SKAGIT LEVEES

Nonstructural Alternatives

Lower Sedro-Woolley

First Costs

(1)	Raise Structures	32,500
(2)	Buy-Outs	221,000
	Subtotal	$253,500
	Contingencies (15%)	38,000
	Engineering Supervision and Administration (10%)	25,400
	Total	$316,900

Annual Costs (3-1/4%)

I&A	10,700
O&M	0
Total	$10,700

Annual Costs (6-7/8%)

I&A	$21,800
O&M	0
Total	$21,800

Annual Benefits

(1) Raise Buildings - elimination of Ave. Ann. damages for 4 homes (for up to 100-year flooding)	$2,300[1/]
(2) Buy-Outs	
(a) Reduction in Emergency Aid and Public Ave. Ann. Damages (7 homes)	1,700
(b) Savings in Insured Companies Administration Costs (Overhead)[2/]	100
(c) Reduction of Insurable Flood Damages (7 homes)	4,600
Total	$8,700

Total

B/C - 3-1/4%	0.81
B/C - 6-7/8%	0.40

1/Total Residential Ave. Ann. damages

2/Assume Administration Costs (mapping, overhead, etc.) are same as the annual premium paid by current flood plain users (7 homes)

West Mount Vernon - Nonstructural

Assume: (1) Evacuate current Residential/Commercial/uses

(2) No physical relocation of existing structures

(3) Convert Flood plain to public park (recreational usage)

First Costs

(1)	Acquisition of lands and structures	$846,000
(2)	Remove Structures (Mobile utility homes)	5,000
	(other commercial and residential)	25,000
(3)	Convert land to public park	100,000
	subtotal	$976,000
(4)	Contingencies 15%	146,000
(5)	Engineering, Supervision and Administration (10%)	98,000
	Total	$1,220,000

Annual Costs (3-1/4%)

I&A (100-year 3-1/4%)	$41,000
O&M (Recreation site)	1,000
Total	$42,000

Annual Costs 6-7/8%

I&A	$84,000
O&M	1,000
Total	$85,000

Annual Benefits

(1)	Reduction in Emergency Aid & Public Ave. Ann. Damages	$ 4,000
(2)	Savings in Insured Companies Administration Costs - (overhead)2/	600
(3)	Value of Recreation Visitor Days1/	8,000
(4)	Reduction of Insurable Flood Damages	19,000
	Total	$31,600

B/C = .75 @ 3-1/4%

B/C = .37 @ 6-7/8%

2/Assume Administration costs (mapping, overhead, etc.) are the same as the annual premium paid by current flood plain users.

1/Assume 25% of expected river related recreational usage will use new park 23,000 x $1.50 = $34,000 x .25 = $8,000

(4 parks will be part of recommended plan)

Clear Lake - Nonstructural

Structural is least cost alternative

Nookachamps - Nonstructural

First Costs		
(1)	Raise Structures	$192,500
(2)	Move Trailers	45,000
(3)	Buy-Outs	678,000
(4)	Cattle Pad	138,500
	Subtotal	$1,054,000
	Contingencies (15%)	158,000
	Engineering, Supervision & Administration (10%)	105,000
	Total	$1,317,000
Annual Costs (3-1/4%)		
	I&A	44,600
	O&M	0
	Total	$44,600
Annual Costs (6-7/8%)		
	I&A	90,700
	O&M	0
	Total	$90,700

Annual Benefits

(1)	Raise Buildings - elimination of Ave. Ann. damages for 25 homes (up to 100-year flooding)	$12,500
(2 & 3)	Move Trailers and Buy-outs	
	(a) Reduction in Emergency Aid and Public Ave. Ann. Damages (18 homes and 4 families)	1,000
	(b) Savings in Insured Companies Administration Costs (overhead)1/	200
	(c) Reduction of Insurable Flood Damages (18 homes and 4 trailers)	7,000
(4)	Cattle Pad	5,500
	Total	$26,200

B/C @ 3-1/4	0.59
B/C @ 6-7/8	0.29

1/Assume Administration Costs (mapping, overhead, etc.) are same as the annual premium paid by current flood plain users (18 properties and 4 trailers).