

Project 206 - Details for Budget Year 2014

Project 206 **Title** College Ave Lift Station Alternate Power Supply **Locked** No
Asset Type Sanitary and storm sewers, trun **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2010
Manager Patrick Pulak 729-2477 **Partner**

Regions

Description This project is for purchase of a Generator to be installed at College Lift Station.

Comments There is a single power supply service to this lift station with no redundancy in the supply. There is also no source of alternate power. In the event of a power failure there is not sufficient time to respond with a temporary pumping system . It is proposed to install an alternate power supply consisting of a diesel fired engine driving a generator.

Budget Version Details

Budget Year 2,014 **Version** 2014 Proposed **Locked** No
Status Council Review **Active** Y

Description

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0410	Generator	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$0	\$200,000	\$0							

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
23.1557	Wastewater Reserve	\$0	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$0	\$200,000	\$0							

Ranks

Description **Value** **Comment**

Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 1072 - Details for Budget Year 2014

Project 1072 **Title** Master Plan Water Treatment Facility **Locked** No
Asset Type Water treatment plants and purr **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2011
Manager Patrick Pulak 729-2477 **Partner**

Regions

Description This project is for the development of a comprehensive Water Treatment Master Plan.

Comments The development of the Maple Leaf plant in 1999 essentially used all of the City's reserve water treatment capacity. This capacity is held for growth and need to be replenished. A study was completed which recommends that a new treatment facility be constructed.

That recommendation was initially rejected for a less costly alternative of increasing the capacity of existing infrastructure. A decade has now passed and the original objectives have been achieved, but with changing water regulation and aging infrastructure the need to plan for an expansion or replacement of the facility is now warranted.

Budget Version Details

Budget Year 2,014 **Version** 2014 Proposed

Locked No

Active Y

Status Council Review

Description

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0019	Detailed Design for WTP Process Upgrade	\$0	\$0	\$0	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0
0019	Preliminary Design for WTP Process Upgrade	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0019	Update Master Plan	\$25,000	\$25,000	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
230	Ground Water Investigation	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$0	\$0	\$0	\$0	\$0
230	High Priority Upgrades	\$1,000,000	\$7,200,000	\$3,900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
230	Install and Examine Hydro Wells	\$200,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
230	Install Koch Reuse Forcemain	\$0	\$0	\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$0
230	Medium Priority Updgrades	\$0	\$2,500,000	\$1,500,000	\$1,100,000	\$0	\$0	\$0	\$0	\$0	\$0
230	WTP Process Upgrade	\$0	\$0	\$0	\$0	\$22,000,000	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$1,375,000	\$9,925,000	\$5,975,000	\$2,750,000	\$27,150,000	\$0	\$0	\$0	\$0	\$0

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
21.2608	Debentures - Utility	\$0	\$9,700,000	\$0	\$0	\$27,000,000	\$0	\$0	\$0	\$0	\$0
22.3950	Water Revenue	\$300,000	\$225,000	\$2,075,000	\$1,250,000	\$150,000	\$0	\$0	\$0	\$0	\$0
23.1541	Water Distribution Reserve	\$1,075,000	\$0	\$3,900,000	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$1,375,000	\$9,925,000	\$5,975,000	\$2,750,000	\$27,150,000	\$0	\$0	\$0	\$0	\$0

Ranks

Description	Value	Comment
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Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 854 - Details for Budget Year 2014

Project 854 **Title** New Wastewater Sewers **Locked** No
Asset Type Waterworks trunk and distributic **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2015
Manager Patrick Pulak 729-2477 **Partner**

Regions

Description This project is for wastewater service upgrades of the North Hill and the South West Sector.

Comments The North Hill Lift Station and forcemain is intended to service the land south of Veterans Way as well as ACC and adjoining lands . Most of the cost will be recovered through land sales. Preliminary estimates for the station and force main are \$5M.

The south end interceptor sewer is a concept that is in the planning stage. The south end lift station commissioned in 2009 and outlets into the distribution system near First St and College Ave. This was the first location in the collection system that had the capacity to accommodate the flow. Extensive further development in the area of the South End Lift Station can not be accommodated by the lift station due to it's limited outlet capacity. The concept is to construct a gravity trunk sewer from 1st and Richmond to either the Municipal WWTF or the Central WWTF. This truck sewer will accommodate the flow from the southern portion of the city including the land that is currently (2009) being considered for annexation. This trunk will also relieve some of the load off the existing along Victoria Ave East truck which can then be used for further development on the north hill . The total length of pipe is in the order of 6.5 kilometers at a cost of \$1,000 per meter (\$6.5M)

Budget Version Details

Locked No

Budget Year 2,014 **Version** 2014 Proposed

Active Y

Status Council Review

Description

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
200	North Hill WW Improvements	\$0	\$4,500,000	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
200	South West WW Improvements	\$0	\$0	\$0	\$5,000,000	\$5,000,000	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$0	\$4,500,000	\$4,500,000	\$5,000,000	\$5,000,000	\$0	\$0	\$0	\$0	\$0

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
21.2608	Debentures - Utility Capital Projects	\$0	\$4,500,000	\$4,500,000	\$5,000,000	\$5,000,000	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$0	\$4,500,000	\$4,500,000	\$5,000,000	\$5,000,000	\$0	\$0	\$0	\$0	\$0

Ranks

Description	Value	Comment
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Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 587 - Details for Budget Year 2014

Project 587 **Title** New Watermains **Locked** No
Asset Type Waterworks trunk and distributic **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2014
Manager Patrick Pulak 729-2477 **Partner**
Regions
Description This project is for the installation of new watermains.
Comments New water mains are required to strengthen the existing water distribution system in reaction to changing water demand due to growth and/or changes in land uses.

Budget Version Details

Budget Year 2,014 **Version** 2014 Proposed **Locked** No
Status Council Review **Active** Y
Description
Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
200	Clare Ave, 18th St to 1st St N	\$0	\$0	\$650,000	\$0	\$0	\$0	\$1,000,000	\$0	\$0	\$0
200	Patricia Ave - 18th to 26th St	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0
200	Richmond Ave - 34th to Wankling Blvd	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0
200	Victoria East to 65th St East	\$0	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$0	\$0	\$650,000	\$0	\$2,000,000	\$900,000	\$1,000,000	\$300,000	\$0	\$0

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
22.3950	Water Revenue - Patricia Ave - 18th to 26th St	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0
22.3950	Water Revenue - Richmond Ave - 34th to Wankling Blvd	\$0	\$0	\$0	\$0	\$0	\$900,000	\$0	\$0	\$0	\$0
23.1541	Water Distribution Reserve - Clare Ave, 18th St to 1st St N	\$0	\$0	\$650,000	\$0	\$0	\$0	\$1,000,000	\$0	\$0	\$0
23.1541	Water Distribution Reserve - Victoria East to 65th St East	\$0	\$0	\$0	\$0	\$2,000,000	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$0	\$0	\$650,000	\$0	\$2,000,000	\$900,000	\$1,000,000	\$300,000	\$0	\$0

Ranks

Description	Value	Comment
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Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 1083 - Details for Budget Year 2014

Project 1083 **Title** Water Reclamation Facility (WRF) - Anaerobic Basin Cover Replacement **Locked** No
Asset Type Sewage treatment and disposal **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2012
Manager Patrick Pulak 729-2477 **Partner**

Regions

Description This project is for the replacement of the anaerobic basin cover.

Comments The anaerobic basis along with the rest of the IWWTP was constructed in 1999. The cover over the basin was estimated at that time to have a lifespan of 10 years. Through an aggressive preventative maintenance program on the cover, that lifespan has been extended significantly. An inspection in 2010 by GTI, the original supplier, recommended that the cover be replaced no later than 2014. They estimated the cost to replace the cover is \$1.4M.

Budget Version Details

Locked No

Budget Year 2,014 **Version** 2014 Proposed

Active Y

Status Council Review

Description

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0410	Anaerobic Basin Cover	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$1,500,000	\$0								

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
23.1546	IWWTF Equipment Reserve	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
23.1557	Wastewater Reserve	\$1,200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$1,500,000	\$0								

Ranks

Description **Value** **Comment**

Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 282 - Details for Budget Year 2014

Project 282 **Title** Watermain Replacement Program **Locked** No
Asset Type Waterworks trunk and distributic **Department** ENGINEERING UTILITIES
Start Date **Completion** **Year Identified** 2010
Manager Patrick Pulak 729-2477 **Partner**

Regions

Description This budget allocation supplies the necessary funds for watermain replacement.

Comments The funding for the replacement of watermains falls under one of two categories depending if the watermain replacement is associated with reconstruction of the over lying road. If the road is scheduled to be replaced then the watermain replacement is budgeted through the street reconstruction project (Project 12), if the street is not replaced but simply repaired then the funds are budgeted through this project.

Budget Version Details

Locked No

Budget Year 2,014 **Version** 2014 Proposed

Active Y

Status Council Review

Description

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
200	3rd St	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000
200	Airport Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0
200	Airport Reservoir	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$0
200	Airport Supply Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$0	\$0
200	Garwood Dr	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
200	Hazlewood Cres	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0
200	Inglewood Cres	\$0	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0
200	Kirkcaldy Drive - 1st to Paterson	\$950,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
200	Neepawa Dr - Wakoma	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
200	Princess Ave - 13th to 18th	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$950,000	\$0	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,000,000	\$1,000,000	\$300,000

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
22.3950	Water Revenue	\$0	\$0	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$0	\$0	\$300,000
23.1541	Water Distribution Reserve	\$950,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,000,000	\$0
	Total Revenues	\$950,000	\$0	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,000,000	\$1,000,000	\$300,000

Ranks

Description Value Comment

Operating Budget Impact

Effective Date Account Type Amount FTE Impact

Related Projects

Project Title Description Year Version

Project 983 - Details for Budget Year 2014

Project	983	Title	WTF Capacity Upgrade	Locked No
Asset Type	Water treatment plants and pur	Department	ENGINEERING UTILITIES	
Start Date		Completion		Year Identified 2007
Manager	Patrick Pulak 729-2477	Partner		

Regions

Description This project is for capacity upgrades at the Water Treatment Facility.

Comments The two issues that all Water Treatment facilities face are water quality and water quantity . This budget allocation will address the capacity issue over a number of years and provide for the necessary planning and capital expenditures required to meet future water demands.

The Brandon Water Treatment facility currently meets the city's demand for water and meets current water quality requirements with the exception of seasonal variation in disinfection byproduct generation. The plant has been maintained and upgraded over the years but the main components range in age from 35 to 60 years old. The treatment technology is still current but advances in water treatment have been made in the past few decades. The water demand of Maple Leaf essentially used the plant's reserve capacity and in 1998 a decision was made to utilize the existing infrastructure with some capacity enhancements to restore the reserve capacity (as opposed to constructing a new plant or adding on to the current plant). More than a decade has passed and it is now the time to conduct a study for the long term needs for Brandon's water supply. There are essentially two options for the future; construct a new facility or enhance the existing facility. The most probable result will be a hybrid of both options. In 2013 it is proposed to formulate the terms of reference to conduct an expression of interest from various consultant's which will be used to select a consultant in 2013 to conduct a Master Plan for the Brandon Water Treatment facility . The following discussion and schedule of improvements are provided simply for budget purposes and will be refined during the Master Plan Study.

The Water Treatment Facility is constructed of three separate water treatment plants or trains under one roof . Each of these plants can operate independently or in any combination which allows for a robust operation with a high level of redundancy. Each of these three plants contain the same process technology which includes a solids contact reactor, followed by filtration and disinfection. The solids contact units are referred to as the reactors and perform the function of removing particles from the water as well as soften the water.

All of the reactors operate on the same principle of mixing a variety of chemicals into the water which allows for mechanical water purification through the development of a sludge blanket and chemical precipitation for softening. The physical appearance of each reactor is different based on the manufacturer's design, however they all contain a large concrete tank with mechanical devices mounted inside the tanks.

Each plant or process train each contain their own reactor for a total of three reactors. All of the reactors can be refurbished using current technology to increase their water treatment capacity. The reactors are feed a supply of raw water through a system of pumps referred to as low lift pumps. These pumps and their resulting piping network feed the water treatment facility with its untreated water supply by lifting the water and allowing the water to flow through the facility by gravity.

Reactor 2 was upgraded in 2007, reactor 1 was ugraded in 2009 which resulted in an increase of water productivity of 13 MLD or 24% of total plant capacity. There is the opportunity to upgrade Reactor 3 to increase it's capacity by an additional 13 MLD. The long term plan calls to add a 40 MLD plant in 2020 and decommission plants 1 and 2 and add an additional 40 MLD plant in 2035 and decommission plant 3. Additional storage, 18 ML, will be added in 2025 at the Ninth St Reservoir.

Budget Version Details

Budget Year	2,014	Version	2014 Proposed
Status	Council Review		
Description			

Locked No
Active Y

Related Projects

Project	Title	Description	Year	Version
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Project 210 - Details for Budget Year 2014

Project 210 **Title** Commercial Water Meter Replacement **Locked** No
Asset Type Other communication equipment **Department** OPERATIONS UTILITIES
Start Date **Completion** **Year Identified** 2005
Manager Ian Broome 729-2292 **Partner**

Regions

Description This project is for the replacement of automated water meters.

Comments The move to an Automated Water Meter Reading program in 2002 involved replacing all water meters with meters that were compatible with the automated read system. These meters are due to be replaced in 2024.

This will be necessary due to the age of the water meters and loss of accuracy for water billing purposes.

Budget Version Details

Budget Year 2,014 **Version** 2014 Proposed **Locked** No
Status Council Review **Active** Y
Description
Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0410	Water Meters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$0									

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
23.1541	Water Distribution Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Revenues	\$0									

Ranks

Description **Value** **Comment**

Operating Budget Impact

Effective Date	Account	Type	Amount	FTE Impact
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Related Projects

Project	Title	Description	Year	Version
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Project 1041 - Details for Budget Year 2014

Project 1041 **Title** Utility Equipment replacement **Locked** No
Asset Type Other machinery and equipmen **Department** OPERATIONS UTILITIES
Start Date **Completion** **Year Identified** 2009
Manager Ian Broome 729-2292 **Partner**

Regions

Description This project is for the purchase and replacement of equipment for the Utilities section.

Comments The Utilities section is uses various pieces of equipment to support their day to day operations. Some of these pieces include, sewer cameras, safety trench cages, a storage shed for materials and a truck mounted valve operator.

Budget Version Details

Locked No

Budget Year 2,014 **Version** 2014 Proposed

Active Y

Status Council Review

Description In order to continue with the Sewer and Water excavation in a safe and efficient manner a new cage is needed to replace current cage used.
 Water meter transmitter batteries are replaced every 10 years. These are the power source that enable us to collect the water meter readings electronically.
 The Large and Small cameras are used in the aid of televising condition of the City's sewer mains, the large camera is used for 6" and over and the small camera 6" and smaller.
 Televising cable will be required to replace current cable in 2016.
 Requested funding for 3 (6") diesel pumps to aid in prevention of overland flooding.
 Truck mount valve operator would assist the water valves throughout the City on a yearly basis . The Operator would help in assuring that the valves in the system are operable. It would also allow the Department to locate and map all the valves in the system. (GPS equipped)
 An addition to the storage shed is needed in the utility Yard to store the plastic pipe , fittings, and signage. The pipe needs to be kept out of the natural elements in preserving the highest level of performance of these items.
 Laptops that are being used with in operation vehicles will be need to be replaced in 2014 and 2015. This aids operators with up to speed data needed out in the field.

Comments

Expenses

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0410	6" pumps (3)	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0410	Cable for camera	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0410	Laptops - (3) 2014 (4) 2015	\$22,500	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0410	Leak detection equipment	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0410	Meter reading laptop	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0
0410	Safety Trench Cage and Trailer	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
0410	Small Camera	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0
0410	Storage Shelter	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0410	Truck Mount Valve Operator	\$76,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$348,700	\$30,000	\$5,000	\$20,000	\$0	\$0	\$25,000	\$0	\$0	\$50,000

Revenues

Account	Description	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
22.1785	Water Rates	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0

22.3947	Wastewater Rates	\$0	\$0	\$5,000	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0
23.1541	Water Distribution Reserve	\$348,700	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
	Total Revenues	\$348,700	\$30,000	\$5,000	\$20,000	\$0	\$0	\$25,000	\$0	\$0	\$50,000

Ranks

Description Value Comment

Operating Budget Impact

Effective Date Account Type Amount FTE Impact

Related Projects

Project Title Description Year Version