CITY INFRASTRUCTURE CAPITAL PLAN

OVERVIEW

The City Infrastructure Capital Plan provides an overview of the following City assets:

1. ENGINEERING AND OPERATIONS

- Transportation
- Water
- Diking
- Drainage
- Sanitary
- Municipal Fleet
- Environmental Protection / Sustainability
- General Engineering

2. PARKS AND FACILITIES

- Facilities
- Parks

Transportation, Water, Diking, Drainage, Sanitary, Municipal Fleet, Environmental Protection/Sustainability and General Engineering are managed by the Engineering and Operations Department and the Facilities and Parks are managed by the Community Services Department.

Each of these teams annually reviews the maintenance and lifecycle needs of each of these assets and aligns these needs with the funding sources available. Following is a discussion on each of these assets that includes the following:

- Asset Overview
- At a Glance Asset Statistics
- Sustainability (Life Cycle) Considerations
- 2017 Achievements
- Key Challenges
- Key Initiatives for 2018
- Draft Capital Plan for 2018

ENGINEERING & OPERATIONS CAPITAL PLAN

Operating Budget: $ 2,847,700

Capital Budget: $ 7,324,500

Staffing Complement: 23.2 FTE (Full-Time Equivalent)) + 2 seasonal workers

Supports Strategic Focus Areas:

Corporate Excellence
Economic Prosperity
Community Livability &
Transportation and Infrastructure

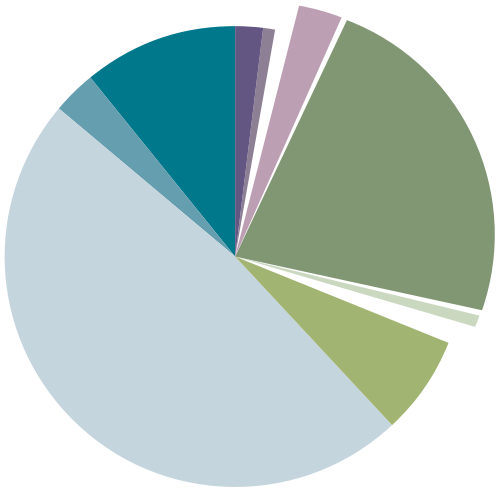
OVERVIEW

Each year, the City partakes in a detailed capital planning process that forecasts the infrastructure needs over the next five, ten and, in some circumstances, up to 50 years. All infrastructures are reviewed and prioritized based on asset age, condition, capacity, and identified corporate priorities. After Council has reviewed and approved the five-year capital plan, budgets are generated to ensure that all encompassing costs of all planned future infrastructure upgrades are anticipated and accounted for

The major groups or categories for the Engineering and Operations capital plan and budget are:

- Transportation
- Water
- Diking
- Drainage
- Sanitary
- Municipal Fleet
- Environmental Protection / Sustainability
- General Engineering

The 2018 Preliminary Capital Budget funding requirements amount to $7,324,500. The individual project category requirements are as follows:



DRAINAGE - PITT POLDER PUMP STATION (2017 CARRY OVER) $6,975,000

SEWER $475,000

WATER $1,625,000

ENGINEERING $225,000

EVIRONMENTAL STEWARDSHIP $17,500

FLEET & EQUIPMENT $372,000

TRANSPORTATION $3,495,000

DIKING $60,000

DRAINAGE $1,055,000

ENGINEERING & OPERATIONS CAPITAL PLAN

OVERVIEW **(CONTINUED)**

For 2018, the majority of the engineering and operations funding will come from the City's Capital Reserve Fund with smaller contributions from DCC's and third party contributors.

Further information for each of the major asset categories above are detailed within this report. Each subsequent section provides further detail on the overall asset category, its condition, proposed projects and allocated budget. Water, drainage, and sanitary have been combined under the Utility header. Lifecycle schedules are dependent on routine maintenance schedules being followed and repairs being addressed as needed.

The proposed 2018 capital budget and the remaining 2019-2022 capital plan represents an investment of $24.4 million in engineering and operations capital assets over this five-year period.

The current Capital requirements exceed reserve funding availability and grant opportunities; therefore, unfunded projects have been deferred into later years.

2018 CAPITAL ASSETS PLAN
TRANSPORTATION

Transportation projects include: intersection control, sidewalks, bus stops, roadways and bridges. Projects in this category include the design, maintenance, construction and purchase of these assets to keep them functional and in a good state of repair in order to maintain an appropriate level of service to our residents.

The Engineering and Operations divisions are responsible for these assets. The Engineering division collates these corporate projects and helps prioritize them based on criteria that include the age and condition of the assets, their forecasted level of service, any health or safety risks and the availability of funds. When a project is identified as a priority and is approved by Council, the engineering division assumes responsibility for managing the design, construction and acquisition of these assets through a third party engineering contractor.

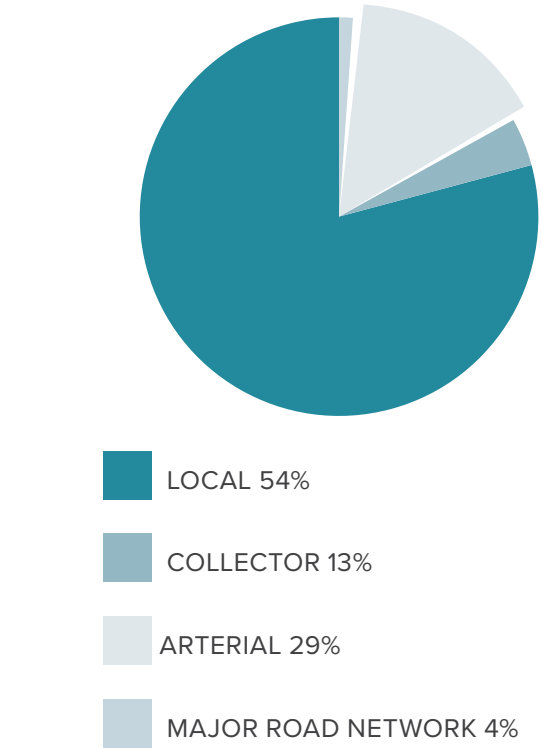
An investment of $3,495,000 is required to fund the preliminary 2018 transportation projects.

ENGINEERING & OPERATIONS CAPITAL PLAN

AT A GLANCE
Transportation Asset Statistics

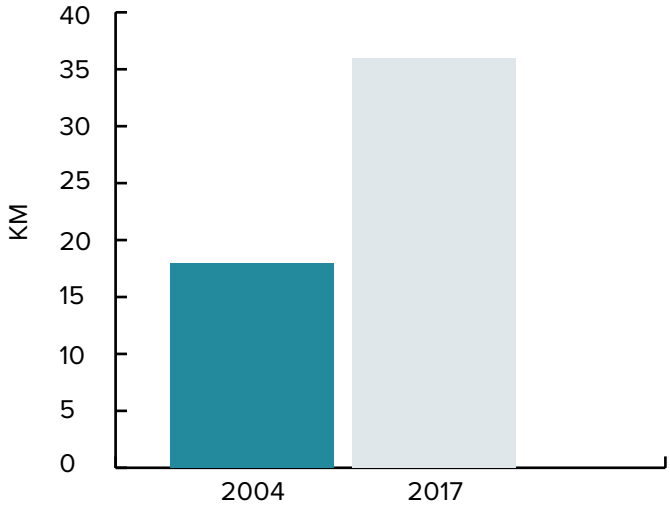
The City of Pitt Meadows operates and maintains 115km of road equivalent to 150 lane kilometers. These road segments are categorized into the following road types:

ROAD CLASSIFICATION PERCENTAGE

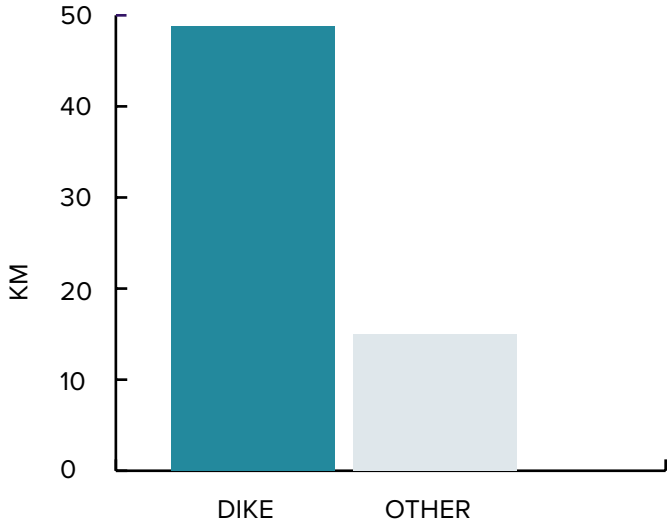


The road network also includes bike lanes and multi-use trails as per the charts below. The Communities' active transportation vision has led to a significant increase in pedestrian and cycling routes throughout the community.

ROAD CLASSIFICATION PERCENTAGE



OFF ROAD MULTI-USE TRAILS



The current estimated replacement value for the City's transportation infrastructure assets is $74,600,000.

ENGINEERING & OPERATIONS CAPITAL PLAN

CURRENT ASSETS

ASSET CATEGORY	QUANTITY
ROADS	114.7 KM
BIKE LANES	36.0 KM
*BRIDGES	9
**OFF ROAD TRAILS/PATHS	15.0 KM
TRAFFIC CONTROL SIGNALS	8
STREET LIGHTS	1,009
SIDEWALKS	58.7 KM
TRAFFIC SIGNS	2,034 SIGNS ON 1,249 POLES

*Includes All Vehicle Bridges, CP Pedestrian Overpass & Heron Pedestrian Bridge. **Not Including Dikes

SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
ROAD NETWORK	WOODEN BRIDGE	40
	CONCRETE BRIDGE	100
	CURB AND GUTTER	25 TO 50
	RAIL CROSSING	15
	ROAD BASE	50 TO 75
	ROAD SURFACE -ASPHALT	20
	ROUNDABOUT	50
	SIDEWALK -CONCRETE	23 TO 50
	SIDEWALK -BRICK	50
	SIDEWALK -ASPHALT	50
	MAIN STREETLIGHTS	40 TO 50
	STREETLIGHTS -LED HEAD	10
	STREETLIGHTS -PARKING LOT LIGHTS	47 TO 50
	STREETLIGHTS -SHORT POST TOP	47 TO 50
	STREETLIGHTS -BEVEL TOP BOLLARD	50
	STREETLIGHTS -CONTROL BOX	50
	CROSSWALK SIGNALS	25
	TRAFFIC SIGNALS	25

ENGINEERING & OPERATIONS CAPITAL PLAN

2017 ACHIEVEMENTS
TRANSPORTATION

- **Paving**
  - Rannie Road Rehabilitation (McNeil Road to Sturgeon Slough)
  - Neaves Road Bike Lanes (Old Dewdney Trunk Road to South Alouette Bridge)
  - Bonson Road (Hammond to 120B Ave)
  - Baynes Road (Airport Way to Airport Trail)
  - Hammond Road @ Blakely Road (Intersection)

- **Pedestrian Improvements**
  - Wheelchair sidewalk letdowns reworked:
    - 116B Ave & 195A St (SW)
    - 116B Ave & 195A St (SE)
    - 116A Ave & 196A St (SW)
    - 116A Ave & 196A St (SE)
    - 116A Ave & 196B St (SW)
    - 116A Ave & 196B St (SE)
    - 116A Ave & 197B St (SW)
    - 116A Ave & 197B St (SE)
    - 116A Ave & 198 St (SW)
    - 116A Ave & 198 St (SE)
  - Trailhead bollard replacements:
    - 11744 Harris Road
    - 11737 192A Street
    - 12175 193A Street (193st access)
    - 12175 193A Street (193Ast access)
    - 19771 Sunset Lane
    - 19770 Honeydew Drive

ENGINEERING & OPERATIONS CAPITAL PLAN

KEY CHALLENGES FOR 2018 TRANSPORTATION

Pavement Management

Pavement management studies are conducted every five years to determine if the City's asphalt repair program is keeping pace with asphalt degradation. This work consists of two distinct tasks; a pavement condition assessment and a pavement management strategy.

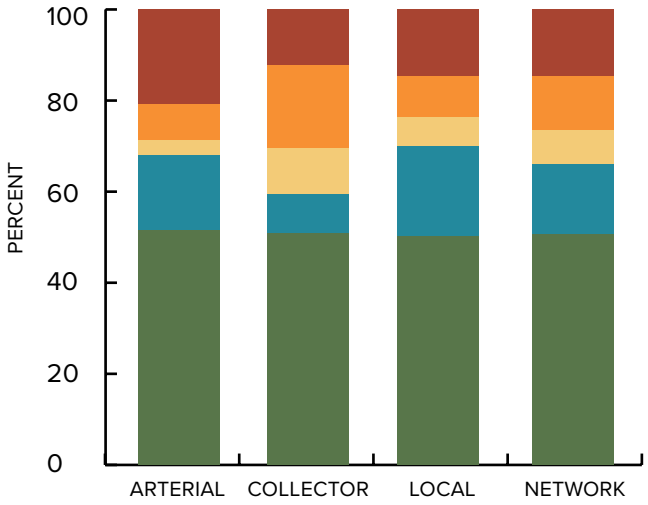
In 2017, a pavement condition assessment and a pavement management strategy was completed which can be referenced to the previous 2012 study to recognize trends. Since 2012, road construction budgets have been allocated 80 percent to collector and arterial roads and 20 percent to local roads. The graphs below illustrate the corresponding pavement condition changes with arterial and collector roads improving and local roads deteriorating.

Additionally, throughout the 2016/2017 winter, the road network experienced numerous freeze thaw cycles and snow related damage. As a result, emergency pavement repair costs and line painting costs are greater than previous years.

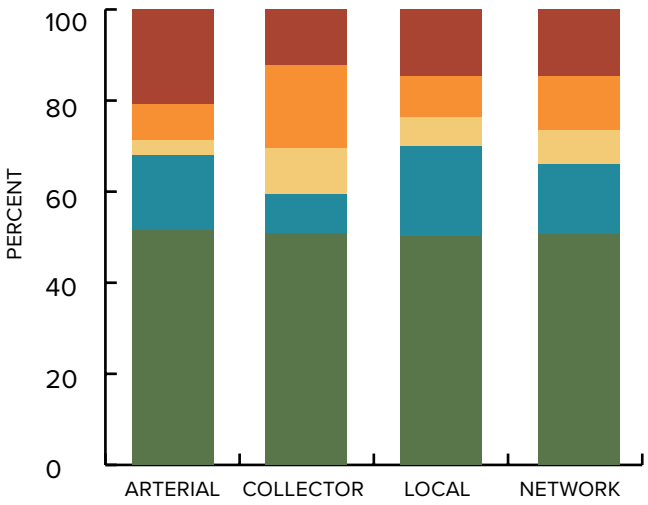
The 2017 study suggests that in order to maintain the current average pavement conditions a budget of $1,200,000 per year (2017 dollars) is required. Alternatively, in order to improve the current average pavement conditions, a capital budget of $1,300,000 per year (2017 dollars) is required. Staff have currently budgeted an average of $1,400,000 over the next 5 years for pavement rehabilitation.

In 2018, Staff will review the recent pavement management strategy against the five-year capital plan to determine if project priorities should be adjusted based on the recent condition assessments.

2011 PAVEMENT CONDITION



2017 PAVEMENT CONDITION



ENGINEERING & OPERATIONS CAPITAL PLAN

Pedestrian and Cycling Master Plan

In 2012, the City completed and Council adopted a Pedestrian and Cycling Master Plan which included recommended improvements to the City's active transportation infrastructure (sidewalks, pedestrian crossings, bike lanes and multi-purpose pathways). In 2015, Council approved 4 years of funding for plan implementation concluding in 2018. In 2019, a decision package will be presented to Council to consider ongoing funding requirements for active transportation projects. Upcoming 2018 projects will be prioritized by the Active Transportation Committee in the spring.

Traffic Patterns and Volumes

Removing the toll structure on the Golden Ears and Port Mann bridges has resulted in commuting traffic pattern changes. The magnitude of these changes and the impact upon our community require further observations.

East/west traffic volumes through Pitt Meadows are increasing as development continues in the communities to our east and these volumes will continue to increase in future years. This increase will continue to put pressure on the City's corridors, as traffic will seek alternate east/west routes other than the Lougheed Highway.

There is continued Provincial focus on the regional transportation of goods through the Gateway network. Accordingly, the Pitt Meadows rail and road networks are expected to see higher volumes and longer trains in the future.

Speeding concerns within local residential neighborhoods continues to provide challenges and requires education, engineering and enforcement. When warranted, the City's recently revised traffic calming policy has provided a process to prioritize these requests.

KEY INITIATIVES FOR 2018 – TRANSPORTATION

2018 PROPOSED PROJECTS	VALUE
HAMMOND ROAD OVERLAY (BONSON ROAD TO KATZIE SLOUGH)	$370,000
THOMPSON ROAD REPAVE	$500,000
FORD ROAD REPAVE (WOOLRIDGE TO WEST EXTENT)	$275,000
KATZIE SLOUGH BRIDGE REPLACEMENT	$1,330,000
SOUTH ALOUETTE BRIDGE REHAB	$383,000*
LADNER ROAD BRIDGE DESIGN	$100,000
OLD DEWDNEY TRUNK PAVEMENT REHABILITATION (SHARPE ROAD TO HALE ROAD)	$660,000

*budget carried over from 2017

ENGINEERING & OPERATIONS CAPITAL PLAN

DRAFT TRANSPORTATION CAPTIAL PLAN 2018

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
ENG & OPS - TRANSPORTATION								
MISC ROAD ASSET REHAB 02-2-90-8158	09-TR-001	3	60,000	60,000	60,000	60,000	60,000	300,000
MISC ROADS - IMPROVEMENTS 02-2-90-7700	09-TR-002	3	10,000	10,000	10,000	10,000	10,000	50,000
HAMMOND RD OVERLAY BONSON TO KATZIE 02-2-90-7744	09-TR-024	3	370,000					370,000
ACTIVE TRANSPORTATION 02-2-90-7745	09-TR-028	3	100,000					100,000
VARIOUS BRIDGE MAINTENANCE 02-2-90-7752	09-TR-062	3	20,000		20,000		20,000	60,000
SIDEWALK REPAIR 02-2-90-7768	12-TR-099	1	20,000	20,000	20,000	20,000	20,000	100,000
THOMPSON ROAD - REPAVE 02-2-90-8155	15-TR-019	3	500,000					500,000
WILDWOOD CR REPAVE-HAMMOND TO BONSON 02-2-90-8156	15-TR-034	3		420,000	275,000			695,000
MCKECHNIE RD REPAVE-ODT TO CONNECTING 02-2-90-7739	15-TR-035	3		500,000				500,000
FORD RD REPAVE-WOOLRIDGE TO WEST END 02-2-90-7779	15-TR-042	3	275,000					275,000

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

DRAFT **TRANSPORTATION** CAPTIAL PLAN 2018 **(CONTINUED)**

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
HALE RD REPAVE-CRANBERRY TO DYKE 02 290 7713B39	15-TR-055	4			250,000		250,000	500,000
LADNER RD REPAVE-RANNIE TO MIDDLETON 02-2-90-7760	15-TR-061	3		410,000				410,000
FRASER WAY UPGRADE 02-2-90-7767	15-TR-081	4					355,000	355,000
KATZIE SLOUGH BRIDGE - HARRIS RD 02-2-90-7748	15-TR-084	3	1,330,000					1,330,000
MIDDLETON RD REPAVE 02-2-90-7774	15-TR-086	4			300,000			300,000
ADVENT ROAD MILL & PAVE 90-7784	15-TR-096	4				100,000		100,000
ADVENT ROAD MILL & PAVE 90-7784	15-TR-096	4				100,000		100,000
LADNER ROAD BRIDGE 02-2-90-7765	15-TR-102	3	100,000	1,050,000				1,150,000
HARRIS ROAD PAVING (URBAN AREA) 90-7786	16-TR-111	3				825,000		825,000
MCDONALD/ PATRICK ROAD 90-7787	16-TR-113	3				260,000		260,000
PAVEMENT MANAGEMENT 02 290 7769	16-TR-115	3					75,000	75,000
NEAVES ROAD PAVEMENT REPAIR 02 290 7705	16-TR-116	2			440,000			440,000

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

DRAFT **TRANSPORTATION** CAPTIAL PLAN 2018 **(CONTINUED)**

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
NEAVES RD BIKE LANES 02 290 7783	16-TR-117	3			350,000		350,000	700,000
HARRIS RD BETWEEN 2 DEWDNEYS 90-7788	16-TR-118	3				150,000		150,000
TRAFFIC CALMING ENGAGEMENT & IMPLEMENTATION	18-TR-001	n/a	50,000	50,000	50,000	50,000	50,000	250,000
SHARPE TO HALE RD - OLD DTR - 2 PHASES	18-TR-003	2	660,000					660,000
ENG & OPS - TRANSPORTATION TOTAL			**3,495,000**	**2,520,000**	**1,775,000**	**1,925,000**	**1,190,000**	**10,905,000**

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

ENGINEERING & OPERATIONS CAPITAL PLAN

2018 CAPITAL ASSETS PLAN
UTILITY INFRASTRUCTURE

Utility infrastructure projects include water and waste water systems (both sanitary and storm drainage). Projects in this category include the design, maintenance, construction and purchase of these assets to keep them functional and in a good state of repair in order to maintain an exceptional level of service to our residents.

The Engineering and Operations divisions are responsible for these assets. The engineering division collates these corporate projects and helps prioritize them based on criteria that include the age and condition of the assets, their forecasted level of service, any health or safety risks and the availability of funds. When a project is identified as a priority and is approved by Council, the engineering division assumes responsibility for managing the design, construction and acquisition of these assets through a third party engineering contractor.

Depending on complexity, these projects may require multiple years to complete. Accordingly, projects may be segmented to match funding constraints.

An investment of $3,155,000 is required to fund the preliminary 2018 utility infrastructure projects.

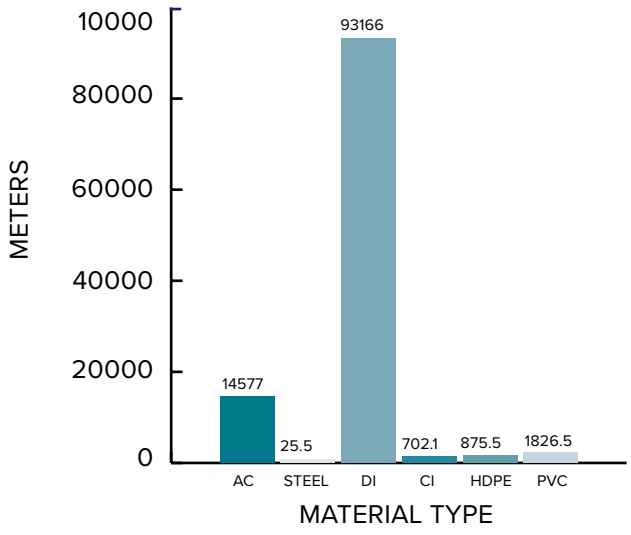
AT A GLANCE

Utility Infrastructure Asset Statistics

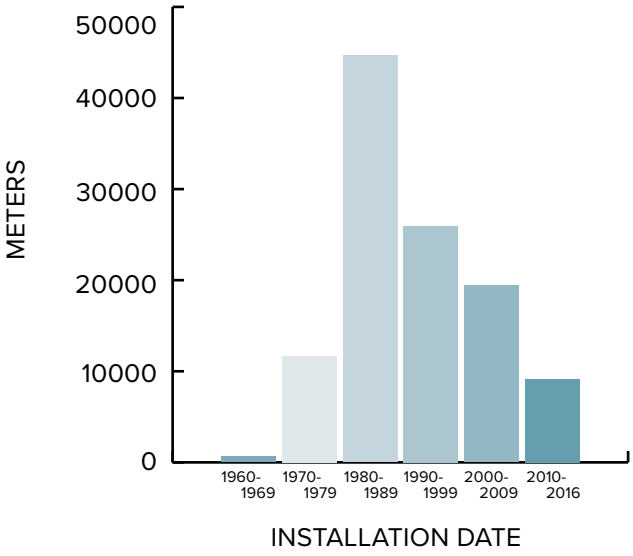
Water Distribution System

- The City purchases the water it distributes from Metro Vancouver and the City's trunk distribution system is constructed, maintained and upgraded under a Joint Supply Agreement with Metro Vancouver.
- A significant portion (80%) of the water distribution system is constructed of Ductile Iron pipe and is in good condition.

WATER SYSTEM INVENTORY



WATER SYSTEM AGE DISTRIBUTION



AT A GLANCE

Utility Infrastructure Asset Statistics

(CONTINUED)

The City continues to replace aged Asbestos Cement Water (AC) Mains and is replacing these mains with Ductile Iron (DI) pipe. This program will be realized over the next twenty years with an anticipated completion for replacement by 2038. There remains approximately 14,600 meters (13.1 %) of AC pipe out of a total system of 111,200 metres of water main for replacement. This equates to a yearly replacement rate of 730m, equivalent to approximately $875,000 per year (2017 dollars). Staff have currently budgeted an average of $1,000,000 over the next 5 years for AC pipe replacement.

The majority of the City of Pitt Meadows Asbestos Cement Water Mains were installed in the early1970's with a life expectancy between 50 and 70 years. Studies have indicated that, in normal use, AC pipe does not pose a threat to public health. Replacing AC mains, however, prior to failure is important in order to prevent decaying AC mains. AC replacement by 2038 will ensure all AC pipe is replaced within its life expectancy.

- Estimated Replacement Value for the City's water distribution assets is $100,900,000.

CURRENT ASSETS

ASSET CATEGORY	QUANTITY
WATER MAINS	112.5 KM
PRESSURE REDUCING STATIONS	6
BOOSTER STATION	1
FIRE HYDRANTS	481
VALVES	989
METERS	720
SERVICE CONNECTIONS	3,951

SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS

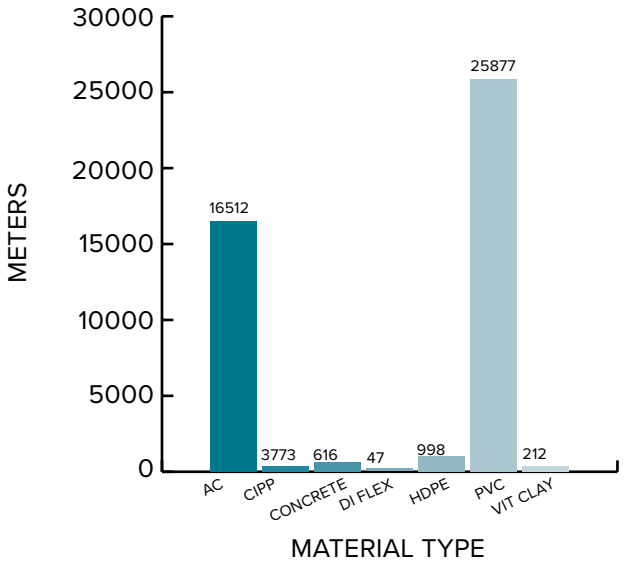
ASSET TYPE	ASSET COMPONENT	USEFUL LIFE (YEARS)
WATER NETWORK	WATER PIPES	45 to 100
	SERVICE CONNECTIONS	50
	BOOSTER STATION	30
	HYDRANT	50
	WATER METER	20
	PRV STATION	50
	WATER VALVES	50

ENGINEERING & OPERATIONS CAPITAL PLAN

Sanitary Sewer System

- The sanitary sewer collection system discharges to the Metro Vancouver Sanitary Sewer Collection pump station on Baynes Road on-route to the regional Annacis Island Sewerage Treatment Plant in Delta, BC.
- The City has a long-term replacement plan for the conversion of Asbestos Concrete (AC) mains to PVC mains, and where possible, mains are lined to extend their useful life for an additional 50 years. Trenchless technologies such as pipe lining can be a cost effective way of extending infrastructure useful life expectancies.
- Development activity provides for the installation, extension and or capacity upgrades of sanitary sewer mains, as required.
- Estimated Replacement Value for the City's sanitary sewer system assets is $32,300,000.

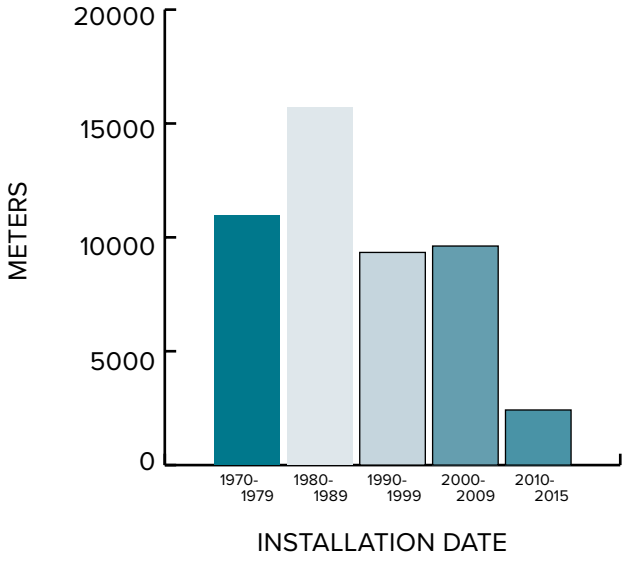
SANITARY SYSTEM INVENTORY



CURRENT ASSETS

ASSET CATEGORY	QUANTITY
SEWER MAINS	48.5 KM
SEWER LIFT STATIONS	8
PUMPS & CONTROLS	16
MANHOLES	697
GENERATOR	6 FIXED & 1 PORTABLE
SERVICE CONNECTIONS	3,035

SANITARY SYSTEM AGE DISTRIBUTION



SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
SANITARY SEWER NETWORK	GAS MONITORS	10
	LIFT STATIONS	50
	MANHOLES	70
	SEWER MAIN -50 MM	80
	SEWER MAIN -100 MM	30 TO 80
	SEWER MAINS -150 MM	80
	SEWER MAINS -200 MM	30 TO 125
	SEWER MAINS -250 MM	30 TO 80
	SEWER MAINS -300 MM	30 TO 80
	SEWER MAINS -375 MM	30 TO 80
	SEWER MAINS -400 MM	30
	SEWER MAINS -450 MM	30 TO 80
	SEWER MAINS -500 MM	30 TO 80
	SEWER MAINS -525 MM	80
	SEWER MAINS -530 MM	80
	SEWER MAINS -675 MM	80
	SERVICE CONNECTIONS	50

Storm Drainage

- There are four separate municipal drainage systems in the City with a total of 204 km of ditches that require regular cleaning and maintenance.
- The ditch and culvert system was reviewed by a consultant in 2007 to determine existing and future capacities. Despite investment in drainage infrastructure in the short term, drainage infrastructure continues to age faster than the City's current rate of replacement. A condition assessment will be completed in 2018 to assist with asset management planning.
- The majority of the drainage pump stations were constructed in the early 1980`s under the Agriculture and Rural Subsidiary Agreement (ARDSA) program and the pumps are now coming to the end of their life cycle and need replacement. This work has been underway since 2010.

ENGINEERING & OPERATIONS CAPITAL PLAN

Pump Stations

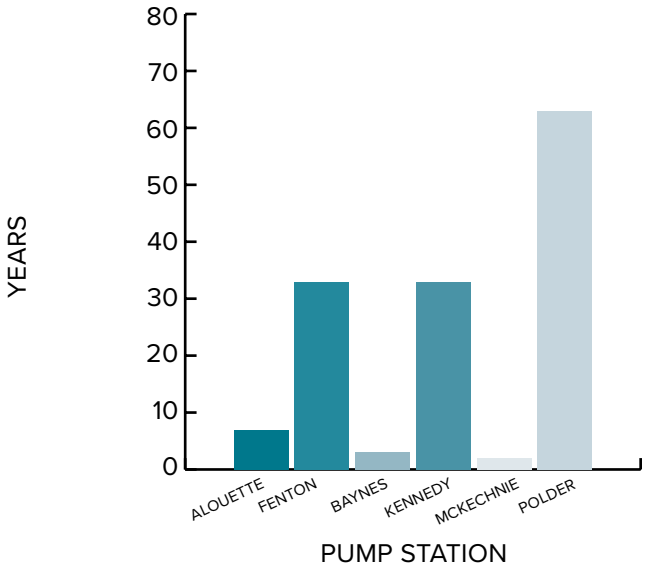
- The pumps in the Area #1 station (Alouette) were replaced in 2010 with a grant from the Emergency Flood Response Program.
- The pumps in the Area #2 and #3 (Fenton, Kennedy, McKechnie) are now being replaced, as funding is available.
- The pumps in the Baynes Road Pump Station were retrofit including new controls in 2014.
- The pump station in area #4 (Polder) was built in 1954 and requires replacement; parts are limited due to the age of the station. In 2017, the City was awarded a $4.6 million grant through the Small Communities Fund to finance the critical upgrade of the Pitt Polder Pump Station. The City's reserves will fund the municipal portion or $2.3 million of the project. The new pump station will meet the current Federal and Provincial standards for environmental safety and efficiency. The anticipated project completion date is spring of 2019.

The estimated Replacement Value for the City's drainage infrastructure assets is $76,100,000.

CURRENT ASSETS

ASSET CATEGORY	QUANTITY
STORM MAINS	48.9 KM
SERVICE CONNECTIONS	2,343
CATCH BASINS	1,405
MANHOLES	720
PUMP STATION & FLOOD BOXES	6
PUMPS	15
CULVERTS	740
OPEN DITCHES (PUBLIC LAND)	176.7 KM
FLOODGATES	11

PUMP STATION YEARS OPERATIONAL SINCE RETROFIT



SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
STORM SEWER (DRAINAGE) NETWORK	STORM PIPES	30 TO 80
	STORM SERVICE CONNECTIONS	50
	CULVERTS	30 TO 100
	CATCH BASINS	50
	FLOOD BOXES	50
	HEADWALL	70
	MANHOLES	70
	PUMP STATIONS (INCLUDES COMPONENTS)	50
	PUMP	35
	STORM INLET	50
	TRASH RACKS	30

ENGINEERING & OPERATIONS CAPITAL PLAN

2017 ACHIEVEMENTS **UTILITIES**

In 2017, the following three Utility Projects were tendered:

1. 332m of Waterline replacement on Wildwood Crescent
2. 630m of Waterline replacement on McKechnie Road
3. Harris Road culvert relocation / replacement at the Katzie Slough bridge

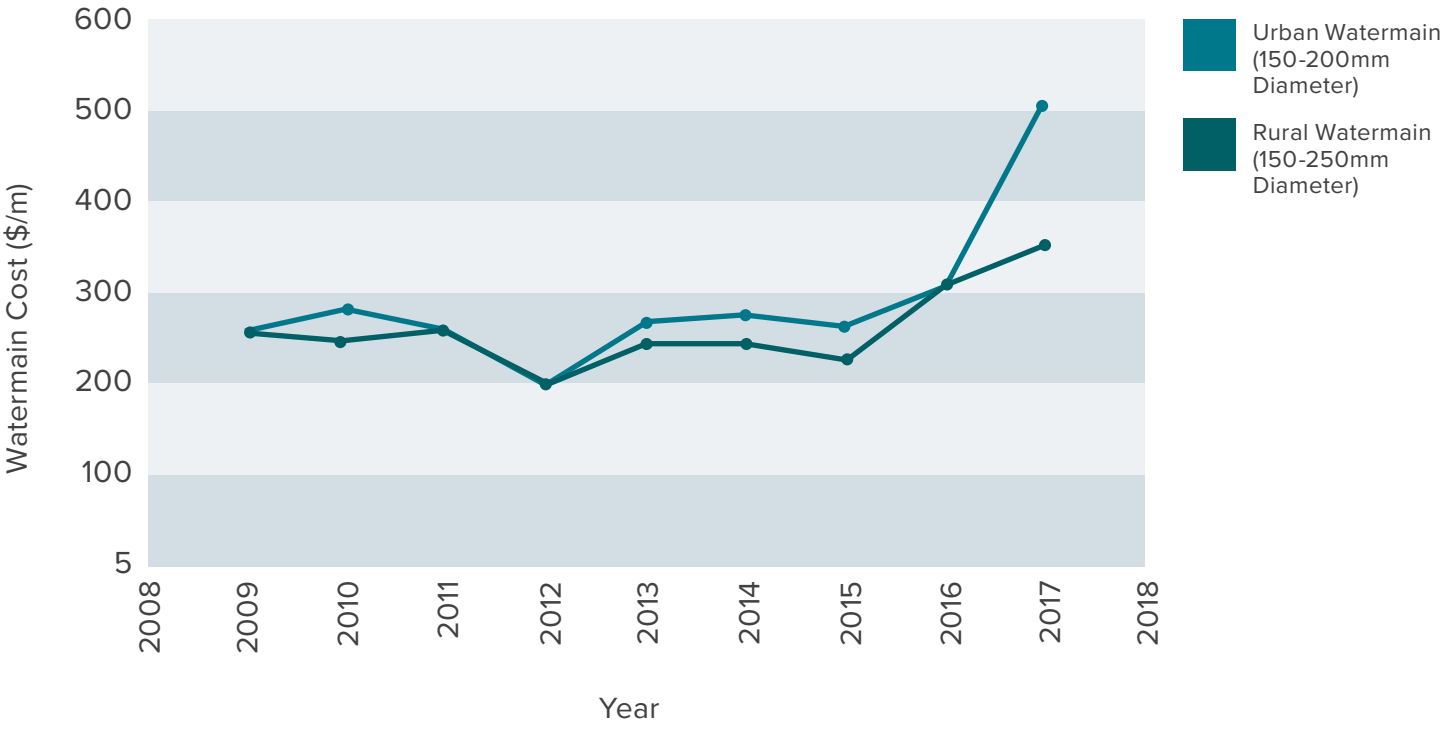
However, a market price increase was experienced far outside of the engineers estimate. This is demonstrated by the curve below:

It appears a number of the City's prequalified contractors have carried a significant amount of work over from the winter of 2016 snow storm and have priced the 2017 work accordingly. This resulted in a 64% increase in urban water main replacement and 14% increase in rural waterline replacement on a cost per meter analysis.

While all Capital infrastructure work is of high importance, given the pricing received, staff recommended that no contract be awarded due to budget constraints and the three Utility projects be deferred to 2018. At this time there are no known failures of the infrastructure in question.

While it is possible the market jump could be sustainable, it is also quite possible that as projects are completed and market saturation is reduced that pricing could revert back to historic norms.

COMPETITIVE TENDER WATERMAIN LOW BID COMPARISON



As for the culvert relocation on Harris Road, staff recommended to include this scope within a revised 2018 bridge replacement budget and to redistribute the 2017 culvert maintenance budget to fund a number of smaller failing culverts throughout the City.

KEY CHALLENGES FOR 2018 UTILITIES

Sustainable Funding

Obtaining sustainable funding for asset lifecycle and replacement purposes is a challenge for the City. Although the City continues its commitment to increase capital funding, there is a historical funding gap that forces the deferral of infrastructure work. This situation will continue until the annual funding gap matches the annual replacement value. The risk is an eventual increase in costs when assets fail.

Prices fluctuate with the economy, with the cost of fossil fuels influencing material, labour availability and construction costs. As this trend continues, estimating project costs is becoming increasingly difficult to budget to maintain current infrastructure replacement levels. Projects are often reviewed and reduced in scope to fall within the dedicated budget amount. As stated previously, in 2017, utility construction increased approximately 14% to 64% over previous years.

Despite investments in drainage, the City's storm drainage infrastructure, in particular pumps and culverts, continues to age faster than the City's current rate of replacement, which in turn drives up operating costs. The two biggest challenges in the utility are:

- Spreading the costs of upgrading and/or replacing infrastructure that is well beyond its expected useful life over the long term to manage costs and the risk associated with infrastructure failure; and
- Building up reserves to sustainable levels in order to reduce the City's reliance on borrowing and grants.
- An Integrated Stormwater Management Plan for the urban area, mandated by Metro Vancouver and the Province, was completed in 2015. This plan includes capital expenditures and highlights areas of immediate focus.

Environmental Protection

Environmental protection and fisheries mandates continue to challenge implementation of the City's ditch maintenance system and pump station upgrades.

There is an increased public interest in Katzie Slough. Volunteer groups have an interest in planting the foreshore in hopes of establishing additional habitat and introducing additional freshwater to the drainage system. This provides a unique challenge for the City managing the many competing interests. Accordingly staff is preparing an Integrated Water Management Master Plan to coordinate these efforts. This complex study was initiated in 2017 with an expected completion date of Q4 2019.

Water Distribution

The City is responsible for the delivery of potable water to a population of approximately 18,573, including agricultural water users. The provision of domestic water to agricultural users is unique to this region and sets Pitt Meadows apart from the rest of Metro Vancouver. Over 55% of the City's water distribution system services the rural area. As a result, the City of Pitt Meadows is one of the largest per capita water users in Metro Vancouver. Infrastructure demands in the rural area are driving significant upgrades in the water distribution system.

Sanitary Sewer System Maintenance

The City's sanitary sewer Asbestos Cement (AC) pipes have been reviewed for life cycle replacement and additional testing has been completed on extracted pipe sections to determine time frames for these replacements.

KEY CHALLENGES FOR 2018 – UTILITIES (CONTINUED)

A comprehensive rehabilitation schedule with estimated costs has been completed for a long-term replacement funding strategy. A strategy has been developed to re-line existing mains with poly vinyl chloride (PVC) material as an alternative to full replacement of the AC mains. To date the City has rehabilitated approximately 3,773 meters (19% of AC mains) by this method.

Lining existing aged Asbestos Cement (AC) Pipes with Cured in Place Polyethylene (CIPP) extends the life of the pipes by approximately 50 years and is a low carbon solution to maintain our system (alternate technique requires trench excavation and laying new pipe). Funding for this program is every second year and is estimated to be realized over 32 years with a completion date of 2050. There remains approximately 16,500 linear meters of the original 20,285 linear meters of AC sewer pipe for replacement. This equates to a replacement rate of 1,050m every two years, equivalent to approximately $300,000 (2017 dollars).

KEY INITIATIVES FOR 2018 – UTILITIES

STORM DRAINAGE PROJECTS	VALUE
CULVERT REPLACEMENTS	$100,000
KENNEDY PUMP STATION - PUMP REPLACEMENT (2 YEAR PROJECT) *ADDITIONAL BUDGET REQUIRED IN 2019	$880,000
SANITARY SEWER PROJECTS	**VALUE**
MISCELLANEOUS SEWER CURED IN PLACE POLYETHYLENE (CIPP) LINING	$300,000
NORTH LOUGHEED LIFT STATION *REMAINING BUDGET CARRIED OVER FROM 2017	$150,000
WATER PROJECTS	**VALUE**
AC REPLACEMENT ADVENT ROAD WEST OF 190A STREET	$260,000
AC REPLACEMENT 194B STREET & 11B AVE	$480,000
AC REPLACEMENT WILDWOOD CRESCENT *REMAINING BUDGET CARRIED OVER FROM 2017	$90,000
AC REPLACEMENT MCKECHNIE ROAD MAIN *REMAINING BUDGET CARRIED OVER FROM 2017	$205,000
AC REPLACEMENT SHARPE ROAD MAIN	$560,000

ENGINEERING & OPERATIONS CAPITAL PLAN

DRAFT **UTILITY** CAPITAL PLAN FOR 2018

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
ENG & OPS - UTILITY - WATER								
VARIOUS WATER REHAB 06-2-94-8100	09-WS-001	3	30,000	30,000	30,000	30,000	30,000	150,000
VARIOUS WATER REHAB 06-2-94-8100	09-WS-001	3	30,000	30,000	30,000	30,000	30,000	150,000
AC REP. - 117 AVE	15-WS-047	3					550,000	550,000
AC REP. - 194A, 194B	15-WS-048	3			275,000			275,000
AC REP. - 195A ST, 195B ST, 117B AVE	15-WS-049	3			400,000			400,000
AC REP. - 194B ST, 118B AVE	15-WS-053	3	480,000					480,000
AC REP. - 195B ST, 119A AVE, 120B AVE	15-WS-054	3				570,000		570,000
AC - REP. - 119 AVE, 116A AVE	15-WS-057	3		250,000				250,000
AC REP. - WILDWOOD CRESCENT MAIN 06-2-94-8708	15-WS-058	3	90,000	200,000				290,000
AC REP. - MCKECHNIE ROAD MAIN 06-2-94-8137	15-WS-059	3	205,000					205,000
AC REP. - SHARPE ROAD MAIN 06-2-94-8716	15-WS-060	3	560,000					560,000
AC REP. - 115A AVE, 197A ST, 197B ST	15-WS-065	3			350,000			350,000
PARK ROAD WATER SERVICE TRANSFERS 06 294 8156	15-WS-067	4			150,000			150,000
CI REP. - BONSON RD	15-WS-076	3			375,000			375,000

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

ENGINEERING & OPERATIONS CAPITAL PLAN

DRAFT **UTILITY** CAPITAL PLAN FOR 2018

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
AC REP. - 188A ST, 188B ST, 119B AVE 06-294-8162	16-WS-079	3		550,000				550,000
AC REP. - 116A, 193, 193B	17-WS-084	3		400,000				400,000
PRV REPLACEMENT - LOUGHEED 94-8720	17-WS-085	3				400,000		400,000
ENG & OPS - UTILITY - WATER TOTAL			**1,625,000**	**1,430,000**	**1,580,000**	**1,000,000**	**580,000**	**6,215,000**
ENG & OPS - UTILITY - SEWER								
SEWER MISC. REPAIRS 08-2-94-8100	09-SS-001	3	15,000	15,000	15,000	15,000	15,000	75,000
SEWER PIPE REHABILITATION 08-2-94-8209	09-SS-023	2	300,000		300,000		300,000	900,000
SCADA UPGRADES 08-2-94-8211	10-SS-024	3	10,000	10,000	10,000	10,000	10,000	50,000
NORTH LOUGHEED LIFT STATION REPLACEMENT 08294 8009	16-SS-025	2	150,000					150,000
MCMYNN FORCEMAIN EXTENSION	18-SS-036	3		170,000				170,000
ENG & OPS - UTILITY - SEWER TOTAL			**475,000**	**195,000**	**325,000**	**25,000**	**325,000**	**1,345,000**
ENG & OPS - UTILITY - DRAINAGE								
STORM MISC. REPAIRS 04-2-94-7105	09-DS-001	3	20,000	20,000	20,000	20,000	20,000	100,000

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

ENGINEERING & OPERATIONS CAPITAL PLAN

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
ALL PUMPSTATIONS-REFURBISH/REPAIR 04-2-94-8000	09-DS-012	3	20,000	20,000	20,000	20,000	20,000	100,000
CULVERT REPLACEMENTS 04-2-94-8009	09-DS-015	2	100,000	150,000	100,000	150,000	100,000	600,000
TRASH RACK SYSTEMS 04-2-94-8556	11-DS-038	3			350,000	350,000	350,000	1,050,000
MAJOR SLOUGH CLEANING 04-2-94-7116	13-DS-036	2		100,000	100,000			200,000
DRAINAGE PUMP REPL-KENNEDY A3 04-2-94-8005	15-DS-019	3	880,000	467,500				1,347,500
DRNG PUMP LIFECYCLE REPL - FENTONAREA2 04 294 8512	15-DS-022	3				545,000	250,000	795,000
FILL SITE REVIEW 04 294 8513	15-DS-043	2	35,000					35,000
ENG & OPS - UTILITY - DRAINAGE TOTAL			**1,055,000**	**757,500**	**590,000**	**1,085,000**	**740,000**	**4,227,500**

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

ENGINEERING & OPERATIONS CAPITAL PLAN

2018 CAPITAL ASSETS PLAN – MUNICIPAL FLEET AND EQUIPMENT, DIKES, ENGINEERING AND THE ENVIRONMENT **(PUBLIC ASSETS)**

These public asset projects include fleet and equipment, dikes, engineering and the environment. Projects in this category include the purchase, repair and replacement of these assets to keep them functional and in a good state of repair in order to maintain an appropriate level of service to our residents.

Municipal Fleet and Equipment, Dikes and the Environment require an investment of $674,500 to fund these preliminary 2018 public asset projects.

AT A GLANCE PUBLIC ASSET STATISTICS

Public Works Fleet and Equipment

- Municipal equipment is utilized to perform a large number of maintenance, public works and development services functions.
- The City's fleet is used to maintain the water, sewer, drainage, roads, buildings and solid waste assets of the municipality and for bylaw enforcement, building inspection and fire to respond to emergencies.
- Estimated Replacement Value for the City's fleet and equipment is $5,400,000

SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
VEHICLES	DUMP TRUCK	10
	FIRE TRUCK	15 TO 20
	HEAVY DUTY VEHICLES	5 TO 15
	LIGHT DUTY VEHICLES	10
	SNOW PLOW	10
	TRAILER	10
	VEHICLE ATTACHMENT & PARTS	5 TO 20
	ZAMBONI	10

ENGINEERING & OPERATIONS CAPITAL PLAN

Diking System

- Pitt Meadows is a community bordering three 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 dike systems across 4 separate diking and drainage areas.
- There are two types of Dikes in Pitt Meadows. Type 1 dikes are standard dikes built between 1977 and early 1989 and Type 2 Dikes are nonstandard agricultural dikes constructed/rebuilt between 1949 and 1950.
- Diking Area #2 and #3 dikes (type 1) were rebuilt in 1977 to 1989 and have an indeterminate lifespan. Operations have completed periodic gravel topping over the years. Recent toppings have improved the surface to accommodate pedestrian traffic.
- Diking Area #1 and #4 are agricultural standard dikes and has an indeterminate lifespan. Operations maintain the slopes by mowing and removal of any trees within the dike structure.
- New flood construction elevations recommended by Fraser River Basin Council will likely require all standard dikes to be raised. There is no timeline or dollar value determined at this time to perform this work. The City's flood risk assessment is scheduled to complete in Q1 of 2018 which will provide direction on the next steps.

CURRENT ASSETS

ASSET CATEGORY	QUANTITY
DIKE (TYPE 1)	30.5 KM
DIKE *(TYPE 2)	30.4 KM

*Agricultural dike (including Pitt Addington dike)

2017 ACHIEVEMENTS – PUBLIC ASSETS

Public Works Fleet and Equipment

- **Equipment Purchases**. In 2017, the following pieces of equipment were purchased:
  - Development Services Vehicle Replacement (Ford Escape)
  - Public Works Superintendent Vehicle (Ford F-150)
  - Dump Truck Replacement (Single Axle)
  - HIAB Truck Replacement

Diking

- **Irrigation Study**. In 2016, the drainage system was successfully modelled to determine its capacity. Additional modelling is still required to determine the feasibility to bring water into the system for irrigation purposes and be able to move water out of the system sufficiently if inclement weather occurs. Data from this study will be integrated into the 2018 Integrated Water Management Master Plan.

ENGINEERING & OPERATIONS CAPITAL PLAN

2017 ACHIEVEMENTS – PUBLIC ASSETS (CONTINUED)

- **National Disaster Management Program Funding**. In 2017, the City of Pitt Meadows was awarded a grant of $85,000 toward a Flood Hazard Risk Assessment project, under the National Disaster Mitigation Program (NDMP) established by the Government of Canada in partnership with the Province of BC. The project will enable the completion of a comprehensive risk assessment of flood related hazards in the city's floodplain and provide critical information for emergency planning and resource allocation.
  The Flood Hazard Risk Assessment project will identify risks that directly affect land owned by the City, portions of land in the City of Maple Ridge, the Katzie First Nation, Metro Vancouver Regional District, the Province of British Columbia, and private landowners.
  Using established risk assessment measures, the project will also estimate likelihood of flooding, consequences of flooding, as well as flood hazards, asset inventory, identify vulnerable populations, and dike structural and seismic hazards. The study is expected to complete in the spring of 2018.

Engineering & Environment

- **Achievements**. Included within the Operations and Engineering Operating Business Plan.

KEY INITIATIVES FOR 2018 – PUBLIC ASSETS

2018 PROPOSED PROJECTS	VALUE
¾ TON PICKUP REPLACEMENT	$45,000
TANDEM AXLE DUMP TRUCK REPLACEMENT	$295,000
SNOW BLOWER REPLACEMENT	$12,000
DRAINAGE ASSET CONDITION ASSESSMENT	$150,000
WATER ASSET CONDITION ASSESSMENT	$75,000

ENGINEERING & OPERATIONS CAPITAL PLAN

DRAFT **PUBLIC ASSETS** CAPITAL PLAN FOR 2018

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
ENG & OPS - FLEET & EQUIPMENT								
2006 BOBCAT REPLACEMENT M068 02-2-90-8039	15-FE-048	3				145,000		145,000
PICKUP REPL 2010 1/2 TON M178 02-2-90-8058	15-FE-052	3				45,000		45,000
2007 3/4 TON PICKUP REPLACEMENT M194 -8060	15-FE-054	3	45,000					45,000
DUMP TRUCK M195 2007 TANDEM AXLE 02-290-8068	15-FE-055	3	295,000					295,000
TON PICKUP REPL 2010 1/2 TON M150 02-2-90-8060	15-FE-056	3				45,000		45,000
'97 TORO SNOWBLOWER REPL M395 02-2-90-8057	15-FE-058	3	12,000					12,000
PAINT SPRAYER M323 02-2-90-8023	15-FE-060	3	20,000					20,000
RIDE ON ROLLER(REPL M290) 02-2-90-8061	15-FE-061	3				65,000		65,000
TRAILTECH TRAILER (REPL M306) 290 8065	15-FE-062	3				15,000		15,000
TRAILTECH TRAILER (REPL M307) 90 8065	15-FE-063	3		20,000				20,000
2010 SERVICE VAN REPLACEMENT M179 90-8070	15-FE-066	3					145,000	145,000
'16 TRACTOR REPLACEMENT MF-051 (M082) 90-8071	15-FE-067	3					275,000	275,000
ENG & OPS - FLEET & EQUIPMENT TOTAL			**372,000**	**20,000**		**315,000**	**420,000**	**1,127,000**

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

DRAFT **PUBLIC ASSETS** CAPITAL PLAN FOR 2018 **(CONTINUED)**

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
ENG & OPS - UTILITY - DIKING								
DIKING - MISCELLANEOUS REPAIRS 02-2-90-8550	09-DK-001	3	30,000	30,000	30,000	30,000	30,000	150,000
DIKE TOPPING 02-2-90-8551	09-DK-005	3	30,000	30,000	30,000	30,000	30,000	150,000
ENG & OPS - UTILITY - DIKING TOTAL			**60,000**	**60,000**	**60,000**	**60,000**	**60,000**	**300,000**
ENG & OPS - ENGINEERING								
DRAINAGE ASSET CONDITION ASSESSMENT	18-EN-001	3	150,000					150,000
WATER ASSET CONDITION ASSESSMENT	18-EN-002	3	75,000					75,000
ENG & OPS - ENGINEERING TOTAL			**225,000**					**225,000**
ENG & OPS - ENV STEWARDSHIP								
ENVIRONMENTAL CONSULTANTS 92-9706	17-ES-002	2	5,000	10,000	10,000	10,000	10,000	45,000
COMMUNITY CARBON OFFSET PROJECT 92-9708	17-ES-004	2	5,000	5,000	5,000	5,000	5,000	25,000
EXPANDED WASTE STREAM BINS - 2020 DP?	18-ES-006	2	7,500		5,000	5,000	5,000	22,500
ENG & OPS - ENV STEWARDSHIP TOTAL			**17,500**	**15,000**	**20,000**	**20,000**	**20,000**	**92,500**

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

PARKS AND FACILITIES CAPITAL PLAN

OVERVIEW

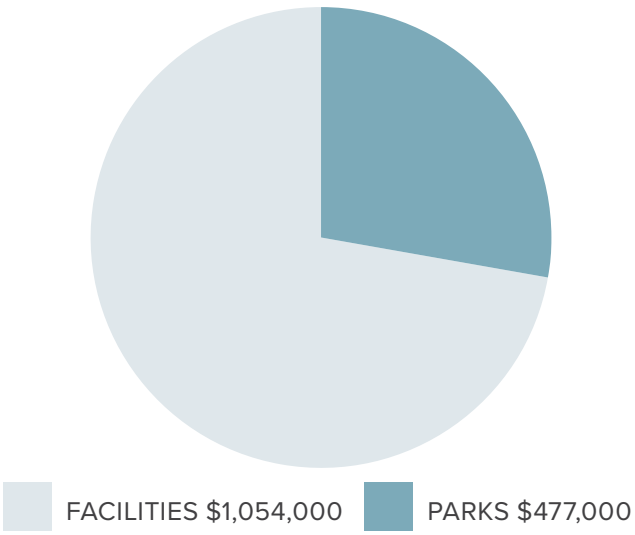
The Parks and Facilities Division is responsible for creating the five-year capital project plan based on approved master plans, emerging community needs and general asset upkeep. This is the first level of prioritization. Once a project is placed on the priority list and is approved by Council, the Division that made the initial project request assumes responsibility for managing the acquisition.

Capital projects are administered by managers for each of their corresponding areas of responsibility.

Parks projects include new park planning and construction, and trail construction. Staff in this area also administer the lifecycle repair and replacement of playgrounds, sports fields as well as a wide variety of other park amenity structures. Facilities projects include all building envelope improvements, lifecycle replacements and repairs.

The budget breakdown between the two divisions is as follows:

CAPITAL BUDGET $ 1,531,000



For 2018, the majority of the Parks and Facilities capital funding will come from the City's Future Capital Reserve Fund, Lifecycle Reserve and Operating Reserve with smaller contributions from DCC's and third party contributors.

Following are further details on the overall asset category, its condition, proposed projects and allocated budget. Lifecycle schedules are dependent on routine maintenance schedules being followed and repairs being addressed as needed.

The proposed 2018 capital budget and the remaining 2019-2022 capital plan represents an investment of $19.53 million in parks and facilities capital assets over this five-year period.

To ensure Capital requirements do not exceed cash flow and grant opportunities, projects have been allocated so as not to exceed available and approved funding capacity in any given year. Projects could be contemplated earlier if grant funding or financing opportunities are realized.

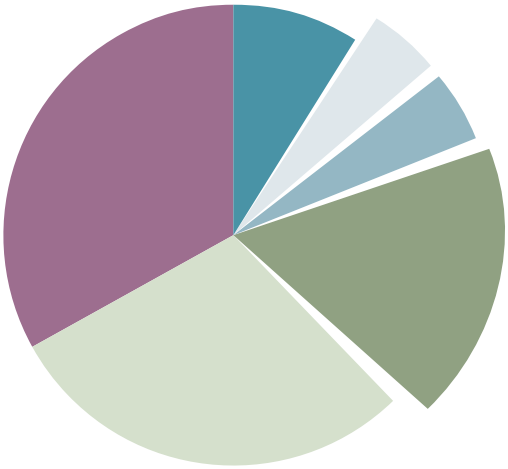
PARKS AND FACILITIES CAPITAL PLAN

2018 CAPITAL ASSETS PLAN - FACILITIES

AT A GLANCE –
Facilities Asset Statistics

The City of Pitt Meadows operates and maintains 20 buildings. These facilities are categorized into the following types:

TYPE OF FACILITIES



ADMINISTRATION BUILDINGS 9%

PUBLIC WORKS BUILDINGS 5%

FIRE HALLS 5%

RECREATION BUILDINGS 19%

HERITAGE BUILDINGS 29%

OTHER BUILDINGS 33%

CURRENT FACILITY ASSETS

ASSET CATEGORY	QUANTITY
CITY ADMINISTRATION BUILDINGS	2
PUBLIC WORKS BUILDING	1
FIRE HALL	1
RECREATION AND CULTURE BUILDINGS	4
HERITAGE BUILDINGS	6
OTHER BUILDINGS	7

Municipal Facility Assets

- City Hall was built in the 1970's with major renovations/additions occurring in 1991 and 2005/06. Minor renovations were completed in 2014.
- The City Hall Annex was constructed in 1984 with renovations completed in 2013.
- The Public Works building and complex was constructed in 1984 with renovations and an expansion completed in 2015.
- The Fire Hall was constructed in 1983 with miscellaneous renovations and upgrades in recent years.
- The Pitt Meadows Family Recreation Centre was constructed in 2001 and remodeled in 2014.
- South Bonson Community Centre was constructed in 2011.
- The Pitt Meadows Arena was extensively renovated in 2012 and is operated by an independent entity.
- The Heritage Hall was built in the 1940's and has seen several renovations over the years.

PARKS AND FACILITIES CAPITAL PLAN

- The building at the corner of Harris Road and McMyn Road was formerly an addition to the old City Hall (pre-1984) and was moved to its present position in 1985. The building was a Visitor Centre for many years and this year has been renovated to become the City Art Gallery.
- The Masson House at the corner of Harris Road and 122nd Street was moved to its current location from the corner of Park and Bonson Roads. The house was extensively renovated and is now leased as a restaurant.
- The Struthers House on Harris Road has been upgraded after a fire destroyed most of the interior in 2009; it is now being leased as a music teaching facility.
- The Civic Centre Parkade adjacent to the Pitt Meadows Family Recreation Centre was built in 2011.
- The estimated replacement value for the City Buildings is $70,000,000.

SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS FOR FACILITIES ASSETS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
FACILITIES	BUILDINGS	
	BUILDING ENVELOPES	40-50
	ROOFS	30
	HVAC – HEATING, COOLING AND VENTILATION	15-30 (WITH SOUND MAINTENANCE PROCEDURES)
	PARKING LOTS	20-30

2017 ACHIEVEMENTS

- **Recreation Facilities**
  - LED light upgrade gymnasium
  - Gym painting
  - Renovation to the youth lounge
- **Heritage Buildings**
  - Painted the interior of building (both floors)
  - Refinished the floors

ARENA

- New bleachers in the Chrysler and Fiat rinks
- New players gates in the Fiat rink
- New players benches in the Volkswagen rink
- Front entrance safety railings
- New safety netting in all rinks
- LED light upgrade in Chrysler rink, entryway and foyer
- Painting

- **Other Buildings**
  - General maintenance of all facilities

PARKS AND FACILITIES CAPITAL PLAN

KEY CHALLENGES

Asset Replacement Planning. Asset Management Plans, including funding the replacement of the City facilities, was presented in 2017. Funding needs are being identified and attached to the asset accordingly, but the City will need to stay cognizant of the funding gap that currently exists.

Gender Neutral Change Rooms. The industry trend is moving away from male and female change room facilities in recreation centers, pools etc., and moving towards universal facilities that can accommodate all individuals and family structures. Pitt Meadows will need to begin planning for facility changes required to convert to this format.

Long-Range Facility Planning. The condition assessments started in 2017 will culminate in a long-range facilities plan to begin looking at the current and long-term needs of the City as well as the maintenance and replacements that may be required. This work is critical to ensure the City's facilities assets are optimized for use and future growth is planned to ensure operating needs are in place.

KEY INITIATIVES FOR 2018 – FACILITIES

2018 PROPOSED PROJECTS	VALUE
SOUTH BONSON HVAC	$100,000
SPORT COURT REPAVING	$60,000
ARENA - STANDS IN CHRYSLER RINK	$80,000
HERITAGE HALL HVAC UPGRADES	$50,000
FIRE HALL – REPLACEMENT PLANNING	$350,000
FACILITIES STRATEGIC PLAN AND IMPLEMENTATION	$70,000
GENERAL LIFECYCLE - FACILITIES	$110,000

PARKS AND FACILITIES CAPITAL PLAN

DRAFT **FACILITIES** CAPITAL PLAN FOR 2018

DEPARTMENT	PROJECT #	PRIORITY	2018	2019	2020	2021	2022	TOTAL
COMM SVCS - FACILITIES								
ARENA BUILDING & EQUIPMENT 02-2-91-8732	13-AR-100	2	185,000	195,000	205,000	215,000	225,000	1,025,000
RECREATION FACILITY MAINT (VARIOUS ACCTS) -8520	13-FA-069	3	180,000	180,000	190,000	190,000	200,000	940,000
CITY FACILITIES - LIFECYCLE MAINT 02 292 9408	15-FA-083	3	110,000	110,000	115,000	115,000	120,000	570,000
CITY HALL - ROOF REPLACEMENT 92-9433	15-FA-088	3			95,000			95,000
HARRIS PARK - POWER UPGRADE 02 291 8702	16-FA-079	3				35,000		35,000
CITY FACILITIES-INDOOR AIR QUALITY SURVEY 92-9434	16-FA-092	3	9,000		10,000		11,000	30,000
CITY FACILITIES - FIRE SAFETY PLANS 92-9441	17-FA-099N	2				12,000		12,000
CITY FACILITIES - HAZARDOUS MATERIALS SURVEY -9442	17-FA-100	2				6,000		6,000
MAIN FIRE HALL - REPLACEMENT 92-9443	17-FA-107	3	350,000	400,000	7,000,000	2,225,000		9,975,000
GENDER NEUTRAL CHANGE ROOMS-REFURBISH FRC & POOL	18-FA-090	3		80,000	45,000			125,000
SOUTH BONSON HVAC-HEAT PUMPS	18-FA-091	1	100,000					100,000
HERITAGE HALL LIFE CYCLE EXTRA MAINTENANCE	18-FA-092	2	50,000	50,000				100,000
HARRIS ROAD PARK WASHROOM BLOCK HOUSE	18-FA-094	2			250,000			250,000
FACILITIES ASSESSMENT -IMPLEMENTATION	18-FA-109	2	50,000					50,000
FACILITIES STRATEGIC PLAN	18-FA-110	2	20,000					20,000
FURNITURE CONDITION ASSESSMENTS	18-FA-111	2			10,000			10,000
COMM SVCS - FACILITIES TOTAL			**1,054,000**	**1,015,000**	**7,920,000**	**2,798,000**	**556,000**	**13,343,000**

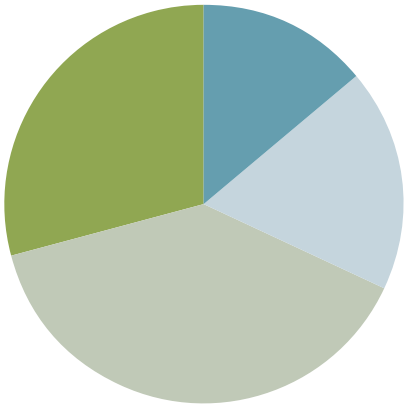
Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)

PARKS AND FACILITIES CAPITAL PLAN

2018 CAPITAL ASSETS PLAN - PARKS

AT A GLANCE –
Parks Asset Statistics

The City of Pitt Meadows operates and maintains 28 parks. These Parks are categorized into the following types:



MUNICIPAL PARKS 14%

COMMUNITY PARKS 18%

NEIGHBORHOOD PARKS 39%

MINI PARKS 29%

CURRENT DEVELOPED PARK ASSETS

ASSET CATEGORY	QUANTITY
MUNICIPAL PARKS	4
COMMUNITY PARKS	5
NEIGHBORHOOD PARKS	11
MINI PARKS	8

Municipal Parks Assets

- Municipal Parks are parks that meet community needs and can have both active areas and protected natural features. Municipal Parks also tend to draw people from outside the community to access the amenities at these parks. Parks in this category include:
  - Harris Landing (9.75 acres)
  - Cottonwood Park/BMX Track (4.08 acres)
  - Shoreline Park (1.74 acres)
  - Menzie's Crossing (1.67 acres)
- Community Parks are parks that are generally between 5 -15 acres, serve a variety of neighborhoods and have recreational facilities. These parks are intended to be a point of visual, social and physical focus for the community. Parks in this category include:
  - Harris Road (4.08 acres)
  - Hoffman (3.65 acers)
  - Pitt Meadows Athletic (15.07 acres)
  - Pitt Meadows Civic Centre/Spirit Square (2.94 acres)
  - Pitt Meadows Secondary (2.63)
- Neighborhood Parks are parks that are generally between 1.2 - 5 acres and often serve as a catchment area to an elementary school or in conjunction with an elementary school. These parks have playgrounds and open grassy areas. Parks in this category include:
  - Bonson (2.02 acres)
  - Eagle (0.83 acres)
  - Mitchell Road (2.85 acres)

PARKS AND FACILITIES CAPITAL PLAN

Municipal Parks Assets CONTINUED

- North Bonson (1.83 acres)
- McLean (1.67 acres)
- Somerset (1.33 acres)
- Waterfront Commons (0.24 aces)
- Davie Jones Elementary (1.88 acres)
- Edith McDermott Elementary (1.80 acres)
- Highland Park Elementary (1.33 acres)
- Pitt Meadows Elementary (1.65 acres)

- Mini Parks are parks that are smaller than 1.2 acres. These parks provide gathering spaces and playgrounds for the local neighborhood. Parks in this category include:
  - Advent (0.13 acres)
  - Chestnut Crescent (0.38 acres)
  - Linden Grove (0.28 acres)
  - Lions Fun (0.17 acres)
  - Morningside East (0.05 acres)
  - Morningside West (0.02 acres)
  - North Commons (0.22 acres)
  - Shinglebolt (0.12 acres)

- The City has 12.4 km of park trails. These trails provide opportunities for people to walk and bike around the community creating neighbourhood connections while enjoying the natural environment around Pitt Meadows. Trails include:
  - Wildwood Trail (1.6 km)
  - Baynes Road Trail (1.8 km)
  - Airport Trail (0.9 km)
    - Harris Road to Baynes Road
  - Fieldstone Walk/Arena Trail (0.9)
  - CPR Trail (2.5 km)
  - Harris Trail (1.2 km)
  - Airport Way Trail (0.7 km)
    – Bonson Road to Golden Ears Bridge
  - Fraser River Trail (1.8 km)
    - Bonons Road to Baynes Road

- The City also has trails along the top of the dikes adding an additional 61 km of trails in the community.

- The estimated replacement value for the City Parks System is $8,000,000.

PARKS AND FACILITIES CAPITAL PLAN

SUSTAINABILITY (LIFE CYCLE) CONSIDERATIONS FOR PARKS ASSETS

ASSET TYPE	ASSET COMPONENT	USEFUL LIFE IN YEARS
PARKS	DIKES	INDEFINITELY (WITH SOUND MAINTENANCE PROCEDURES)
	PARKS	INDEFINITELY (WITH SOUND MAINTENANCE PROCEDURES)
	GREENSPACE	INDEFINITELY (WITH SOUND MAINTENANCE PROCEDURES)
	PLAYGROUND EQUIPMENT	20
	PARK FURNISHINGS (BENCHES, FENCES, PICNIC TABLES)	10
	OUTDOOR TENNIS, BASKETBALL AND SPORT COURTS	15
	GRASS SPORTS FIELDS	10-15
	ARTIFICIAL TURF FIELDS	10 (REPLACING THE TURF)
	TRAILS	15-20 (PAVING AND RE-GRADING)

2017 ACHIEVEMENTS

- **Trails**
  - Signed an agreement for trail maintenance services
  - Overhaul of Baynes Road trail with both grading and new surfacing
  - Maintenance to the Airport Way, Wildwood, Harris and CPR trails
- **Tree Maintenance**
  - Established an urban forestry program
  - Trimmed and removed trees along the trail behind the Pitt Meadows Arena, as per Nav Canada specifications
- **Horticulture**
  - Horticulture refresh of the civic centre complex
  - Installation of self watering planters around the municipal complex
  - Upgrades to landscaping at the Art Gallery and traffic island at 118B Street/Harris Road
- **General Parks**
  - Complete upgrade of the Harris Road Splash Park
  - Improvements to Hoffman Park

PARKS AND FACILITIES CAPITAL PLAN

KEY CHALLENGES

Updating Playground Infrastructure. The City playground infrastructure is aging. Although the play equipment is adequate, it has become outdated in many areas and does not provide the breadth of activity seen in many playgrounds around the region. A plan to begin upgrading City playground infrastructure is required.

Asset Upgrade and Replacement Planning. The City received an Asset Management Plan in 2017. The City has begun allocating funding accordingly for asset replacement, but will need to stay cognizant of the funding gap that currently exists.

Regional Changes to Inventory. There have been changes regionally to the parks infrastructure including pools, ice rinks, sports fields and other parks features. The City of Maple Ridge has undergone a process of determining their community's needs and determined that they will be installing more sports fields and another sheet of ice at the ice rink. Pitt Meadows will need to stay attuned to these changes to ensure our facilities continue to be utilized to their potential.

Long-Range Parks Planning. The City is about to embark on a new Parks and Recreation Master Plan. This work is critical in setting the direction for how the community would like to grow and evolve our parks assets.

KEY INITIATIVES FOR 2018 – PARKS

2018 PROPOSED PROJECTS	VALUE
PARKS START-UP CAPITAL – REMAINING EQUIPMENT PURCHASES (CARRY FORWARD)	$676,000
PARKS AND RECREATION MASTER PLAN	$65,000
HORTICULTURE STRATEGIC PLAN	$15,000
TREE REPLACEMENT PROGRAM	$30,000
GENERAL LIFECYCLE PARKS INFRASTRUCTURE	$150,000
PARKS MINOR CAPITAL – USER GROUPS	$17,000
IRRIGATION SYSTEM UPGRADES	$50,000

PARKS AND FACILITIES CAPITAL PLAN

DRAFT PARKS CAPITAL PLAN FOR 2018

DEPARTMENT	Project #	Priority	2018	2019	2020	2021	2022	TOTAL
COMM SVCS - PARKS								
PARKS INFRASTRUCTURE 02-2-91-8901	10-PK-003	3	150,000	150,000	155,000	155,000	160,000	770,000
HARRIS PARK SPORTS FIELD S RENO 02-2-91-8913	10-PK-033	3				390,000		390,000
PARKS - MINOR CAPITAL - USER GRPS 02-2-91-9062	14-PK-074	3	17,000	17,000	17,000	19,000	19,000	89,000
PM ATHLETIC SPORTS FIELD RENO. -91-8909	15-PK-049	3		390,000				390,000
COMMUNITY GARDEN - ADDITIONAL 02 291 9052 MAF	15-PK-059	3		175,000				175,000
LAND ACQUISITION & IMPROVEMENTS (1.26HA) 1% MUNAST	16-PK-081	3					1,771,200	1,771,200
LAND ACQUISITION - 0.40 HA, 1% MAF	16-PK-082	3					1,291,700	1,291,700
PARKS & REC STARTUP CAPITAL 02 291 9066	16-PK-085	2	50,000					50,000
PARKS AND RECREATION MASTER PLAN 91-8802	17-PK-074	2	65,000					65,000
SHADE STRUCTURE - HARRIS SKATE PARK 91-8704	17-PK-078	2				70,000		70,000
PMSS TURF FIELD SURFACE REPLACEMENT	17-PK-088	3					600,000	600,000
PARK PLAYGROUND UPGRADE/ REPLACEMENT	18-PK-091	1		100,000		105,000		205,000
HORTICULTURE STRATEGIC PLAN	18-PK-092	2	15,000					15,000
TREE REPLACEMENT PROGRAM	18-PK-093	2	30,000	30,000	30,000	32,000	32,000	154,000
SHORELINE PARK RIPARIAN AREA MGMT '18 DP	18-PK-094	2	100,000					100,000
IRRIGATION UPGRADES - CENTRAL SYSTEM	18-PK-095	n/a	50,000					50,000
COMM SVCS - PARKS TOTAL			**477,000**	**862,000**	**202,000**	**771,000**	**3,873,900**	**6,185,900**

Project Priority Column: 1=Imperative (Must Do); 2=Essential (Should Do); 3=Important (Could Do); 4=Desirable (Other Year)