

**City of Pitt Meadows  
Pitt Meadows, British Columbia, Canada**



**Working Together for Results**

**2012 Business Plan  
Capital Assets**



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**Attachments (Capital Budgets)**

**Capital Assets Service Area Summary**

**Committee Members**

Kim Grout - <i>Chair</i>	Director of Operations and Development Services
Dean Rear	Director of Finance
Don Jolley	Fire Chief
Randy Evans	Operations Superintendent
Ike de Boer	Engineering Services Coordinator
David Boag	Director, Parks and Facilities

**Services**

The Committee's role is to develop and set policies along with guidelines for the development of Asset Management Plans for all of the City's capital assets.

**Strategic Plan Alignment**

**Transportation**

- To work with the community, neighboring municipalities, other levels of government, and the business sector to improve transportation through designing pedestrian friendly corridors/trails, traffic calming techniques, installation of bike lanes and encouraging alternative modes of transportation.

**Development**

- To attract business investors to Pitt Meadows in order to broaden and diversify the tax base, this will allow for the existing infrastructure funding envelopes and reserves to increase from its current levels;
- The Corporate Management Team will work closely with the Economic Development Officer, Council and the CAO to develop an economic development strategy keeping in mind the preservation of the natural environment;
- That each department develop a pro-business, customer oriented approach in the delivery of municipal services along with high quality documentation and promotional material to attract investment and employment by ensuring that the publicly owned and built infrastructure is planned, constructed, and maintained at an acceptable level.

**Community Services**

- In partnership with other levels of government, Parks and Leisure Services, developers and community groups, create projects to enhance recreation facilities (green space, trails and recreation opportunities);
- That staff work with developers to ensure services and all new infrastructure create safe livable environments.

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### Public Safety

- To ensure that environmental impacts are minimized by future developments and Capital Works Projects;
- To ensure that all new transportation infrastructure be designed and built with pedestrian and cyclist safety first;
- To ensure that the City's infrastructure in particular the potable water system is managed, maintained and enhanced with upgrades on a continual basis;
- To ensure that the Universal Design Guidelines for Outdoor Spaces be used when designing new infrastructure.

### Governance

- To pursue optimal infrastructure and asset management practices;
- To implement sustainable financing practices for all of the City's infrastructure for long term replacement;
- Continue to develop and refine asset (infrastructure) and risk management approaches to achieve infrastructure management objectives;
- To explore opportunities for new and innovative ways to finance capital works in the future to achieve infrastructure sustainability;

### **2011 Successes**

Undertook a significant Capital Works Program budgeted at \$20.5 million. Major projects completed or underway include:

- Water main looping between Reichenbach and Rippington Roads;
- AC water main replacement on 193 Street, Hammond to 116B Street;
- Rural Water Metering underway;
- Haney Main #1 replaced from Harris Road to the Katzie Slough;
- Miscellaneous Sanitary Main Re-lining (1,100 metres completed in 2011);
- Advent and 190A, Traffic Calming;
- Neaves Road pavement rehabilitation;
- Old Dewdney Trunk Road repave Sharpe to Hale Roads;
- Completion of Kennedy Road Bridge over the Katzie Slough;
- Bonson Road pavement rehabilitation 116B to Joyner Place;
- Blakely Road repaved from 120B to 121B;
- Ladner Road repaved from Neaves to Aquilini's processing plant driveway;
- Baynes Road watermain and repaving of south 160 metre section;
- McKechnie Drainage Area improvements;
- Environmental Studies of the Katzie Slough underway;
- Pitt Meadows Arena Upgrades;
- South Bonson Community Centre Building completed;
- Fenton Slough Pump Station pump purchase;
- Tandem Axle Truck Purchased;
- Works Yard Painting completed;
- Pedestrian Countdown Timers installed at all intersections on Harris Road;
- McMyn Park Design completed;
- Youth Action Skate Park completed;
- Fire Hall Kitchen Upgrade completed;

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- Fire Engine 1 – 2 Replacement underway;
- Laptop Replacement underway;
- Fiber Network upgrade completed;
- Smart Phone Replacement ;

#### **Significant Issues and Trends**

- The City's infrastructure (roads, water, sewer, bridges, storm sewers, buildings, fleet etc.) are relatively new and at a good level of repair. However, in the future all of these assets will need to be replaced/upgraded at a significant cost. Thus, it is imperative that the City continues to provide for this, eventually by putting sufficient funds into reserves annually for their replacement. If this is not done, either the infrastructure will not be replaced/upgraded when required or the City will have to assume significant debt or impose significant tax increases when the replacement/upgrade is required. Staff is in the process of implementing a Capital Asset Management Plan for the City's entire infrastructure inventory. The hiring of a consultant to assist with the Plan has been done for the water, sanitary and drainage infrastructure. Roads will be reviewed in 2012 and on a 5 year basis through a Pavement Management System.
- The rural infrastructure specifically the drainage (culverts and pump stations) has been identified (from a Drainage and Irrigation Study) for a number of immediate replacements. A program is underway to continue replacement and maintenance of driveway/road culverts for the entire rural area, a pump station upgrade in Dyking Area #1 has been completed and is now operational. The City has now implemented the introduction of a Drainage Utility in order to establish a mechanism to fund long term improvements to the entire drainage system. The Drainage Utility, similar to the Water Utility, will provide for adequate funding for current and future long-term needs relating to maintenance, rehabilitation replacement, upgrades and environmental protection of the urban and rural drainage systems.
- Water mains in the rural area have been upgraded to minimum fire fighting sizes, with the change in agriculture practices; supply of potable water for irrigation purposes is putting a strain on the existing system. The City has completed a review of the rural water system to determine capacities along with a long term life cycle analysis of the entire system. The review has identified that significant upgrades are required to supply the rural area with the same level of water supply as the urban area for firefighting purposes. The City is encouraging rural property owners to find alternative sources for their irrigation needs.
- The City's sanitary sewer Asbestos Cement (AC) pipes have been reviewed for life cycle replacement, additional testing has been completed on extracted pipe sections to determine time frames in years for these replacements. A comprehensive rehabilitation schedule complete with estimated costs has been completed for a long term replacement funding strategy. A strategy has been developed to re-line existing mains with PVC material as opposed to full replacement of the of the AC mains.
- Currently, the City is not funding its capital assets at a sustainable level when these long-term needs are considered. Although the City has made significant improvements in this area in the last ten years, the tight economic times create a steady pressure to reduce capital funding, never mind increase it.

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- It has become evident that the continued strong economic growth within the Province has driven costs for all of the City's Capital projects higher although, tender prices have decreased to 2007 levels due to the economic slowdown. Prices are expected to rise again as the economy improves and the continued climb in oil prices will also dictate asphalt costs. If this trend continues additional funding will be required to maintain current infrastructure replacement levels.
- High profile residential development projects are underway, these large projects will significantly enhance the City's vision of a compact community, however they are impacting existing infrastructure ie: roads specifically the Harris and Lougheed intersection. The City continues to work with outside agencies to improve the intersection. Future diversity of development with light industrial planned in the south Harris Road area will increase the tax base; this will allow for increased funding to be placed into reserves to fund future infrastructure improvements.
- As part of a Risk Management Strategy undertaken by the City in 2005, a number of items were identified with regards to Capital Assets and infrastructure with some of the recommendations listed as follows:
  - Contracts with contractors and Developers should be reviewed with respect to risk management considerations, with particular emphasis on indemnification and liability obligations.
  - A systematic plan for all infrastructure replacement has been partially developed and is being implemented.
  - A more systematic recording system for inspections of infrastructure should be implemented;
  - Roadway maintenance standards for inspection and repair should be systematized.
  - Current initiatives with respect to drainage issues analysis, backflow prevention device installation strategy, and infrastructure inventory should continue on a priority basis.
  - Significant priority should be placed on systematic documentation of inspections and records management, which may assist the City significantly in defending potential legal actions.

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**Major Asset Summary:**

The City’s capital asset plan is made up of 10 major capital asset categories which have been summarized below.

**1. Transportation System Overview**

Business Purpose

- To provide a safe and reliable road network and traffic control facilities within the City of Pitt Meadows.

Department Responsibility

- The Development Services Division is responsible for Master Transportation Infrastructure project planning and Traffic Management.
  - Maintain and utilize a Pavement Management System to help target/schedule road rehabilitation;
  - Municipal participation with Translink/Gateway/ICBC regarding eligible major street and highway program initiatives and development of a City project and funding strategy;
  - Operations and Development Services Division manage and respond to public inquiries and requests for service;
  - Cooperate with ICBC on Safer City Initiatives.

**Current Assets (as of Sept. 2011)**

<b>Asset Category</b>	<b>Quantity</b>
Roads	114.3 km
*Bridges	11
Traffic Control Signals	8
Street Lights	994
Rail Crossings	2
*Includes all Vehicle Bridges, CP Pedestrian Overpass & Heron Pedestrian Bridge	

Sustainability (Life Cycle) Considerations

- Pavement structures – having a service life of 20 to 30 years;
- Bridge structures– having a service life of 50 and 100 years;
- Concrete or corrugated metal road crossing culvert structures – having a service life of 50 years;
- Concrete curb, gutter, sidewalk structures – having a service life of 40 years;
- Traffic Signals & Ornamental street lights – having a service life of 30 years;
- Regulatory and other traffic signs – having a service life of 20 years;
- Street furniture, litter bins and other related appurtenances – having a service life of 25 years;
- Street trees and landscaping – having unlimited service life;
- Replacement value of the transportation infrastructure is approximately \$63.8 million, value based on Tangible Capital Assets completed in 2010 by the Finance Dept.

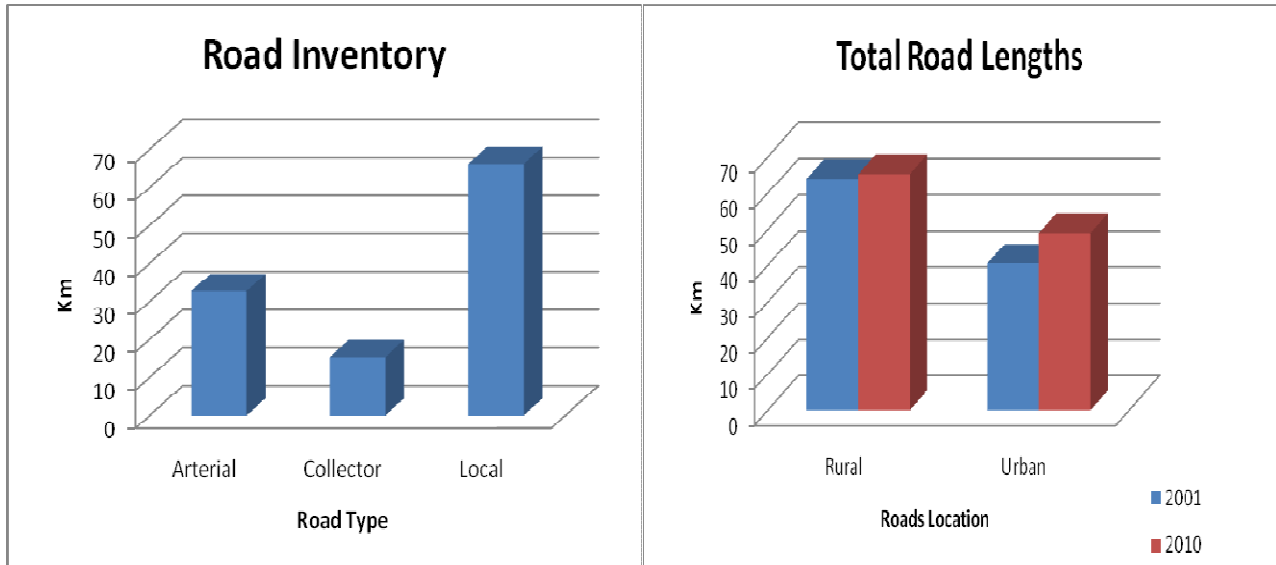
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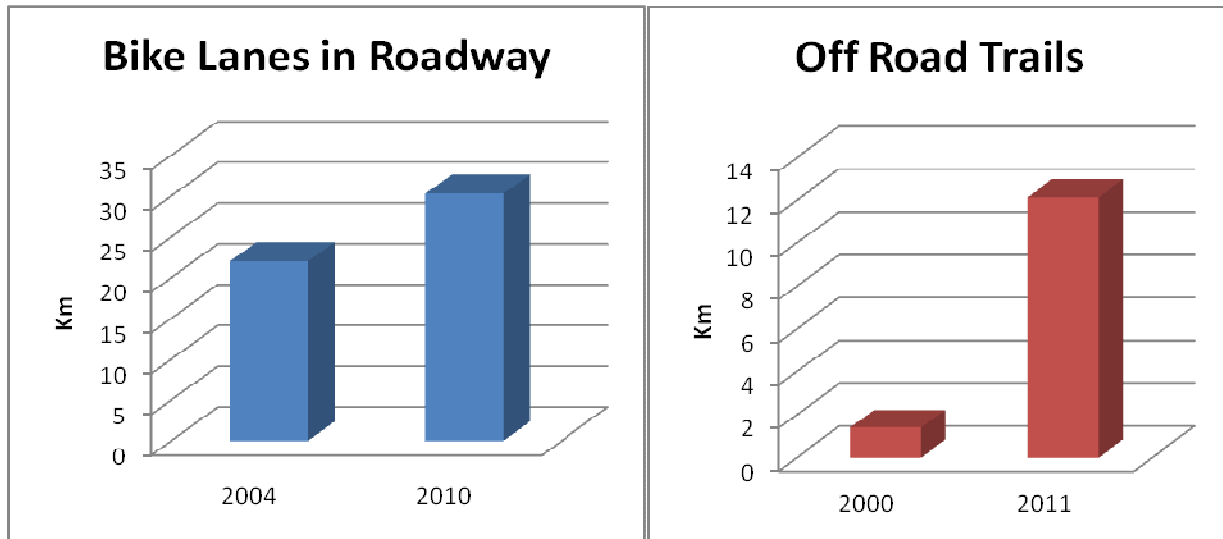
Key Funding Sources

- Development Cost Charges:
  - Provision of major transportation infrastructure, structures and equipment/facilities in support of development;
  - Provision of highway over sizing in support of development;
  - Provision of highway assistance for construction fronting OCP designated Park, Greenbelt and Schools.
- Transportation Infrastructure Reserve Fund:
  - Funding from general taxation;
  - Replacement and rehabilitation of the existing highway infrastructure and appurtenances.
  - Highway Use Levies on particular roads (Harris Road, Baynes Road, McNeil Road, Rannie Road, Neaves Road & Airport Way) for use in capital rehabilitation.
- Translink Funding:
  - Provision of capital improvements and maintenance of eligible highways in the Major Roads Network (Old Dewdney Trunk Road).

Transportation System Inventory  
Current Assets as of Sept 2011



**Total Road lengths have increased 7.7% (7,750) since 2001.**



**Bike Lane lengths have increased 28% since 2004.**

**Off road Trails have increased 88% since 2000, dykes are not included in total.**

## 2. Water Distribution System Overview

### Business Purpose

- To provide a safe supply of potable water for domestic and commercial uses and a high quality infrastructure for delivery and fire protection purposes.

### Department Responsibility

- Development Services maintains a 'Epanet' water model (software) to test, manage and schedule distribution system improvements;
- Operations are responsible for performing routine annual system maintenance including fire hydrant maintenance, valve location and testing & flushing of part of the distribution system each year;
- Operations is responsible for water supply sampling throughout the distribution system, this is conducted on a weekly basis with samples tested by Metro Vancouver laboratories;
- Development Services and Operations manage and respond to the public's request for service;
- Operations and Development Services are responsible for reporting water quality to the Fraser Health Authority each year.

### Background Information

- A significant portion (74%) of the water distribution system is Ductile Iron and in good condition.
- Capital Works Program provides for the gradual replacement of asbestos cement (AC) watermains. Approximately 30% of annual water capital is designated for the replacement of AC mains each year with all of the main replacement to be completed by 2025.
- Supply purchased from Metro Vancouver, trunk distribution provided and upgraded under a Joint Supply Agreement.

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**Current Assets (as of Sept 30, 2011)**

Asset Category	Quantity
Watermains	112.3 km
Pressure Reducing Stations	6
Fire Hydrants	461
Valves	946
Meters	554
Service Connections	5,250

Sustainability (Life Cycle) Considerations

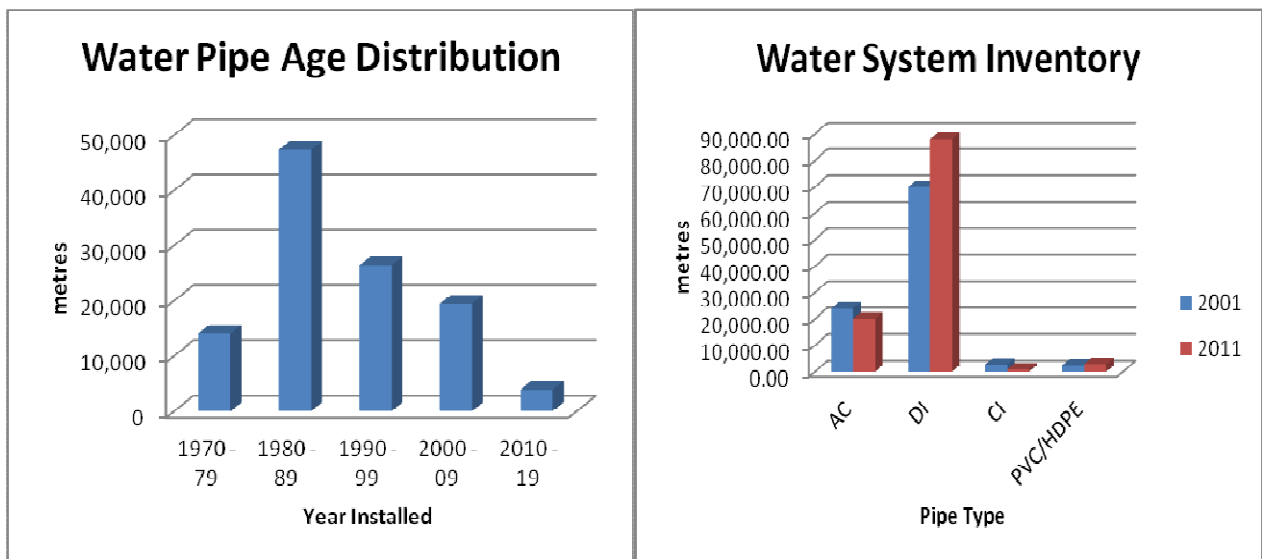
- Watermains made of ductile iron – having a service life of 70 years;
- Watermains made of asbestos-cement – having a service life of 40 years;
- Valves, fittings and appurtenances – having a service life of 50 years;
- Pressure reducing stations – having a service life of 50 years;
- Service connections – having a service life of 50 years;
- Replacement value of the waterworks infrastructure is approximately \$50 million, value based on Tangible Capital Assets completed by Finance Dept. in 2010.

Key Funding Sources

- Development Cost Charges:
  - Water Utility Charges for operating costs;
  - New and upgraded trunk distribution pipes, and major facilities and structures in support of development;
  - Provision of watermain over-sizing in support of development.
- Waterworks Capital Reserve Fund:
  - Replacement and rehabilitation of the existing water distribution system and appurtenances.

Water System Inventory

Current Assets as of September 30, 2011



**Total Watermain installation has increased by 11.5% (12,903m) since 2001**

**3. Sanitary Sewer System Overview**

Business Purpose

- To provide a dependable sanitary sewer collection system and facilities for transmission to Regional District facilities by means of safe and high quality infrastructure.

Department Responsibility

- Development Services maintains a Sansys sewer model to test, manage and schedule collection system improvements.
- Operations and Development Services manage and respond to public inquiries and requests for service.
- Development Services has developed a long term replacement plan for the conversion of Asbestos Cement mains to PVC and as an alternative; relining existing AC pipes with PVC.
- Development Services has identified aged Sanitary Lift Stations for replacement to new approved standards c/w pumps and standby power.
- Operations are responsible for annual sewer main flushing for a quarter of the entire system each year. Video inspection of sewers is also done on an annual basis. All sanitary lift stations are inspected and maintained (cleaning) on a weekly basis.

Background Information

- City collection system discharges to the Metro Vancouver (GVS&DD) pump station on Baynes Road on-route to the regional Annacis Island Sewerage Treatment Plant in Delta, B.C.
- Development activity provides extensions from trunk sewers.

**Current Assets (as of Sept. 30, 2011)**

<b>Asset Category</b>	<b>Quantity</b>
Sewer Mains	48.5 km
Pump Stations	8
Pumps & Controls	16
Generator	6 & 1 portable
Service Connections	4,327

Sustainability (Life Cycle) Considerations

- Sanitary sewers made of asbestos-cement – having a service life of 30 years;
- Sanitary sewers made of PVC – having a service life of 50 + years;
- Manholes and other related appurtenances – having a service life of 50 years;
- Pumping stations – having a service life of 50 years;
- Service connections – having a service life of 50 years;
- Replacement value of the sanitary sewer infrastructure is approximately \$22.4 million, value based on Tangible Capital Assets completed by Finance Dept. in 2010.

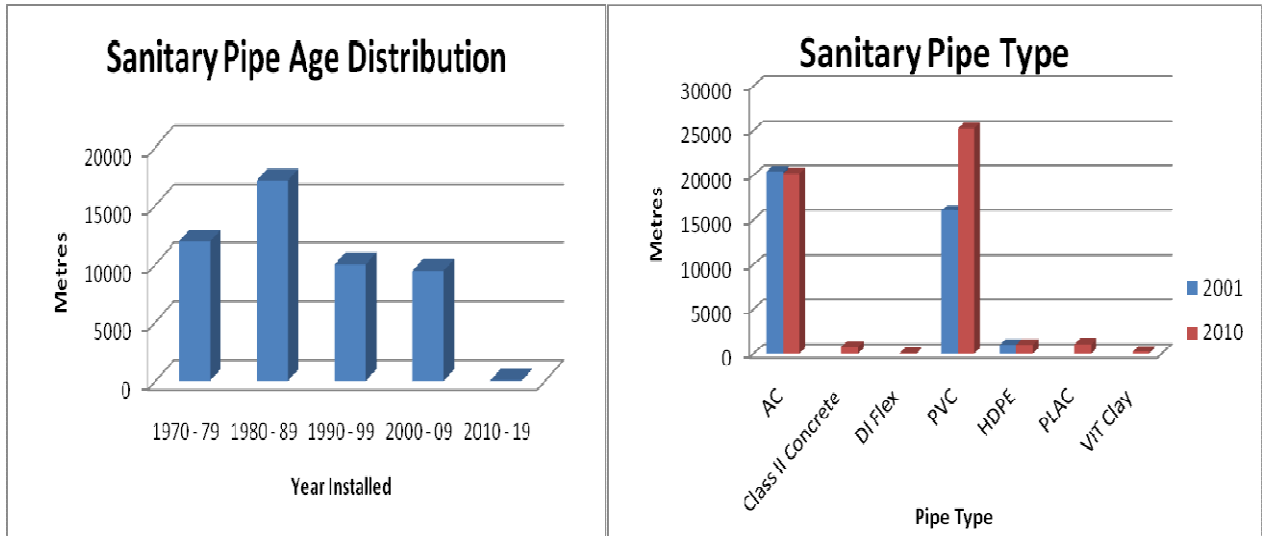
Key Funding Sources

- Sewer Utility Charges for operating costs
- Development Cost Charges:
  - Provision of sanitary sewer assistance for construction fronting OCP designated Park, Greenbelt and Schools.

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- Sanitary Sewer Reserve Fund:
  - Replacement and rehabilitation of the existing sewage collection system and appurtenances.

Sanitary Sewer System Inventory  
 Current Assets as of September 30, 2011



**Total Sanitary main inventory has increased 22.9% (11,129m) since 2001**

**4. Drainage System Overview**

Business Purpose

- To provide effective drainage collection systems and facilities with high quality infrastructure and to protect and/or mitigate flooding of property in an environmentally sensitive manner. The rural drainage system currently flows through a system of ditches, natural channels, culverts and bridges, complete with pump stations and flood boxes to provide flood protection for the municipal floodplain.

Department Responsibility

- Development Services maintains a Hydsys storm sewer model to test, manage and schedule collection system improvements;
- Ditches are cleaned annually and on a rotational basis to maximize flood protection;
- Operations and Development Services manage and respond to public inquiries and requests for service;
- The City has updated its subdivision servicing stormwater management criteria in 2005 in keeping with the Best Management Practices developed by Metro Vancouver.
- Operations have started a flushing of the storm system on an annual basis. All catch basins are cleaned out annually.
- Drainage pump stations are inspected regularly and bar screens and debris traps are kept clear to ensure optimal pump operation.

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Background Information

- A Storm Sewer Audit was done on the Urban area piped system in 2004 and found the system to be in good shape with no major deficiencies identified;
- Environmental protection and fisheries issues are increasingly prevalent requiring the City’s on-going attention and continued improvement in the area of quality control;
- Development activity provides extensions from trunk sewers;
- There are 4 separate municipal drainage systems in the City with a total of 188.4 km of ditches requiring cleaning and maintenance;
- Ditch and culvert system was reviewed by a Consultant in 2007 to determine existing and future capacities. A culvert upgrading program was developed to assist Operations in setting future culvert crossing sizes.

**Current Assets (as of Sept. 30, 2011)**

<b>Asset Category</b>	<b>Quantity Length</b>
Storm Mains	47.4 km
Service Connections	3,650
Catch Basins	1,393
Manholes	783
Pump Stations & Flood Boxes	6
Pumps	15
Culverts	722
Private Access Culverts	500
Open Ditches	188.4 km

Sustainability (Life Cycle) Considerations

- Storm sewers made of concrete – having a service life of 55 years;
- Storm sewers made of CSP – having a service life of 60 years;
- Storm sewers made of PVC – having a service life of 100 years;
- Manholes, catch basins, inlet/outlet structures and other related appurtenances – having a service life of 50 years;
- Service connections – having a service life of 50 years;
- Replacement value of the drainage infrastructure is approximately \$57.0 million, value based on Tangible Capital Assets estimated replacement values completed in 2010 by the Finance Dept.
- The pump station structures have a lifecycle of 100 years, the pumps average 35-45 years and the major electrical components have a 25 year lifecycle.
- A replacement value appraisal of the 6 Pump stations was done in 2008 with the total costs at \$11.6 million

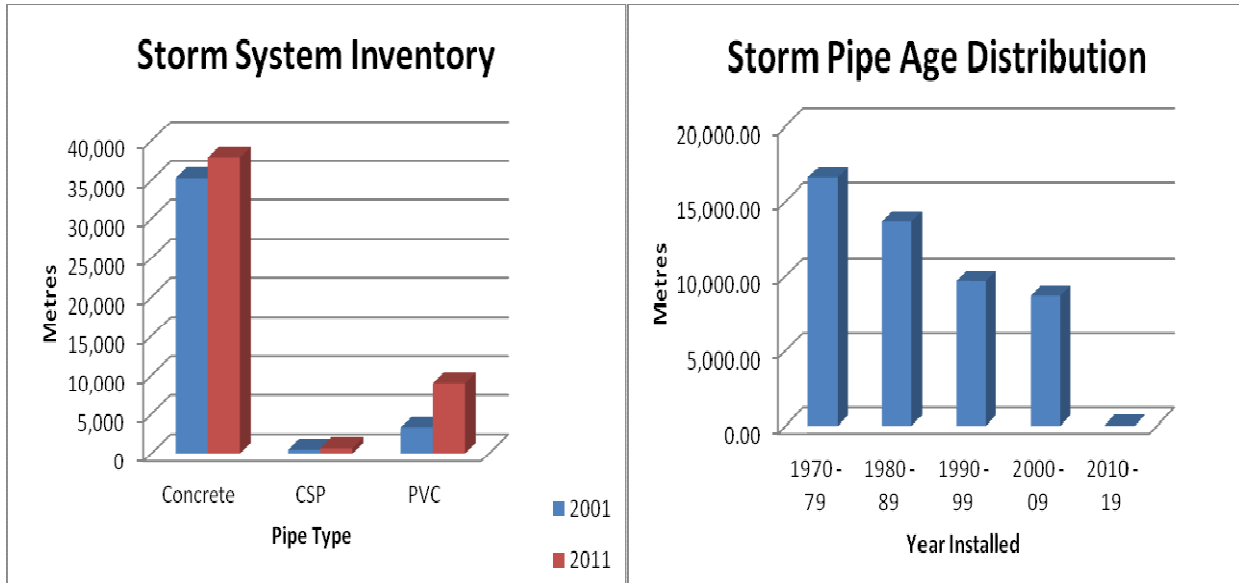
Key Funding Sources

- Drainage Levies and a Drainage Mill Rate for operating costs;
- Development Cost Charges:
  - Provision of storm sewer assistance for construction fronting OCP designated Park, Greenbelt and School Sites.
- Drainage Utility Reserve Fund:

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- Replacement and rehabilitation of the existing drainage/storm sewer collection system and appurtenances.

Drainage System Inventory  
 Current Assets as of September 30, 2011



**Total Storm main inventory has increased 17.8% (7,084 m) since 2001.**

**5. Recreation and Cultural Facilities, Parks and Dykes Overview**

Business Purpose

- The Parks and Leisure Services Department provide safe and well-maintained recreation facilities and parks within the City of Pitt Meadows to meet the mission statement of “Opportunity for community pride, personal enjoyment and healthy life styles.”

Department Responsibility

- Ridge Meadows Parks and Leisure Services provide services to the citizens of Pitt Meadows in accordance with the Parks, Recreation and Culture Plan;
- The Department is responsible for the operation and maintenance of the current asset inventory;
- The Department utilizes a long term (lifecycle) budget program;
- The Department maintains a capital asset inventory.

**Current Assets**

Asset Category	Quantity
Recreation Buildings	3
Developed Park Land	18
Cultural & other buildings	8

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#### Sustainability (Life Cycle) Considerations

- Recreational building envelopes can have a service life of up to 50 years if well maintained;
- Parks, dykes and green spaces can maintain their functionality indefinitely through the use of sound maintenance practices;
- Typical facility roofs can survive up to 30 years with ongoing maintenance and repairs;
- Building heating, cooling & ventilation (HVAC) and other electro/mechanical equipment can last from 15 to 30 years if adequately maintained;
- Park play equipment can perform for up to 20 years if well maintained;
- Park furnishings (benches, picnic tables, fences, trails etc) can last 10 years;
- Tennis & basketball courts can last up to 20 years;
- A typical heavily used playing field can perform for 20 years before major retrofits are required;
- Replacement value of the recreational facilities is approximately \$37 million, value based on 2009 appraisal. The total costs include the Pitt Meadows Arenas.

#### Key Funding Sources

- Development Cost Charges:
  - Acquisition and development of major park and green spaces in support of growth.
- Parkland Acquisition Reserve Fund:
  - Provision of funding for new parks and open spaces.
- Life Cycle Reserve Fund & Equipment Replacement Reserve Fund:
  - Provision for recreation buildings;
  - Retrofitting and replacement of recreational, cultural and park infrastructure & equipment.
- South Bonson Amenity Reserve Fund;
  - Building and equipping the South Bonson Community Centre.
- Other Sources (Donations and Grants):
  - May be utilized for all of the above.

## **6. Fire Services and Emergency Program Overview**

#### Business Purpose

- The Pitt Meadows Fire and Rescue Service works as a team of volunteer and career firefighters serving the community by protecting life and property.

#### Department Responsibility

- The Pitt Meadows Volunteer Fire Department provides fire suppression, rescue, first responder medical services as well as Fire Safety Inspections. Fire Cause Investigation, Burning Bylaw enforcement and administration and Public Safety Programs.
- Maintain one Fire hall and fleet of vehicles.
- Utilize a long term (life cycle) budget program.
- Maintain a capital asset inventory.

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**Current Assets**

<b>Asset Category</b>	<b>Quantity</b>
Apparatus	4
Vehicles	4
*Small Equipment	100
* Includes: Rescue Tools (jaws of life), Breathing Apparatus, Radio Equipment and Personal Protective Equipment.	

Sustainability (Life Cycle) Considerations

- A Fire hall can have a service life of 50 or more years, often determined by growth, if well maintained;
- Vehicle and apparatus can have varying length of service. Typically vehicles are replaced after 10 years and fire apparatus after 20 years;
- Fire service equipment life cycles can vary from 5 years (paggers and turn out gear) to 25 years (base radio, hydraulic rescue equipment-jaws of life);
- Development and population growth usually drive calls for service which ultimately affects calls for Capital Assets.
- Replacement value of the hall and equipment is approximately \$3.5 million, values based on 2009 appraisal.

Key Funding Sources

- Equipment Replacement Reserve Fund:
  - Replacement of Fire and Rescue Apparatus, Staff Vehicles and Major Equipment (turn-out gear, paggers, radio etc.).
- Operating Reserve Fund
- Facilities & Fixtures Lifecycle Reserve Fund
- Other Sources:
  - Provincial and Federal Grants when available.

**7. Municipal Fleet Overview**

Business Purpose

- Municipal equipment is necessary to safely and effectively perform the maintenance and after hours servicing of the municipal infrastructure and service to the public.

Department Responsibility

- Fleet is maintained by the Operations Division of the Operations and Development Services Department who are working to:
  - to insure fleet is in good operational condition at all times;
  - to insure the fleet replacement program is conducted efficiently and in a cost effective manner;
  - to insure equipment charge out rates reflects operating and replacement costs.

Background Information

- Municipal equipment is utilized to perform over 140 maintenance functions;
- The fleet is used to maintain the water, sewer, drainage, roads, buildings and solid waste assets of the municipality;
- The standby vehicle was needed for 115 dispatched after hour's calls up to Sept. 31, 2011;

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- The Fleet has evolved from specific style functions into versatile multi-functional roles;
- A Fleet principle of equipment charge out rates has changed from “rental” fee structure to calculated rate.

**Current Assets**

<b>Asset Category</b>	<b>Quantity</b>
Vehicle Fleet	22
Equipment	37
Small Tools	42

Sustainability (Life Cycle) Considerations

- Major heavy duty equipment have life cycles ranging from 12 to 20 years.
- Minor equipment and vehicles have a life cycle of 10 years or less. The majority of the fleet falls into this category;
- Replacement value of the fleet and equipment is approximately \$2.8 million based on 2010 Tangible Capital Assets report.

Key Funding Sources

- Equipment Replacement Reserve Fund.

**8. Municipal Buildings Overview**

Business Purpose

- Municipal facilities are provided for a safe and functioning work place for Municipal staff, Library staff or lease operators.

Department Responsibility

- The Operations and Development Services Department along with the Facilities Clerk are responsible for the building maintenance and operation of current building asset inventory.
  - Working jointly with the Resource Management Committee to determine life cycle analysis for all buildings and established reserves to insure proactive approach to large scale expenditures;
  - Advise and make recommendations to the Resource Management Committee regarding immediate or short term future needs.

Background Information

- A consultant report for municipal buildings was completed in 2002. The report completes an inventory and costs of municipal building infrastructure;
- The original Municipal Hall was built in the 1970's with major renovations/additions occurring in 1991 and 2005/06;
- The Library was constructed in 1984, the Fire hall was completed in 1983 and the Public Works building and complex was completed in 1984.

**Current Assets**

<b>Asset Category</b>	<b>Quantity</b>
<b>Buildings c/w furniture</b>	
Municipal Hall	1
Public Works Yard	1
Library	1
Fire Hall	1
Masson House	1
Visitor Information Centre	1
Struthers House	1
Civic Centre Parkade	1

Sustainability (Life Cycle) Considerations

- The 4 main buildings have life cycles of 100 years;
- An updated life cycle analysis has been prepared late 2005;
- Replacement value of the City Hall, Works Yard and the existing Library building is estimated at 11.6 million based on 2009 appraisal replacement values.

Key Funding Sources

- Future Capital Reserve Fund;
- Life Cycle Reserve fund;

**9. Dyking System Overview**

Business Purpose

- The City maintains a total of 61 Km of dyke along the 3 major rivers; they provide flood protection for the City's four Dyking Districts.

Department Responsibility

- The Operations Division of the Operations and Development Services Department is responsible for the maintenance of all of the dyke surfaces, within Pitt Meadows;
- Dykes are mowed to reduce the growth of intrusive vegetation;
- Operations have done periodic gravel topping over the years.

Background Information

- Pitt Meadows is a community bordering 3 major rivers (Fraser, Pitt and Alouette);
- Pitt Meadows has approximately 86% of its 9,516 hectares of land mass in the floodplain;
- Flood protection is provided by 61 km of dyke systems;
- There are 4 separate municipal drainage systems in the City with a total of 185.4 km of ditches requiring cleaning and maintenance.
- New flood construction elevations will require all standard dykes to be raised by 0.3 m to 0.9 m.

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**Current Assets**

<b>Asset Category</b>	<b>Quantity</b>
Dyke (type 1)	30.5 km
Dyke *(type 2)	30.4 km

\*Agricultural dyke (including Pitt Addington dyke)

Sustainability (Life Cycle) Considerations

- Dyking Area #2 and #3 dykes (type 1) were rebuilt in 1987 to 1989 and have an indeterminate lifespan. Operations have done periodic gravel topping over the years.
- Dyking Area #1 and #4 are agricultural standard dykes and has an indeterminate lifespan. Operations maintain the slopes by mowing and removal of any trees within the dyke structure. Area #1 dykes have recently been topped with gravel to allow periodic inspection by vehicle.

Key Funding Sources

- Dyking Reserve fund;
- Grants if available.

**10. Information Technology Overview**

Business Purpose

- To provide useful and secure access to the information assets of the City through effective technology infrastructure and systems.

Department Responsibility

- Information Technology Systems support approximately 65 personal computers & 24 Virtual servers connected over a wide area network with local area networks operating in each of the four locations connected via a private fiber network;
- Maintain current business applications, which include: Vadim Accounting System, Vadim Property system, Vadim Payroll, Vadim Purchasing system, Cartegraph Asset Management, Hummingbird Document Management System, Geographic Information System (GIS), SCADA system (remote monitoring for dyke pump stations), Office software products (MS Word, Excel, Outlook, etc), City Website, Hummingbird DM and Telecommunications (VOIP & Voicemail, Cell Phones and Smartphones).

Sustainability (Life Cycle) Considerations

- PCs and desktop software - have a service life of 4 years;
- Wide Area Network and Local Area Network - have a service life of 7 years;
- Fiber Optic Network having a service life of 40 years
- Main Systems Software has a service life of 7 years (excluding ongoing patches and repairs to existing systems);
- Printers have a service life of 4 to 7 years;
- Council presentation equipment has a service life of 4 to 7 years;
- Main application, data, and message servers have a service life of 4 years;
- Records Management systems will have a service life of 7 years;
- Financial Software systems have a service life of 4 years before substantial upgrades are required;

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- Financial Performance systems have a service life of 4 to 7 years;
- Web site and public access services have a service life of 4 years before significant upgrades are required;
- Web content management tools have a service life of 4 to 7 years;
- GIS hardware, software, and application data have a service life of 4 years;
- SCADA monitoring systems have a service life of 7 years;
- Work, Resource, and Asset Management systems have a service life of 7 years;
- IT Strategic Plan has a service life of 4 years before substantive revision is required;
- Estimated replacement costs for the IT system is \$1.3 million.

Key Funding Sources

- Equipment Reserve Fund;
- Equipment Replacement Reserve.

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