

AGENDA
SPECIAL OPEN COMMITTEE OF THE WHOLE MEETING
BOARD ROOM, SERVICE AND RESOURCE CENTRE,
411 DUNSMUIR STREET, NANAIMO, BC
WEDNESDAY, 2013-NOV-13, AT 9:00 A.M.

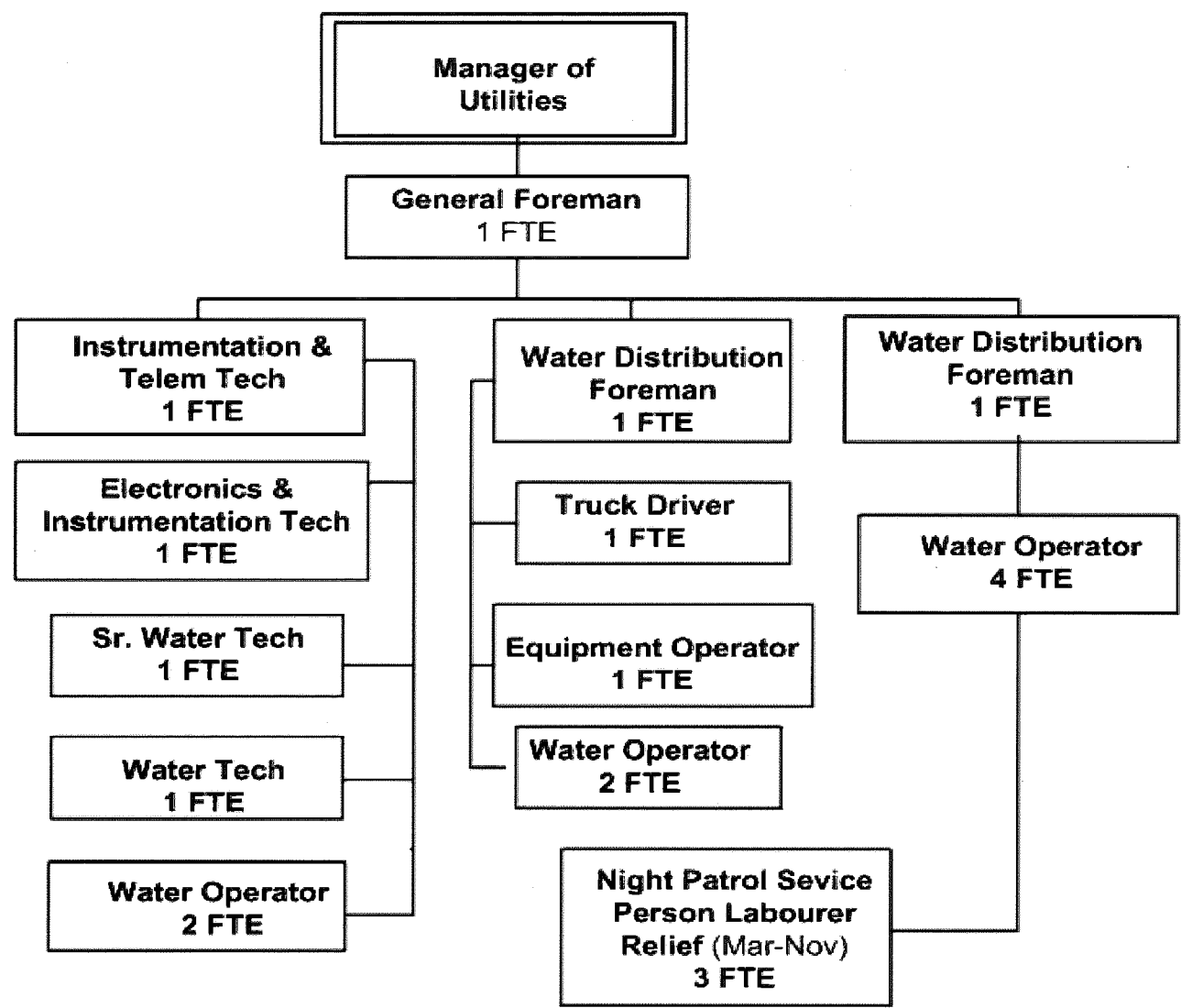
1. **CALL THE SPECIAL OPEN COMMITTEE OF THE WHOLE MEETING TO ORDER:**
2. **ADOPTION OF AGENDA:**
3. **PRESENTATIONS:**
 - (a) Ms. Susan Clift, Director of Engineering and Public Works, to provide a presentation regarding the 2014-2018 Financial Plan for Engineering and Public Works. Council discussion regarding the Financial Plan to follow the presentation.
4. **OTHER BUSINESS:**
5. **QUESTION PERIOD:** *(Agenda Items Only)*
6. **ADJOURNMENT:**

ACTING MAYOR: COUNCILLOR MCKAY

2013-OCT-21 to 2013-DEC-01



**COUNCIL BUDGET REVIEW PILOT
ENGINEERING AND PUBLIC WORKS
WATER
November 13, 2013**



Engineering and Public Works - Water - Current Level of Service
2014 - 2018 Financial Plan Review

Financial and Operational Planning includes:

Annual operating and maintenance activities to provide current service levels
Adjust activities to respond to the expansion of water supply and distribution infrastructure
Identify, design and construct specific projects, supported by a long range asset management plan, for renewal of current infrastructure.
Identify and support specific projects for expansion/upgrades to current infrastructure.

Significant Events

A new water treatment plant and reservoir are currently under construction. Both will be in service in 2015.
Ongoing water conservation education and incentives to reduce consumption.
Planning for a new source/augmentation of existing source to be in place by 2020
Sharing of water supply with other communities
Revenue decline due to conservation
Water Sustainability Act - Spring 2014

Current Level of Service

Water infrastructure provides water that is clean and safe to drink with minimal service disruption, to satisfy all anticipated consumption and fire protection.
The main components of the City's water infrastructure are dams, reservoirs, mains and pump/pressure reducing stations and services. Current replacement cost is estimated in excess of \$700M.
There are over 600 kilometers of supply and distribution mains.
During 2012, the City delivered over 15.8 billion liters of water to its residential, commercial and industrial customers. (Residential population of 88,000)

Annual operating and maintenance programs include:

- Telemetry monitoring of system from Jump Cr to remote points throughout
 - weekly calibration of instruments
 - data collection/analysis
- Dam inspections, reporting and maintenance program
 - compliance with British Columbia Dam Safety Regulation and Canadian Dam Association (CDA) guidelines
 - daily/weekly/monthly inspection protocols
 - maintenance and upgrades as issues develop
 - annual engineering inspection
- Reservoirs inspections and maintenance program (9 tanks in system)
 - flushing and cleaning program
 - maintenance and repair; security
 - controls and adjustments of flows and levels
 - vegetation control
- Water testing program
 - raw water quality samples
 - treated water quality samples
 - also complaint-driven response
- Water treatment program
 - operating and maintenance of facilities
 - chlorine handling and response
- Pump station, pressure reducing station, air valve inspections and maintenance
 - asset management program to rebuild/replace components
 - manage 23 pressure zones to ensure residential, commercial, industrial and fire flows
- Main flushing program
 - supply and distribution mains
- Supply Main Maintenance
 - regular inspection, maintenance, repair
- Watershed Management
 - weather station maintenance
 - interact with forestry companies: security/forest fires
 - supply main inspection and maintenance
 - rights of way maintenance
- Main and service connections
 - repair main breaks (e.g. 11 breaks in 2012 at a cost of \$75k; responded within avg 22 minutes)
 - replace service connections
 - valve exercising, meter maintenance
- Support capital projects and development
 - service connections and tie-ins
 - shut downs, reconfiguration of system

Detailed asset information for water supply and distribution infrastructure including location, type of material and in service year are maintained in the City's Geographic Information System (GIS).

Continuous Improvement Changes

Partnership projects (e.g. MOTI) to replace mains over failing culverts
Replace Telus data lines as part of SCADA upgrade with radio communications - saving over \$40k per year
Migrated all dam inspection reports to digital, eliminating paper and retyping - allows easy access in a database
Field laptops for emergency response - mapping and as-built information in the event the system is down

Engineering and Public Works - Water - Annual Operating and Maintenance
2014 - 2018 Financial Plan Review

Annual Operating and Maintenance Budget

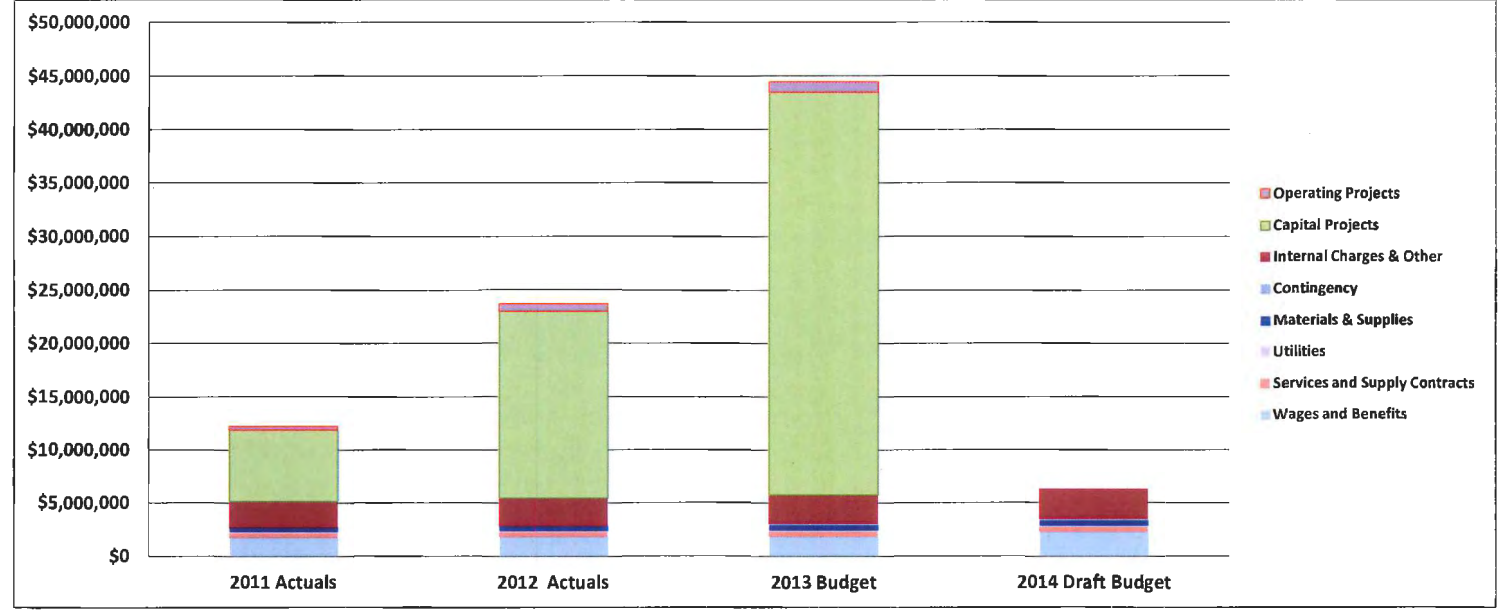
Annual operating and maintenance budgets include:

- Staffing
- Contracted services (eg flush truck, flagging, water testing, brushcutting)
- Utilities
- Materials and supplies
- Vehicles, Equipment
- Allocation of portion of Corporate Services and Engineering Services expenditures to Sewer and Water Operations

Notes:
CUPE contract expires December 31 2013
2013 - 2017 Financial Plan includes inflationary increases for years 2 to 5 (2% increase for wages and benefits)
2014 Draft Budget does not include an increase for wages and benefits, a contingency is used for wages increases

			2013 - 2017 Financial Plan		
Water (including Water Treatment Plant)	2011 Actuals	2012 Actuals	2013 Budget	2014 Budget	2014 Draft Budget
User Fees	11,165,546	11,798,813	13,246,482	14,239,969	13,982,752
Connection and Service Fees	87,330	133,860	123,000	123,030	103,000
City Property Rentals	18,900	18,900	18,900	18,900	18,900
Other Revenue	26,598	10,037	500	500	58,833
Total Operating Revenues	11,298,374	11,961,610	13,388,882	14,382,399	14,163,485
Wages and Benefits	1,770,681	1,831,059	1,874,962	1,911,437	2,263,909
Services and Supply Contracts	427,764	452,398	467,620	476,732	482,630
Utilities	112,428	118,275	109,300	111,486	117,700
Materials & Supplies	372,882	434,848	494,650	496,398	495,550
Contingency	-	-	100,000	100,000	100,000
RDN Initiatives	-	-	139,260	174,875	174,075
Internal Charges & Other	2,469,577	2,598,815	2,689,653	2,773,609	2,816,243
Total Operating and Maintenance Expenditures	5,153,332	5,435,395	5,875,445	6,044,538	6,450,107
Net Revenues before Transfer to Reserves, Debt and Projects	6,145,042	6,526,215	7,513,437	8,337,861	7,713,378
Transfer to Reserves	4,290,536	4,470,772	1,987,867	3,065,109	
Transfer to Asset Management Reserve	-	-	302,506	634,884	
Debt	540,695	97,292	148,001	1,166,868	1,159,744
	4,831,231	4,568,064	2,438,374	4,866,861	1,159,744
Net Revenues before Projects	1,313,811	1,958,151	5,075,063	3,471,000	6,553,634
User Fees	1,269,660	1,911,919	5,075,063	3,471,000	
Transfers from Reserves	4,219,335	6,630,405	7,570,083	23,819,350	
Borrowing	-	-	13,312,350	9,187,650	
Other Project Funding	1,550,054	9,706,864	12,754,116	421,000	
Total Project Funding	7,039,049	18,249,188	38,711,612	36,899,000	-
Capital	6,689,929	17,543,753	37,728,172	36,639,000	
Operating	349,120	705,435	983,440	260,000	
Total Project Expenditures	7,039,049	18,249,188	38,711,612	36,899,000	-
Net Budgeted FTEs	44,151	46,232	(0) 19.9	0	6,553,634

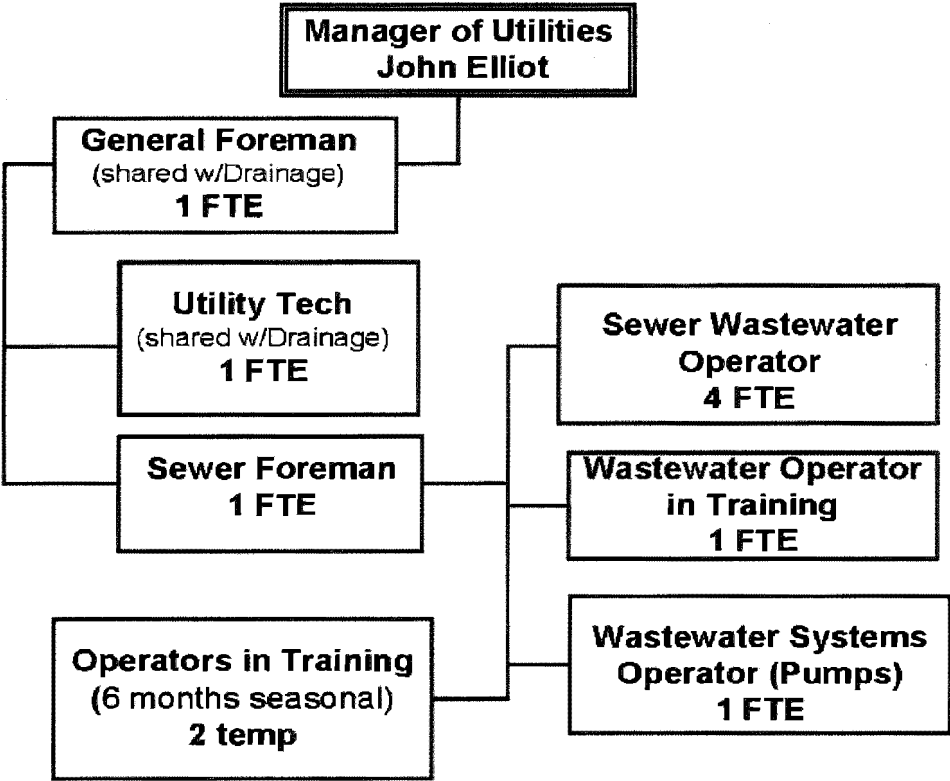
Expenditure Analysis



		2013 - 2017 Financial Plan						
Water Treatment Plant		2013 Budget	2014 Budget	2014 Draft Budget	2015 Draft Budget	2016 Draft Budget	2017 Draft Budget	2018 Draft Budget
	Wages and Benefits			354,221	658,691	671,864	685,304	699,008
	Services and Supply Contracts			-	164,055	169,938	173,337	176,802
	Utilities			-	154,000	157,080	160,222	163,426
	Materials & Supplies			-	179,691	183,284	186,949	190,689
	Contingency							
	RDN Initiatives							
	Internal Charges & Other			19,200	21,768	22,062	22,361	22,667
Total Operating and Maintenance Expenditures		-	-	373,421	1,178,205	1,204,228	1,228,173	1,252,592
Budgeted FTEs					6.0			



**COUNCIL BUDGET REVIEW PILOT
ENGINEERING AND PUBLIC WORKS
SEWER
November 13, 2013**



Engineering and Public Works - Sewer - Current Level of Service
2014 - 2018 Financial Plan Review

Financial and Operational Planning includes:

Annual operating and maintenance activities to provide current service levels
Identify specific projects, supported by a long range asset management plan, for renewal of current infrastructure.
Identify specific projects for expansion/upgrades to current infrastructure.

Significant Events

Identify any changes (eg regulatory, development) that have impacted service levels/budgets
RDN secondary treatment and capital improvements
Provincial requirements for reduction of inflow and infiltration
New low pressure system - Green Lake area

Current Level of Service

Sanitary sewer infrastructure maintains public health and safety, with minimal service disruption and impact to environment and property.
The main components of the City's sanitary sewer infrastructure are mains, services and lift stations.
There are over 548 kilometers of sanitary sewer mains. During 2011, the City's average daily flow was 31,100 cubic meters per day. Could fill Nanaimo Aquatic

Annual operating and maintenance programs include:

Video inspection program
- identify/monitor problem areas
provide support and input for capital planning
pre video prior to root cutting to ensure safety to workers and public

Main flushing programs
- flush 40 - 45 kms annually
- some areas require 3 month, 6 month or annual flushing rotations

- flush mains prior to videoing
Manhole, cleanouts maintenance
- address infiltration (eg roots)
- right of way inspections to ensure MH's are accessible and safe
- ensure water tight manholes are functioning in ESA's

Main repairs and service upgrades
- repair mains and connections, identified through video inspection program, flushing program, users
- sewer backups investigation reports to manage risk and ensure
- support and provide input for capital planning process
- inspection repair and maintenance to 16 sewer lift stations and 11 sewer flow monitors

Detailed asset information for sanitary sewer infrastructure including location, type of material and in service year are maintained in the City's Geographic Information System (GIS).

Continuous Improvement Changes

Identify operational changes that have been recently implemented and estimated annual cost savings
program to reduce I & I within the system
upgrading sewer lift station pumps with more efficient pumps to save energy
replace Telus data lines as part of SCADA upgrade with radio communications - savings of \$40K per year (split with water)
installing computers in vehicles to provide current as-built information allowing crews to stay in the field
field laptops for emergency response - mapping and as-built information in the event the system is down

Engineering and Public Works - Sewer - Annual Operating and Maintenance
2014 - 2018 Financial Plan Review

Annual Operating and Maintenance Budget

Annual operating and maintenance budgets include:

- Staffing
- Contracted services (eg flush truck, trucking, flagging)
- Utilities
- Materials and supplies
- Vehicles, Equipment
- Allocation of portion of Corporate Services and Engineering Services expenditures to Sewer and Water Operations

Notes:

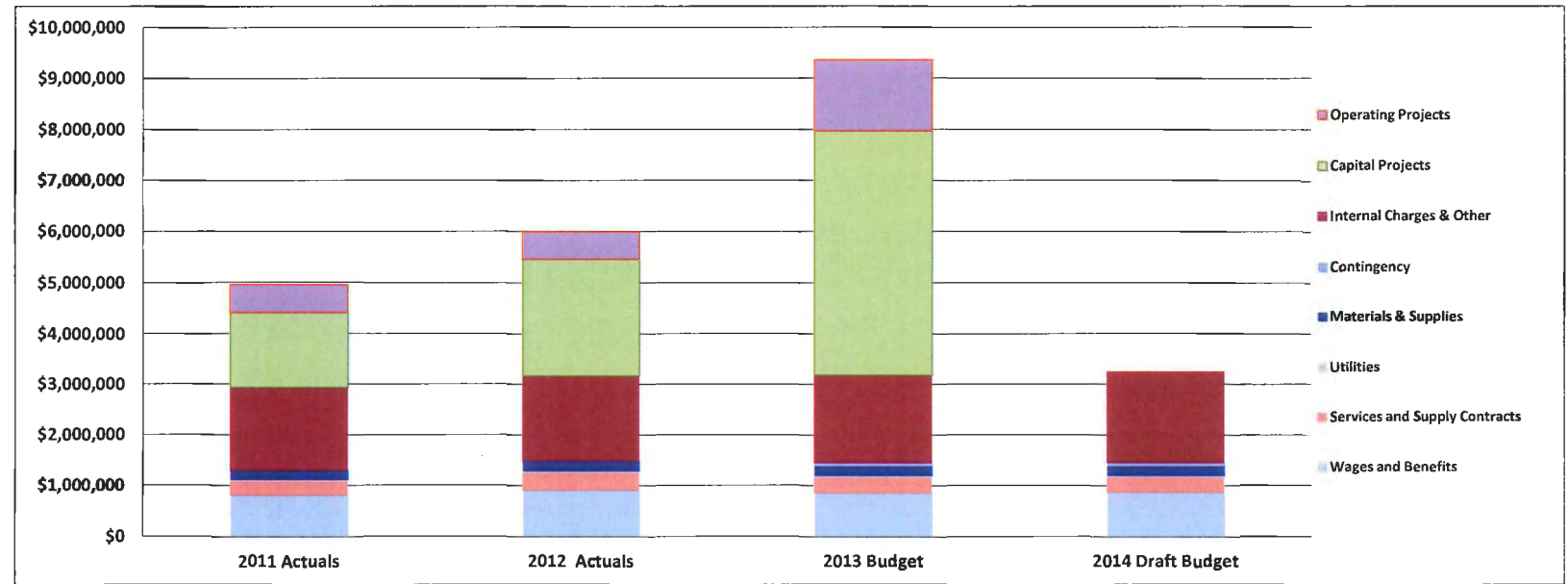
CUPE contract expires December 31 2013

2013 - 2017 Financial Plan includes inflationary increases for years 2 to 5 (2% increase for wages and benefits)

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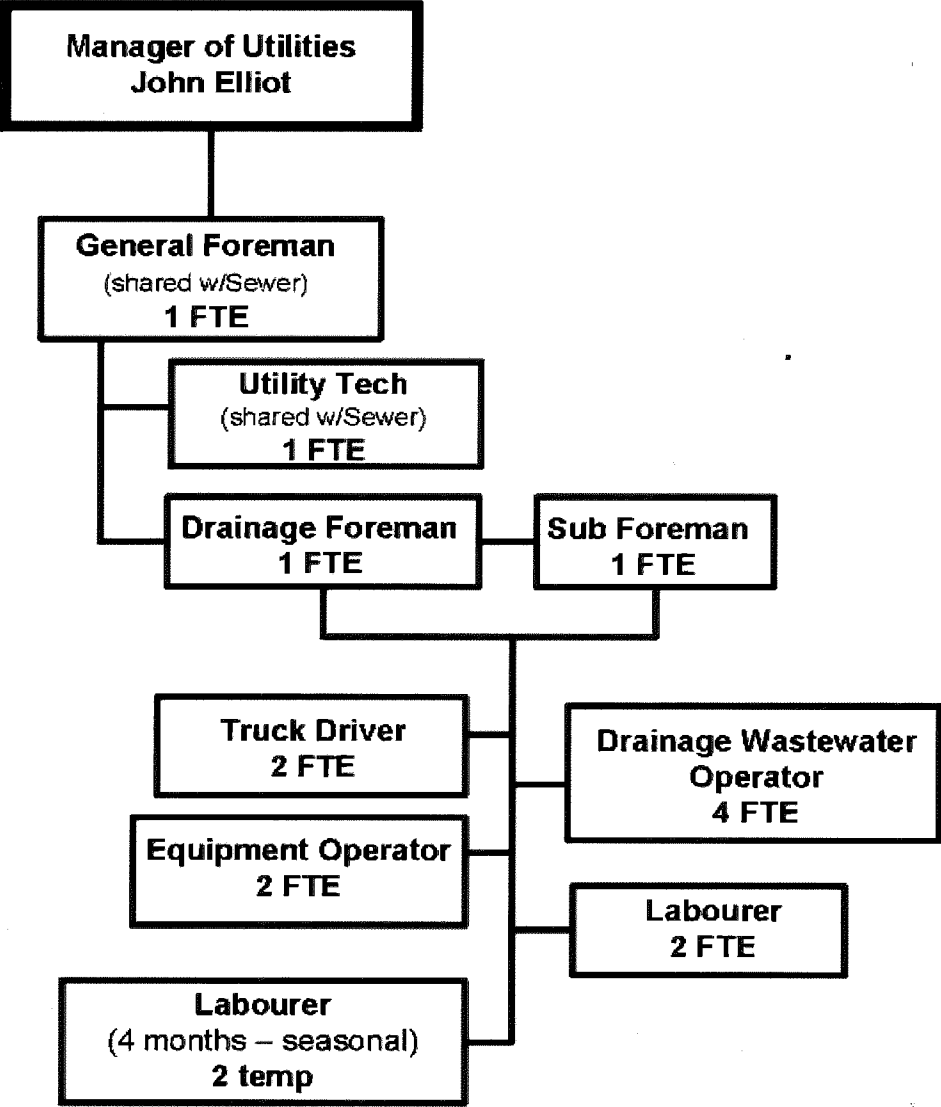
		2013 - 2017 Financial Plan				
Sewer		2011 Actuals	2012 Actuals	2013 Budget	2014 Budget	2014 Draft Budget
	User Fees	4,670,536	4,883,810	5,113,500	5,420,310	5,422,867
	Connection and Service Fees	48,680	123,120	85,000	85,850	85,000
	Recoveries	-	-	1,000	1,020	1,000
	Total Operating Revenues	4,719,216	5,006,930	5,199,500	5,507,180	5,508,867
	Wages and Benefits	798,031	897,848	846,847	863,784	857,340
	Services and Supply Contracts	277,267	355,592	314,600	320,892	305,186
	Utilities	24,523	26,147	28,660	29,233	28,600
	Materials & Supplies	195,670	208,729	198,995	202,975	201,195
	Contingency	-	-	60,000	60,000	60,000
	Internal Charges & Other	1,636,795	1,681,608	1,740,139	1,783,441	1,803,751
	Total Operating and Maintenance Expenditures	2,932,285	3,169,925	3,189,241	3,260,325	3,256,072
	Net Revenues before Transfer to Reserves and Projects	1,786,931	1,837,005	2,010,259	2,246,855	2,252,795
	Transfer to/from Surplus Reserve	1,032,010	1,208,724	176,486	65,813	
	Transfer to Asset Management Reserve	-	-	233,273	480,542	
		1,032,010	1,208,724	409,759	546,355	-
	Net before Projects	754,921	628,281	1,600,500	1,700,500	
	User fees	695,307	556,678	1,600,500	1,700,500	
	Transfers from Reserves	966,189	1,747,729	4,568,151	2,241,000	
	Other Project Funding	361,338	511,324			
	Total Project Funding	2,022,833	2,815,730	6,168,651	3,941,500	-
	Capital	1,465,252	2,288,440	4,777,962	3,479,000	
	Operating	557,581	527,290	1,390,689	462,500	
	Total Project Expenditures	2,022,833	2,815,730	6,168,651	3,941,500	-
	Net	59,615	71,604	0	0	-
	Budgeted FTEs			8.1		

Expenditure Analysis





**COUNCIL BUDGET REVIEW PILOT
ENGINEERING AND PUBLIC WORKS
DRAINAGE
November 13, 2013**



Engineering and Public Works - Drainage - Current Level of Service 2014 - 2018 Financial Plan Review

Financial and Operational Planning includes:

Annual operating and maintenance activities to provide current service levels

Identify specific projects, supported by a long range asset management plan, for renewal of current infrastructure.

Identify specific projects for expansion/upgrades to current infrastructure.

Significant Changes

Environmental awareness around climate change and ground water recharging - Ditch/Swale Policy.

Beaver Management - managing areas prone to flooding.

Steepslope developments - Detention Chambers to manage pre development drainage flows, challenging access to utility rights of ways.

New infrastructure like rain gardens in addition to in-ground storm systems.

Current Level of Service

Drainage infrastructure conveys rainwater in order to minimizes impact to property and environment.

The major components of the City's drainage system are mains, services, catch basins, inlet and outlet structures, open ditches and retention por

There are over 423 kilometers of drainage mains.

Annual operating and maintenance programs include:

Storm sewer mains and service connections

- repairs and upgrades to existing system with function and safety in mind
- investigate to resolve flooding concerns and ensure city owned infrastructure is in good working condition
- extension to existing systems to resolve drainage problems

Video inspection program

- identify/monitor problem areas
- provide support information for capital planning
- video prior to any flushing or root cutting

Main flushing program

- flush ~ 10 kms/ annually
- root cutting
- clean mains and service connections of silt and debris

Catchbasin, manholes, cleanouts, inlet/outlet structure maintenance program

- clean structures of debris
- annually clean approximately 10,000 catch basins

Detention pond and natural water courses

- brushcutting to ensure access to infrastructure including detentions ponds and ditches
- cleaning underground detention chambers
- beaver management clearing unnatural debris from stream channels

Culvert and Inlet / outlet structure maintenance program

- assess and inventory culverts
- replace/repair as required or submit for capital planning
- vegetation control at inlets and outlets to ensure full capacity in storm events

Detailed asset information for drainage infrastructure including location, type of material and in service year are maintained in the City's Geographic Information System (GIS).

Continuous Improvement Changes

Asset Management - Ongoing culvert Inventory and assessment program using GPS field tablets.

Field Laptops for emergency response - mapping and as-built information readily available in the event the system is down

Develop maintenance management programs for operational and maintenance of new infrastructure like in-ground detention chambers. 9 now i

Installation of rain gardens and bottomless catch basins, where ground conditions warrant, to promote ground water recharging.

Engineering and Public Works - Drainage - Annual Operating and Maintenance
2014 - 2018 Financial Plan Review

Annual Operating and Maintenance Budget

Annual operating and maintenance budgets include:

- Staffing
- Contracted Services (eg flush truck, flagging)
- Materials and supplies

Indirect costs that are incurred to support Drainage operations such as payroll, accounts payable, human resources and senior management resources are not included in Drainage Operations actuals/budget.

Notes:
CUPE contract expires December 31 2013
2013 - 2017 Financial Plan includes inflationary increases for years 2 to 5 (2% increase for wages and benefits)
2014 Draft Budget does not include an increase for wages and benefits, a contingency is used for wages increases

Drainage	2013 - 2017 Financial Plan				
	2011 Actuals	2012 Actuals	2013 Budget	2014 Budget	2014 Draft Budget
Connection and Service Fees	61,340	67,640	53,000	53,530	53,000
Recoveries	6,800	2,200	6,250	6,325	4,265
Total Operating Revenues	68,140	69,840	59,250	59,855	57,265
Wages and Benefits	1,098,346	1,045,934	1,110,296	1,132,502	1,101,543
Services and Supply Contracts	258,944	245,237	261,722	266,956	275,225
Materials & Supplies	321,378	317,078	312,950	319,209	315,050
Internal Charges & Other	271,113	277,759	305,332	311,347	281,902
Total Operating and Maintenance Expenditures	1,949,781	1,886,009	1,990,300	2,030,015	1,973,720
Net - Operating Funded from General Revenues	1,881,641	1,816,169	1,931,050	1,970,160	1,916,455
Transfers from Reserves	270,340	572,244	843,453	875,000	
Other Project Funding	-	3,865	-	-	
Total Project Funding	270,340	576,109	843,453	875,000	-
Capital	763,547	867,201	1,636,667	875,000	
Operating	63,585	104,288	202,262	118,950	
Total Project Expenditures	827,132	971,489	1,838,929	993,950	-
Net - Funded from General Revenues	2,438,434	2,211,549	2,926,526	2,089,110	1,916,455
Funded from General Revenues	88%	77%	76%	69%	97%
Cost per Capita	\$ 28.04	\$ 25.27	\$ 32.97	\$ 23.21	\$ 21.29
Budgeted FTEs			13.0		

Expenditure Analysis

