Agenda – Executive Policy Committee – July 15, 2009

ADDENDUM REPORTS

Item No. 4 Infrastructure Deficit and Possible Funding Options
File S-7

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

That this report on Infrastructure Deficit Funding Options be received as information.

ADMINISTRATIVE REPORT

ISSUE: INFRASTRUCTURE DEFICIT AND POSSIBLE FUNDING OPTIONS

CRITICAL PATH: SECRETARY OF STRATEGIC INFRASTRUCTURE RENEWAL – EXECUTIVE POLICY COMMITTEE - COUNCIL

AUTHORIZATION

Author	Department Head / Deputy CAO	CFO	CAO
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RECOMMENDATIONS

1. **That this report on Infrastructure Deficit Funding Options be received as information.**

IMPLICATIONS OF THE RECOMMENDATIONS

- This report outlines funding options to consider for the 2009 Infrastructure Deficit.
- There are two companion reports: "Existing Infrastructure Deficit – new estimate" and "New Strategic Infrastructure Deficit – new estimate".
- An internal cross departmental working group was established to determine the infrastructure deficit.
- The total infrastructure deficit for the City's existing infrastructure is estimated at $3.8 billion over the next 10 years, calculated in constant 2009 dollars.
- The total infrastructure deficit for the City's new strategic infrastructure is estimated at $3.6 billion over the next 10 years, calculated in constant 2009 dollars.
- The current backlog of infrastructure deficit (both existing and new) as of the beginning of 2009 is estimated at $3.5 billion.
- With the current funding level in the City's capital budget, the infrastructure deficit (combined existing and new) will grow by an additional $3.9 billion over the next 10 years. In other words, to maintain the infrastructure at today's condition would require an additional $3.9 billion over the next 10 years.
- To deal with the entire infrastructure deficit, the City of Winnipeg would require $7.4 billion over the next 10 years (in 2009 dollars) or an additional $740 million per year.

- Of the $740 million per year, $700 million relates to the capital budget which works out to $1,050 per capita per year. When added to the current level of capital funding of $525 per capita, the total funding required is $1,575 per capita per year – this would be tripling Winnipeg's current 6 year capital budget. Looking at the current level of capital funding of other cities, two cities are currently spending at this high level: Edmonton at $1,655 and Saskatoon at $1,508.
- Even with its recent trend of increased capital funding, the City of Winnipeg, on a per capita basis, is currently spending the least of the eight Canadian cities.
- Other cities have access to additional sources of revenue in the areas of provincial capital grants, cash and reserve funding, and developer cost charges.
- Although the Province of Manitoba has historically been generous to Winnipeg relative to cities in other provinces, this has now changed. Examining 2009 Capital budget provincial grants in 8 large Canadian cities, Manitoba's funding to Winnipeg is now near the bottom range. 6 of the other 7 cities compared to receive more capital grants per capita then Winnipeg – more than twice more on a per capita basis.

REASON FOR THE REPORT:

The Secretary of Strategic Infrastructure Renewal requested a review of funding options to consider for the Infrastructure Deficit.

HISTORY

Defining the terms:

"Existing Infrastructure" includes renewal, replacement and reconstruction of any existing infrastructure including new construction as a result of consolidation or closing of existing facilities.

> For example, if two libraries were closed and a new regional library was built in the same vicinity, the new regional library is still considered a replacement of existing infrastructure and not considered new strategic infrastructure. Thus if the new construction does not increase the inventory of the asset group, then it is categorized as existing infrastructure work.

"New Strategic Infrastructure" includes new infrastructure to service growth and to meet new federal or provincial regulations. It does not include new construction to replace existing infrastructure or as a result of consolidation/closing of existing facilities.

"Infrastructure Deficit", as defined by Public Sector Accounting Board*, "is the added investment in (infrastructure) assets that would be required to maintain them at appropriate service levels and in a good state of repair". The City's asset management professionals used best practices to determine the funding level and timing with the goal of achieving the lowest long term preservation costs for the infrastructure.

* *The Public Sector Accounting Board (PSAB) issues standards and guidance with respect to matters of accounting in the public sector. PSAB issues such standards and guidance to serve*

the public interest by strengthening accountability in the public sector through developing, recommending and gaining acceptance of accounting and financial reporting standards of good practice.

To estimate the infrastructure deficit the following method was used:

1) Identified the total required work (for both existing and new strategic) over the next 10 years in order to "maintain the infrastructure at an appropriate service level and in a good state of repair" and estimated the costs in 2009 dollars.
2) Determined the likely capital funding available by extending the 6 year capital budget to an estimated 10 year capital funding.
3) The required work minus the funding available over the next 10 years estimated the infrastructure deficit.

There have been previous estimates of Winnipeg's infrastructure deficit:

- Strategic Infrastructure Reinvestment Policy (SIRP) report (1998) and;
- New Deal information (2003)
- Adjusted for construction inflation of 2003 New Deal numbers, as well as new Federal Gas Tax funding and new Provincial capital funding (2007)

Infrastructure Deficit	Annual Deficit	10 Year Amount	
SIRP (1998) (renewal only)	$82 million	$0.8 billion	In 1998 dollars
New Deal (2003)	$188 million	$1.8 billion	In 2003 dollars
Adjusted 2003 New Deal (2009)	$250 million	$2.5 billion	In 2009 dollars

In the fall of 2008, Councillor Wyatt was named the Secretary of Strategic Infrastructure Renewal with the main goal of providing focused public policy solutions relating to the City's infrastructure deficit.

DISCUSSION:

Factors that have influenced the growth in the infrastructure deficit:

- Old infrastructure needs renewal – during the 1950s, 60s and 70s, the City experienced significant growth with corresponding new infrastructure being built as a result of the baby boomer generation. Much of this infrastructure is now 40 to 60 years old and needs renewal.
- Capital spending has been deferred – during the 1990s the City was borrowing large sums annually to build new infrastructure and renew existing infrastructure. With no population growth and the City's debt having grown to over $1 billion, the City stopped borrowing in 1998.
- Possible funding that could have been used for capital was used to balance the operating budget – with the debt being paid down over the last decade, the freed up interest payments were used to fund operations instead of increasing capital spending. As well, the increased GST exemption was used to fund operations.

- Asset management practices implemented – City Departments have set up asset management units and are implementing best practice to manage the City's infrastructure. This more detailed / sophisticated examination has resulted in additional infrastructure deficit items being identified.
- Construction inflation – Between 2000 and 2008, Winnipeg's overall construction inflation is estimated at 68%. Thus even if the City infrastructure deficit inventory backlog was not growing, it would still cost 68% more to repair today than it did in the year 2000.

Thus in addition to some capital projects being deferred, the City's financial debt of the 1990's has been replaced by an infrastructure debt.

Capital Budget

Over the past decade, the City of Winnipeg has increased its Capital Budget as shown in the chart below, from a total capital of $120 million in 2001 to that of $476 million in 2009. The recent increased funding is partially due to several large one time projects (new water treatment plant, upgrades to sewage treatment plants, Disraeli Bridge and rapid transit) which have been facilitated by increased capital funding from the federal and provincial governments.

Winnipeg's Capital Budgets, 2001 to 2009 (in millions $)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010F	2011F	2012F	2013F	2014F
Roads	31	68	52	32	55	62	157	180	97	65	65	68	66	69
Transit	11	11	19	14	15	32	42	17	165	28	27	27	29	30
Other Tax Supported	25	29	41	48	30	50	73	94	58	65	38	45	49	52
Water, Sewer, LD	53	62	61	111	198	164	156	131	157	153	257	246	165	81
Total	120	170	173	205	298	308	427	421	476	310	387	387	308	232

Even with recent increased capital spending, the forecasted budget years show a declining level of planned capital spending.

Construction Inflation

An aspect which is negatively affecting the buying power of the capital budget is construction inflation. Between 2000 and 2008, Winnipeg's overall construction inflation is estimated at 68%. Thus on average it costs 68% more in 2008 to renew an infrastructure item than it did in the year 2000. For comparison, Winnipeg's consumer price index (CPI) during this same period was 18%.

What is also concerning, for some service areas, the infrastructure deficit (or capital funding shortfall) is still growing and that the average condition of the infrastructure is declining.

Public Opinion Survey

The most recent Probe Research Omnibus poll, March 2009, on the most important issue or concern of Winnipeggers, shows Crime at 34% and Infrastructure at 33%. In essence these two issues are tied in first place as being the most important issue of Winnipeggers.

Best Practices

The Public Service's various service areas are either at or moving towards best practices with respect to asset management of the City's infrastructure. Industry standards exist for some service areas but not all.

Replacement Value
The City has calculated the replacement value for much of the City's infrastructure, but currently there are gaps. Over the next year, the City should be in a position to state the replacement cost of the City's existing infrastructure inventory. This would provide additional context to the significance of the infrastructure deficit.

Population Growth:
The most recent population forecast was developed by the Conference Board of Canada in June 2007. The City of Winnipeg is forecasted to grow by 188,000 people over the next 25 years with a corresponding need for 87,000 more dwelling units of which about half will be apartment units. As comparison, once completed Waverley West is expected to have 11,500 dwelling units. Thus the City's recent growth is expected to continue, and this will necessitate additional capital projects (roads, bridges, water and sewer extensions, and facilities (libraries, fire, police recreation, etc). The full Conference Board of Canada report is posted on the City's website at: http://winnipeg.ca/cao/pdfs/population_forecast.pdf

Changing Provincial and Federal Legislation:
For wastewater treatment, provincial environmental and operating license legislation has required the service to go through a $1.2 billion upgrade of its wastewater treatment plants.

Estimating the Infrastructure Deficit
In December 2008, the Public Service established an internal cross departmental working group of department heads, managers and specialist to review the condition of the City's infrastructure. This was the first time since SIRP that the departments met to discuss the infrastructure deficit. A consistent methodology was established, significant information sharing occurred and a more complete package was assembled. For example, the working group discussed how the "appropriate asset management condition" was to be determined. This was done by examining best practices, benchmarking against industry standards and determining an appropriate long term condition trend. This appropriate asset management condition is not pristine/new condition – it offers the lowest long-term preservation cost for the infrastructure.

But for illustrative purposes, the infrastructure deficit was calculated in two parts: the working group has estimated the additional funding (over and above the capital budget forecast) required over the next 10 years to maintain the infrastructure at its current condition. It has also estimated the additional funding required to maintain the City's infrastructure at an appropriate asset management condition which in many cases is above the current condition. Both components together make up the total Infrastructure Deficit.

Please refer to Appendix A for a graphical representation of the components of the Infrastructure Deficit.

To provide an additional view, the Infrastructure Deficit was also categorized as:

- funding required to rehabilitate existing infrastructure, and
- funding required for both growth projects and new regulatory projects.

Cross Departmental Working Group Findings:

Total Infrastructure Deficit (in 2009 dollars)

Over the next 10 years	**Annual Deficit**	**10 Year Amount**
Existing Infrastructure Deficit	$380 million	$3.8 billion
New Strategic Infrastructure Deficit	$360 million	$3.6 billion
Total Infrastructure Deficit	**$740 million**	**$7.4 billion**

The table below breaks down the total infrastructure deficit based on achieving different average condition levels:

Total Infrastructure Deficit (in 2009 dollars)
(combining both existing and new strategic infrastructure deficits)

Over the next 10 years	**Annual Deficit**	**10 Year Amount**
Funding shortfall to maintain Infrastructure at current conditions (2008)	$390 million	$3.9 billion
Additional shortfall to maintain at appropriate asset management condition	$350 million	$3.5 billion
Total Infrastructure Deficit	**$740 million**	**$7.4 billion**

The figures above represent different aspects and timing of the infrastructure deficit calculations. The following are some observations to provide some insight on the infrastructure deficit:

- The current backlog of infrastructure deficit (both existing and new) as of the beginning of 2009 is estimated at $3.5 billion.
- With the current funding level in the City's capital budget, the infrastructure deficit (combined existing and new) will grow by $3.9 billion over the next 10 years. In other words, to maintain the infrastructure at today's condition, the City would require an additional $3.9 billion capital funding over the next 10 years.
- The Infrastructure Deficit was also categorized as $3.8 billion (51%) required to rehabilitate existing infrastructure, and $3.6 billion (49%) required to fund both growth projects and new regulatory projects.
- To deal with the entire infrastructure deficit, the City of Winnipeg would require $7.4 billion over the next 10 years (in 2009 dollars) or an additional $740 million per year.
- Of the $740 million per year, $700 million relates to the capital budget which works out to $1,050 per capita per year. When added to the current level of capital funding of $525 per capita, the total funding required is $1,575 per capita per year – this would be tripling Winnipeg's current 6 year capital budget. Looking at the current level of capital funding of other cities, two cities are currently spending at this high level: Edmonton at $1,655 and Saskatoon at $1,508. (Details to follow)

Please refer to the following appendices for a breakdown by service areas on the existing and new infrastructure deficit:

Appendix B: Existing Infrastructure Deficit by service areas

Appendix C: New Strategic Infrastructure Deficit by service areas

Appendix D: Total Infrastructure Deficit by service areas

Appendix E: Helping to Define the Services Areas

Please refer to Appendix F to help compare graphically the City of Winnipeg's actual capital budget to the unfunded infrastructure deficit. The numbers are presented as average annual figures and are sorted by service areas or grouped service areas. Roads, Transit and Parks have significant unfunded capital needs relative to the current level of funding. As well the new strategic infrastructure is primarily made up of transportation needs (Roads and Transit) – 85% of the total new strategic infrastructure.

Current multi-year capital budgets comparisons between other Canadian Cities

Even with its trend of increased capital funding, the City of Winnipeg is spending the least, on a per capita basis, of the eight cities shown. The average total of the seven other cities is $1,078 per capita which is twice the amount of Winnipeg's current planned capital spending. See chart below for details and Appendix G for graph.

2009 Capital Budget Comparison -- Multiple Year Annual Average

$ Per Capita / Yr	**Edm**	**Cal**	**Saskt**	**Reg**	**Wpg**	**Ham**	**Tor**	**Ott**
Roads	$491	$144	$524	$145	$112	$143	$91	$229
Transit	$374	$148	$18	$14	$76	$30	$479	$199
Other Tax Support	$603	$399	$580	$134	$72	$160	$257	$167
W & S & LD	$188 *	$350	$385	$346	$265	$490	$241	$217
Total	**$1,655**	**$1,041**	**$1,508**	**$639**	**$525**	**$823**	**$1,068**	**$812**

* The City of Edmonton's capital budget does not include the Water service (EPCOR)

Source: Cities' capital budgets

Sources of Revenue Comparisons with other Canadian Cities

Winnipeg's capital funding is low relative to other Canadian cities. Other cities have access to additional sources of revenue in the areas of provincial capital grants, cash and reserve funding, and developer charges. For details, see table below which outlines the sources of revenue for each city on an annual per capita basis. See Appendix H for graph of data.

2009 Capital Budget Comparison -- Multiple Year Annual Average

Source of Revenues

$ per capita /yr	Edm	Cal	Saskt	Reg	Wpg	Ham	Tor	Ott
Cash	$228	$78	$18	$178	$88	$199	$89	$0
Reserves	$205	$127	$963	$86	$129	$50	$303	$413
Debt - TS	$361	$20	$63	$0	$26	$39	$228	$82
Debt - W&S	$140	$295	$53	$157	$126	$56	$0	$43
Prov Grants	$524	$377	$90	$17	$84	$159	$150	$127
Fed Grants	$83	$43	$144	$67	$70	$62	$133	$0
Developer	$52	$88	$179	$133	$1	$239	$33	$147
Other	$63	$13	$0	$0	$1	$21	$132	$0
Total	**$1,655**	**$1,041**	**$1,508**	**$639**	**$525**	**$823**	**$1,068**	**$812**

Source: Cities' capital budgets

2009 Provincial Capital Funding comparisons

Another varying aspect of a source of revenue for cities is funding from their provincial governments. Although the Province of Manitoba has historically been generous to Winnipeg relative to cities in other provinces, this has now changed.

Examining the 2009 Capital multi year budgets provincial grants in 7 large Canadian cities, Manitoba's capital budget funding to Winnipeg is now near the bottom range. 6 of the other 7 cities compared to receive more capital grants per capita then Winnipeg – more than twice more on a per capita basis. The average of the other 7 cities is $206 per capita per year, while Winnipeg receives $84 per capita.

Provincial Capital Grants

$ per capita /yr	Edm	Cal	Saskt	Reg	Wpg	Ham	Tor	Ott
Prov Grants	$524	$377	$90	$17	$84	$159	$150	$127

Source: Cities' capital budgets

Funding Source Options:

The City of Winnipeg has used the following funding sources to fund past capital projects:

- Property Tax
- User Fees
- Provincial Grants
- Federal Grants/Gas Tax
- Developer Contributions
- Frontage Levies
- P3 lease payments
- Debt (significantly used in the 1990s), currently used for water & sewer utilities

The following table outlines a short list of several funding options to fund both the Existing and New Strategic Infrastructure Deficit.

Funding Options	For Existing	for New Strategic
City Already Has Authority		
Frontage Levies	Local roads	
Debt Financing – typically for large projects	✓	✓
Public Private Partnership (P3)	✓	✓
Property Taxes	✓	✓
User Fees	✓	✓
Federal and Provincial Grants	✓	✓
Development Cost Charges (partial authority)		✓
Sponsorships	✓	✓
City Does Not Have Authority		
New City tax dedicated to infrastructure funding: - Fuel Tax - Sales Tax	 ✓ ✓	 ✓ ✓
Increased share of Federal and Provincial existing taxes	✓	✓
Development Cost Charges (expanded authority)	✓	✓
Land Transfer Tax	✓	✓
Vehicle Registration Fee	✓	✓
Franchise Fee on Gas and Electric Utilities	✓	✓
Income Tax	✓	✓
Electrical bill fee	✓	✓

Financial Impact Statement Date: July 2, 2009

Project Name: Infrastructure Deficit

COMMENTS: Received as information

original signed by Radhika Abeysekera
Manager of Finance (Campus)
Corporate Finance Department

IN PREPARING THIS REPORT THERE WAS:

Internal Consultation With and Concurrence By:

- **Public Works**
- **Water and Waste**
- **Transit**
- **Community Services**
- **Planning, Property & Development**
- **Police Service**
- **Fire Paramedic Service**
- **Corporate Finance**
- **Legal Services**

External Consultation With:
none

THIS REPORT SUBMITTED BY:

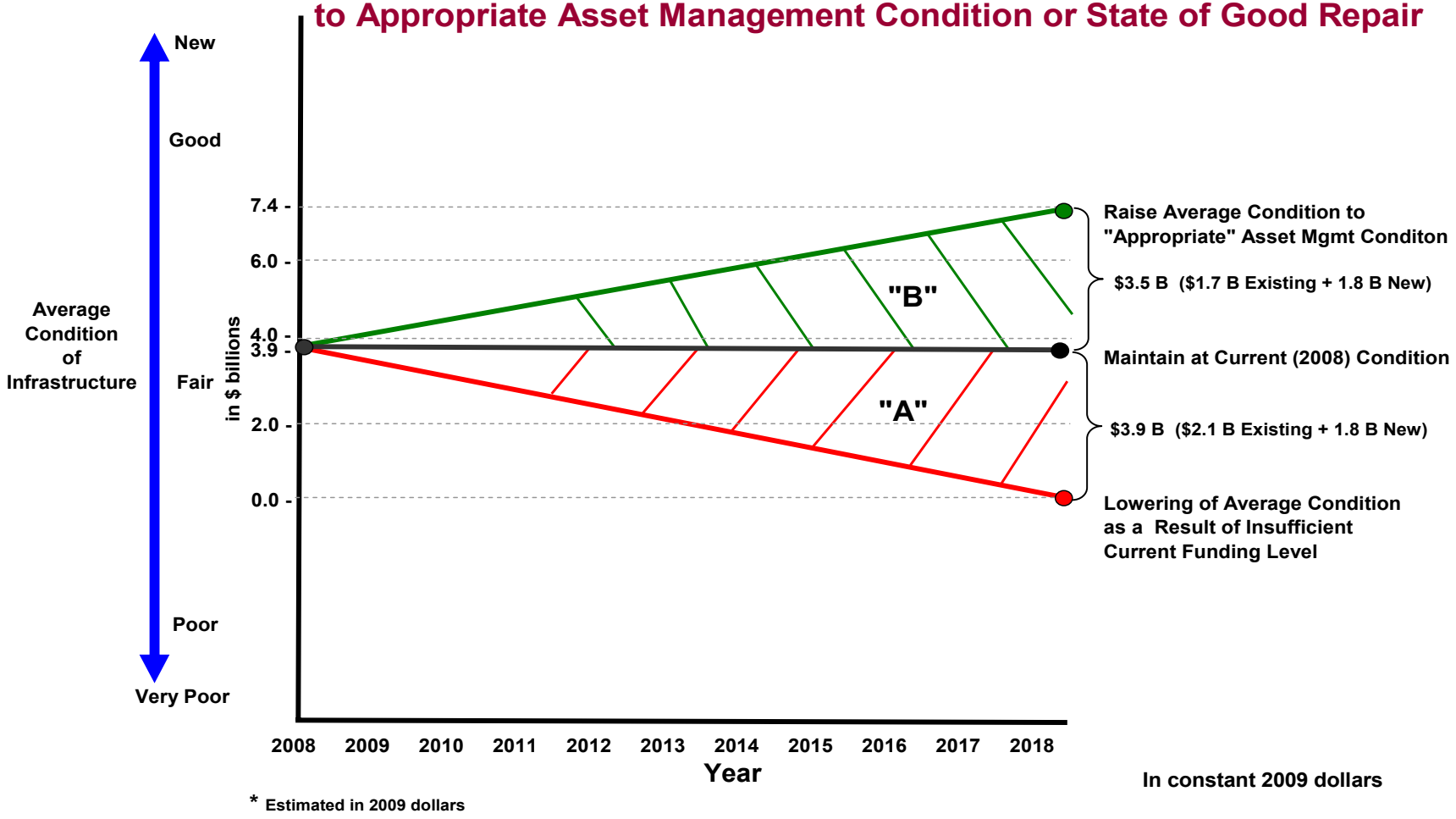
Department: Office of the CFO
Division:
Prepared by: Georges Chartier, City Economist
Report Date: July 8, 2009

File No.

Appendix A

Total Infrastructure Deficit: $7.4 B

- Red shaded area represents cost to maintain infrastructure at today's current condition
- Green shaded area represents additional cost to raise average condition to Appropriate Asset Management Condition or State of Good Repair



* Estimated in 2009 dollars

In constant 2009 dollars

Appendix B

Existing Infrastructure Deficit

Detail by Service Areas
Unfunded projects over the next 10 Years, in 2009 $ millions

	Capital	Operating	Total
Bridges	$200	$15	$215
Roads - Regional	$925	$10	$935
Roads - Local & Lanes	$756	$32	$788
Active Transportation	$0	$0	$0
Transit	$75	$25	$100
Parks	$284	$125	$409
Riverbanks	$100	$0	$100
Flood Protection	$130	$0	$130
Buildings			
- Police	$120	$0	$120
- Fire Paramedic	$23	$0	$23
- Libraries	$19	$0	$19
- Pools, Arenas, Parks, Rec.	$277	$0	$277
- Parkades (3 city owned)	$0	$0	$0
- Administrative Bldgs	$72	$0	$72
Tax Supported Sub-Total	**$2,981**	**$207**	**$3,188**
Water - Treatment	$17	$0	$17
Water - Distribution	$141	$0	$141
Sewage - Collection	$164	$0	$164
Sewage - Treatment	$6	$0	$6
Land Drainage	$238	$0	$238
Solid Waste	$10	$0	$10
Utility Sub-Total	**$576**	**$0**	**$576**
Total Existing	**$3,557**	**$207**	**$3,764**

Appendix C

New Strategic Infrastructure Deficit

Detail by Service Areas
Unfunded projects over the next 10 Years, in $ millions

	Capital	Operating	Total
Bridges	$200	$4	$204
Roads - Regional	$1,524	$0	$1,524
Roads - Local & Lanes	$0	$0	$0
Active Transportation	$93	$1	$94
Transit	$1,147	$91	$1,238
Parks	$167	$26	$193
Riverbanks	$0	$0	$0
Flood Protection	$0	$0	$0
Buildings			
- Police	$15	$0	$15
- Fire Paramedic	$3	$15	$18
- Libraries	$8	$0	$8
- Pools, Arenas, Parks, Rec.	$142	$0	$142
- Parkades (3 city owned)	$0	$0	$0
- Administrative Bldgs	$15	$0	$15
Tax Supported Sub-Total	**$3,314**	**$137**	**$3,451**
Water - Treatment	$0	$0	$0
Water - Distribution	$15	$0	$15
Sewage - Collection	$34	$0	$34
Sewage - Treatment	$90	$15	$105
Land Drainage	$0	$0	$0
Solid Waste	$0	$0	$0
Utility Sub-Total	**$139**	**$15**	**$154**
Total New Strategic	**$3,453**	**$152**	**$3,605**

Appendix D

Total Infrastructure Deficit

Detail by Service Areas
Unfunded projects over the next 10 Years, in $ millions

	Capital	Operating	Total
Bridges	$400	$19	$419
Roads - Regional	$2,449	$10	$2,459
Roads - Local & Lanes	$756	$32	$788
Active Transportation	$93	$1	$94
Transit	$1,222	$116	$1,338
Parks	$451	$151	$602
Riverbanks	$100	$0	$100
Flood Protection	$130	$0	$130
Buildings			
- Police	$135	$0	$135
- Fire Paramedic	$26	$15	$41
- Libraries	$27	$0	$27
- Pools, Arenas, Parks, Rec.	$420	$0	$420
- Parkades (3 city owned)	$0	$0	$0
- Administrative Bldgs	$87	$0	$87
Tax Supported Sub-Total	**$6,295**	**$344**	**$6,639**
Water - Treatment	$17	$0	$17
Water - Distribution	$156	$0	$156
Sewage - Collection	$198	$0	$198
Sewage - Treatment	$96	$15	$111
Land Drainage	$238	$0	$238
Solid Waste	$10	$0	$10
Utility Sub-Total	**$715**	**$15**	**$730**
Total Infrastructure Deficit	**$7,010**	**$359**	**$7,369**

Appendix E

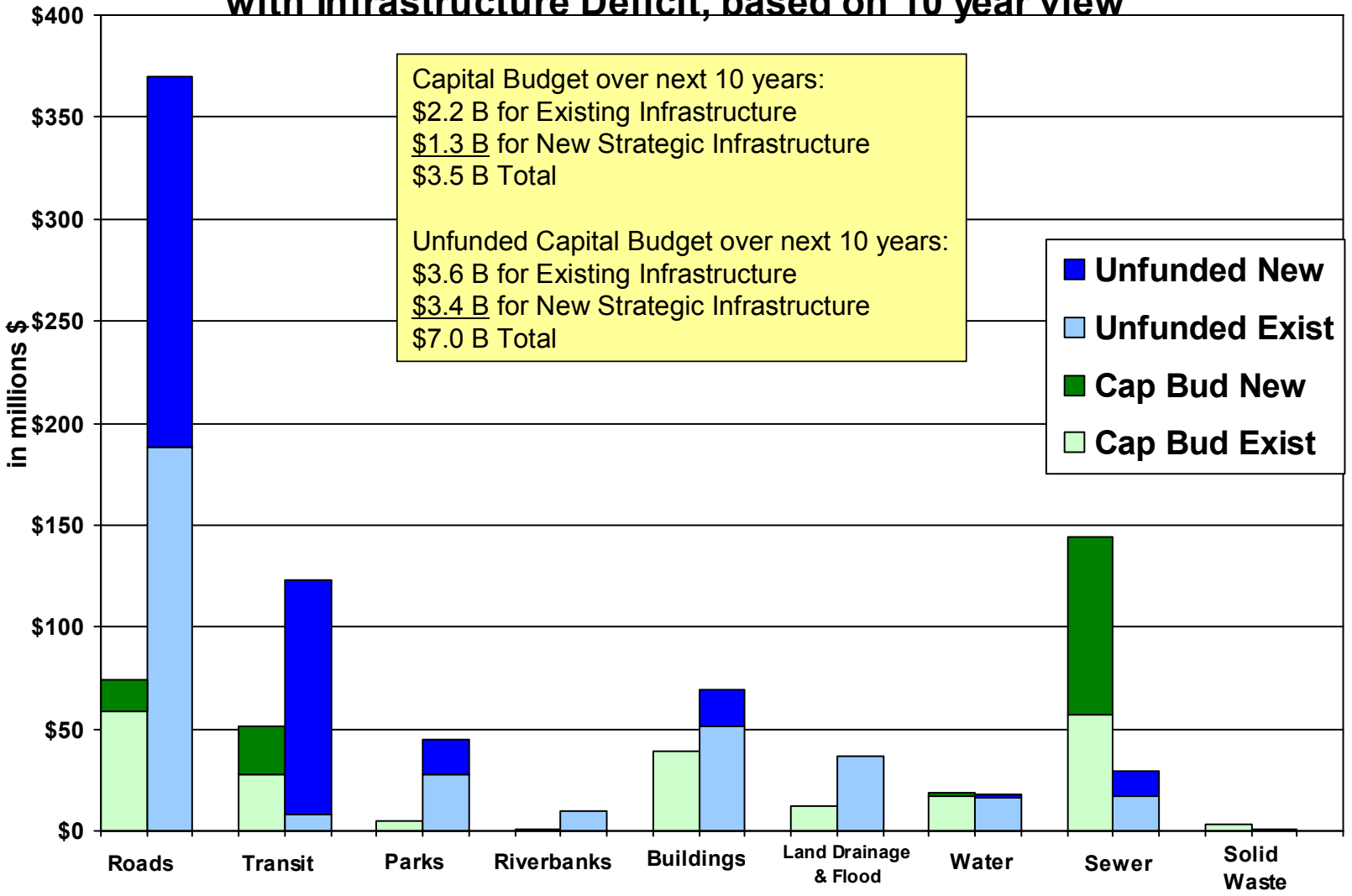
Helping to Define the Services Areas

Service Areas	Components
Bridges	Bridges, structural culverts, overhead structures (signs)
Roads - Regional	Regional, Arterials, regional sidewalks, traffic signals
Roads - Local & Lanes	Local streets, back lanes, alleys, local sidewalks
Active Transportation	Regional bicycle paths / walkways
Transit	Bus purchases, rapid transit, bus shelters, bus garage
Water - Treatment	Water treatment plant, Shoal Lake intake, aqueducts, reservoirs, 3 regional pumping stations and reservoirs
Water - Distribution	Watermains, feedermains, fire hydrants, valves, river crossings
Sewage - Collection	sewermains, interceptors, forcemains, pumping stations, river crossings
Sewage - Treatment	3 sewage treatment plants
Land Drainage	Land drainage sewers, river outfalls, stormwater retention basins
Flood Protection	Primary dike, flood pumping stations
Solid Waste	Landfill
Parks	Regional and local parks, benches, playgrounds, sports fields, boulevards
Riverbanks	Riverbank stabilization along city owned property
Buildings	
- Police	Police stations
- Fire Paramedic	Fire stations, Ambulance stations
- Libraries	Libraries
- Pools, Arenas, Parks, Rec.	Arenas, Assiniboine Park, community centres, day care centres, senior centres, indoor pools, outdoor pools, wading pools, Parks buildings, sport field houses, golf courses
- Parkades (3 city owned)	Parkades, three owned by City
- Administrative Bldgs	Various city owned buildings used as city offices

Appendix F

Average Annual Capital Budget

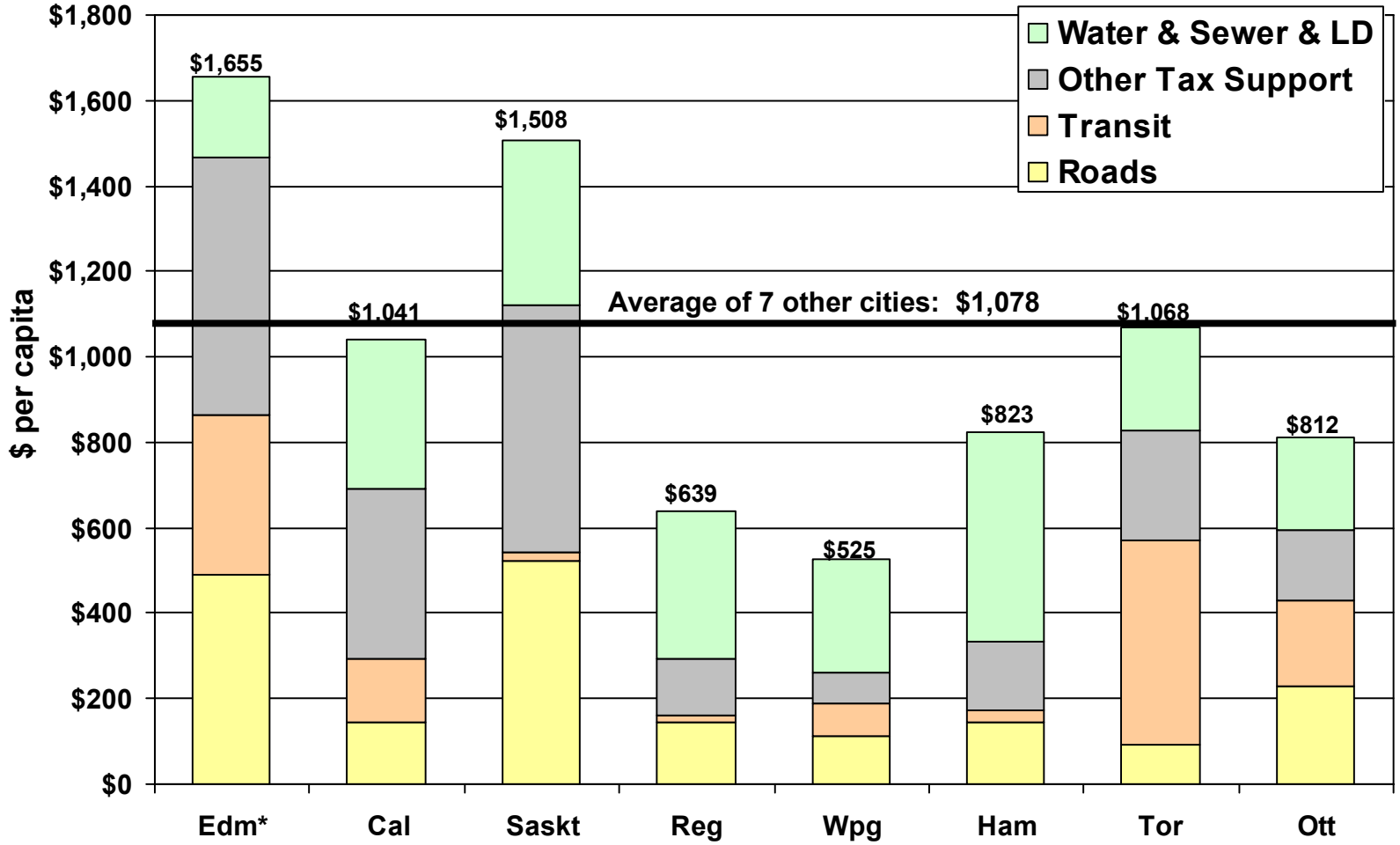
with Infrastructure Deficit, based on 10 year view



Appendix G

Average Annual Capital Budget per Capita

based on 2009 multi-year budget

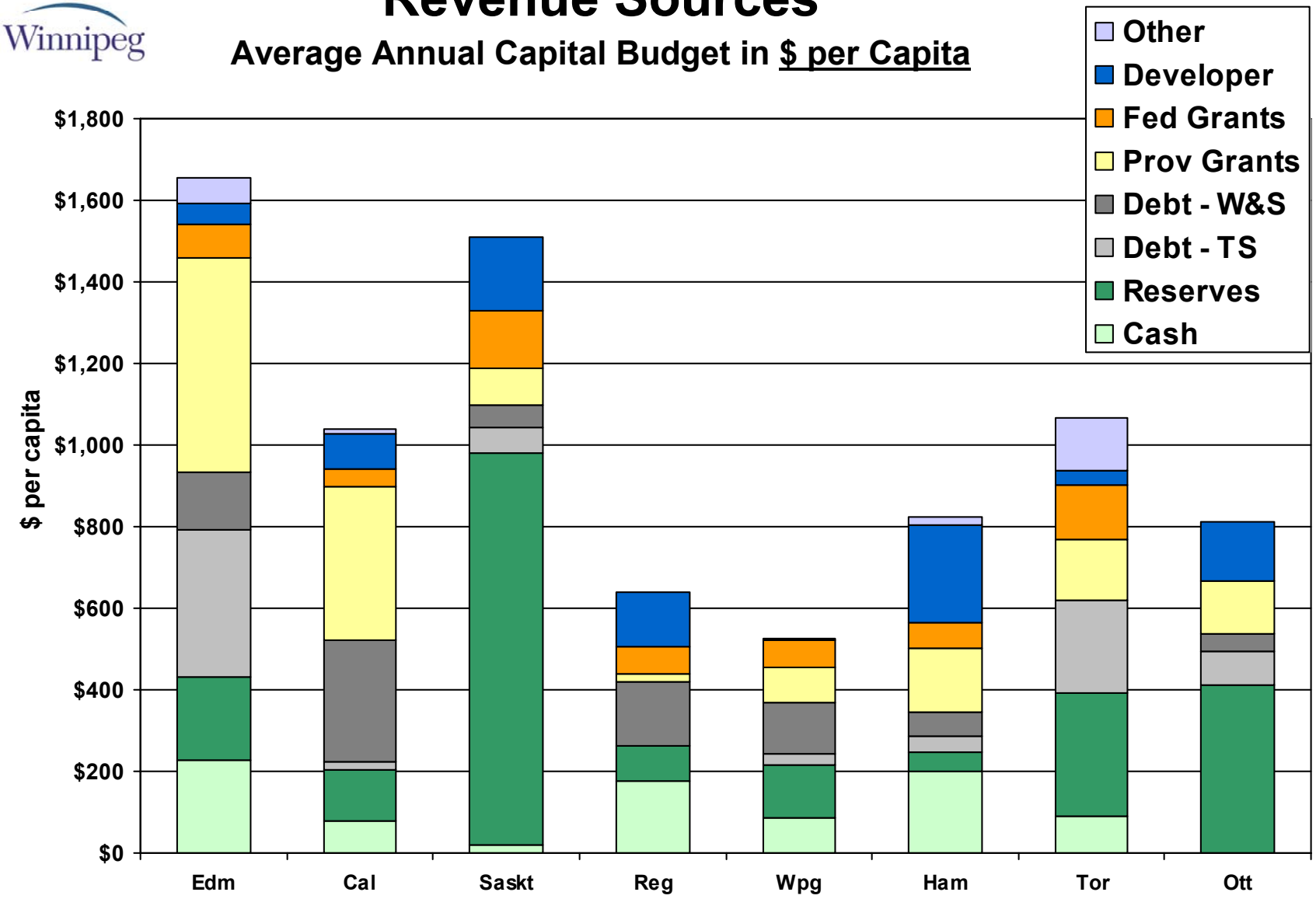


* City of Edmonton's capital budget does not include Water (EPCOR)

Appendix H

Revenue Sources

Average Annual Capital Budget in $ per Capita



City of Edmonton's capital budget does not include Water (EPCOR)

Unsustainable Infrastructure Funding

For both Existing and New Strategic Infrastructure

