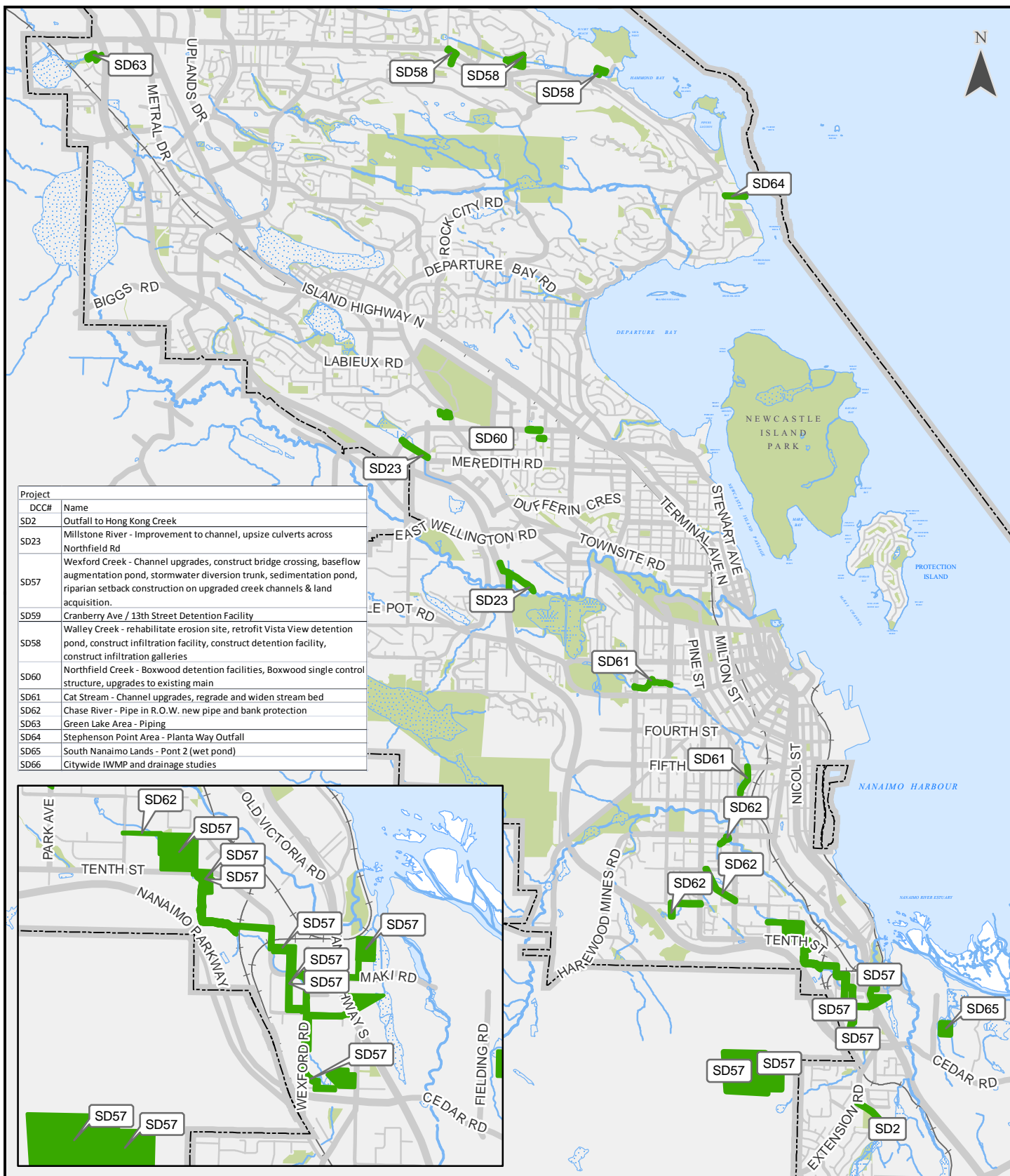


APPENDIX B

2017 DCC Bylaw - Drainage Project List

DCC Number	Project Name/Description	Location	Project Timing Range	Total Project Cost	Allocated to Growth		Allocated to Existing	
					Growth Percent	Growth Cost	Existing Percent	Existing Cost
SD2	Outfall to Hong Kong Creek	Hong Kong Creek - Extension: Lenwood to Roberta (BR 14-0 and 14-1)	2020-2025	482,726	20%	\$ 96,545	80%	\$ 386,181
SD23	Millstone River - Improvement to channel, upsize culverts across Northfield Rd	Millstone River - Between Meredith Rd and Millstone River, South of Rosstown Rd and East of Northfield Rd	2035	1,969,161	20%	\$ 393,832	80%	\$ 1,575,329
SD57	Wexford Creek - Channel upgrades (mainstream, south tributary, north tributary realignments; upgrade ditch to creek; construct bridge crossing; baseflow augmentation pond; stormwater diversion trunk; sedimentation pond; riparian setback construction on upgraded creek channels, land acquisition)	Wexford Creek - through Town Centre, Lawlor at 10th, 11th, 12th, and Junction Ave, through BC Hydro site, 12th Dr at Quin, 10th St at Wexford Creek, Upper South Wexford tributary on Weyerhaeuser property, West of North Wexford Marsh	2020-2040	13,260,443	60%	\$ 7,956,266	40%	\$ 5,304,177
SD58	Walley Creek - rehabilitate erosion site, retrofit Vista View detention pond, construct infiltration facility, construct detention facility, construct infiltration galleries	Walley Creek - downstream of Shores Dr, Upstream of Vista View Cres, Morningside Park between Shores Dr and Morningside Dr, Dunn Pl and Hammond Bay	2040	588,560	20%	\$ 117,712	80%	\$ 470,848
SD59	Cranberry Ave / 13th Street Detention Facility	Cranberry Ave / 13th St - Wexford Creek	2040	1,001,017	60%	\$ 600,610	40%	\$ 400,407
SD60	Northfield Creek - Boxwood detention facilities, Boxwood singel control structure, upgrades to existing main	Northfield Creek - West of Bowen Road, Mallard Dr to Davies, Northfield Road from McCullough, Lady Rose Pl to Spencer	2016-2040	1,857,698	100%	\$ 1,857,698	0%	\$ -
SD61	Cat Stream - Channel upgrades, regrade and widen stream bed	Cat Stream - Downstream of Wakesiah Ave to Howard Ave, Robins Park	2035/2040	299,439	54%	\$ 162,301	46%	\$ 137,139
SD62	Chase River - Pipe in R.O.W., new pipe and bank protection	Chase River - West of Park Ave through undeveloped land, 9th St, Douglas Ave, North of Nova Street	2030-2040	2,744,567	60%	\$ 1,646,740	40%	\$ 1,097,827
SD63	Green Lake Area - Piping	Millstone River - Green Acres Way, through lots 42 and 43, behind lots 43 and 44	2040	426,179	20%	\$ 85,236	80%	\$ 340,943
SD64	Stephenson Point Area - Planta Way Outfall	Stephenson Point - Planta Way	2035	239,689	20%	\$ 47,938	80%	\$ 191,751
SD65	South Nanaimo Lands - Pond 2 (wet pond)	Beck Creek - Existing gully south of Maki Road and east of Fielding Road	2030	2,901,117	60%	\$ 1,740,670	40%	\$ 1,160,447
SD66	Citywide IWMP and drainage studies	Citywide	One IWMP each 2 years	1,958,571	30%	\$ 587,571	70%	\$ 1,371,000
				2017-2041 \$ 27,729,167		\$ 15,293,120		\$ 12,436,048



City of Nanaimo

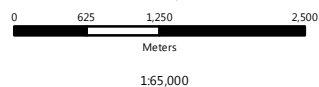
2017

Storm DCC
Project Map

Legend

Storm DCC Project

Published: May 11, 2017



DISCLAIMER

This map is intended for general information only. The City of Nanaimo makes no representation or warranty regarding the accuracy or completeness of the information presented and assumes no responsibility for any damage, loss or injury resulting from the use of this product.

Engineering and Public Works Project Summary Sheet

DCC SD2: (20% Growth) Hong Kong Creek Outfall DR

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2180 DCC SD2 (20% Growth) Hong Kong Creek Outfall	482,726	386,181	96,545	0	0	0
	482,726	386,181	96,545	0	0	0

Project Description:

Construct new 600mm diameter outfall at Extension Road between 1600 & 1618 Extension to Hong Kong Creek (flow paths 14-0 & 14-1)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

New pipes needed to deal with growth in area as 1981 North Slope and Hong Kong Creek Areas Stormwater Management Plans.

Project Map:



Engineering and Public Works Project Summary Sheet

DCC SD23: (20% Growth) Northfield Road DR, 2350/2365 Northfield Road

Project:

Components:

1791 DCC SD23 (20%
Growth) Northfield Road
DR - 2350/2365
Northfield Road

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
508,000	406,400	101,600	0	0	0
508,000	406,400	101,600	0	0	0

Project Description:

Upsize existing twinned CMP Culverts across Northfield Rd at 2350/2365 Northfield

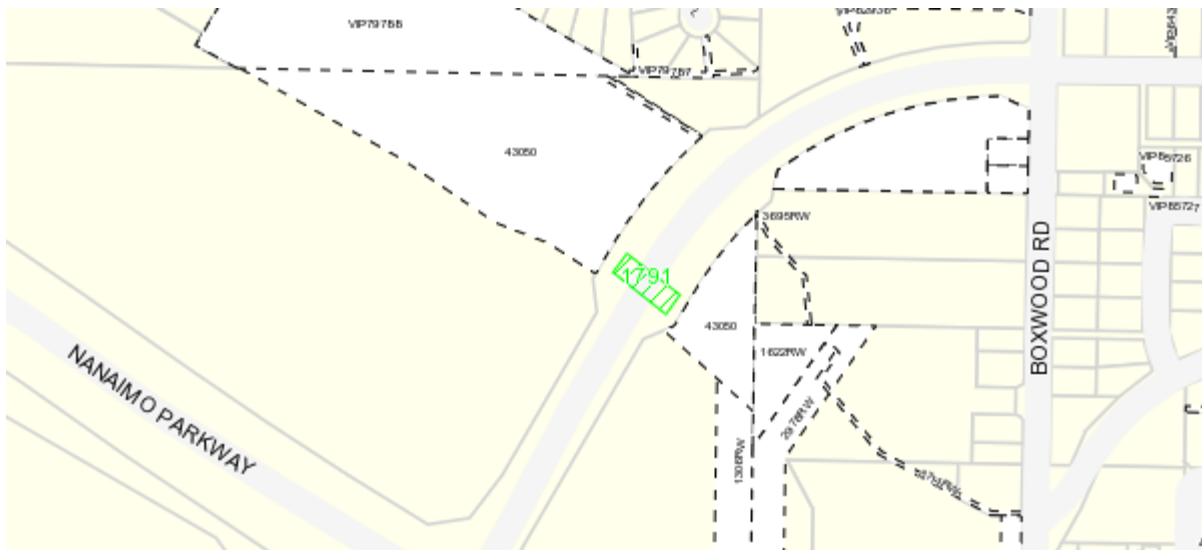
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Pipe upsizing needed to deal with existing and future capacity shortfalls as identified in the 1982 Millstone River Basin Stormwater Management Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD23: (20% Growth) Millstone River - Channel upgrades bet Meredith and Millstone River

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2175 DCC SD23 (20% Growth) Millstone River - Channel upgrades bet Meredith and Millstone River	1,094,077	875,261	218,815	0	0	0
	1,094,077	875,261	218,815	0	0	0

Project Description:

Channel upgrades bet Meredith and Millstone River to improve capacity (channel sections J1-8 to J1-11)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Widening of Channel is necessary for flood protection in the Bowen Road/Buttertubs Marsh area as per 1982 Millstone River Basin Stormwater Management Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD23: (20% Growth) Millstone River - Channel upgrades south of Rosstown, east to Northfield

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2176 DCC SD23 (20% Growth) Millstone River - Channel upgrades south of Rosstown, east to Northfield	367,084	293,668	73,417	0	0	0
	367,084	293,668	73,417	0	0	0

Project Description:

Channel upgrades south of Rosstown, east to Northfield to improve capacity (sections J1-1 to J1-3)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Widening of Channel is necessary for flood protection in the Bowen Road/Buttertubs Marsh area as per 1982 Millstone River Basin Stormwater Management Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Channel construction on Wexford Road

Project:

Components:

687 DCC SD57: (60% Growth)
Wexford Creek - Channel
construction on Wexford Road

2035 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
504,357	201,743	302,614	0	0	0
504,357	201,743	302,614	0	0	0

Project Description:

Proposed 200m channel construction on Wexford Road from Twelfth to south property line of 1337 Wexford

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Channel construction required to maintain public safety and property by ensuring flood flows can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Channel construction in town centre

Project:

Components:

688 DCC SD57: (60% Growth)
Wexford Creek - Channel
construction in town centre

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
1,375,250	550,100	825,150	0	0	0
1,375,250	550,100	825,150	0	0	0

Project Description:

Proposed 575m channel construction through town centre

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Channel construction required to maintain public safety and property by ensuring flood flows can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Lawlor @ Eleventh DR, PH 2

Project:

Components:

695 DCC SD57 (60% Growth) Wexford Creek: Lawlor @ Eleventh DR - PH 2

2020 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
609,600	243,840	365,760	0	0	0
609,600	243,840	365,760	0	0	0

Project Description:

Replace existing culvert with bridge crossing on Lawlor Road at Eleventh

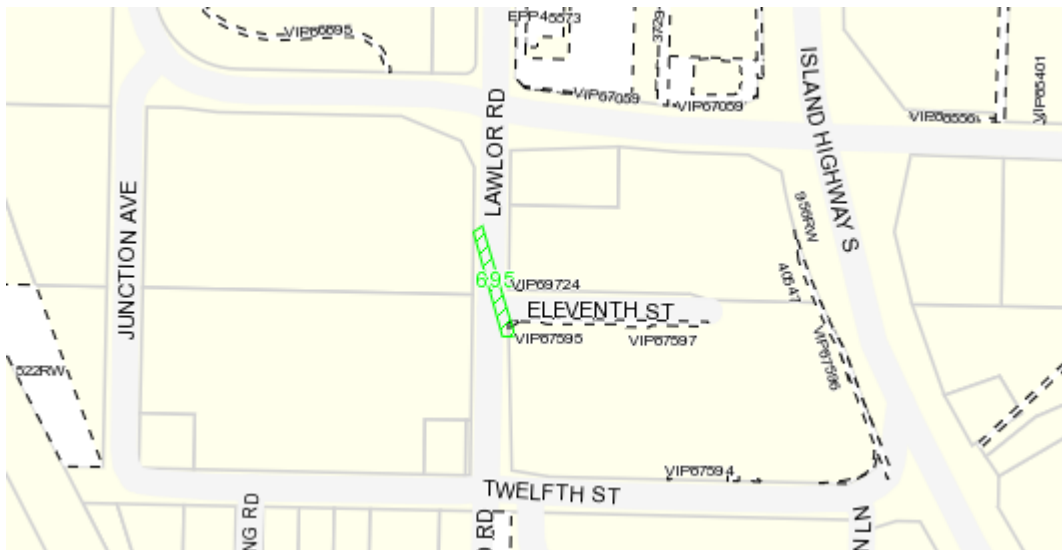
Asset Management Description of Work:

Upgrades - Increased service capacity

Justification:

Replace existing culvert with bridge crossing to maintain public safety and property by ensuring Q100 flood flows of 8.8 cms can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Land Purchases

Project:

Components:

698 DCC SD57: (60% Growth) Wexford Creek - Land Purchases

2018 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
873,760	349,504	524,256	0	0	0
873,760	349,504	524,256	0	0	0

Project Description:

Land purchase of 9.0 ha Weyerhaeuser land; 0.6 ha west of North Wexford marsh; and 3 commercial lots d/s of Island Highway South for 1ha for drainage improvements and environmental protection.

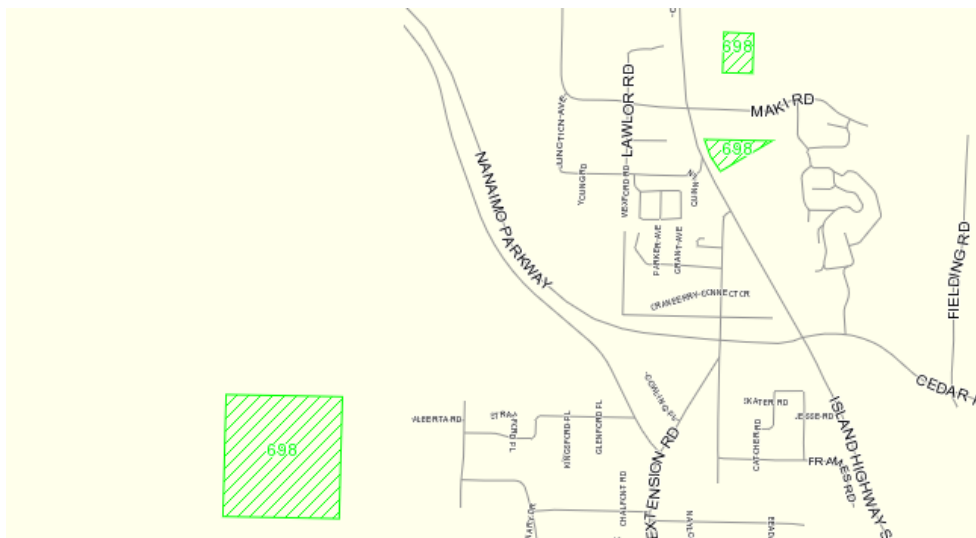
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Land required to complete recommended drainage improvements and environmental protection as per 2002 Wexford Creek ISMP

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Channel construction on Twelfth St

Project:

Components:

2163 DCC SD57: (60% Growth) Wexford Creek - Channel construction on Twelfth St

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
544,951	217,981	326,971	0	0	0
544,951	217,981	326,971	0	0	0

Project Description:

Proposed 210m channel construction on Twelfth St from Wexford to Island Hwy

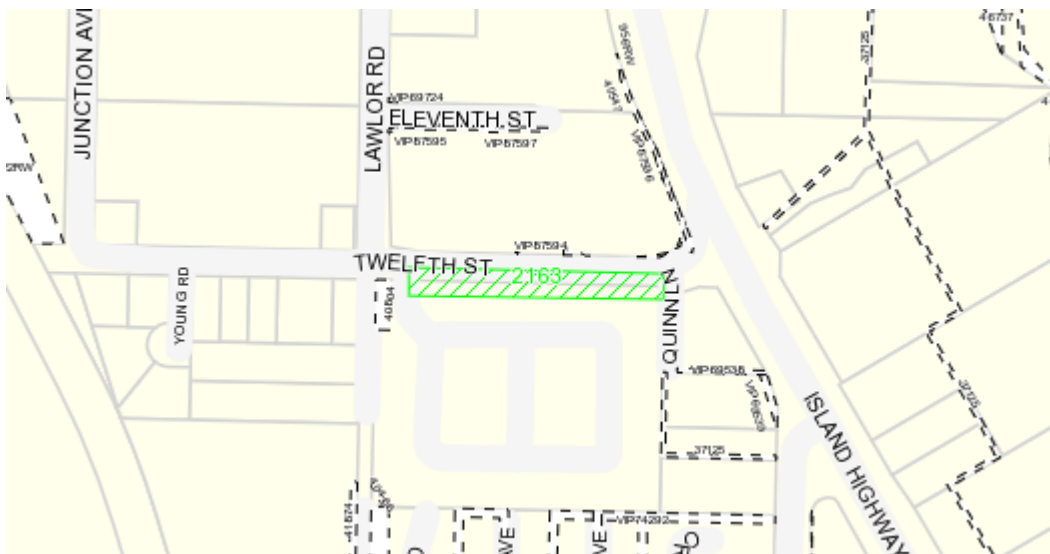
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Channel construction required to maintain public safety and property by ensuring flood flows can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Stormwater Diversion Trunk (North section)

Project:

Components:

684 DCC SD57: (60% Growth)
Wexford Creek - Stormwater
Diversion Trunk (North section)

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
1,324,823	529,929	794,894	0	0	0
1,324,823	529,929	794,894	0	0	0

Project Description:

Install 1160m of 675mm/900mm/1050mm diameter in various sections north of Twelfth

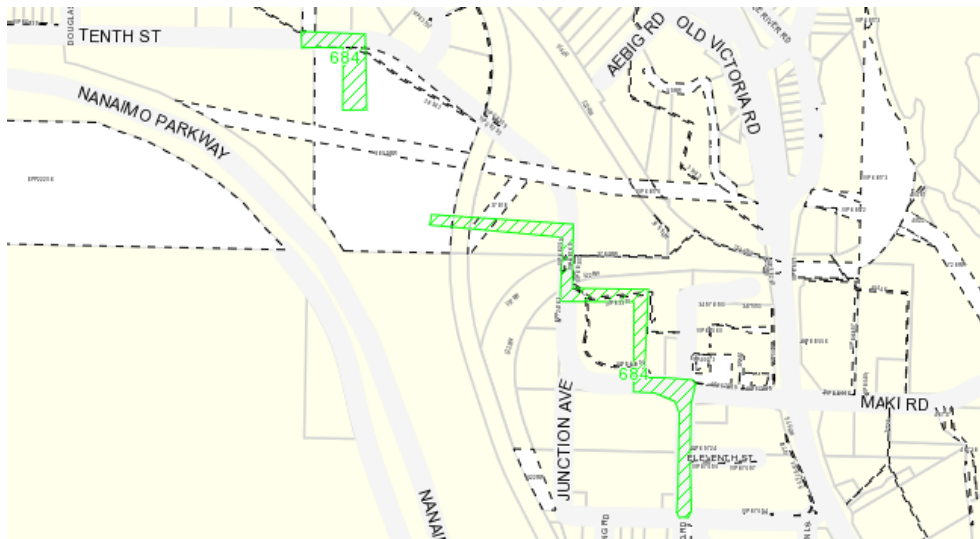
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Trunk required to address excess flows and volumes resulting from post-development frequently occurring events to reduce insidious impacts on the creek and fish habitat as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Stormwater Diversion Trunk (Mainstem)

Project:

Components:

686 DCC SD57: (60% Growth)
Wexford Creek - Stormwater
Diversion Trunk (Mainstem)

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
571,044	228,418	342,627	0	0	0
571,044	228,418	342,627	0	0	0

Project Description:

Install 500m of 1350mm/1200mm diameter at various locations from Twelfth/Hwy intersection to outlet at Nanaimo Estuary

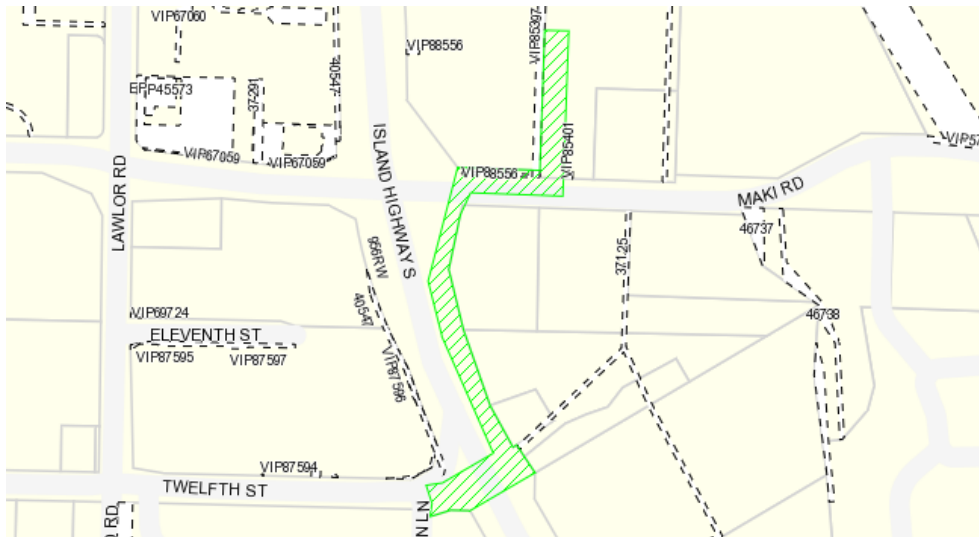
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Trunk required to address excess flows and volumes resulting from post-development frequently occurring events to reduce insidious impacts on the creek and fish habitat as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Stormwater Diversion Trunk (South section)

Project:

Components:

677 DCC SD57: (60% Growth) Wexford Creek - Stormwater Diversion Trunk (South section)

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
856,566	342,627	513,940	0	0	0
856,566	342,627	513,940	0	0	0

Project Description:

Install 750m of 750mm diameter along proposed Cranberry Connector from Thirteenth to Twelfth

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Trunk required to address excess flows and volumes resulting from post-development frequently occurring events to reduce insidious impacts on the creek and fish habitat as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - South Wexford Augmentation Pond

Project:

Components:

675 DCC SD57: (60% Growth)
Wexford Creek - South Wexford
Augmentation Pond

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
1,194,816	477,926	716,890	0	0	0
1,194,816	477,926	716,890	0	0	0

Project Description:

Construct South Wexford creek 175000m3 baseflow augmentation pond in upper South Wexford tributary on Weyerhaeuser property

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

South Wexford baseflow augmentation pond needed to sustain baseflow at existing or improved levels as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Sedimentation Pond

Project:

Components:

682 DCC SD57: (60% Growth)
Wexford Creek - sedimentation
pond

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
458,724	183,490	275,234	0	0	0
458,724	183,490	275,234	0	0	0

Project Description:

Construct 9000m3 sedimentation pond West of North Wexford Marsh.

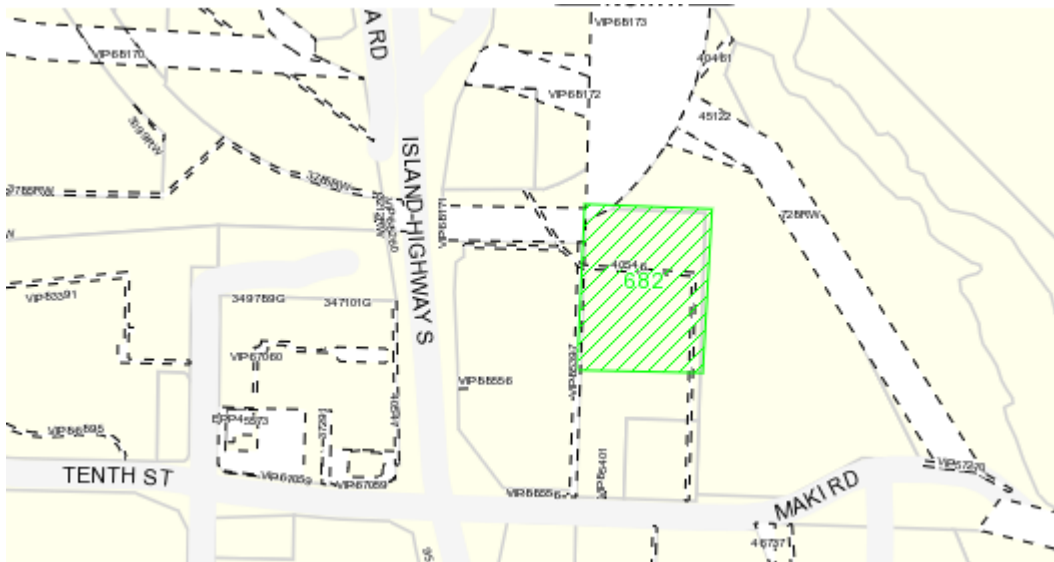
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Sedimentation pond needed to provide water quality treatment of diversion flows prior to discharge to the wetland as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Upgrade existing creek channel around BC Hydro site

Project:

Components:

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
790,196	316,078	474,117	0	0	0
790,196	316,078	474,117	0	0	0

Project Description:

Proposed 370m channel construction through BC Hydro site

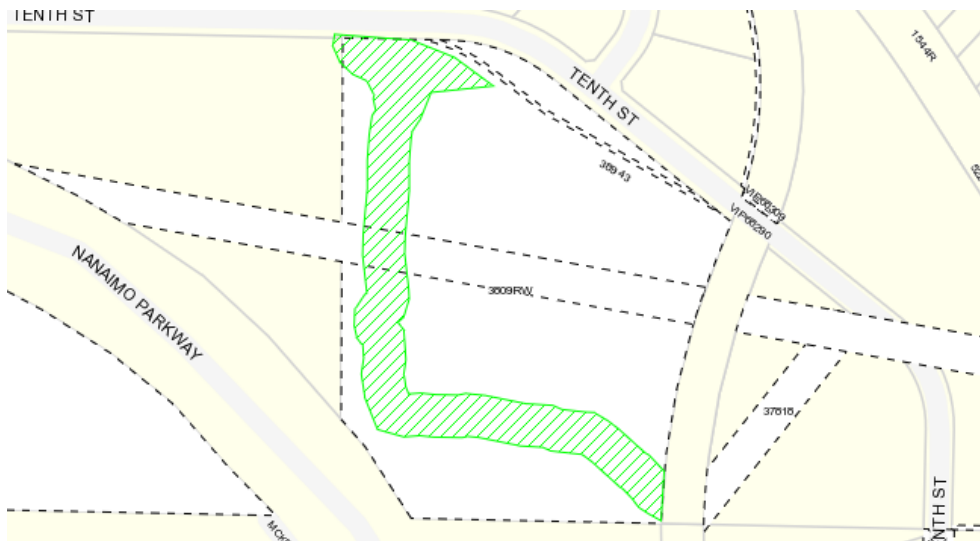
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Channel construction required to maintain public safety and property by ensuring flood flows can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - North Wexford Baseflow Augmentation Pond

Project:

Components:

676 DCC SD57: (60% Growth) Wexford Creek - North Wexford Baseflow Augmentation Pond

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
522,732	209,093	313,639	0	0	0
522,732	209,093	313,639	0	0	0

Project Description:

Construct North Wexford Creek 23000m3 baseflow augmentation pond at 10th and Wexford Creek.

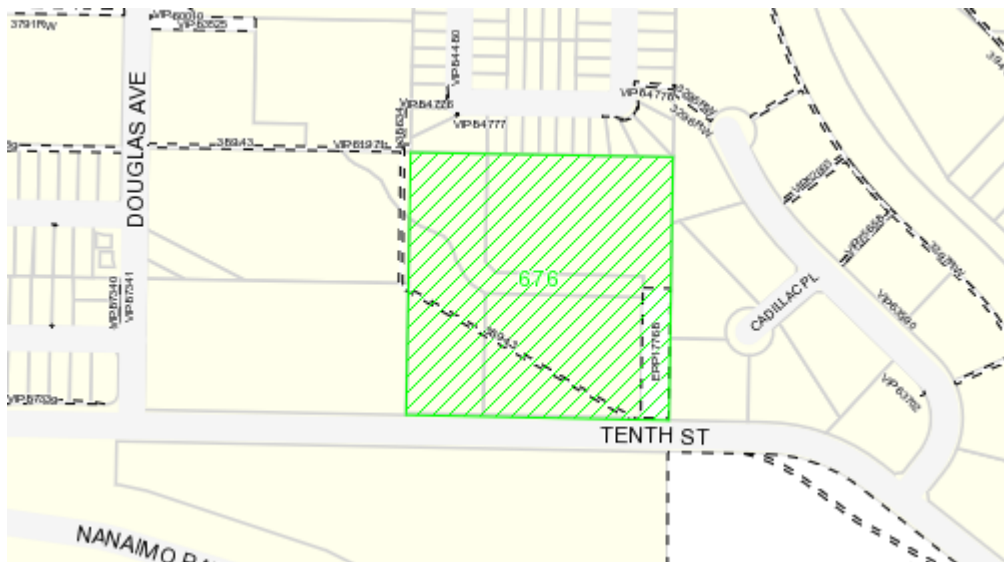
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Pond needed to sustain baseflows at existing or improved levels as per 2002 Wexford Creek ISMP.

Project Map:



Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Riparian Construction

Project:

Components:

2193 DCC SD57: (60% Growth)
Wexford Creek - Riparian Construction
DR

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2,312,822	925,129	1,387,693	0	0	0
2,312,822	925,129	1,387,693	0	0	0

Project Description:

Riparian setback construction on 1350m of upgraded creek channels in Wexford Creek Catchment.

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Riparian construction needed to protect/enhance riparian forest integrity and thereby strive to protect creek health as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Tenth DR, on Wexford Creek - PH 3

Project:

Components:

2276 DCC SD57 (60% Growth)
Wexford Creek: Tenth DR (on
Wexford Creek) - PH 3

2021 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
508,000	203,200	304,800	0	0	0
508,000	203,200	304,800	0	0	0

Project Description:

Replace existing culvert with bridge crossing on Tenth Street on north leg of Wexford Creek

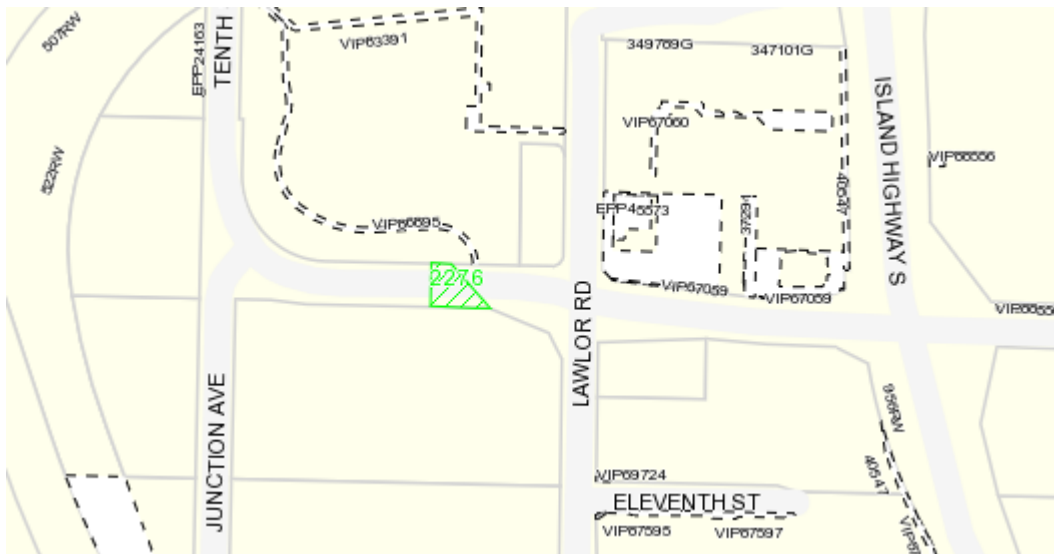
Asset Management Description of Work:

Upgrades - Increased service capacity

Justification:

Replace existing culvert with bridge crossing to maintain public safety and property by ensuring Q100 flood flows of 9.0 cms can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Twelfth @ Quinn DR - PH 1

Project:

Components:

2288 DCC SD57
(60% Growth)
Wexford Creek:
Twelfth @ Quinn DR -
PH 1

2019 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
406,400	162,560	243,840	0	0	0
406,400	162,560	243,840	0	0	0

Project Description:

Replace existing culvert with bridge crossing on Twelfth Street at Quinn

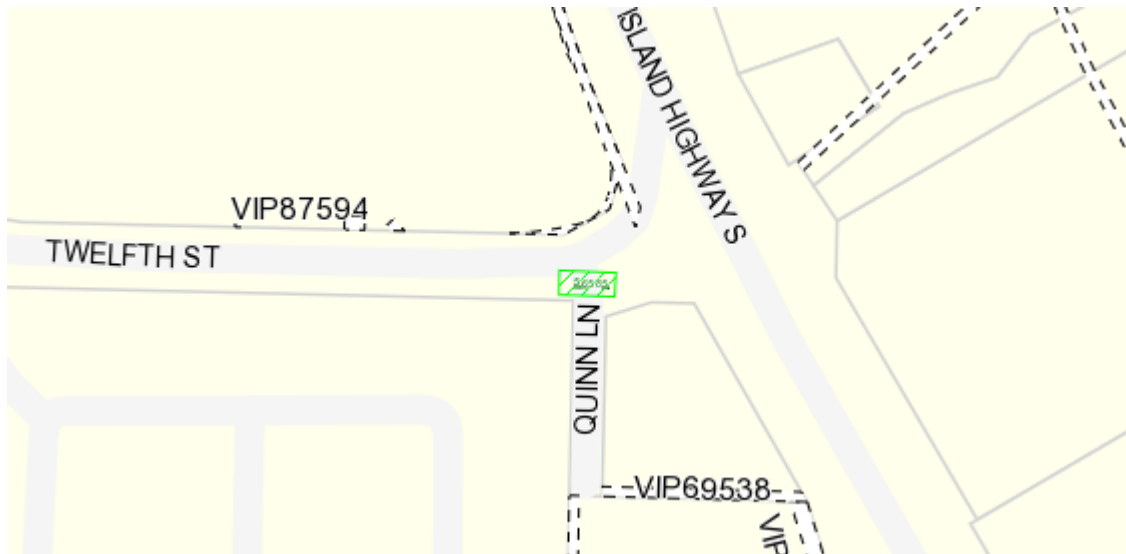
Asset Management Description of Work:

Upgrades - Increased service capacity

Justification:

Replace existing culvert with bridge crossing to maintain public safety and property by ensuring Q100 flood flows of 9.8 cms can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD57: (60% Growth) Wexford Creek - Twelfth & Lawlor Intersection DR - PH 2

Project:

Components:

2287 DCC SD57
(60% Growth) Wexford
Creek: Twelfth &
Lawlor Intersection DR
- PH 2

2020 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
406,400	162,560	243,840	0	0	0
406,400	162,560	243,840	0	0	0

Project Description:

Replace existing culverts with bridge crossing(s) at intersection of Twelfth and Wexford

Asset Management Description of Work:

Upgrades - Increased service capacity

Justification:

Replace existing culvert with bridge crossing to maintain public safety and property by ensuring Q100 flood flows of 9.8 cms can be adequately conveyed by the creek system as per 2002 Wexford Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD58: (20% Growth) Walley Creek - Rehab Med Priority Erosion Site

Project:

Components:

2164 DCC SD58 (20% Growth)
Walley Creek - Rehab Med Priority
Erosion Site

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
29,409	23,527	5,882	0	0	0
29,409	23,527	5,882	0	0	0

Project Description:

Rehabilitate medium priority erosion site downstream of Shores Drive.

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Rehabilitate medium priority erosion site for environmental protection/enhancement as per 2004 Walley Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD58: (20% Growth) Walley Creek - Retrofit Vista View Detention Pond

Project:

Components:

2165 DCC SD58 (20% Growth) Walley Creek: Retrofit Vista View Detention Pond

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
186,254	149,004	37,251	0	0	0
186,254	149,004	37,251	0	0	0

Project Description:

Retrofit Vista View Detention Pond Outlet upstream of Vista View Cres.

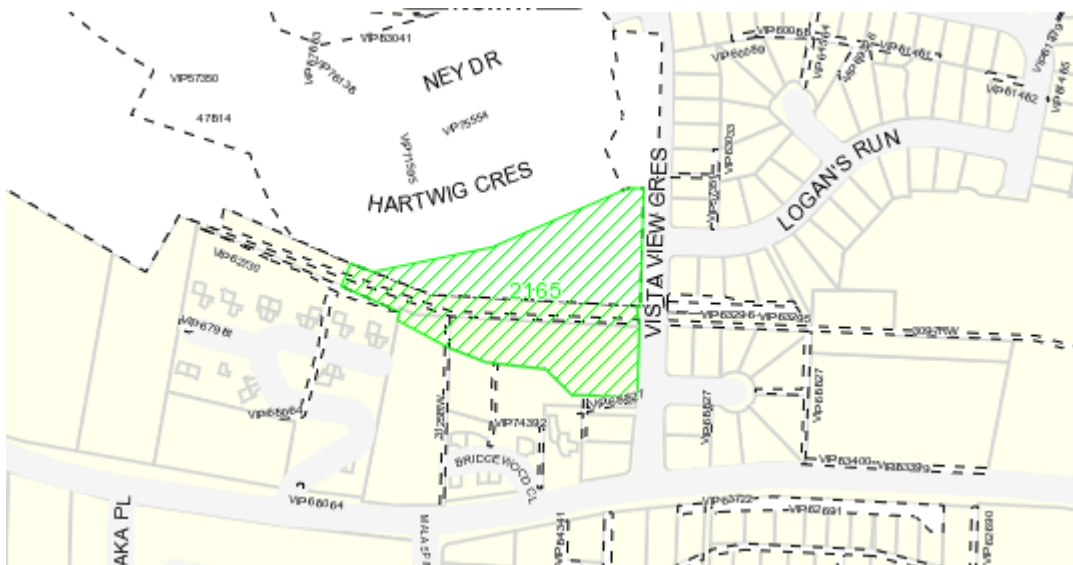
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Retrofit will allow use of some of the existing active volume to detain runoff from MAR event with the bulk of the active storage remaining to detain large storms as per 2004 Walley Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD58: (20% Growth) Walley Creek - Construct Infiltration Facility in NE corner

Project:

Components:

2166 DCC SD58 (20% Growth)
Walley Creek: Construct Infiltration
Facility in NE corner

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
160,767	128,614	32,153	0	0	0
160,767	128,614	32,153	0	0	0

Project Description:

Construct 220m Infiltration Facility in NE corner in Morningside Park (between Shores and Morningside)

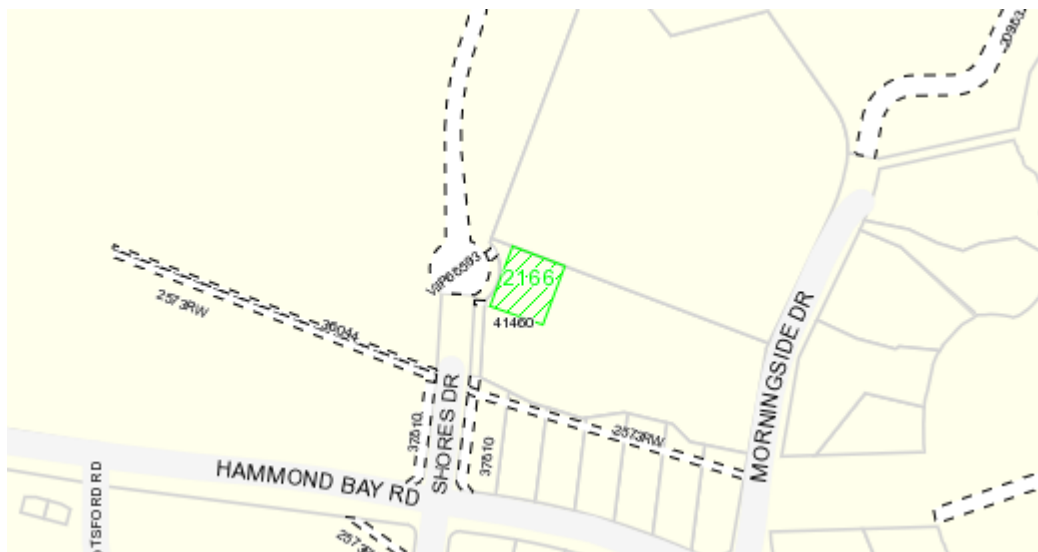
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

This facility is intended to capture and infiltrate 50% MAR flows, and to compensate for development on the north side of Walley Creek and downstream of Vista View Crescent where this capture and infiltration cannot take place as per 2004 Walley Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD58: (20% Growth) Walley Creek - Construct Detention Facility in NE corner

Project:

Components:

2167 DCC SD58 (20% Growth)
Walley Creek: Constuct Detention
Facility in NE corner

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
99,357	79,486	19,871	0	0	0
99,357	79,486	19,871	0	0	0

Project Description:

Construct 530m3 Detention Facility in NE corner in Morningside Park (between Shores and Morningside)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

This facility is intended to capture and detain 50% to 100% MAR flows, and to compensate for development on the north side of Walley Creek and downstream of Vista View Crescent where this capture and infiltration cannot take place as per 2004 Walley Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD58: (20% Growth) Walley Creek - Construct Infiltration Galleries on Dunn and Ham Bay

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2168 DCC SD58 (20% Growth) Walley Creek: Construct Infiltration Galleries on Dunn and Ham Bay	112,772	90,218	22,554	0	0	0
	112,772	90,218	22,554	0	0	0

Project Description:

Construct 150m of Infiltration Galleries parallel to roads in SW central catchment on Dunn and Hammond Bay

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Infiltration Galleries are intended to maximize the recharge of groundwater into the areas identified with suitable potential on Fig 5-2 of 2004 Walley Creek ISMP.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD59: (60% Growth) Thirteenth Street Detention Facility DR

Project:

Components:

692 DCC SD59: (60% Growth)
Thirteenth Street Detention
Facility

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
1,001,017	1,001,017	0	0	0	0
1,001,017	1,001,017	0	0	0	0

Project Description:

Construct 4900m3 storage pond at Cranberry Ave / 13th St when Cranberry Connector goes through.

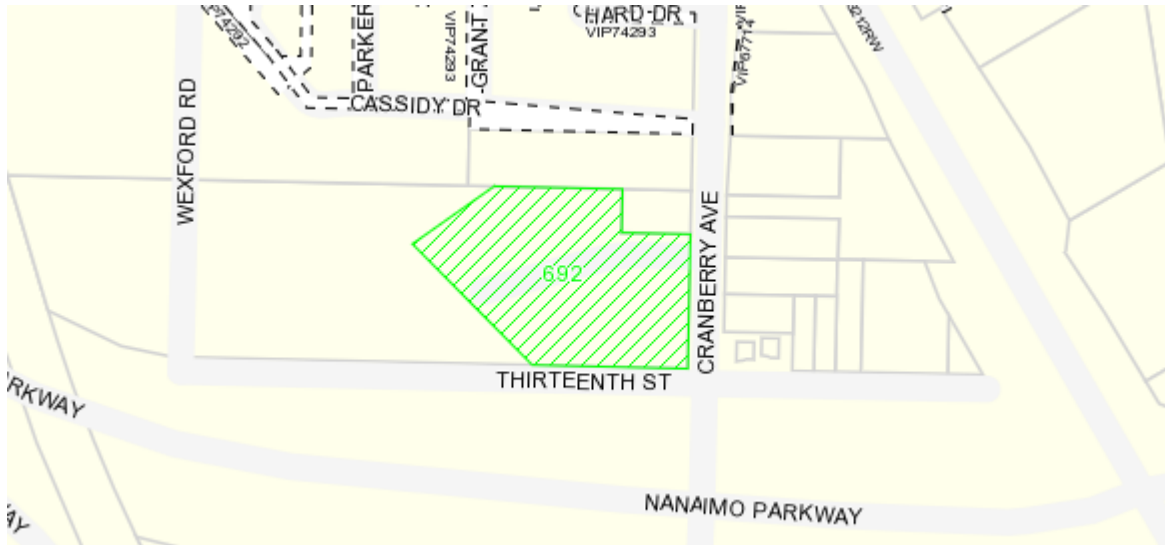
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Detention Facility needed to address drainage improvements needed for environmental protection, erosion control and flood control due to urbanization of the Chase River Basin as per 1995 Cranberry Ave / 13th Street Stormwater Detention Facility Final Report.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

Project:

DCC SD60: (100% Growth) Boxwood Connector Pond DR - Ph 1

Components:

1760 DCC SD60: (100% Growth) Boxwood Connector Pond DR - Ph 1

2021 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
1,020,000	0	1,020,000	0	0	0
1,020,000	0	1,020,000	0	0	0

Project Description:

Install new 3480 m3 Storm Detention Pond to service Boxwood Connector

Asset Management Description of Work:

Strategic Acquisition - New assets not captured in risk management, growth or upgrades

Justification:

Study determined that the natural pond with outlet control structure on the west side of Bowen is needed for current and future conditions in the catchment. The pond prevents the upsizing of Northfield trunk storm drainage piping as per 2014 Northfield Creek Master Drainage Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD60: (100% Growth) Mallard Drive DR, 1718 Mallard to Davies

Project:

Components:

1980 DCC SD60 (100% Growth) Mallard Drive DR (1718 Mallard to Davies)

2035 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
71,373	0	71,373	0	0	0
71,373	0	71,373	0	0	0

Project Description:

Upsize 40m of existing 300mm diameter AC with 375m on Mallard Drive from 1718 Mallard to Davies.

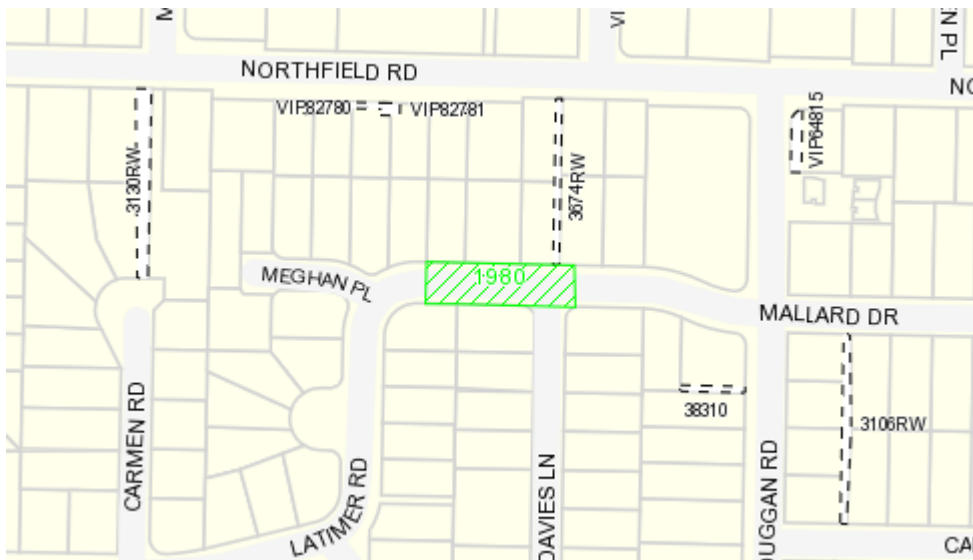
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Pipe upsizing needed to deal with existing and future capacity shortfalls as identified in the 2014 Northfield Creek Master Drainage Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

Project:

DCC SD60: (100% Growth) Northfield Road DR, McCullough to 1708 Northfield

Components:

1981 DCC SD60 (100% Growth)
Northfield Road DR (McCullough to
1708 Northfield)

2035 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
330,000	0	330,000	0	0	0
330,000	0	330,000	0	0	0

Project Description:

Replace existing 675mm diameter RCP with 750mm on Northfield Road from McCullough to 1708 Northfield.

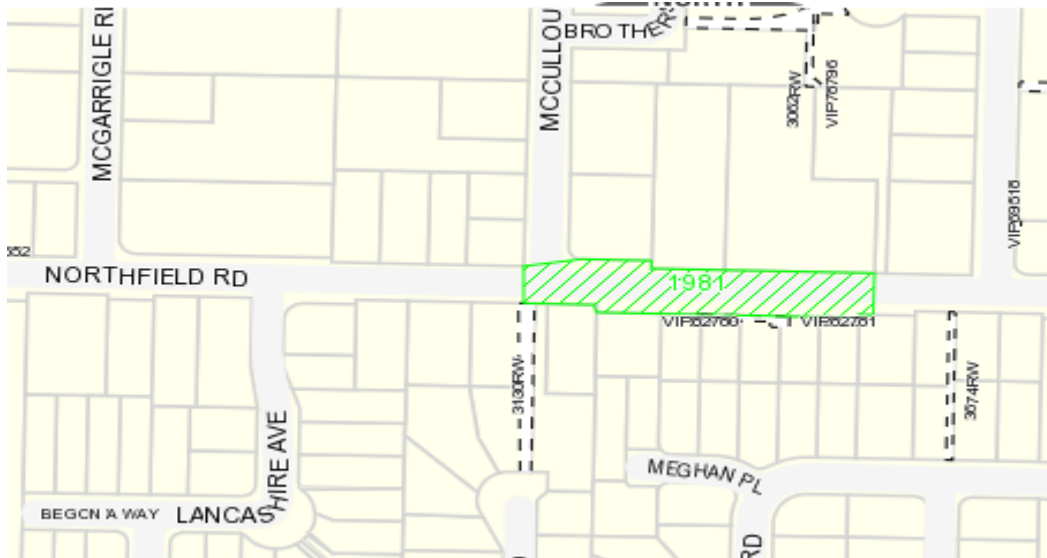
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Pipe upsizing needed to deal with existing and future capacity shortfalls as identified in the 2014 Northfield Creek Master Drainage Plan.

Project Map:



Engineering and Public Works Project Summary Sheet

DCC SD60: (100% Growth) Lady Rose Place DR, 230 Lady Rose to Spencer

Project:

Components:

1982 DCC SD60 (100% Growth) Lady Rose Place DR (230 Lady Rose to Spencer)

2019 Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
108,850	0	108,850	0	0	0
108,850	0	108,850	0	0	0

Project Description:

Upsize existing 300mm diameter PVC with 375mm on Lady Rose Place from 230 Lady Rose to Spencer

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Pipe upsizing needed to deal with existing and future capacity shortfalls as identified in the 2014 Northfield Creek Master Drainage Plan.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD60: (100% Growth) Boxwood Connector Pond DR - Ph 2

Project:

Components:

	Funding					
	Budget	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2442 DCC SD60: (100% Growth) Boxwood Connector Pond DR - Ph 2	331,500	0	331,500	0	0	0
	331,500	0	331,500	0	0	0

Project Description:

Increase Storm Detention Pond to service Boxwood Connector by 1210 m3

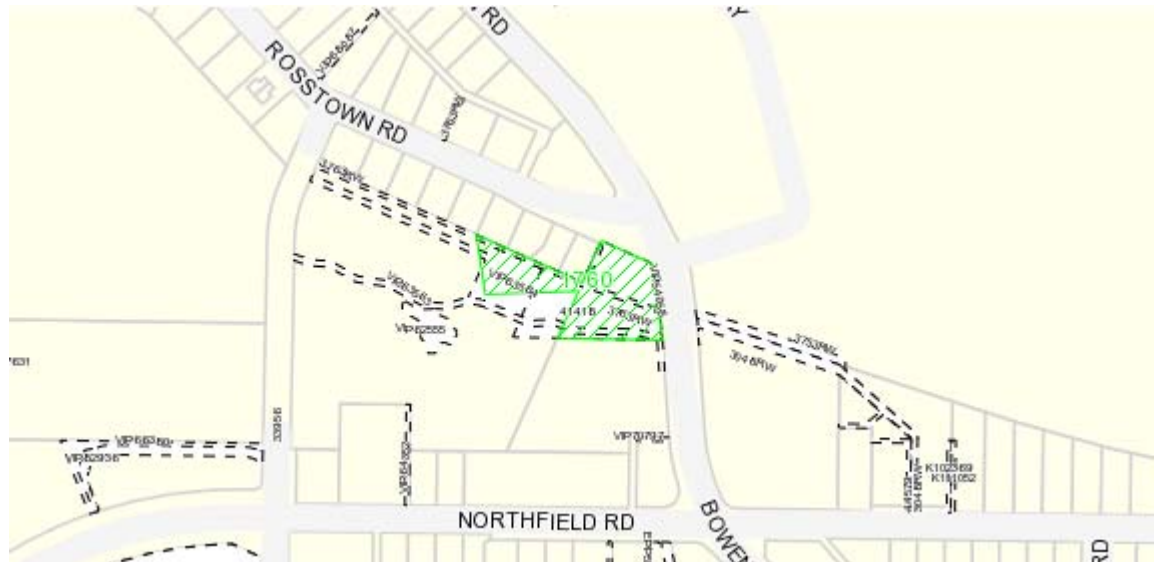
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

2014 Northfield Creek Master Drainage Plan Study determined that the natural pond with outlet control structure on the west side of Bowen is needed for current and future conditions in the catchment. The pond prevents the upsizing of Northfield trunk storm drainage piping. The Phase 2 1210 m3 increase is to accommodate future conditions and the impacts of climate change.

Project Map:



DRAFT

DCC SD61: (60% Growth) Cat Stream - Channel Upgrades

Project:

Components:

	Funding					
	Budget	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2169 DCC SD61 (60% Growth) Cat Stream: Channel Upgrades	256,032	102,413	153,619	0	0	0
	256,032	102,413	153,619	0	0	0

Project Description:

Channel upgrades downstream of Wakesiah Ave to Howard Ave

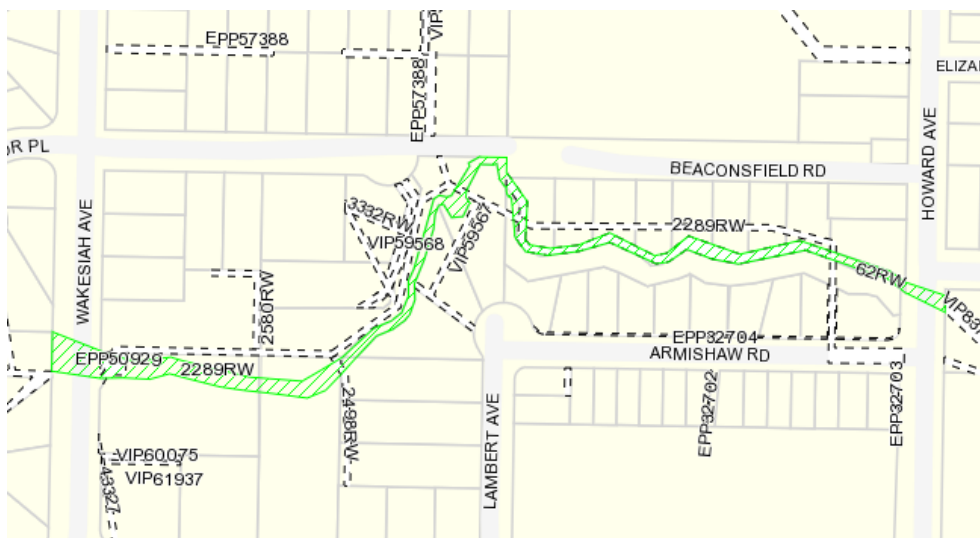
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Channel upgrade include lowering the channel to increase detention in the channel during large rain events which will reduce peak flows and lower the water surfaces along this section and immediately upstream as per 2002 Upper Cat Stream Detention Pond Study .

Project Map:



Engineering and Public Works Project Summary Sheet

DCC SD61: (20% Growth) Cat Stream - Regrade and widen stream bed

Project:

Components:

2174 DCC SD61 (20% Growth) Cat Stream: Regrade and widen stream bed

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
43,407	34,726	8,681	0	0	0
43,407	34,726	8,681	0	0	0

Project Description:

Regrade and widen stream bed at Robins Park

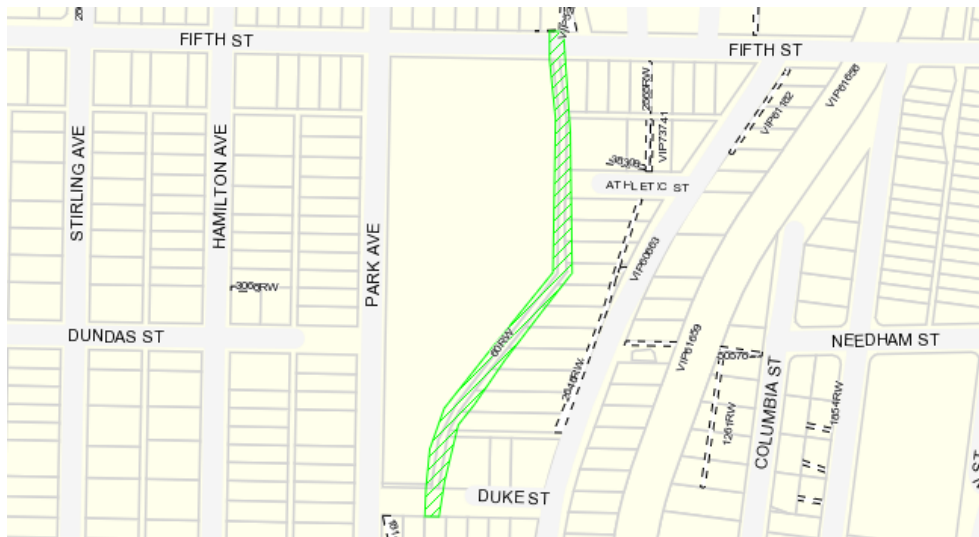
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Regrading and widening required as creek frequently overflows into the park because the channel is inadequate as per 1981 Cat Stream Basin Study.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD62: (60% Growth) Chase River - West of Park Ave, segments 4-5 and 4-6

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2170 DCC SD62 (60% Growth) Chase River - West of Park Ave (segments 4-5 and 4-6)	1,169,750	467,900	701,850	0	0	0
	1,169,750	467,900	701,850	0	0	0

Project Description:

Construct new 1050 & 1200 dia pipes west of Park Ave (segments 4-5 and 4-6)

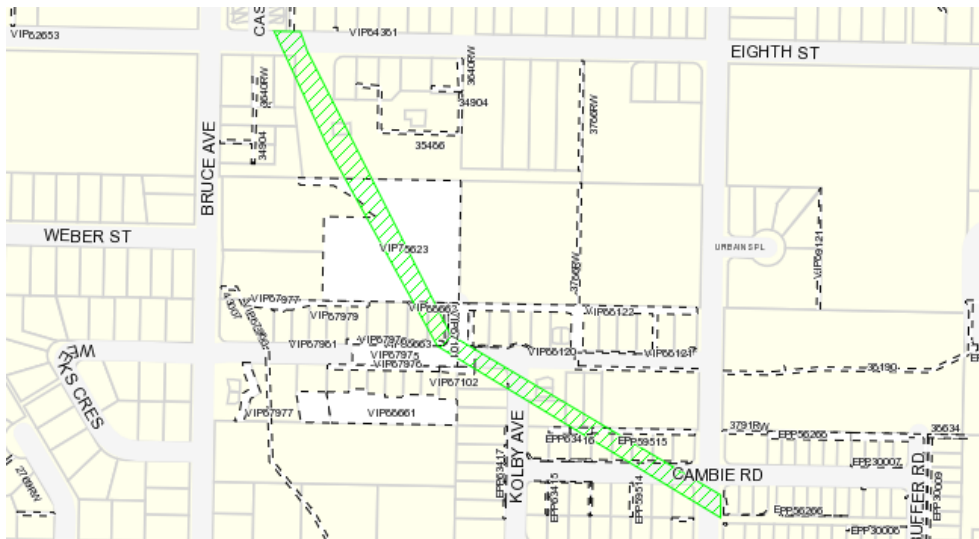
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

New pipes needed to deal with growth in area as 1981 Chase River Basin Drainage Study

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD62: (60% Growth) Chase River - Ninth Street, Howard to Bruce

Project:

Components:

2171 DCC SD62 (60% Growth)
Chase River: Ninth Street (Howard
to Bruce)

Budget	Funding				
	General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
704,660	281,860	422,800	0	0	0
704,660	281,860	422,800	0	0	0

Project Description:

Construct new 600 to 900 dia pipes on Ninth Street from Howard to Bruce (segments 11-2, 11-3 & 11-4)

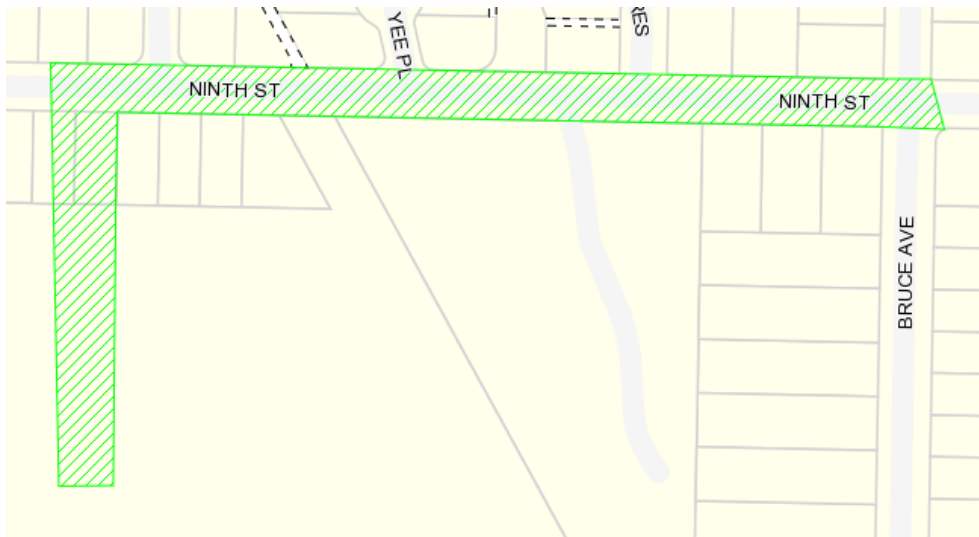
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

New pipes needed to deal with growth in area as 1981 Chase River Basin Drainage Study

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD62: (60% Growth) Chase River - Douglas Ave Esmnt

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2172 DCC SD62 (60% Growth) Chase River: Douglas Ave Esmnt	704,660	281,860	422,800	0	0	0
	704,660	281,860	422,800	0	0	0

Project Description:

Construct new 1200 to 1350 dia pipes in Douglas Ave Esmnt (segments 2-2 & 2-3)

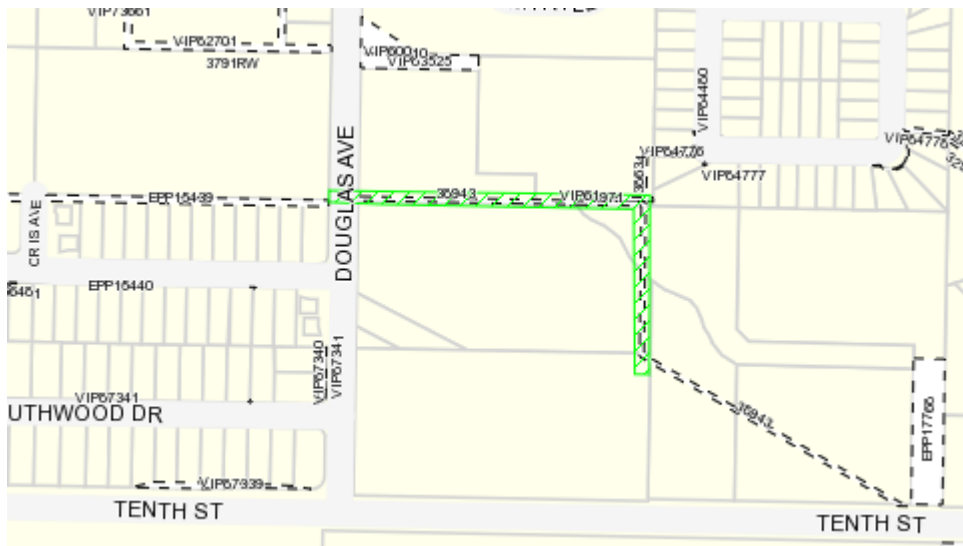
Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

New pipes needed to deal with existing capacity and future growth in area as 1981 Chase River Basin Drainage Study

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD62: (60% Growth) Chase River - Bank protection

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2173 DCC SD62 (60% Growth) Chase River: Bank protection	165,500	66,200	99,300	0	0	0
	165,500	66,200	99,300	0	0	0

Project Description:

Bank protection north of Nova Street (segment 1-13)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Project from 2008 Bylaw project list as per 1981 Chase River Basin Drainage Study.

Project Map:



DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD63: (20% Growth) Millstone River - Green Acres Way

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2177 DCC SD63 (20% Growth) Millstone River: Green Acres Way	426,179	340,943	85,236	0	0	0
	426,179	340,943	85,236	0	0	0

Project Description:

Construct new 600mm/675mm/900mm diameter piping on Green Acres Way, Rhodo Way and Esmnt in Green Lake Area (flow paths 1-0 to 1-3)

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

New pipes needed to deal with growth in area as 1981 North Slope and Hong Kong Creek Areas Stormwater Management Plans.

Project Map:



DRAFT

DCC SD64: (20% Growth) Planta Road Outfall DR

Components:

2179 DCC SD64
(20% Growth) Planta
Road: Outfall

Construct new 525mm diameter outfall at Planta Road between 3560 and 3570 Planta Road properties.

Growth - Identified as a DCC Project

The Planta Road Outfall is required to eliminate erosion problems in the lower portion of the adjacent properties as per 1981 North Slope and Hong Kong Creek Areas Stormwater Management Plans .

DRAFT

Engineering and Public Works Project Summary Sheet

DCC SD65: (60% Growth) Chase River - Wet Pond DR

Project:

Components:

	Budget	Funding				
		General Taxation	DCC's	Water Reserves	Sewer Reserves	Other Sources
2181 DCC SD65 (60% Growth) Chase River - Wet Pond DR	2,901,117	1,160,447	1,740,670	0	0	0
	2,901,117	1,160,447	1,740,670	0	0	0

Project Description:

Construct 57,300 m3 wet pond at existing gully south of Maki Road and east of Fielding Road

Asset Management Description of Work:

Growth - Identified as a DCC Project

Justification:

Wet pond needed to address drainage improvements needed for environmental protection, erosion control and flood control due to urbanization of the South Nanaimo Lands as per 2006 South Nanaimo Lands Stormwater Management Preliminary Cost Estimates Report.

Project Map:



DRAFT