,220,499	0	1,071,175	8,330,444	690,700	405,500	9,426,644
2016	7,127,358	1,446,134	0	1,071,175	9,644,667	2,766,200	405,500	12,816,367
2017	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2018	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2019	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2020	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2021	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2022	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2023	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2024	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2025	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2026	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2027	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2028	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2029	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2030	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2031	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2032	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2033	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2034	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2035	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2036	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2037	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2038	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2039	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2040	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2041	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2042	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2043	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2044	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2045	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2046	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2047	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2048	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2049	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2050	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2051	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2052	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2053	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2054	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2055	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2056	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2057	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2058	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2059	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2060	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515
2061	7,127,358	1,671,282	0	1,071,175	9,869,815	2,766,200	405,500	13,041,515

Table 13-44 Flow of Project Benefit in Economic Terms (Plan B-3)

(Unit: 1,000 Baht)

Year	Agriculture					Water Supply	Power Generation	Total
	Chao Phraya Delta	Phitsanulok (Stage1) & Existing DEDP	Phitsanulok (Stage 2) & New DEDP	Associate Irrigation	Sub-total			
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	763,325	763,325	0	0	763,325
2010	0	0	0	917,522	917,522	0	0	917,522
2011	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2012	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2013	0	0	0	1,071,175	1,071,175	0	0	1,071,175
2014	5,112,375	0	0	1,071,175	6,183,550	486,200	405,500	7,075,250
2015	6,254,002	1,270,374	0	1,071,175	8,595,551	486,200	405,500	9,487,251
2016	7,391,348	1,511,301	0	1,071,175	9,973,824	1,938,000	405,500	12,317,324
2017	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2018	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2019	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2020	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2021	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2022	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2023	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2024	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2025	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2026	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2027	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2028	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2029	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2030	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2031	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2032	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2033	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2034	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2035	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2036	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2037	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2038	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2039	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2040	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2041	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2042	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2043	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2044	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2045	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2046	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2047	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2048	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2049	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2050	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2051	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2052	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2053	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2054	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2055	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2056	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2057	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2058	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2059	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2060	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505
2061	7,391,348	1,750,482	0	1,071,175	10,213,005	1,938,000	405,500	12,556,505

Table 13-45 Flow of Project Cost in Economic Terms (Plan A)

(Unit: 1,000 Baht)

Total: 9,000 Baht															
Year	Kok-Ing-Nan Project					Phitsanulok (Stage 1) & Existing DEDP		Phitsanulok (Stage2) & New DEDP			Associate Irrigation Projects			Total	
	Capital Cost	Environmental Impact Mitigation Cost	O & M Cost	Replacement Cost	Sub-total	Capital Cost	Capital Cost	O & M Cost	Sub-total	Capital Cost	O & M Cost	Sub-total			
2002	93,840	0	0	0	93,840	0	0	0	0	0	0	0	93,840		
2003	431,480	0	0	0	431,480	0	0	0	0	254,800	0	254,800	686,280		
2004	1,232,280	0	0	0	1,232,280	0	0	0	0	254,800	0	254,800	1,487,080		
2005	2,849,460	0	0	0	2,849,460	85,000	0	0	0	746,200	0	746,200	3,680,660		
2006	3,953,320	0	0	0	3,953,320	85,000	0	0	0	746,200	0	746,200	4,784,520		
2007	4,888,920	89,000	0	0	4,888,920	85,000	0	0	0	746,200	0	746,200	5,720,120		
2008	4,728,490	89,000	0	0	4,728,490	85,000	0	0	0	721,630	0	721,630	5,535,120		
2009	4,384,550	89,000	0	0	4,384,550	85,000	718,900	0	718,900	0	52,624	52,624	5,241,074		
2010	5,019,810	89,000	0	0	5,019,810	85,000	718,900	0	718,900	0	52,624	52,624	5,876,334		
2011	5,019,810	89,000	0	0	5,019,810	85,000	2,184,000	0	2,184,000	0	52,624	52,624	7,341,434		
2012	4,259,790	89,000	0	0	4,259,790	85,000	2,184,000	0	2,184,000	0	52,624	52,624	6,581,414		
2013	2,091,600	89,000	0	0	2,091,600	85,000	2,184,000	0	2,184,000	0	52,624	52,624	4,413,224		
2014	0	89,000	117,760	0	117,760	37,400	1,674,400	0	1,674,400	0	52,624	52,624	1,882,184		
2015	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2016	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2017	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2018	0	0	117,760	8,904	126,664	0	0	144,900	144,900	0	52,624	52,624	324,188		
2019	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2020	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2021	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2022	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2023	0	0	117,760	26,208	143,968	0	0	144,900	144,900	0	52,624	52,624	341,492		
2024	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2025	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2026	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2027	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2028	0	0	117,760	8,904	126,664	0	0	144,900	144,900	0	52,624	52,624	324,188		
2029	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2030	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2031	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2032	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2033	0	0	117,760	26,208	143,968	0	0	144,900	144,900	0	52,624	52,624	341,492		
2034	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2035	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2036	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2037	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2038	0	0	117,760	191,688	309,448	0	0	144,900	144,900	0	52,624	52,624	506,972		
2039	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2040	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2041	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2042	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2043	0	0	117,760	26,208	143,968	0	0	144,900	144,900	0	52,624	52,624	341,492		
2044	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2045	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2046	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2047	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2048	0	0	117,760	8,904	126,664	0	0	144,900	144,900	0	52,624	52,624	324,188		
2049	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2050	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2051	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2052	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2053	0	0	117,760	26,208	143,968	0	0	144,900	144,900	0	52,624	52,624	341,492		
2054	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2055	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2056	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2057	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2058	0	0	117,760	8,904	126,664	0	0	144,900	144,900	0	52,624	52,624	324,188		
2059	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2060	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		
2061	0	0	117,760	0	117,760	0	0	144,900	144,900	0	52,624	52,624	315,284		

Table 13-46 Flow of Project Cost in Economic Terms (Plan B)

(Unit: 1,000 Baht)

Year	Kok-Ing-Nan Project					Phitsanulok (Stage 1) & Existing DEDP				Phitsanulok (Stage2) & New DEDP				Associate Irrigation Projects			Total
	Capital Cost	Environmental Impact Mitigation Cost	O & M Cost	Replacement Cost	Sub-total	Capital Cost	Capital Cost	O & M Cost	Sub-total	Capital Cost	O & M Cost	Sub-total					
2002	93,840	0	0	0	93,840	0	0	0	0	0	0	0	0	0	0	93,840	
2003	431,480	0	0	0	431,480	0	0	0	0	254,800	0	254,800	254,800	0	254,800	686,280	
2004	1,232,280	0	0	0	1,232,280	0	0	0	0	254,800	0	254,800	254,800	0	254,800	1,487,080	
2005	2,849,460	0	0	0	2,849,460	85,000	0	0	85,000	746,200	0	746,200	746,200	0	746,200	3,680,660	
2006	3,953,320	0	0	0	3,953,320	85,000	0	0	85,000	746,200	0	746,200	746,200	0	746,200	4,784,520	
2007	4,888,920	89,000	0	0	4,888,920	85,000	0	0	85,000	746,200	0	746,200	746,200	0	746,200	5,720,120	
2008	4,728,490	89,000	0	0	4,728,490	85,000	0	0	85,000	721,630	0	721,630	721,630	0	721,630	5,535,120	
2009	4,384,550	89,000	0	0	4,384,550	85,000	0	0	85,000	0	52,624	52,624	52,624	52,624	105,248	4,522,174	
2010	5,019,810	89,000	0	0	5,019,810	85,000	0	0	85,000	52,624	52,624	105,248	52,624	52,624	105,248	5,157,434	
2011	5,019,810	89,000	0	0	5,019,810	85,000	0	0	85,000	52,624	52,624	105,248	52,624	52,624	105,248	5,157,434	
2012	4,259,790	89,000	0	0	4,259,790	85,000	0	0	85,000	52,624	52,624	105,248	52,624	52,624	105,248	4,397,414	
2013	2,091,600	89,000	0	0	2,091,600	85,000	0	0	85,000	52,624	52,624	105,248	52,624	52,624	105,248	2,229,224	
2014	0	89,000	117,760	0	117,760	37,400	0	0	37,400	52,624	52,624	105,248	52,624	52,624	105,248	207,784	
2015	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2016	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2017	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2018	0	0	117,760	8,904	126,664	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	179,288	
2019	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2020	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2021	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2022	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2023	0	0	117,760	26,208	143,968	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	196,592	
2024	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2025	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2026	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2027	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2028	0	0	117,760	8,904	126,664	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	179,288	
2029	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2030	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2031	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2032	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2033	0	0	117,760	26,208	143,968	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	196,592	
2034	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2035	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2036	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2037	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2038	0	0	117,760	191,688	309,448	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	362,072	
2039	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2040	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2041	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2042	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2043	0	0	117,760	26,208	143,968	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	196,592	
2044	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2045	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2046	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2047	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2048	0	0	117,760	8,904	126,664	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	179,288	
2049	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2050	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2051	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2052	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2053	0	0	117,760	26,208	143,968	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	196,592	
2054	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2055	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2056	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2057	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2058	0	0	117,760	8,904	126,664	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	179,288	
2059	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2060	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	
2061	0	0	117,760	0	117,760	0	0	0	0	52,624	52,624	105,248	52,624	52,624	105,248	170,384	

Table 13-47 Flow of Net Project Benefit in Economic Terms (Plan A-1)

(Unit: 1,000 Baht)			
Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	5,241,074	763,325	-4,477,749
2010	5,876,334	917,522	-4,958,812
2011	7,341,434	1,071,175	-6,270,259
2012	6,581,414	1,071,175	-5,510,239
2013	4,413,224	1,071,175	-3,342,049
2014	1,882,184	6,695,027	4,812,843
2015	315,284	10,056,808	9,741,524
2016	315,284	14,216,861	13,901,577
2017	315,284	14,703,713	14,388,429
2018	324,188	14,703,713	14,379,525
2019	315,284	14,703,713	14,388,429
2020	315,284	14,703,713	14,388,429
2021	315,284	14,703,713	14,388,429
2022	315,284	14,703,713	14,388,429
2023	341,492	14,703,713	14,362,221
2024	315,284	14,703,713	14,388,429
2025	315,284	14,703,713	14,388,429
2026	315,284	14,703,713	14,388,429
2027	315,284	14,703,713	14,388,429
2028	324,188	14,703,713	14,379,525
2029	315,284	14,703,713	14,388,429
2030	315,284	14,703,713	14,388,429
2031	315,284	14,703,713	14,388,429
2032	315,284	14,703,713	14,388,429
2033	341,492	14,703,713	14,362,221
2034	315,284	14,703,713	14,388,429
2035	315,284	14,703,713	14,388,429
2036	315,284	14,703,713	14,388,429
2037	315,284	14,703,713	14,388,429
2038	506,972	14,703,713	14,196,741
2039	315,284	14,703,713	14,388,429
2040	315,284	14,703,713	14,388,429
2041	315,284	14,703,713	14,388,429
2042	315,284	14,703,713	14,388,429
2043	341,492	14,703,713	14,362,221
2044	315,284	14,703,713	14,388,429
2045	315,284	14,703,713	14,388,429
2046	315,284	14,703,713	14,388,429
2047	315,284	14,703,713	14,388,429
2048	324,188	14,703,713	14,379,525
2049	315,284	14,703,713	14,388,429
2050	315,284	14,703,713	14,388,429
2051	315,284	14,703,713	14,388,429
2052	315,284	14,703,713	14,388,429
2053	341,492	14,703,713	14,362,221
2054	315,284	14,703,713	14,388,429
2055	315,284	14,703,713	14,388,429
2056	315,284	14,703,713	14,388,429
2057	315,284	14,703,713	14,388,429
2058	324,188	14,703,713	14,379,525
2059	315,284	14,703,713	14,388,429
2060	315,284	14,703,713	14,388,429
2061	315,284	14,703,713	14,388,429

Table 13-48 Flow of Net Project Benefit in Economic Terms (Plan A-2)

(Unit: 1,000 Baht)			
Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	5,241,074	763,325	-4,477,749
2010	5,876,334	917,522	-4,958,812
2011	7,341,434	1,071,175	-6,270,259
2012	6,581,414	1,071,175	-5,510,239
2013	4,413,224	1,071,175	-3,342,049
2014	1,882,184	6,604,774	4,722,590
2015	315,284	10,064,854	9,749,570
2016	315,284	13,586,175	13,270,891
2017	315,284	14,089,489	13,774,205
2018	324,188	14,089,489	13,765,301
2019	315,284	14,089,489	13,774,205
2020	315,284	14,089,489	13,774,205
2021	315,284	14,089,489	13,774,205
2022	315,284	14,089,489	13,774,205
2023	341,492	14,089,489	13,747,997
2024	315,284	14,089,489	13,774,205
2025	315,284	14,089,489	13,774,205
2026	315,284	14,089,489	13,774,205
2027	315,284	14,089,489	13,774,205
2028	324,188	14,089,489	13,765,301
2029	315,284	14,089,489	13,774,205
2030	315,284	14,089,489	13,774,205
2031	315,284	14,089,489	13,774,205
2032	315,284	14,089,489	13,774,205
2033	341,492	14,089,489	13,747,997
2034	315,284	14,089,489	13,774,205
2035	315,284	14,089,489	13,774,205
2036	315,284	14,089,489	13,774,205
2037	315,284	14,089,489	13,774,205
2038	506,972	14,089,489	13,582,517
2039	315,284	14,089,489	13,774,205
2040	315,284	14,089,489	13,774,205
2041	315,284	14,089,489	13,774,205
2042	315,284	14,089,489	13,774,205
2043	341,492	14,089,489	13,747,997
2044	315,284	14,089,489	13,774,205
2045	315,284	14,089,489	13,774,205
2046	315,284	14,089,489	13,774,205
2047	315,284	14,089,489	13,774,205
2048	324,188	14,089,489	13,765,301
2049	315,284	14,089,489	13,774,205
2050	315,284	14,089,489	13,774,205
2051	315,284	14,089,489	13,774,205
2052	315,284	14,089,489	13,774,205
2053	341,492	14,089,489	13,747,997
2054	315,284	14,089,489	13,774,205
2055	315,284	14,089,489	13,774,205
2056	315,284	14,089,489	13,774,205
2057	315,284	14,089,489	13,774,205
2058	324,188	14,089,489	13,765,301
2059	315,284	14,089,489	13,774,205
2060	315,284	14,089,489	13,774,205
2061	315,284	14,089,489	13,774,205

Table 13-49 Flow of Net Project Benefit in Economic Terms (Plan A-3)

(Unit: 1,000 Baht)

Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	5,241,074	763,325	-4,477,749
2010	5,876,334	917,522	-4,958,812
2011	7,341,434	1,071,175	-6,270,259
2012	6,581,414	1,071,175	-5,510,239
2013	4,413,224	1,071,175	-3,342,049
2014	1,882,184	6,528,434	4,646,250
2015	315,284	10,075,915	9,760,631
2016	315,284	13,025,744	12,710,460
2017	315,284	13,543,721	13,228,437
2018	324,188	13,543,721	13,219,533
2019	315,284	13,543,721	13,228,437
2020	315,284	13,543,721	13,228,437
2021	315,284	13,543,721	13,228,437
2022	315,284	13,543,721	13,228,437
2023	341,492	13,543,721	13,202,229
2024	315,284	13,543,721	13,228,437
2025	315,284	13,543,721	13,228,437
2026	315,284	13,543,721	13,228,437
2027	315,284	13,543,721	13,228,437
2028	324,188	13,543,721	13,219,533
2029	315,284	13,543,721	13,228,437
2030	315,284	13,543,721	13,228,437
2031	315,284	13,543,721	13,228,437
2032	315,284	13,543,721	13,228,437
2033	341,492	13,543,721	13,202,229
2034	315,284	13,543,721	13,228,437
2035	315,284	13,543,721	13,228,437
2036	315,284	13,543,721	13,228,437
2037	315,284	13,543,721	13,228,437
2038	506,972	13,543,721	13,036,749
2039	315,284	13,543,721	13,228,437
2040	315,284	13,543,721	13,228,437
2041	315,284	13,543,721	13,228,437
2042	315,284	13,543,721	13,228,437
2043	341,492	13,543,721	13,202,229
2044	315,284	13,543,721	13,228,437
2045	315,284	13,543,721	13,228,437
2046	315,284	13,543,721	13,228,437
2047	315,284	13,543,721	13,228,437
2048	324,188	13,543,721	13,219,533
2049	315,284	13,543,721	13,228,437
2050	315,284	13,543,721	13,228,437
2051	315,284	13,543,721	13,228,437
2052	315,284	13,543,721	13,228,437
2053	341,492	13,543,721	13,202,229
2054	315,284	13,543,721	13,228,437
2055	315,284	13,543,721	13,228,437
2056	315,284	13,543,721	13,228,437
2057	315,284	13,543,721	13,228,437
2058	324,188	13,543,721	13,219,533
2059	315,284	13,543,721	13,228,437
2060	315,284	13,543,721	13,228,437
2061	315,284	13,543,721	13,228,437

Table 13-50 Flow of Net Project Benefit in Economic Terms (Plan B-1)

(Unit: 1,000 Baht)

Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	4,522,174	763,325	-3,758,849
2010	5,157,434	917,522	-4,239,912
2011	5,157,434	1,071,175	-4,086,259
2012	4,397,414	1,071,175	-3,326,239
2013	2,229,224	1,071,175	-1,158,049
2014	207,784	7,160,542	6,952,758
2015	170,384	9,363,020	9,192,636
2016	170,384	13,379,516	13,209,132
2017	170,384	13,587,572	13,417,188
2018	179,288	13,587,572	13,408,284
2019	170,384	13,587,572	13,417,188
2020	170,384	13,587,572	13,417,188
2021	170,384	13,587,572	13,417,188
2022	170,384	13,587,572	13,417,188
2023	196,592	13,587,572	13,390,980
2024	170,384	13,587,572	13,417,188
2025	170,384	13,587,572	13,417,188
2026	170,384	13,587,572	13,417,188
2027	170,384	13,587,572	13,417,188
2028	179,288	13,587,572	13,408,284
2029	170,384	13,587,572	13,417,188
2030	170,384	13,587,572	13,417,188
2031	170,384	13,587,572	13,417,188
2032	170,384	13,587,572	13,417,188
2033	196,592	13,587,572	13,390,980
2034	170,384	13,587,572	13,417,188
2035	170,384	13,587,572	13,417,188
2036	170,384	13,587,572	13,417,188
2037	170,384	13,587,572	13,417,188
2038	362,072	13,587,572	13,225,500
2039	170,384	13,587,572	13,417,188
2040	170,384	13,587,572	13,417,188
2041	170,384	13,587,572	13,417,188
2042	170,384	13,587,572	13,417,188
2043	196,592	13,587,572	13,390,980
2044	170,384	13,587,572	13,417,188
2045	170,384	13,587,572	13,417,188
2046	170,384	13,587,572	13,417,188
2047	170,384	13,587,572	13,417,188
2048	179,288	13,587,572	13,408,284
2049	170,384	13,587,572	13,417,188
2050	170,384	13,587,572	13,417,188
2051	170,384	13,587,572	13,417,188
2052	170,384	13,587,572	13,417,188
2053	196,592	13,587,572	13,390,980
2054	170,384	13,587,572	13,417,188
2055	170,384	13,587,572	13,417,188
2056	170,384	13,587,572	13,417,188
2057	170,384	13,587,572	13,417,188
2058	179,288	13,587,572	13,408,284
2059	170,384	13,587,572	13,417,188
2060	170,384	13,587,572	13,417,188
2061	170,384	13,587,572	13,417,188

Table 13-51 Flow of Net Project Benefit in Economic Terms (Plan B-2)

(Unit: 1,000 Baht)			
Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	4,522,174	763,325	-3,758,849
2010	5,157,434	917,522	-4,239,912
2011	5,157,434	1,071,175	-4,086,259
2012	4,397,414	1,071,175	-3,326,239
2013	2,229,224	1,071,175	-1,158,049
2014	207,784	7,113,276	6,905,492
2015	170,384	9,426,644	9,256,260
2016	170,384	12,816,367	12,645,983
2017	170,384	13,041,515	12,871,131
2018	179,288	13,041,515	12,862,227
2019	170,384	13,041,515	12,871,131
2020	170,384	13,041,515	12,871,131
2021	170,384	13,041,515	12,871,131
2022	170,384	13,041,515	12,871,131
2023	196,592	13,041,515	12,844,923
2024	170,384	13,041,515	12,871,131
2025	170,384	13,041,515	12,871,131
2026	170,384	13,041,515	12,871,131
2027	170,384	13,041,515	12,871,131
2028	179,288	13,041,515	12,862,227
2029	170,384	13,041,515	12,871,131
2030	170,384	13,041,515	12,871,131
2031	170,384	13,041,515	12,871,131
2032	170,384	13,041,515	12,871,131
2033	196,592	13,041,515	12,844,923
2034	170,384	13,041,515	12,871,131
2035	170,384	13,041,515	12,871,131
2036	170,384	13,041,515	12,871,131
2037	170,384	13,041,515	12,871,131
2038	362,072	13,041,515	12,679,443
2039	170,384	13,041,515	12,871,131
2040	170,384	13,041,515	12,871,131
2041	170,384	13,041,515	12,871,131
2042	170,384	13,041,515	12,871,131
2043	196,592	13,041,515	12,844,923
2044	170,384	13,041,515	12,871,131
2045	170,384	13,041,515	12,871,131
2046	170,384	13,041,515	12,871,131
2047	170,384	13,041,515	12,871,131
2048	179,288	13,041,515	12,862,227
2049	170,384	13,041,515	12,871,131
2050	170,384	13,041,515	12,871,131
2051	170,384	13,041,515	12,871,131
2052	170,384	13,041,515	12,871,131
2053	196,592	13,041,515	12,844,923
2054	170,384	13,041,515	12,871,131
2055	170,384	13,041,515	12,871,131
2056	170,384	13,041,515	12,871,131
2057	170,384	13,041,515	12,871,131
2058	179,288	13,041,515	12,862,227
2059	170,384	13,041,515	12,871,131
2060	170,384	13,041,515	12,871,131
2061	170,384	13,041,515	12,871,131

Table 13-52 Flow of Net Project Benefit in Economic Terms (Plan B-3)

(Unit: 1,000 Baht)			
Year	Cost	Benefit	Net Benefit
2002	93,840	0	-93,840
2003	686,280	0	-686,280
2004	1,487,080	0	-1,487,080
2005	3,680,660	0	-3,680,660
2006	4,784,520	0	-4,784,520
2007	5,720,120	0	-5,720,120
2008	5,535,120	0	-5,535,120
2009	4,522,174	763,325	-3,758,849
2010	5,157,434	917,522	-4,239,912
2011	5,157,434	1,071,175	-4,086,259
2012	4,397,414	1,071,175	-3,326,239
2013	2,229,224	1,071,175	-1,158,049
2014	207,784	7,075,250	6,867,466
2015	170,384	9,487,251	9,316,867
2016	170,384	12,317,324	12,146,940
2017	170,384	12,556,505	12,386,121
2018	179,288	12,556,505	12,377,217
2019	170,384	12,556,505	12,386,121
2020	170,384	12,556,505	12,386,121
2021	170,384	12,556,505	12,386,121
2022	170,384	12,556,505	12,386,121
2023	196,592	12,556,505	12,359,913
2024	170,384	12,556,505	12,386,121
2025	170,384	12,556,505	12,386,121
2026	170,384	12,556,505	12,386,121
2027	170,384	12,556,505	12,386,121
2028	179,288	12,556,505	12,377,217
2029	170,384	12,556,505	12,386,121
2030	170,384	12,556,505	12,386,121
2031	170,384	12,556,505	12,386,121
2032	170,384	12,556,505	12,386,121
2033	196,592	12,556,505	12,359,913
2034	170,384	12,556,505	12,386,121
2035	170,384	12,556,505	12,386,121
2036	170,384	12,556,505	12,386,121
2037	170,384	12,556,505	12,386,121
2038	362,072	12,556,505	12,194,433
2039	170,384	12,556,505	12,386,121
2040	170,384	12,556,505	12,386,121
2041	170,384	12,556,505	12,386,121
2042	170,384	12,556,505	12,386,121
2043	196,592	12,556,505	12,359,913
2044	170,384	12,556,505	12,386,121
2045	170,384	12,556,505	12,386,121
2046	170,384	12,556,505	12,386,121
2047	170,384	12,556,505	12,386,121
2048	179,288	12,556,505	12,377,217
2049	170,384	12,556,505	12,386,121
2050	170,384	12,556,505	12,386,121
2051	170,384	12,556,505	12,386,121
2052	170,384	12,556,505	12,386,121
2053	196,592	12,556,505	12,359,913
2054	170,384	12,556,505	12,386,121
2055	170,384	12,556,505	12,386,121
2056	170,384	12,556,505	12,386,121
2057	170,384	12,556,505	12,386,121
2058	179,288	12,556,505	12,377,217
2059	170,384	12,556,505	12,386,121
2060	170,384	12,556,505	12,386,121
2061	170,384	12,556,505	12,386,121

Table 13-53 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan A-1)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	5,241,074	0.403883228	2,116,782	763,325	0.403883228	308,294
2010	5,876,334	0.3606100	2,119,065	917,522	0.3606100	330,868
2011	7,341,434	0.321973237	2,363,745	1,071,175	0.321973237	344,890
2012	6,581,414	0.287476104	1,891,999	1,071,175	0.287476104	307,937
2013	4,413,224	0.256675093	1,132,765	1,071,175	0.256675093	274,944
2014	1,882,184	0.22917419	431,348	6,695,027	0.22917419	1,534,327
2015	315,284	0.204619813	64,513	10,056,808	0.204619813	2,057,822
2016	315,284	0.182696261	57,601	14,216,861	0.182696261	2,597,367
2017	315,284	0.163121662	51,430	14,703,713	0.163121662	2,398,494
2018	324,188	0.145644341	47,216	14,703,713	0.145644341	2,141,513
2019	315,284	0.13003959	40,999	14,703,713	0.13003959	1,912,065
2020	315,284	0.116106777	36,607	14,703,713	0.116106777	1,707,201
2021	315,284	0.103666765	32,684	14,703,713	0.103666765	1,524,286
2022	315,284	0.092559612	29,183	14,703,713	0.092559612	1,360,970
2023	341,492	0.08264251	28,222	14,703,713	0.08264251	1,215,152
2024	315,284	0.0737880	23,264	14,703,713	0.0737880	1,084,957
2025	315,284	0.065882103	20,772	14,703,713	0.065882103	968,712
2026	315,284	0.058823307	18,546	14,703,713	0.058823307	864,921
2027	315,284	0.052520809	16,559	14,703,713	0.052520809	772,251
2028	324,188	0.04689358	15,202	14,703,713	0.04689358	689,510
2029	315,284	0.041869268	13,201	14,703,713	0.041869268	615,634
2030	315,284	0.037383275	11,786	14,703,713	0.037383275	549,673
2031	315,284	0.033377924	10,524	14,703,713	0.033377924	490,779
2032	315,284	0.029801718	9,396	14,703,713	0.029801718	438,196
2033	341,492	0.026608677	9,087	14,703,713	0.026608677	391,246
2034	315,284	0.023757747	7,490	14,703,713	0.023757747	349,327
2035	315,284	0.021212274	6,688	14,703,713	0.021212274	311,899
2036	315,284	0.01893953	5,971	14,703,713	0.01893953	278,481
2037	315,284	0.016910295	5,332	14,703,713	0.016910295	248,644
2038	506,972	0.015098478	7,655	14,703,713	0.015098478	222,004
2039	315,284	0.013480784	4,250	14,703,713	0.013480784	198,218
2040	315,284	0.012036414	3,795	14,703,713	0.012036414	176,980
2041	315,284	0.010746798	3,388	14,703,713	0.010746798	158,018
2042	315,284	0.009595356	3,025	14,703,713	0.009595356	141,087
2043	341,492	0.008567282	2,926	14,703,713	0.008567282	125,971
2044	315,284	0.007649359	2,412	14,703,713	0.007649359	112,474
2045	315,284	0.006829785	2,153	14,703,713	0.006829785	100,423
2046	315,284	0.0060980	1,923	14,703,713	0.0060980	89,664
2047	315,284	0.005444662	1,717	14,703,713	0.005444662	80,057
2048	324,188	0.004861306	1,576	14,703,713	0.004861306	71,479
2049	315,284	0.004340452	1,368	14,703,713	0.004340452	63,821
2050	315,284	0.003875403	1,222	14,703,713	0.003875403	56,983
2051	315,284	0.003460181	1,091	14,703,713	0.003460181	50,878
2052	315,284	0.003089448	974	14,703,713	0.003089448	45,426
2053	341,492	0.002758435	942	14,703,713	0.002758435	40,559
2054	315,284	0.002462889	777	14,703,713	0.002462889	36,214
2055	315,284	0.002199008	693	14,703,713	0.002199008	32,334
2056	315,284	0.0019634	619	14,703,713	0.0019634	28,869
2057	315,284	0.001753036	553	14,703,713	0.001753036	25,776
2058	324,188	0.00156521	507	14,703,713	0.00156521	23,014
2059	315,284	0.001397509	441	14,703,713	0.001397509	20,549
2060	315,284	0.001247776	393	14,703,713	0.001247776	18,347
2061	315,284	0.001114086	351	14,703,713	0.001114086	16,381
Total			22,807,875			30,005,884
Net Present Value at 12%:			7,198,010			
Benefit-Cost Ratio at 12%:			1.32			

Table 13-54 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan A-2)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	5,241,074	0.403883228	2,116,782	763,325	0.403883228	308,294
2010	5,876,334	0.3606100	2,119,065	917,522	0.3606100	330,868
2011	7,341,434	0.321973237	2,363,745	1,071,175	0.321973237	344,890
2012	6,581,414	0.287476104	1,891,999	1,071,175	0.287476104	307,937
2013	4,413,224	0.256675093	1,132,765	1,071,175	0.256675093	274,944
2014	1,882,184	0.22917419	431,348	6,604,774	0.22917419	1,513,644
2015	315,284	0.204619813	64,513	10,064,854	0.204619813	2,059,469
2016	315,284	0.182696261	57,601	13,586,175	0.182696261	2,482,143
2017	315,284	0.163121662	51,430	14,089,489	0.163121662	2,298,301
2018	324,188	0.145644341	47,216	14,089,489	0.145644341	2,052,054
2019	315,284	0.13003959	40,999	14,089,489	0.13003959	1,832,191
2020	315,284	0.116106777	36,607	14,089,489	0.116106777	1,635,885
2021	315,284	0.103666765	32,684	14,089,489	0.103666765	1,460,612
2022	315,284	0.092559612	29,183	14,089,489	0.092559612	1,304,118
2023	341,492	0.08264251	28,222	14,089,489	0.08264251	1,164,391
2024	315,284	0.0737880	23,264	14,089,489	0.0737880	1,039,635
2025	315,284	0.065882103	20,772	14,089,489	0.065882103	928,245
2026	315,284	0.058823307	18,546	14,089,489	0.058823307	828,790
2027	315,284	0.052520809	16,559	14,089,489	0.052520809	739,991
2028	324,188	0.04689358	15,202	14,089,489	0.04689358	660,707
2029	315,284	0.041869268	13,201	14,089,489	0.041869268	589,917
2030	315,284	0.037383275	11,786	14,089,489	0.037383275	526,711
2031	315,284	0.033377924	10,524	14,089,489	0.033377924	470,278
2032	315,284	0.029801718	9,396	14,089,489	0.029801718	419,891
2033	341,492	0.026608677	9,087	14,089,489	0.026608677	374,903
2034	315,284	0.023757747	7,490	14,089,489	0.023757747	334,735
2035	315,284	0.021212274	6,688	14,089,489	0.021212274	298,870
2036	315,284	0.01893953	5,971	14,089,489	0.01893953	266,848
2037	315,284	0.016910295	5,332	14,089,489	0.016910295	238,257
2038	506,972	0.015098478	7,655	14,089,489	0.015098478	212,730
2039	315,284	0.013480784	4,250	14,089,489	0.013480784	189,937
2040	315,284	0.012036414	3,795	14,089,489	0.012036414	169,587
2041	315,284	0.010746798	3,388	14,089,489	0.010746798	151,417
2042	315,284	0.009595356	3,025	14,089,489	0.009595356	135,194
2043	341,492	0.008567282	2,926	14,089,489	0.008567282	120,709
2044	315,284	0.007649359	2,412	14,089,489	0.007649359	107,776
2045	315,284	0.006829785	2,153	14,089,489	0.006829785	96,228
2046	315,284	0.0060980	1,923	14,089,489	0.0060980	85,918
2047	315,284	0.005444662	1,717	14,089,489	0.005444662	76,713
2048	324,188	0.004861306	1,576	14,089,489	0.004861306	68,493
2049	315,284	0.004340452	1,368	14,089,489	0.004340452	61,155
2050	315,284	0.003875403	1,222	14,089,489	0.003875403	54,602
2051	315,284	0.003460181	1,091	14,089,489	0.003460181	48,752
2052	315,284	0.003089448	974	14,089,489	0.003089448	43,529
2053	341,492	0.002758435	942	14,089,489	0.002758435	38,865
2054	315,284	0.002462889	777	14,089,489	0.002462889	34,701
2055	315,284	0.002199008	693	14,089,489	0.002199008	30,983
2056	315,284	0.0019634	619	14,089,489	0.0019634	27,663
2057	315,284	0.001753036	553	14,089,489	0.001753036	24,699
2058	324,188	0.00156521	507	14,089,489	0.00156521	22,053
2059	315,284	0.001397509	441	14,089,489	0.001397509	19,690
2060	315,284	0.001247776	393	14,089,489	0.001247776	17,581
2061	315,284	0.001114086	351	14,089,489	0.001114086	15,697
Total			22,807,875			28,942,189
Net Present Value at 12%:			6,134,314			
Benefit-Cost Ratio at 12%:			1.27			

Table 13-55 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan A-3)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	5,241,074	0.403883228	2,116,782	763,325	0.403883228	308,294
2010	5,876,334	0.3606100	2,119,065	917,522	0.3606100	330,868
2011	7,341,434	0.321973237	2,363,745	1,071,175	0.321973237	344,890
2012	6,581,414	0.287476104	1,891,999	1,071,175	0.287476104	307,937
2013	4,413,224	0.256675093	1,132,765	1,071,175	0.256675093	274,944
2014	1,882,184	0.22917419	431,348	6,528,434	0.22917419	1,496,149
2015	315,284	0.204619813	64,513	10,075,915	0.204619813	2,061,732
2016	315,284	0.182696261	57,601	13,025,744	0.182696261	2,379,755
2017	315,284	0.163121662	51,430	13,543,721	0.163121662	2,209,274
2018	324,188	0.145644341	47,216	13,543,721	0.145644341	1,972,566
2019	315,284	0.13003959	40,999	13,543,721	0.13003959	1,761,220
2020	315,284	0.116106777	36,607	13,543,721	0.116106777	1,572,518
2021	315,284	0.103666765	32,684	13,543,721	0.103666765	1,404,034
2022	315,284	0.092559612	29,183	13,543,721	0.092559612	1,253,602
2023	341,492	0.08264251	28,222	13,543,721	0.08264251	1,119,287
2024	315,284	0.0737880	23,264	13,543,721	0.0737880	999,363
2025	315,284	0.065882103	20,772	13,543,721	0.065882103	892,289
2026	315,284	0.058823307	18,546	13,543,721	0.058823307	796,686
2027	315,284	0.052520809	16,559	13,543,721	0.052520809	711,327
2028	324,188	0.04689358	15,202	13,543,721	0.04689358	635,114
2029	315,284	0.041869268	13,201	13,543,721	0.041869268	567,066
2030	315,284	0.037383275	11,786	13,543,721	0.037383275	506,309
2031	315,284	0.033377924	10,524	13,543,721	0.033377924	452,061
2032	315,284	0.029801718	9,396	13,543,721	0.029801718	403,626
2033	341,492	0.026608677	9,087	13,543,721	0.026608677	360,380
2034	315,284	0.023757747	7,490	13,543,721	0.023757747	321,768
2035	315,284	0.021212274	6,688	13,543,721	0.021212274	287,293
2036	315,284	0.01893953	5,971	13,543,721	0.01893953	256,512
2037	315,284	0.016910295	5,332	13,543,721	0.016910295	229,028
2038	506,972	0.015098478	7,655	13,543,721	0.015098478	204,490
2039	315,284	0.013480784	4,250	13,543,721	0.013480784	182,580
2040	315,284	0.012036414	3,795	13,543,721	0.012036414	163,018
2041	315,284	0.010746798	3,388	13,543,721	0.010746798	145,552
2042	315,284	0.009595356	3,025	13,543,721	0.009595356	129,957
2043	341,492	0.008567282	2,926	13,543,721	0.008567282	116,033
2044	315,284	0.007649359	2,412	13,543,721	0.007649359	103,601
2045	315,284	0.006829785	2,153	13,543,721	0.006829785	92,501
2046	315,284	0.0060980	1,923	13,543,721	0.0060980	82,590
2047	315,284	0.005444662	1,717	13,543,721	0.005444662	73,741
2048	324,188	0.004861306	1,576	13,543,721	0.004861306	65,840
2049	315,284	0.004340452	1,368	13,543,721	0.004340452	58,786
2050	315,284	0.003875403	1,222	13,543,721	0.003875403	52,487
2051	315,284	0.003460181	1,091	13,543,721	0.003460181	46,864
2052	315,284	0.003089448	974	13,543,721	0.003089448	41,843
2053	341,492	0.002758435	942	13,543,721	0.002758435	37,359
2054	315,284	0.002462889	777	13,543,721	0.002462889	33,357
2055	315,284	0.002199008	693	13,543,721	0.002199008	29,783
2056	315,284	0.0019634	619	13,543,721	0.0019634	26,592
2057	315,284	0.001753036	553	13,543,721	0.001753036	23,743
2058	324,188	0.00156521	507	13,543,721	0.00156521	21,199
2059	315,284	0.001397509	441	13,543,721	0.001397509	18,927
2060	315,284	0.001247776	393	13,543,721	0.001247776	16,900
2061	315,284	0.001114086	351	13,543,721	0.001114086	15,089
Total			22,807,875			27,998,720
Net Present Value at 12%:			5,190,846			
Benefit-Cost Ratio at 12%:			1.23			

Table 13-56 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan B-1)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	4,522,174	0.403883228	1,826,430	763,325	0.403883228	308,294
2010	5,157,434	0.3606100	1,859,822	917,522	0.3606100	330,868
2011	5,157,434	0.321973237	1,660,556	1,071,175	0.321973237	344,890
2012	4,397,414	0.287476104	1,264,151	1,071,175	0.287476104	307,937
2013	2,229,224	0.256675093	572,186	1,071,175	0.256675093	274,944
2014	207,784	0.22917419	47,619	7,160,542	0.22917419	1,641,011
2015	170,384	0.204619813	34,864	9,363,020	0.204619813	1,915,859
2016	170,384	0.182696261	31,129	13,379,516	0.182696261	2,444,388
2017	170,384	0.163121662	27,793	13,587,572	0.163121662	2,216,427
2018	179,288	0.145644341	26,112	13,587,572	0.145644341	1,978,953
2019	170,384	0.13003959	22,157	13,587,572	0.13003959	1,766,922
2020	170,384	0.116106777	19,783	13,587,572	0.116106777	1,577,609
2021	170,384	0.103666765	17,663	13,587,572	0.103666765	1,408,580
2022	170,384	0.092559612	15,771	13,587,572	0.092559612	1,257,660
2023	196,592	0.08264251	16,247	13,587,572	0.08264251	1,122,911
2024	170,384	0.0737880	12,572	13,587,572	0.0737880	1,002,599
2025	170,384	0.065882103	11,225	13,587,572	0.065882103	895,178
2026	170,384	0.058823307	10,023	13,587,572	0.058823307	799,266
2027	170,384	0.052520809	8,949	13,587,572	0.052520809	713,630
2028	179,288	0.04689358	8,407	13,587,572	0.04689358	637,170
2029	170,384	0.041869268	7,134	13,587,572	0.041869268	568,902
2030	170,384	0.037383275	6,370	13,587,572	0.037383275	507,948
2031	170,384	0.033377924	5,687	13,587,572	0.033377924	453,525
2032	170,384	0.029801718	5,078	13,587,572	0.029801718	404,933
2033	196,592	0.026608677	5,231	13,587,572	0.026608677	361,547
2034	170,384	0.023757747	4,048	13,587,572	0.023757747	322,810
2035	170,384	0.021212274	3,614	13,587,572	0.021212274	288,223
2036	170,384	0.01893953	3,227	13,587,572	0.01893953	257,342
2037	170,384	0.016910295	2,881	13,587,572	0.016910295	229,770
2038	362,072	0.015098478	5,467	13,587,572	0.015098478	205,152
2039	170,384	0.013480784	2,297	13,587,572	0.013480784	183,171
2040	170,384	0.012036414	2,051	13,587,572	0.012036414	163,546
2041	170,384	0.010746798	1,831	13,587,572	0.010746798	146,023
2042	170,384	0.009595356	1,635	13,587,572	0.009595356	130,378
2043	196,592	0.008567282	1,684	13,587,572	0.008567282	116,409
2044	170,384	0.007649359	1,303	13,587,572	0.007649359	103,936
2045	170,384	0.006829785	1,164	13,587,572	0.006829785	92,800
2046	170,384	0.0060980	1,039	13,587,572	0.0060980	82,857
2047	170,384	0.005444662	928	13,587,572	0.005444662	73,980
2048	179,288	0.004861306	872	13,587,572	0.004861306	66,053
2049	170,384	0.004340452	740	13,587,572	0.004340452	58,976
2050	170,384	0.003875403	660	13,587,572	0.003875403	52,657
2051	170,384	0.003460181	590	13,587,572	0.003460181	47,015
2052	170,384	0.003089448	526	13,587,572	0.003089448	41,978
2053	196,592	0.002758435	542	13,587,572	0.002758435	37,480
2054	170,384	0.002462889	420	13,587,572	0.002462889	33,465
2055	170,384	0.002199008	375	13,587,572	0.002199008	29,879
2056	170,384	0.0019634	335	13,587,572	0.0019634	26,678
2057	170,384	0.001753036	299	13,587,572	0.001753036	23,819
2058	179,288	0.00156521	281	13,587,572	0.00156521	21,267
2059	170,384	0.001397509	238	13,587,572	0.001397509	18,989
2060	170,384	0.001247776	213	13,587,572	0.001247776	16,954
2061	170,384	0.001114086	190	13,587,572	0.001114086	15,138
Total			19,707,553			28,128,698
Net Present Value at 12%:			8,421,146			
Benefit-Cost Ratio at 12%:			1.43			

Table 13-57 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan B-2)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	4,522,174	0.403883228	1,826,430	763,325	0.403883228	308,294
2010	5,157,434	0.3606100	1,859,822	917,522	0.3606100	330,868
2011	5,157,434	0.321973237	1,660,556	1,071,175	0.321973237	344,890
2012	4,397,414	0.287476104	1,264,151	1,071,175	0.287476104	307,937
2013	2,229,224	0.256675093	572,186	1,071,175	0.256675093	274,944
2014	207,784	0.22917419	47,619	7,113,276	0.22917419	1,630,179
2015	170,384	0.204619813	34,864	9,426,644	0.204619813	1,928,878
2016	170,384	0.182696261	31,129	12,816,367	0.182696261	2,341,502
2017	170,384	0.163121662	27,793	13,041,515	0.163121662	2,127,354
2018	179,288	0.145644341	26,112	13,041,515	0.145644341	1,899,423
2019	170,384	0.13003959	22,157	13,041,515	0.13003959	1,695,913
2020	170,384	0.116106777	19,783	13,041,515	0.116106777	1,514,208
2021	170,384	0.103666765	17,663	13,041,515	0.103666765	1,351,972
2022	170,384	0.092559612	15,771	13,041,515	0.092559612	1,207,118
2023	196,592	0.08264251	16,247	13,041,515	0.08264251	1,077,784
2024	170,384	0.0737880	12,572	13,041,515	0.0737880	962,307
2025	170,384	0.065882103	11,225	13,041,515	0.065882103	859,202
2026	170,384	0.058823307	10,023	13,041,515	0.058823307	767,145
2027	170,384	0.052520809	8,949	13,041,515	0.052520809	684,951
2028	179,288	0.04689358	8,407	13,041,515	0.04689358	611,563
2029	170,384	0.041869268	7,134	13,041,515	0.041869268	546,039
2030	170,384	0.037383275	6,370	13,041,515	0.037383275	487,535
2031	170,384	0.033377924	5,687	13,041,515	0.033377924	435,299
2032	170,384	0.029801718	5,078	13,041,515	0.029801718	388,660
2033	196,592	0.026608677	5,231	13,041,515	0.026608677	347,017
2034	170,384	0.023757747	4,048	13,041,515	0.023757747	309,837
2035	170,384	0.021212274	3,614	13,041,515	0.021212274	276,640
2036	170,384	0.01893953	3,227	13,041,515	0.01893953	247,000
2037	170,384	0.016910295	2,881	13,041,515	0.016910295	220,536
2038	362,072	0.015098478	5,467	13,041,515	0.015098478	196,907
2039	170,384	0.013480784	2,297	13,041,515	0.013480784	175,810
2040	170,384	0.012036414	2,051	13,041,515	0.012036414	156,973
2041	170,384	0.010746798	1,831	13,041,515	0.010746798	140,155
2042	170,384	0.009595356	1,635	13,041,515	0.009595356	125,138
2043	196,592	0.008567282	1,684	13,041,515	0.008567282	111,730
2044	170,384	0.007649359	1,303	13,041,515	0.007649359	99,759
2045	170,384	0.006829785	1,164	13,041,515	0.006829785	89,071
2046	170,384	0.0060980	1,039	13,041,515	0.0060980	79,527
2047	170,384	0.005444662	928	13,041,515	0.005444662	71,007
2048	179,288	0.004861306	872	13,041,515	0.004861306	63,399
2049	170,384	0.004340452	740	13,041,515	0.004340452	56,606
2050	170,384	0.003875403	660	13,041,515	0.003875403	50,541
2051	170,384	0.003460181	590	13,041,515	0.003460181	45,126
2052	170,384	0.003089448	526	13,041,515	0.003089448	40,291
2053	196,592	0.002758435	542	13,041,515	0.002758435	35,974
2054	170,384	0.002462889	420	13,041,515	0.002462889	32,120
2055	170,384	0.002199008	375	13,041,515	0.002199008	28,678
2056	170,384	0.0019634	335	13,041,515	0.0019634	25,606
2057	170,384	0.001753036	299	13,041,515	0.001753036	22,862
2058	179,288	0.00156521	281	13,041,515	0.00156521	20,413
2059	170,384	0.001397509	238	13,041,515	0.001397509	18,226
2060	170,384	0.001247776	213	13,041,515	0.001247776	16,273
2061	170,384	0.001114086	190	13,041,515	0.001114086	14,529
Total			19,707,553			27,201,715
Net Present Value at 12%:			7,494,162			
Benefit-Cost Ratio at 12%:			1.38			

Table 13-58 Net Present Value and Benefit-Cost Ratio in Economic Terms (Plan B-3)

(Unit: 1,000 Baht)						
Year	Cost	D.F.	Present Worth	Benefit	D.F.	Present Worth
2002	93,840	0.892857143	83,786	0	0.892857143	0
2003	686,280	0.797193878	547,098	0	0.797193878	0
2004	1,487,080	0.711780248	1,058,474	0	0.711780248	0
2005	3,680,660	0.635518078	2,339,126	0	0.635518078	0
2006	4,784,520	0.567426856	2,714,865	0	0.567426856	0
2007	5,720,120	0.506631121	2,897,991	0	0.506631121	0
2008	5,535,120	0.452349215	2,503,807	0	0.452349215	0
2009	4,522,174	0.403883228	1,826,430	763,325	0.403883228	308,294
2010	5,157,434	0.3606100	1,859,822	917,522	0.3606100	330,868
2011	5,157,434	0.321973237	1,660,556	1,071,175	0.321973237	344,890
2012	4,397,414	0.287476104	1,264,151	1,071,175	0.287476104	307,937
2013	2,229,224	0.256675093	572,186	1,071,175	0.256675093	274,944
2014	207,784	0.22917419	47,619	7,075,250	0.22917419	1,621,465
2015	170,384	0.204619813	34,864	9,487,251	0.204619813	1,941,280
2016	170,384	0.182696261	31,129	12,317,324	0.182696261	2,250,329
2017	170,384	0.163121662	27,793	12,556,505	0.163121662	2,048,238
2018	179,288	0.145644341	26,112	12,556,505	0.145644341	1,828,784
2019	170,384	0.13003959	22,157	12,556,505	0.13003959	1,632,843
2020	170,384	0.116106777	19,783	12,556,505	0.116106777	1,457,895
2021	170,384	0.103666765	17,663	12,556,505	0.103666765	1,301,692
2022	170,384	0.092559612	15,771	12,556,505	0.092559612	1,162,225
2023	196,592	0.08264251	16,247	12,556,505	0.08264251	1,037,701
2024	170,384	0.0737880	12,572	12,556,505	0.0737880	926,519
2025	170,384	0.065882103	11,225	12,556,505	0.065882103	827,249
2026	170,384	0.058823307	10,023	12,556,505	0.058823307	738,615
2027	170,384	0.052520809	8,949	12,556,505	0.052520809	659,478
2028	179,288	0.04689358	8,407	12,556,505	0.04689358	588,819
2029	170,384	0.041869268	7,134	12,556,505	0.041869268	525,732
2030	170,384	0.037383275	6,370	12,556,505	0.037383275	469,403
2031	170,384	0.033377924	5,687	12,556,505	0.033377924	419,110
2032	170,384	0.029801718	5,078	12,556,505	0.029801718	374,205
2033	196,592	0.026608677	5,231	12,556,505	0.026608677	334,112
2034	170,384	0.023757747	4,048	12,556,505	0.023757747	298,314
2035	170,384	0.021212274	3,614	12,556,505	0.021212274	266,352
2036	170,384	0.01893953	3,227	12,556,505	0.01893953	237,814
2037	170,384	0.016910295	2,881	12,556,505	0.016910295	212,334
2038	362,072	0.015098478	5,467	12,556,505	0.015098478	189,584
2039	170,384	0.013480784	2,297	12,556,505	0.013480784	169,272
2040	170,384	0.012036414	2,051	12,556,505	0.012036414	151,135
2041	170,384	0.010746798	1,831	12,556,505	0.010746798	134,942
2042	170,384	0.009595356	1,635	12,556,505	0.009595356	120,484
2043	196,592	0.008567282	1,684	12,556,505	0.008567282	107,575
2044	170,384	0.007649359	1,303	12,556,505	0.007649359	96,049
2045	170,384	0.006829785	1,164	12,556,505	0.006829785	85,758
2046	170,384	0.0060980	1,039	12,556,505	0.0060980	76,570
2047	170,384	0.005444662	928	12,556,505	0.005444662	68,366
2048	179,288	0.004861306	872	12,556,505	0.004861306	61,041
2049	170,384	0.004340452	740	12,556,505	0.004340452	54,501
2050	170,384	0.003875403	660	12,556,505	0.003875403	48,662
2051	170,384	0.003460181	590	12,556,505	0.003460181	43,448
2052	170,384	0.003089448	526	12,556,505	0.003089448	38,793
2053	196,592	0.002758435	542	12,556,505	0.002758435	34,636
2054	170,384	0.002462889	420	12,556,505	0.002462889	30,925
2055	170,384	0.002199008	375	12,556,505	0.002199008	27,612
2056	170,384	0.0019634	335	12,556,505	0.0019634	24,653
2057	170,384	0.001753036	299	12,556,505	0.001753036	22,012
2058	179,288	0.00156521	281	12,556,505	0.00156521	19,654
2059	170,384	0.001397509	238	12,556,505	0.001397509	17,548
2060	170,384	0.001247776	213	12,556,505	0.001247776	15,668
2061	170,384	0.001114086	190	12,556,505	0.001114086	13,989
Total			19,707,553			26,380,318
Net Present Value at 12%:			6,672,766			
Benefit-Cost Ratio at 12%:			1.34			

Table 13-59 Economic Internal Rate of Return (Plan A-1)

Year	Incremental Benefit	D.F. (14%)	Present Worth	D.F. (15%)	Present Worth
2002	-93,840	0.877192982	-82,316	0.869565217	-81,600
2003	-686,280	0.769467528	-528,070	0.756143667	-518,926
2004	-1,487,080	0.674971516	-1,003,737	0.657516232	-977,779
2005	-3,680,660	0.592080277	-2,179,246	0.571753246	-2,104,429
2006	-4,784,520	0.519368664	-2,484,930	0.497176735	-2,378,752
2007	-5,720,120	0.455586548	-2,606,010	0.432327596	-2,472,966
2008	-5,535,120	0.399637323	-2,212,041	0.37593704	-2,080,857
2009	-4,477,749	0.350559055	-1,569,715	0.326901774	-1,463,784
2010	-4,958,812	0.307507943	-1,524,874	0.284262412	-1,409,604
2011	-6,270,259	0.26974381	-1,691,364	0.247184706	-1,549,912
2012	-5,510,239	0.236617377	-1,303,818	0.214943223	-1,184,389
2013	-3,342,049	0.207559102	-693,673	0.18690715	-624,653
2014	4,812,843	0.182069388	876,271	0.162527957	782,222
2015	9,741,524	0.15970999	1,555,819	0.141328658	1,376,757
2016	13,901,577	0.140096482	1,947,562	0.122894485	1,708,427
2017	14,388,429	0.122891651	1,768,218	0.10686477	1,537,616
2018	14,379,525	0.107799694	1,550,108	0.092925887	1,336,230
2019	14,388,429	0.094561135	1,360,586	0.080805119	1,162,659
2020	14,388,429	0.082948364	1,193,497	0.070265321	1,011,008
2021	14,388,429	0.072761723	1,046,927	0.061100279	879,137
2022	14,388,429	0.063826073	918,357	0.053130677	764,467
2023	14,362,221	0.055987783	804,109	0.046200589	663,543
2024	14,388,429	0.04911209	706,646	0.040174425	578,047
2025	14,388,429	0.043080781	619,865	0.034934283	502,649
2026	14,388,429	0.037790159	543,741	0.030377637	437,086
2027	14,388,429	0.033149262	476,966	0.026415337	380,075
2028	14,379,525	0.0290783	418,132	0.022969858	330,296
2029	14,388,429	0.025507281	367,010	0.01997379	287,391
2030	14,388,429	0.022374808	321,938	0.017368513	249,906
2031	14,388,429	0.019627024	282,402	0.015103054	217,309
2032	14,388,429	0.017216688	247,721	0.013133091	188,965
2033	14,362,221	0.015102358	216,903	0.011420079	164,018
2034	14,388,429	0.013247682	190,613	0.009930503	142,884
2035	14,388,429	0.011620774	167,205	0.00863522	124,247
2036	14,388,429	0.010193661	146,671	0.007508887	108,041
2037	14,388,429	0.008941808	128,659	0.006529467	93,949
2038	14,196,741	0.007843691	111,355	0.005677798	80,606
2039	14,388,429	0.006880431	98,999	0.004937215	71,039
2040	14,388,429	0.006035466	86,841	0.004293231	61,773
2041	14,388,429	0.005294268	76,176	0.003733244	53,716
2042	14,388,429	0.004644095	66,821	0.003246299	46,709
2043	14,362,221	0.004073768	58,508	0.002822869	40,543
2044	14,388,429	0.00357348	51,417	0.002454669	35,319
2045	14,388,429	0.003134632	45,102	0.002134494	30,712
2046	14,388,429	0.002749677	39,564	0.001856082	26,706
2047	14,388,429	0.002411997	34,705	0.001613984	23,223
2048	14,379,525	0.002115787	30,424	0.001403465	20,181
2049	14,388,429	0.001855954	26,704	0.001220404	17,560
2050	14,388,429	0.00162803	23,425	0.001061221	15,269
2051	14,388,429	0.001428096	20,548	0.000922801	13,278
2052	14,388,429	0.001252716	18,025	0.000802436	11,546
2053	14,362,221	0.001098874	15,782	0.00069777	10,022
2054	14,388,429	0.000963924	13,869	0.000606757	8,730
2055	14,388,429	0.000845548	12,166	0.000527614	7,592
2056	14,388,429	0.000741708	10,672	0.000458795	6,601
2057	14,388,429	0.000650621	9,361	0.000398952	5,740
2058	14,379,525	0.000570721	8,207	0.000346915	4,988
2059	14,388,429	0.000500632	7,203	0.000301665	4,340
2060	14,388,429	0.000439151	6,319	0.000262318	3,774
2061	14,388,429	0.00038522	5,543	0.000228102	3,282
Total			853,868		-1,217,473
Economic Internal Rate of Return:			14.38%		

Table 13-60 Economic Internal Rate of Return (Plan A-2)

Year	Incremental Benefit	D.F. (14%)	Present Worth	D.F. (15%)	Present Worth
2002	-93,840	0.877192982	-82,316	0.869565217	-81,600
2003	-686,280	0.769467528	-528,070	0.756143667	-518,926
2004	-1,487,080	0.674971516	-1,003,737	0.657516232	-977,779
2005	-3,680,660	0.592080277	-2,179,246	0.571753246	-2,104,429
2006	-4,784,520	0.519368664	-2,484,930	0.497176735	-2,378,752
2007	-5,720,120	0.455586548	-2,606,010	0.432327596	-2,472,966
2008	-5,535,120	0.399637323	-2,212,041	0.37593704	-2,080,857
2009	-4,477,749	0.350559055	-1,569,715	0.326901774	-1,463,784
2010	-4,958,812	0.307507943	-1,524,874	0.284262412	-1,409,604
2011	-6,270,259	0.26974381	-1,691,364	0.247184706	-1,549,912
2012	-5,510,239	0.236617377	-1,303,818	0.214943223	-1,184,389
2013	-3,342,049	0.207559102	-693,673	0.18690715	-624,653
2014	4,722,590	0.182069388	859,839	0.162527957	767,553
2015	9,749,570	0.15970999	1,557,104	0.141328658	1,377,894
2016	13,270,891	0.140096482	1,859,205	0.122894485	1,630,919
2017	13,774,205	0.122891651	1,692,735	0.10686477	1,471,977
2018	13,765,301	0.107799694	1,483,895	0.092925887	1,279,153
2019	13,774,205	0.094561135	1,302,504	0.080805119	1,113,026
2020	13,774,205	0.082948364	1,142,548	0.070265321	967,849
2021	13,774,205	0.072761723	1,002,235	0.061100279	841,608
2022	13,774,205	0.063826073	879,153	0.053130677	731,833
2023	13,747,997	0.055987783	769,720	0.046200589	635,166
2024	13,774,205	0.04911209	676,480	0.040174425	553,371
2025	13,774,205	0.043080781	593,404	0.034934283	481,192
2026	13,774,205	0.037790159	520,529	0.030377637	418,428
2027	13,774,205	0.033149262	456,605	0.026415337	363,850
2028	13,765,301	0.0290783	400,272	0.022969858	316,187
2029	13,774,205	0.025507281	351,343	0.01997379	275,123
2030	13,774,205	0.022374808	308,195	0.017368513	239,237
2031	13,774,205	0.019627024	270,347	0.015103054	208,033
2032	13,774,205	0.017216688	237,146	0.013133091	180,898
2033	13,747,997	0.015102358	207,627	0.011420079	157,003
2034	13,774,205	0.013247682	182,476	0.009930503	136,785
2035	13,774,205	0.011620774	160,067	0.00863522	118,943
2036	13,774,205	0.010193661	140,410	0.007508887	103,429
2037	13,774,205	0.008941808	123,166	0.006529467	89,938
2038	13,582,517	0.007843691	106,537	0.005677798	77,119
2039	13,774,205	0.006880431	94,772	0.004937215	68,006
2040	13,774,205	0.006035466	83,134	0.004293231	59,136
2041	13,774,205	0.005294268	72,924	0.003733244	51,422
2042	13,774,205	0.004644095	63,969	0.003246299	44,715
2043	13,747,997	0.004073768	56,006	0.002822869	38,809
2044	13,774,205	0.00357348	49,222	0.002454669	33,811
2045	13,774,205	0.003134632	43,177	0.002134494	29,401
2046	13,774,205	0.002749677	37,875	0.001856082	25,566
2047	13,774,205	0.002411997	33,223	0.001613984	22,231
2048	13,765,301	0.002115787	29,124	0.001403465	19,319
2049	13,774,205	0.001855954	25,564	0.001220404	16,810
2050	13,774,205	0.00162803	22,425	0.001061221	14,617
2051	13,774,205	0.001428096	19,671	0.000922801	12,711
2052	13,774,205	0.001252716	17,255	0.000802436	11,053
2053	13,747,997	0.001098874	15,107	0.00069777	9,593
2054	13,774,205	0.000963924	13,277	0.000606757	8,358
2055	13,774,205	0.000845548	11,647	0.000527614	7,267
2056	13,774,205	0.000741708	10,216	0.000458795	6,320
2057	13,774,205	0.000650621	8,962	0.000398952	5,495
2058	13,765,301	0.000570721	7,856	0.000346915	4,775
2059	13,774,205	0.000500632	6,896	0.000301665	4,155
2060	13,774,205	0.000439151	6,049	0.000262318	3,613
2061	13,774,205	0.00038522	5,306	0.000228102	3,142

Total 137,407 -1,810,810

Economic Internal Rate of Return: 14.06%

Table 13-61 Economic Internal Rate of Return (Plan A-3)

Year	Incremental Benefit	D.F. (13%)	Present Worth	D.F. (14%)	Present Worth
2002	-93,840	0.884955752	-83,044	0.877192982	-82,316
2003	-686,280	0.783146683	-537,458	0.769467528	-528,070
2004	-1,487,080	0.693050162	-1,030,621	0.674971516	-1,003,737
2005	-3,680,660	0.613318728	-2,257,418	0.592080277	-2,179,246
2006	-4,784,520	0.542759936	-2,596,846	0.519368664	-2,484,930
2007	-5,720,120	0.480318527	-2,747,480	0.455586548	-2,606,010
2008	-5,535,120	0.425060644	-2,352,762	0.399637323	-2,212,041
2009	-4,477,749	0.376159862	-1,684,349	0.350559055	-1,569,715
2010	-4,958,812	0.332884833	-1,650,713	0.307507943	-1,524,874
2011	-6,270,259	0.294588348	-1,847,145	0.26974381	-1,691,364
2012	-5,510,239	0.260697653	-1,436,506	0.236617377	-1,303,818
2013	-3,342,049	0.230705888	-771,030	0.207559102	-693,673
2014	4,646,250	0.204164502	948,599	0.182069388	845,940
2015	9,760,631	0.180676551	1,763,517	0.159709999	1,558,870
2016	12,710,460	0.159890753	2,032,285	0.140096482	1,780,691
2017	13,228,437	0.141496242	1,871,774	0.122891651	1,625,664
2018	13,219,533	0.125217913	1,655,322	0.107799694	1,425,062
2019	13,228,437	0.110812312	1,465,874	0.094561135	1,250,896
2020	13,228,437	0.098063993	1,297,233	0.082948364	1,097,277
2021	13,228,437	0.086782295	1,147,994	0.072761723	962,524
2022	13,228,437	0.076798491	1,015,924	0.063826073	844,319
2023	13,202,229	0.067963266	897,267	0.055987783	739,164
2024	13,228,437	0.060144484	795,618	0.04911209	649,676
2025	13,228,437	0.053225207	704,086	0.043080781	569,891
2026	13,228,437	0.047101953	623,085	0.037790159	499,905
2027	13,228,437	0.041683144	551,403	0.033149262	438,513
2028	13,219,533	0.036887738	487,639	0.0290783	384,402
2029	13,228,437	0.032644016	431,829	0.025507281	337,421
2030	13,228,437	0.02888851	382,150	0.022374808	295,984
2031	13,228,437	0.025565053	338,186	0.019627024	259,635
2032	13,228,437	0.022623941	299,279	0.017216688	227,750
2033	13,202,229	0.020021186	264,324	0.015102358	199,385
2034	13,228,437	0.017717864	234,380	0.013247682	175,246
2035	13,228,437	0.015679526	207,416	0.011620774	153,725
2036	13,228,437	0.013875686	183,554	0.010193661	134,846
2037	13,228,437	0.012279369	162,437	0.008941808	118,286
2038	13,036,749	0.010866698	141,666	0.007843691	102,256
2039	13,228,437	0.009616547	127,212	0.006880431	91,017
2040	13,228,437	0.008510218	112,577	0.006035466	79,840
2041	13,228,437	0.007531167	99,626	0.005294268	70,035
2042	13,228,437	0.006664749	88,164	0.004644095	61,434
2043	13,202,229	0.005898008	77,867	0.004073768	53,783
2044	13,228,437	0.005219476	69,046	0.00357348	47,272
2045	13,228,437	0.004619006	61,102	0.003134632	41,466
2046	13,228,437	0.004087616	54,073	0.002749677	36,374
2047	13,228,437	0.003617359	47,852	0.002411997	31,907
2048	13,219,533	0.003201203	42,318	0.002115787	27,970
2049	13,228,437	0.002832923	37,475	0.001855954	24,551
2050	13,228,437	0.002507011	33,164	0.00162803	21,536
2051	13,228,437	0.002218594	29,349	0.001428096	18,891
2052	13,228,437	0.001963357	25,972	0.001252716	16,571
2053	13,202,229	0.001737484	22,939	0.001098874	14,508
2054	13,228,437	0.001537597	20,340	0.000963924	12,751
2055	13,228,437	0.001360705	18,000	0.000845548	11,185
2056	13,228,437	0.001204164	15,929	0.000741708	9,812
2057	13,228,437	0.001065632	14,097	0.000650621	8,607
2058	13,219,533	0.000943037	12,467	0.000570721	7,545
2059	13,228,437	0.000834546	11,040	0.000500632	6,623
2060	13,228,437	0.000738536	9,770	0.000439151	5,809
2061	13,228,437	0.000653572	8,646	0.00038522	5,096

Total 1,946,490 -497,882

Economic Internal Rate of Return: 13.77%

Table 13-62 Economic Internal Rate of Return (Plan B-1)

Year	Incremental Benefit	D.F. (15%)	Present Worth	D.F. (16%)	Present Worth
2002	-93,840	0.869565217	-81,600	0.862068966	-80,897
2003	-686,280	0.756143667	-518,926	0.743162901	-510,018
2004	-1,487,080	0.657516232	-977,779	0.640657674	-952,709
2005	-3,680,660	0.571753246	-2,104,429	0.552291098	-2,032,796
2006	-4,784,520	0.497176735	-2,378,752	0.476113015	-2,277,972
2007	-5,720,120	0.432327596	-2,472,966	0.410442255	-2,347,779
2008	-5,535,120	0.37593704	-2,080,857	0.35382953	-1,958,489
2009	-3,758,849	0.326901774	-1,228,774	0.305025457	-1,146,545
2010	-4,239,912	0.284262412	-1,205,248	0.26295298	-1,114,897
2011	-4,086,259	0.247184706	-1,010,061	0.226683603	-926,288
2012	-3,326,239	0.214943223	-714,953	0.1954169	-650,003
2013	-1,158,049	0.18690715	-216,448	0.168462844	-195,088
2014	6,952,758	0.162527957	1,130,018	0.14522659	1,009,725
2015	9,192,636	0.141328658	1,299,183	0.125195336	1,150,875
2016	13,209,132	0.122894485	1,623,329	0.107927014	1,425,622
2017	13,417,188	0.10686477	1,433,825	0.093040529	1,248,342
2018	13,408,284	0.092925887	1,245,977	0.080207353	1,075,443
2019	13,417,188	0.080805119	1,084,177	0.06914427	927,722
2020	13,417,188	0.070265321	942,763	0.059607129	799,760
2021	13,417,188	0.061100279	819,794	0.051385456	689,448
2022	13,417,188	0.053130677	712,864	0.044297807	594,352
2023	13,390,980	0.046200589	618,671	0.038187765	511,372
2024	13,417,188	0.040174425	539,028	0.032920487	441,700
2025	13,417,188	0.034934283	468,720	0.02837973	380,776
2026	13,417,188	0.030377637	407,582	0.024465284	328,255
2027	13,417,188	0.026415337	354,420	0.021090762	282,979
2028	13,408,284	0.022969858	307,986	0.018181692	243,785
2029	13,417,188	0.01997379	267,992	0.015673872	210,299
2030	13,417,188	0.017368513	233,037	0.013511959	181,292
2031	13,417,188	0.015103054	202,641	0.01164824	156,287
2032	13,417,188	0.013133091	176,209	0.010041587	134,730
2033	13,390,980	0.011420079	152,926	0.00865654	115,920
2034	13,417,188	0.009930503	133,239	0.007462535	100,126
2035	13,417,188	0.00863522	115,860	0.006433219	86,316
2036	13,417,188	0.007508887	100,748	0.005545879	74,410
2037	13,417,188	0.006529467	87,607	0.00478093	64,147
2038	13,225,500	0.005677798	75,092	0.004121491	54,509
2039	13,417,188	0.004937215	66,244	0.00355301	47,671
2040	13,417,188	0.004293231	57,603	0.00306294	41,096
2041	13,417,188	0.003733244	50,090	0.002640465	35,428
2042	13,417,188	0.003246299	43,556	0.002276263	30,541
2043	13,390,980	0.002822869	37,801	0.001962296	26,277
2044	13,417,188	0.002454669	32,935	0.001691634	22,697
2045	13,417,188	0.002134494	28,639	0.001458305	19,566
2046	13,417,188	0.001856082	24,903	0.00125716	16,868
2047	13,417,188	0.001613984	21,655	0.001083758	14,541
2048	13,408,284	0.001403465	18,818	0.000934275	12,527
2049	13,417,188	0.001220404	16,374	0.000805409	10,806
2050	13,417,188	0.001061221	14,239	0.000694318	9,316
2051	13,417,188	0.000922801	12,381	0.00059855	8,031
2052	13,417,188	0.000802436	10,766	0.000515992	6,923
2053	13,390,980	0.00069777	9,344	0.00044482	5,957
2054	13,417,188	0.000606757	8,141	0.000383466	5,145
2055	13,417,188	0.000527614	7,079	0.000330574	4,435
2056	13,417,188	0.000458795	6,156	0.000284978	3,824
2057	13,417,188	0.000398952	5,353	0.00024567	3,296
2058	13,408,284	0.000346915	4,652	0.000211785	2,840
2059	13,417,188	0.000301665	4,047	0.000182573	2,450
2060	13,417,188	0.000262318	3,520	0.000157391	2,112
2061	13,417,188	0.000228102	3,060	0.000135682	1,820

Total 30,252 -1,571,122

Economic Internal Rate of Return: 15.02%

Table 13-63 Economic Internal Rate of Return (Plan B-2)

Year	Incremental Benefit	D.F. (14%)	Present Worth	D.F. (15%)	Present Worth
2002	-93,840	0.877192982	-82,316	0.869565217	-81,600
2003	-686,280	0.769467528	-528,070	0.756143667	-518,926
2004	-1,487,080	0.674971516	-1,003,737	0.657516232	-977,779
2005	-3,680,660	0.592080277	-2,179,246	0.571753246	-2,104,429
2006	-4,784,520	0.519368664	-2,484,930	0.497176735	-2,378,752
2007	-5,720,120	0.455586548	-2,606,010	0.432327596	-2,472,966
2008	-5,535,120	0.399637323	-2,212,041	0.37593704	-2,080,857
2009	-3,758,849	0.350559055	-1,317,699	0.326901774	-1,228,774
2010	-4,239,912	0.307507943	-1,303,807	0.284262412	-1,205,248
2011	-4,086,259	0.26974381	-1,102,243	0.247184706	-1,010,061
2012	-3,326,239	0.236617377	-787,046	0.214943223	-714,953
2013	-1,158,049	0.207559102	-240,364	0.18690715	-216,448
2014	6,905,492	0.182069388	1,257,279	0.162527957	1,122,336
2015	9,256,260	0.15970999	1,478,317	0.141328658	1,308,175
2016	12,645,983	0.140096482	1,771,658	0.122894485	1,554,122
2017	12,871,131	0.122891651	1,581,755	0.10686477	1,375,470
2018	12,862,227	0.107799694	1,386,544	0.092925887	1,195,234
2019	12,871,131	0.094561135	1,217,109	0.080805119	1,040,053
2020	12,871,131	0.082948364	1,067,639	0.070265321	904,394
2021	12,871,131	0.072761723	936,526	0.061100279	786,430
2022	12,871,131	0.063826073	821,514	0.053130677	683,852
2023	12,844,923	0.055987783	719,159	0.046200589	593,443
2024	12,871,131	0.04911209	632,128	0.040174425	517,090
2025	12,871,131	0.043080781	554,498	0.034934283	449,644
2026	12,871,131	0.037790159	486,402	0.030377637	390,995
2027	12,871,131	0.033149262	426,668	0.026415337	339,995
2028	12,862,227	0.0290783	374,012	0.022969858	295,444
2029	12,871,131	0.025507281	328,308	0.01997379	257,085
2030	12,871,131	0.022374808	287,989	0.017368513	223,552
2031	12,871,131	0.019627024	252,622	0.015103054	194,393
2032	12,871,131	0.017216688	221,598	0.013133091	169,038
2033	12,844,923	0.015102358	193,989	0.011420079	146,690
2034	12,871,131	0.013247682	170,513	0.009930503	127,817
2035	12,871,131	0.011620774	149,573	0.00863522	111,145
2036	12,871,131	0.010193661	131,204	0.007508887	96,648
2037	12,871,131	0.008941808	115,091	0.006529467	84,042
2038	12,679,443	0.007843691	99,454	0.005677798	71,991
2039	12,871,131	0.006880431	88,559	0.004937215	63,548
2040	12,871,131	0.006035466	77,683	0.004293231	55,259
2041	12,871,131	0.005294268	68,143	0.003733244	48,051
2042	12,871,131	0.004644095	59,775	0.003246299	41,784
2043	12,844,923	0.004073768	52,327	0.002822869	36,260
2044	12,871,131	0.00357348	45,995	0.002454669	31,594
2045	12,871,131	0.003134632	40,346	0.002134494	27,473
2046	12,871,131	0.002749677	35,391	0.001856082	23,890
2047	12,871,131	0.002411997	31,045	0.001613984	20,774
2048	12,862,227	0.002115787	27,214	0.001403465	18,052
2049	12,871,131	0.001855954	23,888	0.001220404	15,708
2050	12,871,131	0.00162803	20,955	0.001061221	13,659
2051	12,871,131	0.001428096	18,381	0.000922801	11,877
2052	12,871,131	0.001252716	16,124	0.000802436	10,328
2053	12,844,923	0.001098874	14,115	0.00069777	8,963
2054	12,871,131	0.000963924	12,407	0.000606757	7,810
2055	12,871,131	0.000845548	10,883	0.000527614	6,791
2056	12,871,131	0.000741708	9,547	0.000458795	5,905
2057	12,871,131	0.000650621	8,374	0.000398952	5,135
2058	12,862,227	0.000570721	7,341	0.000346915	4,462
2059	12,871,131	0.000500632	6,444	0.000301665	3,883
2060	12,871,131	0.000439151	5,652	0.000262318	3,376
2061	12,871,131	0.00038522	4,958	0.000228102	2,936
Total			1,499,587		-484,198

Economic Internal Rate of Return: 14.73%

Table 13-64 Economic Internal Rate of Return (Plan B-3)

Year	Incremental Benefit	D.F. (14%)	Present Worth	D.F. (15%)	Present Worth
2002	-93,840	0.877192982	-82,316	0.869565217	-81,600
2003	-686,280	0.769467528	-528,070	0.756143667	-518,926
2004	-1,487,080	0.674971516	-1,003,737	0.657516232	-977,779
2005	-3,680,660	0.592080277	-2,179,246	0.571753246	-2,104,429
2006	-4,784,520	0.519368664	-2,484,930	0.497176735	-2,378,752
2007	-5,720,120	0.455586548	-2,606,010	0.432327596	-2,472,966
2008	-5,535,120	0.399637323	-2,212,041	0.37593704	-2,080,857
2009	-3,758,849	0.350559055	-1,317,699	0.326901774	-1,228,774
2010	-4,239,912	0.307507943	-1,303,807	0.284262412	-1,205,248
2011	-4,086,259	0.26974381	-1,102,243	0.247184706	-1,010,061
2012	-3,326,239	0.236617377	-787,046	0.214943223	-714,953
2013	-1,158,049	0.207559102	-240,364	0.18690715	-216,448
2014	6,867,466	0.182069388	1,250,355	0.162527957	1,116,155
2015	9,316,867	0.15970999	1,487,997	0.141328658	1,316,740
2016	12,146,940	0.140096482	1,701,744	0.122894485	1,492,792
2017	12,386,121	0.122891651	1,522,151	0.10686477	1,323,640
2018	12,377,217	0.107799694	1,334,260	0.092925887	1,150,164
2019	12,386,121	0.094561135	1,171,246	0.080805119	1,000,862
2020	12,386,121	0.082948364	1,027,408	0.070265321	870,315
2021	12,386,121	0.072761723	901,236	0.061100279	756,795
2022	12,386,121	0.063826073	790,557	0.053130677	658,083
2023	12,359,913	0.055987783	692,004	0.046200589	571,035
2024	12,386,121	0.04911209	608,308	0.040174425	497,605
2025	12,386,121	0.043080781	533,604	0.034934283	432,700
2026	12,386,121	0.037790159	468,073	0.030377637	376,261
2027	12,386,121	0.033149262	410,591	0.026415337	327,184
2028	12,377,217	0.0290783	359,908	0.022969858	284,303
2029	12,386,121	0.025507281	315,936	0.01997379	247,398
2030	12,386,121	0.022374808	277,137	0.017368513	215,128
2031	12,386,121	0.019627024	243,103	0.015103054	187,068
2032	12,386,121	0.017216688	213,248	0.013133091	162,668
2033	12,359,913	0.015102358	186,664	0.011420079	141,151
2034	12,386,121	0.013247682	164,087	0.009930503	123,000
2035	12,386,121	0.011620774	143,936	0.00863522	106,957
2036	12,386,121	0.010193661	126,260	0.007508887	93,006
2037	12,386,121	0.008941808	110,754	0.006529467	80,875
2038	12,194,433	0.007843691	95,649	0.005677798	69,238
2039	12,386,121	0.006880431	85,222	0.004937215	61,153
2040	12,386,121	0.006035466	74,756	0.004293231	53,176
2041	12,386,121	0.005294268	65,575	0.003733244	46,240
2042	12,386,121	0.004644095	57,522	0.003246299	40,209
2043	12,359,913	0.004073768	50,351	0.002822869	34,890
2044	12,386,121	0.00357348	44,262	0.002454669	30,404
2045	12,386,121	0.003134632	38,826	0.002134494	26,438
2046	12,386,121	0.002749677	34,058	0.001856082	22,990
2047	12,386,121	0.002411997	29,875	0.001613984	19,991
2048	12,377,217	0.002115787	26,188	0.001403465	17,371
2049	12,386,121	0.001855954	22,988	0.001220404	15,116
2050	12,386,121	0.00162803	20,165	0.001061221	13,144
2051	12,386,121	0.001428096	17,689	0.000922801	11,430
2052	12,386,121	0.001252716	15,516	0.000802436	9,939
2053	12,359,913	0.001098874	13,582	0.00069777	8,624
2054	12,386,121	0.000963924	11,939	0.000606757	7,515
2055	12,386,121	0.000845548	10,473	0.000527614	6,535
2056	12,386,121	0.000741708	9,187	0.000458795	5,683
2057	12,386,121	0.000650621	8,059	0.000398952	4,941
2058	12,377,217	0.000570721	7,064	0.000346915	4,294
2059	12,386,121	0.000500632	6,201	0.000301665	3,736
2060	12,386,121	0.000439151	5,439	0.000262318	3,249
2061	12,386,121	0.00038522	4,771	0.000228102	2,825

Total 948,420 -939,772

Economic Internal Rate of Return: 14.47%

Table 13-65 Sensitivity Analysis (Plan A-1)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-4,477,749	-5,001,856	-4,554,082	-5,078,189
2010	-4,958,812	-5,546,445	-5,050,564	-5,638,198
2011	-6,270,259	-7,004,402	-6,377,377	-7,111,520
2012	-5,510,239	-6,168,380	-5,617,357	-6,275,498
2013	-3,342,049	-3,783,371	-3,449,167	-3,890,489
2014	4,812,843	4,624,625	4,143,340	3,955,122
2015	9,741,524	9,709,996	8,735,843	8,704,315
2016	13,901,577	13,870,049	12,479,891	12,448,363
2017	14,388,429	14,356,901	12,918,058	12,886,529
2018	14,379,525	14,347,106	12,909,154	12,876,735
2019	14,388,429	14,356,901	12,918,058	12,886,529
2020	14,388,429	14,356,901	12,918,058	12,886,529
2021	14,388,429	14,356,901	12,918,058	12,886,529
2022	14,388,429	14,356,901	12,918,058	12,886,529
2023	14,362,221	14,328,072	12,891,850	12,857,701
2024	14,388,429	14,356,901	12,918,058	12,886,529
2025	14,388,429	14,356,901	12,918,058	12,886,529
2026	14,388,429	14,356,901	12,918,058	12,886,529
2027	14,388,429	14,356,901	12,918,058	12,886,529
2028	14,379,525	14,347,106	12,909,154	12,876,735
2029	14,388,429	14,356,901	12,918,058	12,886,529
2030	14,388,429	14,356,901	12,918,058	12,886,529
2031	14,388,429	14,356,901	12,918,058	12,886,529
2032	14,388,429	14,356,901	12,918,058	12,886,529
2033	14,362,221	14,328,072	12,891,850	12,857,701
2034	14,388,429	14,356,901	12,918,058	12,886,529
2035	14,388,429	14,356,901	12,918,058	12,886,529
2036	14,388,429	14,356,901	12,918,058	12,886,529
2037	14,388,429	14,356,901	12,918,058	12,886,529
2038	14,196,741	14,146,044	12,726,370	12,675,673
2039	14,388,429	14,356,901	12,918,058	12,886,529
2040	14,388,429	14,356,901	12,918,058	12,886,529
2041	14,388,429	14,356,901	12,918,058	12,886,529
2042	14,388,429	14,356,901	12,918,058	12,886,529
2043	14,362,221	14,328,072	12,891,850	12,857,701
2044	14,388,429	14,356,901	12,918,058	12,886,529
2045	14,388,429	14,356,901	12,918,058	12,886,529
2046	14,388,429	14,356,901	12,918,058	12,886,529
2047	14,388,429	14,356,901	12,918,058	12,886,529
2048	14,379,525	14,347,106	12,909,154	12,876,735
2049	14,388,429	14,356,901	12,918,058	12,886,529
2050	14,388,429	14,356,901	12,918,058	12,886,529
2051	14,388,429	14,356,901	12,918,058	12,886,529
2052	14,388,429	14,356,901	12,918,058	12,886,529
2053	14,362,221	14,328,072	12,891,850	12,857,701
2054	14,388,429	14,356,901	12,918,058	12,886,529
2055	14,388,429	14,356,901	12,918,058	12,886,529
2056	14,388,429	14,356,901	12,918,058	12,886,529
2057	14,388,429	14,356,901	12,918,058	12,886,529
2058	14,379,525	14,347,106	12,909,154	12,876,735
2059	14,388,429	14,356,901	12,918,058	12,886,529
2060	14,388,429	14,356,901	12,918,058	12,886,529
2061	14,388,429	14,356,901	12,918,058	12,886,529
EIRR=	14.38%	13.53%	13.44%	12.62%

Table 13-66 Sensitivity Analysis (Plan A-2)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-4,477,749	-5,001,856	-4,554,082	-5,078,189
2010	-4,958,812	-5,546,445	-5,050,564	-5,638,198
2011	-6,270,259	-7,004,402	-6,377,377	-7,111,520
2012	-5,510,239	-6,168,380	-5,617,357	-6,275,498
2013	-3,342,049	-3,783,371	-3,449,167	-3,890,489
2014	4,722,590	4,534,372	4,062,113	3,873,894
2015	9,749,570	9,718,042	8,743,085	8,711,556
2016	13,270,891	13,239,363	11,912,274	11,880,745
2017	13,774,205	13,742,677	12,365,256	12,333,728
2018	13,765,301	13,732,882	12,356,352	12,323,933
2019	13,774,205	13,742,677	12,365,256	12,333,728
2020	13,774,205	13,742,677	12,365,256	12,333,728
2021	13,774,205	13,742,677	12,365,256	12,333,728
2022	13,774,205	13,742,677	12,365,256	12,333,728
2023	13,747,997	13,713,848	12,339,048	12,304,899
2024	13,774,205	13,742,677	12,365,256	12,333,728
2025	13,774,205	13,742,677	12,365,256	12,333,728
2026	13,774,205	13,742,677	12,365,256	12,333,728
2027	13,774,205	13,742,677	12,365,256	12,333,728
2028	13,765,301	13,732,882	12,356,352	12,323,933
2029	13,774,205	13,742,677	12,365,256	12,333,728
2030	13,774,205	13,742,677	12,365,256	12,333,728
2031	13,774,205	13,742,677	12,365,256	12,333,728
2032	13,774,205	13,742,677	12,365,256	12,333,728
2033	13,747,997	13,713,848	12,339,048	12,304,899
2034	13,774,205	13,742,677	12,365,256	12,333,728
2035	13,774,205	13,742,677	12,365,256	12,333,728
2036	13,774,205	13,742,677	12,365,256	12,333,728
2037	13,774,205	13,742,677	12,365,256	12,333,728
2038	13,582,517	13,531,820	12,173,568	12,122,871
2039	13,774,205	13,742,677	12,365,256	12,333,728
2040	13,774,205	13,742,677	12,365,256	12,333,728
2041	13,774,205	13,742,677	12,365,256	12,333,728
2042	13,774,205	13,742,677	12,365,256	12,333,728
2043	13,747,997	13,713,848	12,339,048	12,304,899
2044	13,774,205	13,742,677	12,365,256	12,333,728
2045	13,774,205	13,742,677	12,365,256	12,333,728
2046	13,774,205	13,742,677	12,365,256	12,333,728
2047	13,774,205	13,742,677	12,365,256	12,333,728
2048	13,765,301	13,732,882	12,356,352	12,323,933
2049	13,774,205	13,742,677	12,365,256	12,333,728
2050	13,774,205	13,742,677	12,365,256	12,333,728
2051	13,774,205	13,742,677	12,365,256	12,333,728
2052	13,774,205	13,742,677	12,365,256	12,333,728
2053	13,747,997	13,713,848	12,339,048	12,304,899
2054	13,774,205	13,742,677	12,365,256	12,333,728
2055	13,774,205	13,742,677	12,365,256	12,333,728
2056	13,774,205	13,742,677	12,365,256	12,333,728
2057	13,774,205	13,742,677	12,365,256	12,333,728
2058	13,765,301	13,732,882	12,356,352	12,323,933
2059	13,774,205	13,742,677	12,365,256	12,333,728
2060	13,774,205	13,742,677	12,365,256	12,333,728
2061	13,774,205	13,742,677	12,365,256	12,333,728

EIRR= 14.06% 13.21% 13.13% 12.31%

Table 13-67 Sensitivity Analysis (Plan A-3)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-4,477,749	-5,001,856	-4,554,082	-5,078,189
2010	-4,958,812	-5,546,445	-5,050,564	-5,638,198
2011	-6,270,259	-7,004,402	-6,377,377	-7,111,520
2012	-5,510,239	-6,168,380	-5,617,357	-6,275,498
2013	-3,342,049	-3,783,371	-3,449,167	-3,890,489
2014	4,646,250	4,458,032	3,993,407	3,805,188
2015	9,760,631	9,729,103	8,753,040	8,721,511
2016	12,710,460	12,678,932	11,407,886	11,376,357
2017	13,228,437	13,196,909	11,874,065	11,842,537
2018	13,219,533	13,187,114	11,865,161	11,832,742
2019	13,228,437	13,196,909	11,874,065	11,842,537
2020	13,228,437	13,196,909	11,874,065	11,842,537
2021	13,228,437	13,196,909	11,874,065	11,842,537
2022	13,228,437	13,196,909	11,874,065	11,842,537
2023	13,202,229	13,168,080	11,847,857	11,813,708
2024	13,228,437	13,196,909	11,874,065	11,842,537
2025	13,228,437	13,196,909	11,874,065	11,842,537
2026	13,228,437	13,196,909	11,874,065	11,842,537
2027	13,228,437	13,196,909	11,874,065	11,842,537
2028	13,219,533	13,187,114	11,865,161	11,832,742
2029	13,228,437	13,196,909	11,874,065	11,842,537
2030	13,228,437	13,196,909	11,874,065	11,842,537
2031	13,228,437	13,196,909	11,874,065	11,842,537
2032	13,228,437	13,196,909	11,874,065	11,842,537
2033	13,202,229	13,168,080	11,847,857	11,813,708
2034	13,228,437	13,196,909	11,874,065	11,842,537
2035	13,228,437	13,196,909	11,874,065	11,842,537
2036	13,228,437	13,196,909	11,874,065	11,842,537
2037	13,228,437	13,196,909	11,874,065	11,842,537
2038	13,036,749	12,986,052	11,682,377	11,631,680
2039	13,228,437	13,196,909	11,874,065	11,842,537
2040	13,228,437	13,196,909	11,874,065	11,842,537
2041	13,228,437	13,196,909	11,874,065	11,842,537
2042	13,228,437	13,196,909	11,874,065	11,842,537
2043	13,202,229	13,168,080	11,847,857	11,813,708
2044	13,228,437	13,196,909	11,874,065	11,842,537
2045	13,228,437	13,196,909	11,874,065	11,842,537
2046	13,228,437	13,196,909	11,874,065	11,842,537
2047	13,228,437	13,196,909	11,874,065	11,842,537
2048	13,219,533	13,187,114	11,865,161	11,832,742
2049	13,228,437	13,196,909	11,874,065	11,842,537
2050	13,228,437	13,196,909	11,874,065	11,842,537
2051	13,228,437	13,196,909	11,874,065	11,842,537
2052	13,228,437	13,196,909	11,874,065	11,842,537
2053	13,202,229	13,168,080	11,847,857	11,813,708
2054	13,228,437	13,196,909	11,874,065	11,842,537
2055	13,228,437	13,196,909	11,874,065	11,842,537
2056	13,228,437	13,196,909	11,874,065	11,842,537
2057	13,228,437	13,196,909	11,874,065	11,842,537
2058	13,219,533	13,187,114	11,865,161	11,832,742
2059	13,228,437	13,196,909	11,874,065	11,842,537
2060	13,228,437	13,196,909	11,874,065	11,842,537
2061	13,228,437	13,196,909	11,874,065	11,842,537

EIRR= 13.77% 12.93% 12.84% 12.04%

Table 13-68 Sensitivity Analysis (Plan B-1)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-3,758,849	-4,211,066	-3,835,182	-4,287,399
2010	-4,239,912	-4,755,655	-4,331,664	-4,847,408
2011	-4,086,259	-4,602,002	-4,193,377	-4,709,120
2012	-3,326,239	-3,765,980	-3,433,357	-3,873,098
2013	-1,158,049	-1,380,971	-1,265,167	-1,488,089
2014	6,952,758	6,931,980	6,236,704	6,215,925
2015	9,192,636	9,175,598	8,256,334	8,239,296
2016	13,209,132	13,192,094	11,871,180	11,854,142
2017	13,417,188	13,400,150	12,058,431	12,041,392
2018	13,408,284	13,390,355	12,049,527	12,031,598
2019	13,417,188	13,400,150	12,058,431	12,041,392
2020	13,417,188	13,400,150	12,058,431	12,041,392
2021	13,417,188	13,400,150	12,058,431	12,041,392
2022	13,417,188	13,400,150	12,058,431	12,041,392
2023	13,390,980	13,371,321	12,032,223	12,012,564
2024	13,417,188	13,400,150	12,058,431	12,041,392
2025	13,417,188	13,400,150	12,058,431	12,041,392
2026	13,417,188	13,400,150	12,058,431	12,041,392
2027	13,417,188	13,400,150	12,058,431	12,041,392
2028	13,408,284	13,390,355	12,049,527	12,031,598
2029	13,417,188	13,400,150	12,058,431	12,041,392
2030	13,417,188	13,400,150	12,058,431	12,041,392
2031	13,417,188	13,400,150	12,058,431	12,041,392
2032	13,417,188	13,400,150	12,058,431	12,041,392
2033	13,390,980	13,371,321	12,032,223	12,012,564
2034	13,417,188	13,400,150	12,058,431	12,041,392
2035	13,417,188	13,400,150	12,058,431	12,041,392
2036	13,417,188	13,400,150	12,058,431	12,041,392
2037	13,417,188	13,400,150	12,058,431	12,041,392
2038	13,225,500	13,189,293	11,866,743	11,830,536
2039	13,417,188	13,400,150	12,058,431	12,041,392
2040	13,417,188	13,400,150	12,058,431	12,041,392
2041	13,417,188	13,400,150	12,058,431	12,041,392
2042	13,417,188	13,400,150	12,058,431	12,041,392
2043	13,390,980	13,371,321	12,032,223	12,012,564
2044	13,417,188	13,400,150	12,058,431	12,041,392
2045	13,417,188	13,400,150	12,058,431	12,041,392
2046	13,417,188	13,400,150	12,058,431	12,041,392
2047	13,417,188	13,400,150	12,058,431	12,041,392
2048	13,408,284	13,390,355	12,049,527	12,031,598
2049	13,417,188	13,400,150	12,058,431	12,041,392
2050	13,417,188	13,400,150	12,058,431	12,041,392
2051	13,417,188	13,400,150	12,058,431	12,041,392
2052	13,417,188	13,400,150	12,058,431	12,041,392
2053	13,390,980	13,371,321	12,032,223	12,012,564
2054	13,417,188	13,400,150	12,058,431	12,041,392
2055	13,417,188	13,400,150	12,058,431	12,041,392
2056	13,417,188	13,400,150	12,058,431	12,041,392
2057	13,417,188	13,400,150	12,058,431	12,041,392
2058	13,408,284	13,390,355	12,049,527	12,031,598
2059	13,417,188	13,400,150	12,058,431	12,041,392
2060	13,417,188	13,400,150	12,058,431	12,041,392
2061	13,417,188	13,400,150	12,058,431	12,041,392
EIRR=	15.02%	14.17%	14.08%	13.27%

Table 13-69 Sensitivity Analysis (Plan B-2)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-3,758,849	-4,211,066	-3,835,182	-4,287,399
2010	-4,239,912	-4,755,655	-4,331,664	-4,847,408
2011	-4,086,259	-4,602,002	-4,193,377	-4,709,120
2012	-3,326,239	-3,765,980	-3,433,357	-3,873,098
2013	-1,158,049	-1,380,971	-1,265,167	-1,488,089
2014	6,905,492	6,884,714	6,194,164	6,173,386
2015	9,256,260	9,239,222	8,313,596	8,296,557
2016	12,645,983	12,628,945	11,364,346	11,347,308
2017	12,871,131	12,854,093	11,566,980	11,549,941
2018	12,862,227	12,844,298	11,558,076	11,540,147
2019	12,871,131	12,854,093	11,566,980	11,549,941
2020	12,871,131	12,854,093	11,566,980	11,549,941
2021	12,871,131	12,854,093	11,566,980	11,549,941
2022	12,871,131	12,854,093	11,566,980	11,549,941
2023	12,844,923	12,825,264	11,540,772	11,521,112
2024	12,871,131	12,854,093	11,566,980	11,549,941
2025	12,871,131	12,854,093	11,566,980	11,549,941
2026	12,871,131	12,854,093	11,566,980	11,549,941
2027	12,871,131	12,854,093	11,566,980	11,549,941
2028	12,862,227	12,844,298	11,558,076	11,540,147
2029	12,871,131	12,854,093	11,566,980	11,549,941
2030	12,871,131	12,854,093	11,566,980	11,549,941
2031	12,871,131	12,854,093	11,566,980	11,549,941
2032	12,871,131	12,854,093	11,566,980	11,549,941
2033	12,844,923	12,825,264	11,540,772	11,521,112
2034	12,871,131	12,854,093	11,566,980	11,549,941
2035	12,871,131	12,854,093	11,566,980	11,549,941
2036	12,871,131	12,854,093	11,566,980	11,549,941
2037	12,871,131	12,854,093	11,566,980	11,549,941
2038	12,679,443	12,643,236	11,375,292	11,339,084
2039	12,871,131	12,854,093	11,566,980	11,549,941
2040	12,871,131	12,854,093	11,566,980	11,549,941
2041	12,871,131	12,854,093	11,566,980	11,549,941
2042	12,871,131	12,854,093	11,566,980	11,549,941
2043	12,844,923	12,825,264	11,540,772	11,521,112
2044	12,871,131	12,854,093	11,566,980	11,549,941
2045	12,871,131	12,854,093	11,566,980	11,549,941
2046	12,871,131	12,854,093	11,566,980	11,549,941
2047	12,871,131	12,854,093	11,566,980	11,549,941
2048	12,862,227	12,844,298	11,558,076	11,540,147
2049	12,871,131	12,854,093	11,566,980	11,549,941
2050	12,871,131	12,854,093	11,566,980	11,549,941
2051	12,871,131	12,854,093	11,566,980	11,549,941
2052	12,871,131	12,854,093	11,566,980	11,549,941
2053	12,844,923	12,825,264	11,540,772	11,521,112
2054	12,871,131	12,854,093	11,566,980	11,549,941
2055	12,871,131	12,854,093	11,566,980	11,549,941
2056	12,871,131	12,854,093	11,566,980	11,549,941
2057	12,871,131	12,854,093	11,566,980	11,549,941
2058	12,862,227	12,844,298	11,558,076	11,540,147
2059	12,871,131	12,854,093	11,566,980	11,549,941
2060	12,871,131	12,854,093	11,566,980	11,549,941
2061	12,871,131	12,854,093	11,566,980	11,549,941
EIRR=	14.73%	13.89%	13.80%	12.99%

Table 13-70 Sensitivity Analysis (Plan B-3)

Year	Base Case	Cost +10%	Benefit -10%	Combination
2002	-93,840	-103,224	-93,840	-103,224
2003	-686,280	-754,908	-686,280	-754,908
2004	-1,487,080	-1,635,788	-1,487,080	-1,635,788
2005	-3,680,660	-4,048,726	-3,680,660	-4,048,726
2006	-4,784,520	-5,262,972	-4,784,520	-5,262,972
2007	-5,720,120	-6,292,132	-5,720,120	-6,292,132
2008	-5,535,120	-6,088,632	-5,535,120	-6,088,632
2009	-3,758,849	-4,211,066	-3,835,182	-4,287,399
2010	-4,239,912	-4,755,655	-4,331,664	-4,847,408
2011	-4,086,259	-4,602,002	-4,193,377	-4,709,120
2012	-3,326,239	-3,765,980	-3,433,357	-3,873,098
2013	-1,158,049	-1,380,971	-1,265,167	-1,488,089
2014	6,867,466	6,846,688	6,159,941	6,139,163
2015	9,316,867	9,299,829	8,368,142	8,351,104
2016	12,146,940	12,129,902	10,915,208	10,898,169
2017	12,386,121	12,369,083	11,130,471	11,113,432
2018	12,377,217	12,359,288	11,121,567	11,103,638
2019	12,386,121	12,369,083	11,130,471	11,113,432
2020	12,386,121	12,369,083	11,130,471	11,113,432
2021	12,386,121	12,369,083	11,130,471	11,113,432
2022	12,386,121	12,369,083	11,130,471	11,113,432
2023	12,359,913	12,340,254	11,104,263	11,084,603
2024	12,386,121	12,369,083	11,130,471	11,113,432
2025	12,386,121	12,369,083	11,130,471	11,113,432
2026	12,386,121	12,369,083	11,130,471	11,113,432
2027	12,386,121	12,369,083	11,130,471	11,113,432
2028	12,377,217	12,359,288	11,121,567	11,103,638
2029	12,386,121	12,369,083	11,130,471	11,113,432
2030	12,386,121	12,369,083	11,130,471	11,113,432
2031	12,386,121	12,369,083	11,130,471	11,113,432
2032	12,386,121	12,369,083	11,130,471	11,113,432
2033	12,359,913	12,340,254	11,104,263	11,084,603
2034	12,386,121	12,369,083	11,130,471	11,113,432
2035	12,386,121	12,369,083	11,130,471	11,113,432
2036	12,386,121	12,369,083	11,130,471	11,113,432
2037	12,386,121	12,369,083	11,130,471	11,113,432
2038	12,194,433	12,158,226	10,938,783	10,902,575
2039	12,386,121	12,369,083	11,130,471	11,113,432
2040	12,386,121	12,369,083	11,130,471	11,113,432
2041	12,386,121	12,369,083	11,130,471	11,113,432
2042	12,386,121	12,369,083	11,130,471	11,113,432
2043	12,359,913	12,340,254	11,104,263	11,084,603
2044	12,386,121	12,369,083	11,130,471	11,113,432
2045	12,386,121	12,369,083	11,130,471	11,113,432
2046	12,386,121	12,369,083	11,130,471	11,113,432
2047	12,386,121	12,369,083	11,130,471	11,113,432
2048	12,377,217	12,359,288	11,121,567	11,103,638
2049	12,386,121	12,369,083	11,130,471	11,113,432
2050	12,386,121	12,369,083	11,130,471	11,113,432
2051	12,386,121	12,369,083	11,130,471	11,113,432
2052	12,386,121	12,369,083	11,130,471	11,113,432
2053	12,359,913	12,340,254	11,104,263	11,084,603
2054	12,386,121	12,369,083	11,130,471	11,113,432
2055	12,386,121	12,369,083	11,130,471	11,113,432
2056	12,386,121	12,369,083	11,130,471	11,113,432
2057	12,386,121	12,369,083	11,130,471	11,113,432
2058	12,377,217	12,359,288	11,121,567	11,103,638
2059	12,386,121	12,369,083	11,130,471	11,113,432
2060	12,386,121	12,369,083	11,130,471	11,113,432
2061	12,386,121	12,369,083	11,130,471	11,113,432
EIRR=	14.47%	13.63%	13.55%	12.74%