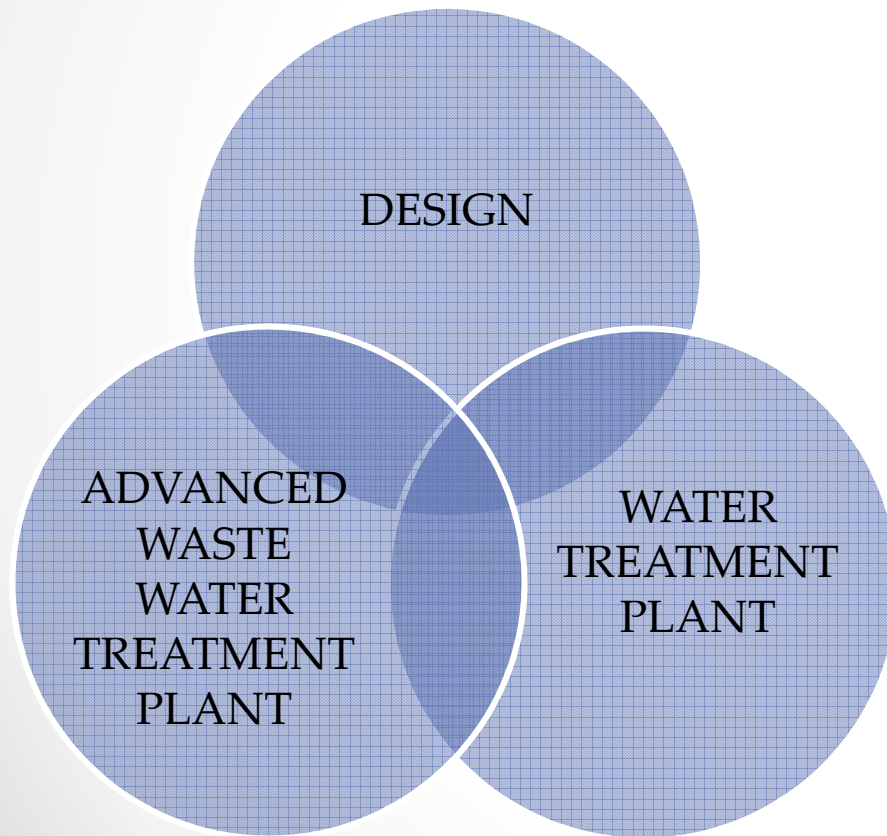


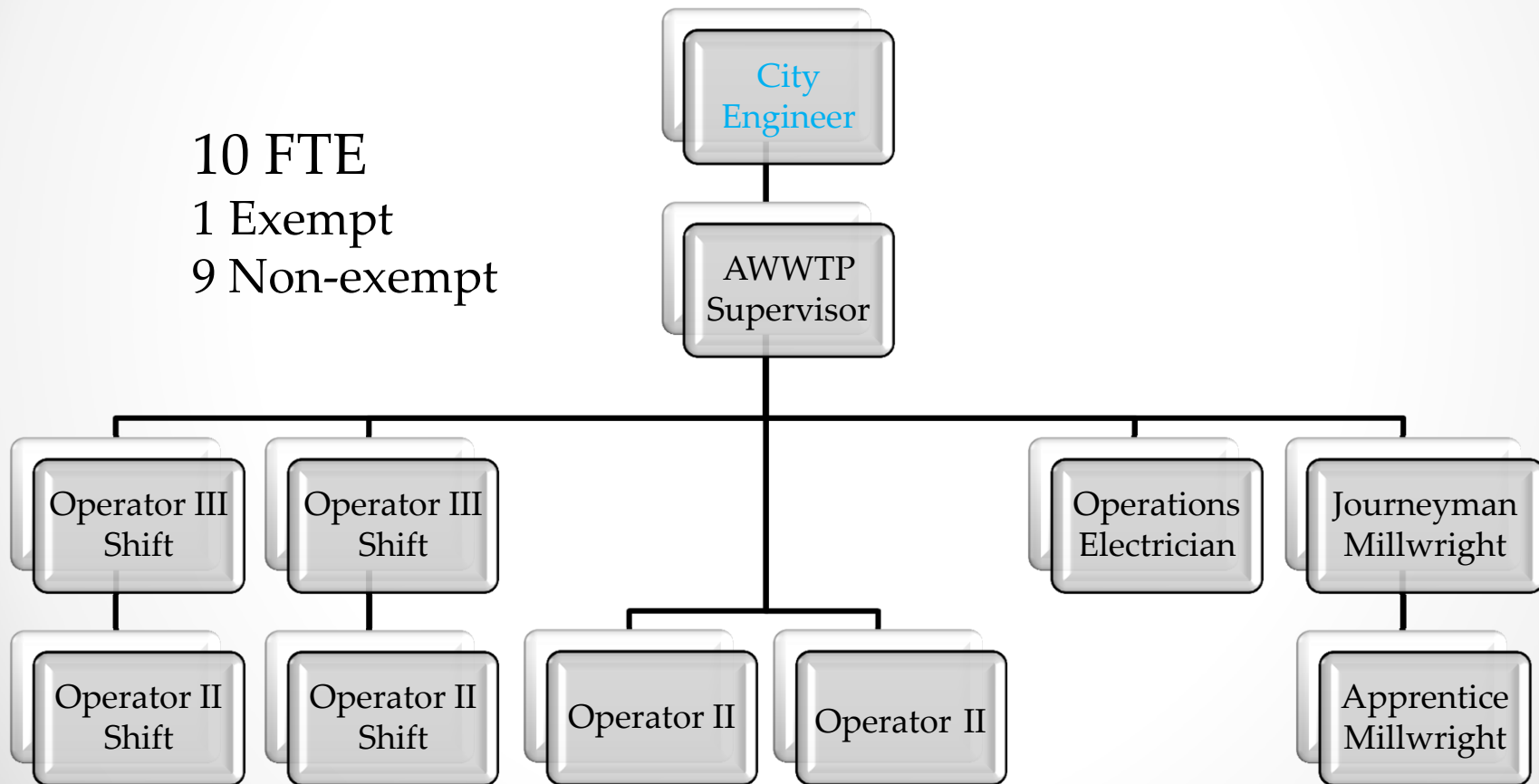
# ENGINEERING BUDGET OVERVIEW



- THREE AREAS; DESIGN, AWWTP and WTP
- OPERATING AND CAPITAL BUDGET FOR EACH
- DESIGN – OPERATING BUDGET
- **AWWTP OPERATING BUDGET.**
- WTP OPERATING BUDGET
- AWWTP AND WTP CAPITAL BUDGET.
- DESIGN CAPITAL BUDGET.

# ADVANCED WASTE WATER TREATMENT PLANT TEAM

10 FTE  
1 Exempt  
9 Non-exempt

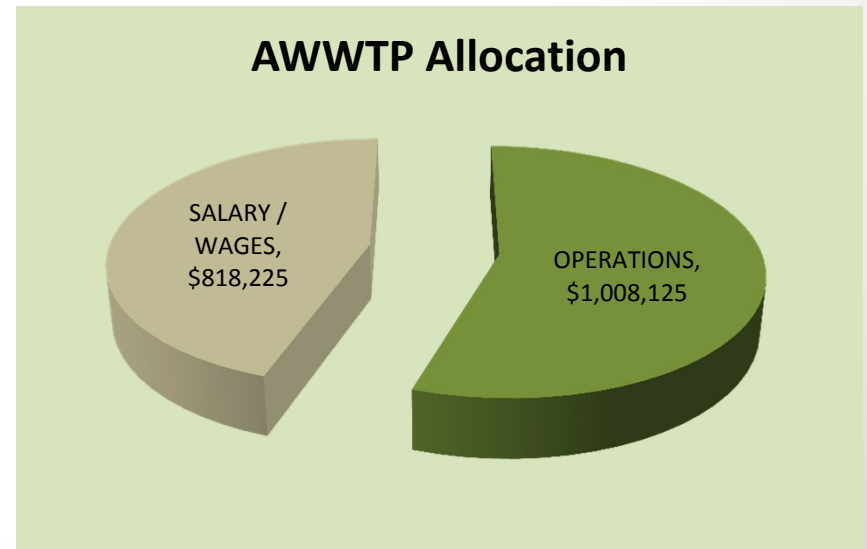
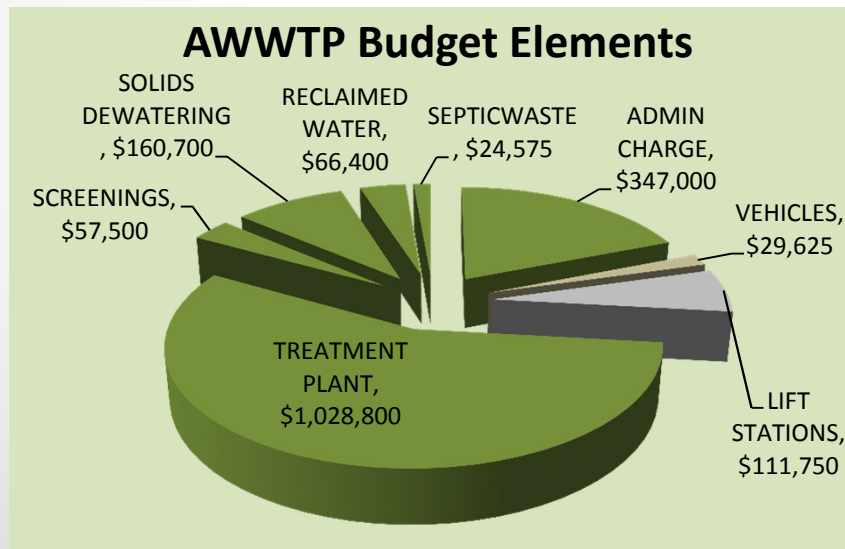


# ADVANCED WASTE WATER TREATMENT PLANT FUNCTION

- Treat raw wastewater from collection system and trucked-in septic waste to create safe product for disposal to landfill and water receiving body.
- Maintain (9) lift stations at low points around City.
- Produce and distribute reclaimed water for irrigation and other uses.
- 24/7/365 days per year operation.
- Treatment Capacity: 27 Ml / Day
- Peak day volume treated: 17 Ml / Day
- Raw wastewater and septic waste in: 4,540 Ml / yr
- Treated effluent out (irrigation): 670 Ml / yr
- Treated effluent out (waste): 3,860 Ml / yr
- Treated sludge out: 818,561 Kg / yr

# AWWTP BUDGET \$1,826,350

	2012	2011	VARIANCE
ADMINISTRATION CHARGE	\$347,000	\$329,300	\$17,700
VEHICLES	\$29,625	\$27,744	\$1,881
LIFT STATIONS	\$111,750	\$105,700	\$6,050
TREATMENT PLANT	\$1,028,800	1,002,000	\$26,800
SCREENINGS (HAULED BY CONTRACTOR)	\$57,500	\$60,500	(\$3,000)
SOLIDS DEWATERING	\$160,700	\$158,600	\$2,100
RECLAIMED WATER	\$66,400	\$-	\$66,400
SEPTIC WASTE HANDLING	\$24,575	\$28,950	(\$4,375)
<b>TOTALS</b>	<b>\$1,826,350</b>	<b>\$1,712,794</b>	<b>\$113,556</b>



# AWWTP OPERATING BUDGET HIGHLIGHTS

- Administration charge has increased +17,700
- Plant vehicle cost decreased, transfer in from PW results in net increase +1,881
- Wages reflect incremental increase in all items
- Wages have been re-allocated to reflect actual effort anticipated at each operation location.
- Treatment plant management expense was previously charged to capital upgrade project – incumbent retired and expense now charged to Operating within Treatment Plant item.
- Power costs expected to increase for all items (significant for plant and lift stations ) +\$24,900
- New screenings and sludge hauling contract -\$3,000
- Solids dewatering process changed +\$2,100
- Reclaimed water (treated effluent) operation now tracked separately to facilitate charging structure +\$66,400
- Septage handling optimised -\$4,375
- Budget relies on estimates of operating costs for untested new plant processes.
- NET BUDGET INCREASE FROM 2011 TO 2012 IS **\$113,556**



# ENGINEERING AWWTP OPERATING BUDGET DETAILED REVIEW

Department:

**SEWER UTILITY - EXPENDITURES**

PAGE: 49.2

Account	Proj	Task	Description	2012 Budget	2011 Budget
-					
0558			ADMINISTRATION CHARGE		
0558-01			General Revenue Fund	347,000	329,300
0560			VEHICLES		
0560-01			#41 Utility Truck	5,500	5,500
0560-01			#94 WQ Supervisor	-	5,500
0560-01			Waste Water Supervisor	5,500	1,375
0560-01			Cub Cadet	3,500	3,500
0560-01			#38 Delivery Vehicle	5,500	5,500
0560-01			P/W Shared Vehicles	9,625	6,369
				29,625	27,744
-					

0000-120000	0553	LIFT STATIONS - SOEC		
	0553-01	Operator Wages	7,550	7,900
	0553-02	Parts & Equipment	3,000	3,000
	0553-03	Technical Assistance-Elec,Welder	1,500	1,500
	0553-04	Electricity	6,600	6,000
	0553-05	Diesel Fuel	700	700
	0553-06	Water	1,000	1,000
	0553-07	Grounds Maintenance	1,000	1,000
	0553-08	Radio License	100	100
	0553	LIFT STATIONS - Lee Ave		
	0553-11	Operator Wages - Lee Ave	11,000	7,900
	0553-12	Parts & Equipment	3,000	3,000
	0553-13	Technical Assistance-Elec,Welder	1,500	1,500
	0553-14	Electricity	6,600	6,000
	0553-15	Natural Gas	700	700
	0553-16	Water	1,000	1,000
	0553-17	Building Maintenance	1,000	1,000
	0553-18	Radio License	100	100
	0553	LIFT STATIONS - Other		
	0553-21	Operator Wages - Other Stations	27,800	29,100
	0553-22	Parts & Equipment	3,000	3,000
	0553-23	Technical Assistance-Elec,Welder	2,000	2,000
	0553-24	Electricity	4,500	4,100
	0553-25	Chemicals	25,000	22,000
	0553-26	Water	1,500	1,500
	0553-27	Building Maintenance	1,000	1,000
	0553-28	Radio License	600	600
			111,750	105,700



Department:

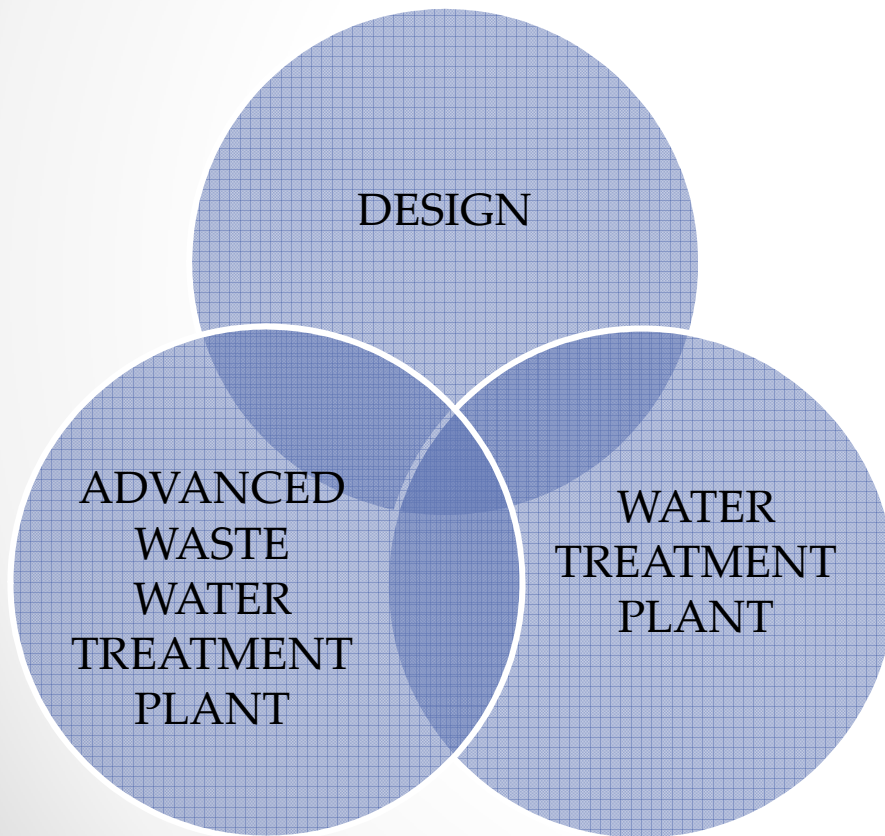
**SEWER UTILITY - EXPENDITURES**

PAGE: 49.3

Account	Proj	Task	Description	2012 Budget	2011 Budget
0000-12000	0554		SEWAGE TREATMENT PLANT & DISPOSAL		
	0557-01		Water Quality Supervisor	99,750	26,800
	0554-01		Building Maintenance	10,000	12,000
	0554-02		Contingencies		30,000
	0554-03		Grounds Maintenance	6,000	10,000
	0554-04		Lab Supplies & Control Equipment	28,000	28,500
	0554-05		Chlorine & Sulphur Dioxide	4,000	25,000
	0554-06		Process Chemicals	5,000	5,000
	0554-07		Petroleum Products	4,000	4,000
	0554-08		Parts & Equipment	53,000	34,000
	0554-09		Technical Assistance-Elec/Boiler/Gas	14,000	14,000
	0554-10		Operator Wages	505,100	531,600
	0554-11		Overtime - 11 Stats & Callouts	25,500	25,000
	0554-12		Operator Standby	29,000	28,000
	0554-13		Electricity	175,000	160,100
	0554-14		Natural Gas	30,000	23,300
	0554-15		Small Tools	4,000	5,000
	0554-16		Water	4,100	4,100
	0554-17		Software Support	11,600	11,600
	0554-18		Provincial Permits	5,000	5,000
	0554-19		Coverall Rental, etc	5,000	5,000
	0554-20		Scum Removal	2,000	2,000
	0554-21		Office Supplies	-	5,000
	0554-22		Safety Equipment	7,000	7,000
	0554-23		Safety Meetings		
	0554-24		Communications	1,750	
				<u>1,028,800</u>	<u>1,002,000</u>

0000-120000	0555	SCREENINGS HAULED BY CONTRACTOR		
	0555-01	2 Loads/wk	7,500	7,500
	0555-02	Hauling Dewatered Sludge	50,000	53,000
			57,500	60,500
0000-120000	0556	SOLIDS DEWATERING		
	0556-01	Operator Wages	92,700	103,600
	0556-02	Parts & Equipment	4,000	4,000
	0556-03	Polymer	60,000	47,000
	0556-04	Technical Assistance	4,000	4,000
			160,700	158,600
	0556	RECLAIMED WATER		
	0556-05	Operator Wages	9,900	-
	0556-06	Parts & Equipment	7,500	-
	0556-07	Electricity	25,000	-
	0556-08	Lab Supplies	1,000	-
	0556-09	Chlorine & Sulphur Dioxide	18,000	-
	0556-10	Technical Assistance	5,000	-
			66,400	-
	0553	SEPTIC WASTE FACILITY		
	0553-40	Operator Wages	9,925	10,400
	0553-41	Electricity & Natural Gas	4,400	4,000
	0553-42	Scum, Screening & Hauling	1,000	1,000
	0553-43	Lab Supplies	500	500
	0553-44	Parts & Equipment	5,000	3,000
	0553-45	Building & Grounds Maintenance	750	750
	0553-46	Equipment Replacement		5,000
	0553-47	Treatment Plan Costs	3,000	3,300
	0553-48	Contingency		1,000
			24,575	28,950

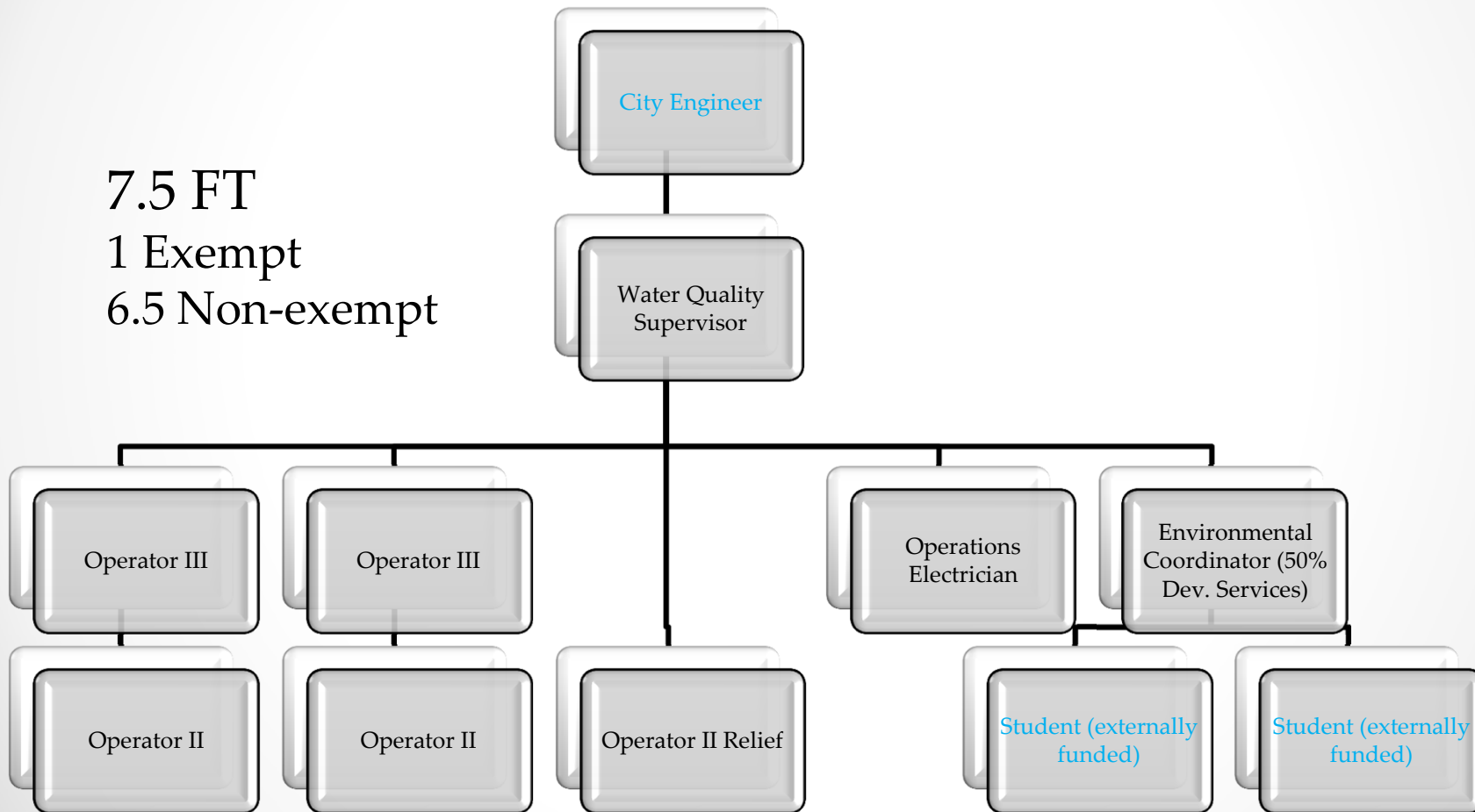
# ENGINEERING BUDGET OVERVIEW



- THREE AREAS; DESIGN, AWWTP and WTP
- OPERATING AND CAPITAL BUDGET FOR EACH
- DESIGN – OPERATING BUDGET
- AWWTP OPERATING BUDGET
- **WTP OPERATING BUDGET.**
- AWWTP AND WTP CAPITAL BUDGET.
- DESIGN CAPITAL BUDGET.

# WATER TREATMENT PLANT TEAM

7.5 FT  
1 Exempt  
6.5 Non-exempt



# WATER TREATMENT PLANT FUNCTION

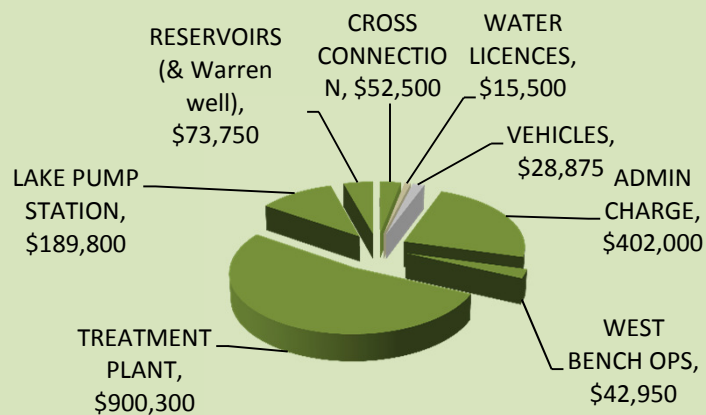
- Supply Penticton with an adequate supply of water that meets the Guidelines for Canadian Drinking Water Quality.
- Maintain reservoirs with sufficient volumes to meet peak drinking water and fireflow demands.
- Develop and promote water conservation.
- Promote and monitor the cross connection control programme.
- 24/7/365 days per year operation.
- Treatment Capacity: 88 Ml /Day
- Peak day volume treated: 40 Ml / Day
- Raw water in: Lake source 5,128 Ml / yr
- Raw water in: Creek source 1,763 Ml / yr
- Treated water out: 6,665 Ml / yr

# WTP OPERATING BUDGET

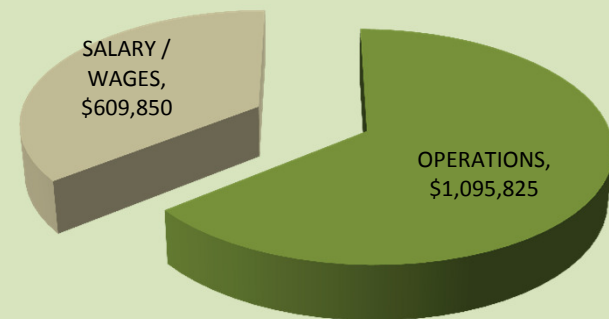
## \$1,705,675

	2012	2011	VARIANCE
CROSS CONNECTION	\$52,500	\$94,000	(\$41,500)
WATER LICENCES	\$15,500	\$15,500	\$0
VEHICLES	\$28,875	\$28,369	\$506
ADMINISTRATION CHARGE	\$402,000	\$383,700	\$18,300
WEST BENCH	\$42,950	\$46,700	(\$3,750)
WATER TREATMENT PLANT	\$900,300	\$941,200	(\$40,900)
PUMP STATION	\$189,800	\$170,360	\$19,440
RESERVOIRS AND WARREN AVE WELL	\$73,750	\$70,350	\$3,400
<b>TOTALS</b>	<b>\$1,705,675</b>	<b>\$1,750,179</b>	<b>(\$44,504)</b>

### WTP Budget Elements



### WTP Allocation



# WTP OPERATING BUDGET HIGHLIGHTS

- Cross-connection costs reduced with transfer of staff person to Development Services -\$41,500
- Administration charge has increased +18,300
- Plant vehicle cost decreased, transfer in from PW results in net increase +\$506
- West Bench reservoir cleaning completed 2011 -\$3,000
- Wages reflect incremental increase in all items
- Wages have been re-allocated to reflect actual effort anticipated at each operation location.
- Treatment plant:
  - Relief operator eliminated -\$35,100
  - Creekflow calibration added +\$3,000
  - Beach coliform monitoring task added +\$4,000
  - Cellphone communication charged added +\$2,000
- Power costs expected to increase for all items (significant for plant and pump station) +\$24,900
- NET BUDGET DECREASE FROM 2011 TO 2012 IS \$44,504



# ENGINEERING WTP OPERATING BUDGET DETAILED REVIEW



Department:

**WATER UTILITY - EXPENDITURES**

PAGE: 52.2

Account	Proj	Task	Description	2012 Budget	2011 Budget
			<b>CROSS CONNECTION/CONSERVATION PROGRAM</b>		
0577-20			Cross Connection Program	3,000	5,000
0577-21			Cross Connection Program - Wages	19,000	36,000
0577-22			Cross Connection Program-Newsletter		3,500
				<u>22,000</u>	<u>44,500</u>
0577-25			Conservation Program	8,000	10,000
0577-26			Conservation Program - Wages	19,000	36,000
0577-28			Conservation Program-Newsletter	3,500	3,500
0577-30			Conservation Program - Regional		
				<u>30,500</u>	<u>49,500</u>
579			<b>WATER LICENCE FEE</b>		
0579-01			Annual Assessment	15,500	15,500
0583			<b>VEHICLES</b>		
0583-01			# 100 Cross Connection Program	2,750	5,500
0583-01			#03 Water Plant Vehicle	5,500	5,500
0583-01			Water Plant Supervisor - Vh Allowance	5,500	5,500
0583-01			#37 Operations	5,500	5,500
0583-01			#21 Utility Foreman	5,500	5,500
			<b>Foreman - Allocation to other Depts</b>		
0583-01			Roads	(1,100)	-1,100
0583-01			Sewer	(2,200)	-2,200
0583-01			P/W Shared Vehicles	7,425	4,169
				<u>28,875</u>	<u>28,369</u>

0588	ADMINISTRATION CHARGE		
0588-02	PIB Lease/Taxes	1,000	
0588-01	General Revenue Fund	401,000	383,700
		402,000	383,700

Department: **WATER UTILITY - EXPENDITURES**

PAGE: 52.3

Account	Proj	Task	Description	2012 Budget	2011 Budget
-					
0592	0592		RECOVERABLE - West Bench Irrigation		
	0592-01		Pump Station	14,000	15,000
	0592-02		Distribution Sampling	5,450	5,000
	0592-03		Reservoir Cleaning		3,000
	0592-04		Chlorine	1,000	1,200
	0592-05		Technical Assistance	3,000	3,000
	0592-06		Building Maintenance	1,000	1,000
	0592-07		Valve Maintenance	2,500	2,500
	0592-08		Hydrant Maintenance	8,000	8,000
	0592-09		Work Orders	5,000	5,000
	0592-10		Call Outs	3,000	3,000
				42,950	46,700

0000-120000	0590	TREATMENT PLANT		
		Water Treatment Plant Supervisor	99,700	98,700
	0590-01	Building Maintenance	5,000	5,000
	0590-02	Contingencies		5,000
	0590-03	Grounds Maintenance	6,000	6,000
	0590-04	Lab Supplies & Control Equipment	7,000	10,000
	0590-05	Chemicals	160,000	160,000
	0590-06	Petroleum Products	4,000	4,000
	0590-07	Parts & Equipment	25,000	25,000
	0590-08	Technical Assistance-Elec,Welder	10,000	15,000
	0590-09	Operator Wages	375,900	411,000
	0590-10	Overtime - 11 Stats & Callouts	15,000	15,000
	0590-11	Operator Standby	25,000	25,000
	0590-12	Electricity	66,000	60,000
	0590-13	Natural Gas	22,000	22,000
	0590-14	Telephone (line Charges)	2,500	2,500
	0590-15	Water	500	500
	0590-16	Sewer Charges	500	500
	0590-17	Coverall Rental	1,200	1,500
	0590-18	Waste Removal	1,000	1,000
	0590-19	Safety Equipment	2,000	2,000
	0590-20	Sewer Use Charges - Solids	24,000	25,000
	0590-21	Software Updates/Support	11,000	11,000
	0590-22	Water Testing	13,000	13,000
	0590-23	Overtime & Call-outs	10,000	10,000
	0590-24			
	0590-25	Centrifuge sludge hauling & tipping fees	1,000	7,500
	0590-26	Small Tools Equipment	4,000	5,000
	0590-27	Calibrate Creekflow stations	3,000	
	0590-28	Beach coliform Monitoring	4,000	
	0590-29	Communications	2,000	
			900,300	941,200

53155- 

0591

PUMPING STATIONS

Okanagan Lake Intake Station

0591-01

Operator Wages

13,000

6,860

0591-02

Parts & Equipment

6,000

8,000

0591-03

Technical Assistance

2,500

2,500

0591-04

Electricity

165,000

150,000

0591-05

Fuel

1,500

1,500

0591-06

Building Maintenance

1,000

1,000

0591-07

Communications

800

500

0591-08

189,800

170,360

\*

Department:

**WATER UTILITY - EXPENDITURES**

PAGE: 52.4

Account	Proj	Task	Description	2012 Budget	2011 Budget
-					
0000-12000	0589		RESERVOIRS - Duncan Ave		
	0589-11		Operator Wages	2,200	4,600
	0589-12		Parts & Equipment	500	1,000
	0589-13		Technical Assistance	1,500	1,000
	0589-14		Electricity	5,500	5,000
	0589-15		Fuel	300	300
	0589-16		Building Maintenance	1,000	1,000
	0589-17		Communications	500	500
				11,500	13,400
			Ridgedale Ave Reservoir		
	0589-21		Operator Wages	8,650	9,100
	0589-22		Parts & Equipment	2,000	2,000
	0589-23		Technical Assistance	2,000	2,000
	0589-24		Electricity	18,000	15,000
	0589-25		Fuel	2,000	2,000
	0589-26		Building Maintenance	1,000	1,000
	0589-27		Communications	500	500
				34,150	31,600
			Smaller Reservoirs & PRV Station		
	0589-31		Operator Wages	12,500	9,100
	0589-32		Parts & Equipment	5,000	5,000
	0589-33		Technical Assistance	2,000	3,000
	0589-34		Electricity	2,200	2,000
	0589-35		Fuel	1,000	1,000
	0589-36		Building Maintenance	1,000	1,000
	0589-37		Communications	500	500
				24,200	21,600
			Warren Ave Well		
	0589-41		Operator Wages	450	500
	0589-42		Parts & Equipment	500	500
	0589-43		Technical Assistance	500	500
	0589-44		Electricity	1,200	1,000
	0589-45		Fuel		
	0589-46		Building Maintenance	1,000	1,000
	0589-47		Communications	250	250
				3,900	3,750
			Sub-total - (589)	73,750	70,350

# Engineering

## Fees and Charges Changes

Description	2011 Fee	Proposed 2012 Fee	Type of Change	Fee Calculation	Notes
Reclaimed treated effluent for irrigation		Two part fee; Monthly fixed charge based upon meter size ranging from \$8.63/month (up to ¾") to \$2,126/month (6") PLUS variable consumption charge \$0.22/100 cubic feet	New Fee	Monthly fee is based upon 50% of treated water fee. Variable consumption fee is calculated to reflect power, chemical and equipment depreciation costs.	New fee :- <ul style="list-style-type: none"> <li>• Reflects value to consumers of a reliable irrigation water product.</li> <li>• Is priced to be an attractive alternative to treated potable water.</li> <li>• Reflects additional costs to consumers associated with use of treated effluent.</li> </ul>
Treated water rates: Monthly fixed treated water meter rates based on meter size.		Addition of monthly fixed charge for metered large water services based on meter sizes 8", 10" and 12".	New fee	Based on graphical extrapolation of existing smaller meter monthly charges.	New fee is in response to anticipated need for larger diameter services than are currently included in the fees and charges bylaw.
Treated water rates: Monthly non-metered treated water rates based on service size.		Addition of monthly fixed charge for un-metered large water services based on services sized 8", 10" and 12".	New Fee	Based on graphical extrapolation of existing smaller service size monthly charges.	New fee is in response to anticipated need for larger diameter services than are currently included in the fees and charges bylaw.