

Fluoridation costs

CAPITAL COSTS		New Plymouth	Inglewood	Oakura	Okato
Item	No. items	Initial value	Initial value	Initial value	Initial value
Tank	1				
Tank level transmitter	1				
Grundfos dose pumps	2				
ABB Analyser	1				
Flow meter	1				
Valves	10				
PRV	2				
Pressure control valve	1				
Pipework	1				
Building works	1				
Electrical	1				
Capital Costs Total		\$ 184,975.00	\$ 66,975.00	\$ 66,975.00	\$ 66,975.00

*Estimate
*Estimate
*Estimate

*allow for containment only. Chemical is supplied in a container

CHEMICAL COSTS		bulk	ibc	drum	drum
supply basis					
lxom pricing					
pricing based on mass HFA					
Mass HFA per unit		/T	1000l	200l	200l

Dose Calculation

target dose	g/m3	0.70	0.70	0.70	0.70
annual water volume	m3 pa	11,845,606	618,507	270,246	155,778
mass of fluoride	kg	8,292	433	189	109
mass of HFA	18% solution (T)	46.1	2.4	1.1	0.6
volume of HFA	specific Gravity = 1.19	54.8	2.9	1.3	0.7
price HFA	\$/T				
Expected spend on fluoride chemical		\$ 21,085.44	\$ 1,594.72	\$ 1,987.36	\$ 1,145.57

average volume last 6 year

OPERATIONS MAINTENANCE COSTS

Weekly analyser validation (Annual)	1				
Weekly MoH lab test (Annual)	1				
Analyser consumables - reagents (Annual)	1				
Analyser consumables - Electrodes, cams, tubing, motors (Annual)	1				
Chemical unloading & purchasing annual staff cost	1				
Maintenance per year (mainly staff time)	1				
Electricity	1				
HSNO / legislative fees	1				
New installation approvals?					
Ops/ Maint Total		\$ 10,952.40	\$ 10,952.40	\$ 10,952.40	\$ 10,952.40

DEPRECIATION

Annual Straight Line Depreciation	Assumed life				
Tank	25				
Tank level transmitter	10				
Grundfos dose pumps	10				
ABB Analyser	10				
Flow meter	25				
Valves	25				
PRV	25				
Pressure control valve	5				
Pipework	50				
Building works	100				
Electrical	25				
Straight line based on asset expected life		\$ 9,391.00	\$ 6,171.00	\$ 6,171.00	\$ 6,171.00

Total annual costs \$ 41,428.84 \$ 18,718.11 \$ 19,110.76 \$ 18,268.97 \$ 97,526.68

	NP	ING	OA	OK	
Population Count	59,072	3,983	1,625	530	65,210
cost per population count	\$ 0.70	\$ 4.70	\$ 11.76	\$ 34.47	\$ 1.50