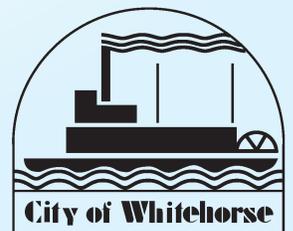


City of Whitehorse



September 2007



Contents

Introduction	5
Community Profile	7
Community Vision Statement	12
Whitehorse Residents Value...	13
Integrated Community Sustainability Template Assessments	16
Service Agreements with Adjacent Governments: Existing and Potential	21
Infrastructure Descriptions/Priorities	22
List of Potential Projects	39
Written Criteria	41
Prioritising Gas Tax Projects	44
List of Priority Gas Tax Projects	45
1 to 17 Capital Project Sheets	46
The Planning Process	63
 <i>Appendixes:</i>	
Planning Process for Integrated Community Sustainability Plan (ICSP)	66
Stakeholders	67
Project rating grid	68
Letters	70
Capital projects sheets	72
Bibliography	120



Prepared by:
Lesley Cabott
Integrated Community Sustainability Plan Project Manager
City of Whitehorse
3128 - 3rd Avenue (Smith House, LePage Park)
(867) 668-8600



Introduction

The City of Whitehorse has been practising and adopting the principles of sustainability for a number of years. This report includes many City of Whitehorse previously adopted sustainable practices and policies.

Like many urban communities across Canada, Whitehorse's existing infrastructure is aging and needs to be replaced. There is not the ability for municipalities across Canada to raise the dollars necessary to repair and replace infrastructure and to manage growth. Municipalities do not have the legislated ability to raise the amount of money necessary to respond to what has been referred to as the "infrastructure deficit".

In response to the "infrastructure deficit" the Government of Canada established a program called the New Deal for Cities and Communities. This program provides funding from federal gas tax revenues. The Yukon Government and Canada entered into the Gas Tax Agreement in 2005. As part of the agreement all Yukon communities and Yukon First Nations are eligible for gas tax funding for capacity building, planning and infrastructure.

The City of Whitehorse entered into a contribution agreement for planning and capacity building with Yukon Government in 2006 to complete an Integrated Community Sustainability Plan.

The Government of Yukon created a Yukon Integrated Community Sustainability Plan (ICSP) Template in cooperation with the Council of Yukon First Nations and the Association of Yukon Communities. This template provides a framework for development of the ICSP's for communities and first nations and a minimum requirement in which ICSP's will be reviewed by the Review Committee for approval. If the Review Committee approves this ICSP the City of Whitehorse will be eligible for funding under the Community Works Fund to begin working on infrastructure improvements. This report responds to the Yukon Government ICSP Template.

Process

This Plan is the first part of a two part plan and process for Whitehorse's Sustainability Plan. The City of Whitehorse has completed this plan in-house with an Integrated Community Sustainability Plan Project Manager, a Project Team, City Council, through a number of community interviews and a one day public value and visioning session on May 23rd, 2007 in Whitehorse. The public has been invited throughout the process to participate through advertising in the Yukon News and Whitehorse Star.

The groups and individuals who participated in the process are listed in an appendix to this report.

The City of Whitehorse thanks all those participated in the development of this plan and we look forward to their continued involvement as the City of Whitehorse enters into phase 2 of the process.

ICSP City of Whitehorse Project Team:

Lesley Cabott, Project Manager
Valerie Anderson, Manager Financial Services
Brian Crist, Director of Operations
Jeannine Dewald, Assistant Sustainability Office
Robert Fendrick, Director of Administrative Services
Mike Gau, Manager of Planning and Development
Douglas Hnatuik, Special Projects Coordinator, Parks and Recreation
Jim McLeod, Manager of Public Works
Dave Muir, Manager of Transit
Linda Rapp, Manager of Parks and Recreation
Sabine Schweiger, Environmental Coordinator
Wayne Tuck, Manager of Engineering and Environment
Jen Turner, Environmental Coordinator
George White, Manager of Maintenance and Safety Services

Community Profile

Whitehorse is the largest city in the Yukon Territory. It is the political and commercial capital of the Yukon and is home for the majority of Yukon residents. Whitehorse is a vibrant, modern city that played host to the 2007 Canada Winter Games.

Whitehorse is located along the Yukon River in the south central area of Yukon and is Canada’s most north-westerly city.

Whitehorse is a large municipality geographically. Whitehorse developed over the past 100 years linearly along the Alaska Highway and Yukon River. From north to south the city extends approximately thirty kilometres and is forty-one thousand, six hundred hectares in size. Whitehorse is a picturesque city surrounded by the mountain peaks of Haeckel Hill, Mount McIntyre, Golden Horne and Grey Mountain.

The downtown/central business district is located in the geographic center of Whitehorse. The settlement radiates north and south from the downtown along the Alaska Highway. The pattern is non-contiguous offering natural open space amongst the twenty-four residential neighbourhoods ranging in densities from less than 4 units per hectare in the country residential neighbourhoods to over 40 units per hectare in the downtown.

Urban Residential > 40 units/ha.	Suburban Residential 14 to 40 units/ha		Country Residential < 4 units/ha	
Downtown	Riverdale Porter Creek Crestview Kopper King Valleyview Takhini	Hillcrest McIntyre Granger Arkell Logan Copper Ridge	Hidden Valley MacPherson Cowley Creek Spruce Hill Mary Lake Wolf Creek	Wolf Creek Pine Ridge McRae Canyon Crescent McLean Lake Lobird

Source: City of Whitehorse 2002 OCP

History

The settlement of Whitehorse developed as a river/railway transportation hub and tent city in response to the Klondike Gold Rush in 1898. Historically the area of Whitehorse on the Yukon River was used by first nation’s people for food gathering and a meeting place. The first nation’s people by the nature of their mobile lifestyle did not establish a large village but rather trails, fishing and camping spots on a seasonal basis. Some of these traditional places are protected today by the Kwanlin Dun First Nation and Ta’an Kwach’an Council through their respective land claim and self government agreements. More however have been lost to 20th century development following the arrival of Europeans, in response to the Klondike Gold Rush. Following the building of the White Pass and Yukon Railway during the Klondike Gold Rush that linked Skagway and Whitehorse, Whitehorse began its role as the center of goods and services and transportation in and out of the territory. This role continues today. The second large influx of people into Whitehorse came during the Second World War when thousands of American Army personnel arrived in Whitehorse to construct the Alaska Highway. It was during this time that suburban development occurred with the residential development of Takhini, up the Two Mile Hill and outside of the downtown core. This type of post second world war development pattern was happening throughout North America and Whitehorse responded.

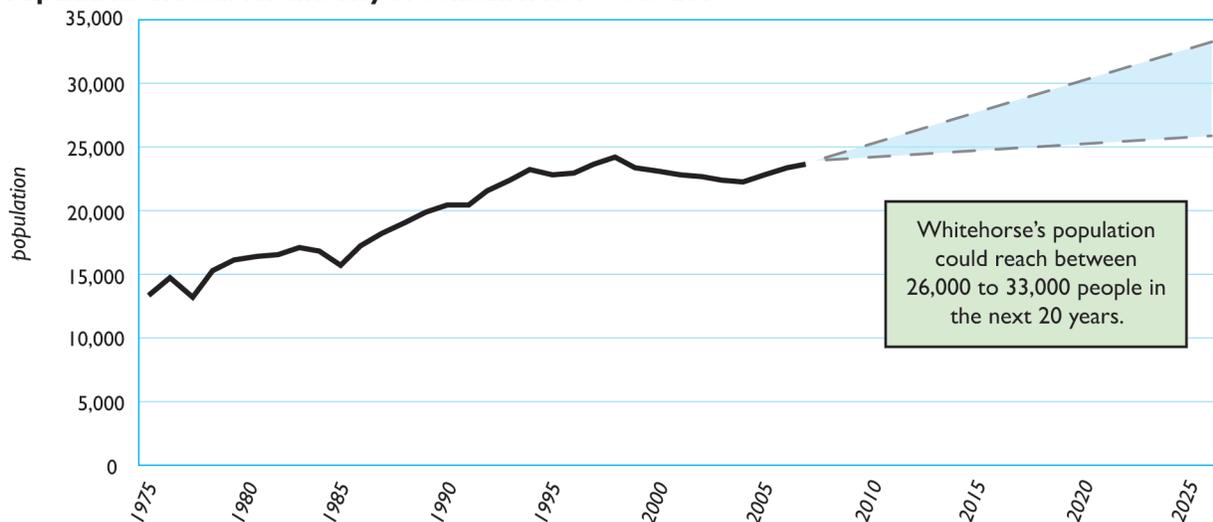
Population, Growth and Characteristics

The population of Whitehorse is growing and in December 2006, Whitehorse reached its peak population of 24,151. Well into the 20th century Whitehorse's population fluctuated based on the mining industry. Downturns in the economy saw people move out of the territory and the population decrease. Today, the population of Whitehorse is growing. In the past 20 years Whitehorse has grown by 10,000 people and statistics show these people are staying. The Whitehorse population of the past tended to be very mobile. Today 85% of the city's population have lived in Whitehorse for five years or more.

The number of births for the Yukon is declining and the number of deaths is increasing. Hence the Yukon and the City of Whitehorse will continue to rely on in-migration for population increases.

Utilizing the projected growth rates ranging from .5% as the low to 2.0% as the high as detailed in the Whitehorse Official Community, Whitehorse's population could reach between 26,000 to 33,000 people in the next 20 years.

Population Growth for the City of Whitehorse 1974 to 2006



Source Porter Creek Bench Socio- Economic Report, Nov 2006

Whitehorse's population is aging. This demographic will play a significant role in how resources and planning relating to life style, health, labour market, social programs and housing are managed in the coming years. The fastest growing age group in Whitehorse is those over 55 years of age. There has been an increase of 134% of Whitehorse residents over the age of 65 since 1996. This increase is the largest percentage in Canada (*Canadian Urban Land Institute*).

Fifteen percent of the population of Whitehorse are First Nations people. The Ta'an Kwach'an Council and Kwanlin Dun First Nation have settled land claim agreements with Canada and Yukon. Both First Nations own land within the City of Whitehorse. The Whitehorse area First Nations have established governments and are developing legislation, policy and institutions to protect, develop and manage their land within the City. The First Nations have been practicing sustainable ways for centuries, their participation in this process and their sharing of information is invaluable.

Health

Whitehorse is the regional center for health in Yukon. The Whitehorse General Hospital is a regional facility serving all of Yukon. The majority of Yukon health care providers and services are situated in Whitehorse. The Department of Health and Social Services provides three main areas of service:

1. Health Services

- Insured Health and Hearing Services
- Community Health
- Community Nursing
- Emergency Medical Services

2. Social Services

- Family and Children Services
- Social Services
- Regional Services in the Communities

3. Continuing Care

- Extended/Complex Care
- Intermediate and Community Care

Community Vision Statement

“Whitehorse will be a well planned self sustaining community that is a leader in energy conservation and innovation that maintains and conserves wilderness spaces for future generations. Whitehorse will continue to strive for a better quality of life that is reflected in its vibrant economy and social life.”

From May 23rd, 2007 Community Value and Visioning Session, Hi Country Inn

Community Values

Whitehorse Residents Value a Sense of Community

Whitehorse has a small town feel and yet offers many larger city services. People are friendly and involved in the community. There is a high level of community involvement. Residents value the uniqueness of our community and celebrate the diversity of our people.

Whitehorse Residents Value Their Quality of Life

Whitehorse is a safe community that offers a balanced lifestyle. Residents of Whitehorse value the opportunities to be challenged in their work and recreate nearby. We value the intergenerational mix of our population, access to health care and the educational opportunities available.

Whitehorse Residents Value the Natural Beauty and the Closeness to Nature

The Yukon River runs through Whitehorse and our city is surrounded by mountains. Our residents value the nearby access to the wilderness. Residents value the wildlife, green spaces and trails in our neighbourhoods and the connections to other neighbourhoods. We value clean air and clean water.

Whitehorse Residents Value Leadership

Whitehorse has world class recreational, cultural and educational facilities. We are leaders in business, science, culture and sports. We are proud of our accomplishments and support innovators and new ideas.

Whitehorse Residents Value the Contributions of First Nations

The Kwanlin Dun First Nation and the Ta’an Kwach’an Council have Final and Self Government Agreements. We value the First Nations’ culture, traditions and governments. We value and respect their stewardship of the land. Whitehorse residents value the participation and contribution of the Kwanlin Dun First Nation and the Ta’an Kwach’an Council and their people.

Whitehorse Residents Value our Vibrant Arts and Cultural Community

Whitehorse residents are proud of our heritage and the numerous community events and celebrations that we enjoy. We value and support our many artists. We celebrate their unique and diverse works and performances. We value the cultural facilities which attract outside artists to perform and exhibit in our city.

Whitehorse Residents Value Local Businesses

Whitehorse residents value the ability to shop locally and support local businesses. Whitehorse residents are proud of Whitehorse/Yukon based businesses.

Whitehorse Residents Value...

Value	Goal	Measure of Success
Sense of Community	<i>Provide opportunities for community participation in City projects</i>	High degree of community “buy-in”
	<i>Protect the small town feel</i>	Neighbourhood meeting points Create a sense of place Keep each neighbourhood special Develop architectural guidelines for neighbourhoods
	<i>Complete the development of the waterfront</i>	Vibrant riverfront with traffic on the river
	<i>Create common community image</i>	Increased level of social interaction in Whitehorse
	<i>Promote intergenerational interaction</i>	Intergenerational urban gardening program Integrate schools into the community
Quality of Life	<i>Ensure a healthy population</i>	Lower health care costs Lower disease rates Lower obesity rates in children Lower drug and alcohol use Higher participation in recreation Less dependency on social programs
	<i>Whitehorse is a good place to live and work</i>	Diversity in housing choice and cost Balance human and wildlife habitat Safe community Locate new neighbourhoods close to existing services Eliminate urban sprawl
	<i>Ensure pedestrian safety</i>	Increase kilometres of safe sidewalks Landscape and streetscape the urban environment
	<i>Preserve green spaces</i>	Percentage of land protected Five minute walking distance to green space from residence Greenway Plan Trail Plan Ecological integrity maintained Plans are done before development
	<i>Educational opportunities for all ages</i>	Increase kilometres of formal trails Environmental education is available for youth. Increase the innovators in the school program. Develop innovative educational programs for all ages.

Continued...

Value	Goal	Measure of Success
Natural Beauty and Closeness to Nature	<i>Develop trail connections</i>	Hard-surfaced trails connecting all neighbourhoods Multi-use trails Trail conflicts have decreased Habitat corridors are protected Trails are linked to transit system
	<i>No loss of green space</i>	Increase density Redevelop existing disturbed/built lands Regional Land Use Plan
	<i>Increase stewardship</i>	Partnerships with First Nations Educational programs
	<i>Protect Wildlife and Preserve Wilderness areas</i>	Monitor wildlife habitat and populations Maintain important wildlife corridors Wildlife sightings remain frequent Protect watersheds Preserve access to wilderness
	<i>Ensure safe, secure and clean drinking water</i>	Water meets/exceeds National Standards Use 100% groundwater for drinking water Replace Selkirk pump house
	<i>Reduce water consumption</i>	Implement a water metering program Allow separate grey water systems
	<i>Reduce green house gas emissions</i>	Work towards being carbon neutral Increased transit ridership Infill and high density housing Carbon fund established Increase transit service Use Bio-diesel for buses Less vehicle idling Good air quality
	<i>Establish green building regulations</i>	Partnerships with Yukon Housing and First Nations All new government buildings are LEED Certified Demonstration projects Net Zero
	<i>Reduce waste</i>	Commercial composting Cart program city wide City-wide blue box program Reduce, reuse, recycle
	<i>Reduce use of non-renewable energy</i>	Increase KW produced through wind, solar, hydro, thermal and waste heat

Value	Goal	Measure of Success
Contributions of the First Nations	<i>Healthy First Nation culture</i>	Full participation in planning, decision making and management Use of traditional knowledge Culture and language is maintained Self-sufficiency Healthy land and wildlife
	<i>Partner with First Nations</i>	Increased cultural awareness Protection of special places
Leadership	<i>Retrofit existing buildings</i>	Incentives to green up buildings Innovative financing
	<i>Support an innovation Cluster</i>	Yukon College Leading academics
	<i>Participate in Demonstration Projects</i>	Porter Creek Bench Sustainable Neighbourhood New Fire Hall LEED certified Solar Panels on Shipyards Park Building Bike Lockers in the downtown Net Zero buildings
	<i>Maintain and enhance indoor and our recreational facilities</i>	Increase in Yukon athletes Increase in participation rates Increase in number of events
Vibrant Arts and Cultural Community	<i>Foster a vibrant and accessible arts and cultural community</i>	Increased arts infrastructure Increased arts promotion Partnerships Broad participation in the arts Sport tourism Artist's products are diverse High level of youth participation Number of events
Local Businesses	<i>Support locally produced goods and food</i>	More local producers
	<i>Thriving local businesses</i>	Local business adapts to change Local businesses develop niche market More small box retail

Integrated Community Sustainability Template Assessments

Community Inventory and Assessment Checklists:

Capital Project Infrastructure Inventory and Assessment

- Use this list to identify important structures, utilities and transportation assets and the needs that exist in your community.
- If there is something missing from the list add it under “other”.
- If an item doesn’t apply to your community, leave it blank.

Capital Project/Infrastructure	Do you have it? Yes/No	What is the condition? Good/Avg/Poor	Is there enough? Yes/No	Do you need it? Yes/No
City Hall	Yes	Avg	No	Yes
Airport	Yes	Avg	Being upgraded 2007	Yes
CGCCommunity buildings	Yes	Good	Yes	Yes
Community Hall	No			Yes
Dock facilities	2	Avg	No	Yes
Community energy systems	Yes	Avg	Yes/No	Yes
Fire Station	2	Avg Downtown 2 Mile poor	No	Yes
Health clinic	Yes	Good	Yes	Yes
Housing	Yes	Good/avg/poor	Yes	Yes
Internet service	Yes	Good	Yes	Yes
Library	Yes	Good	Yes	Yes
Police building	Yes	Good/ Avg	Yes	Yes
Post office	Yes	Good/ Avg	Yes	Yes
Recreation (parks)	Yes	Good	Yes	Yes
Roads	Yes	Avg	No	Yes
Schools	Yes	Good/avg	No	Yes
Sewage collection and disposal	Yes	Good/ avg	Yes/ no	Yes
Solid waste disposal	Yes	Good/ avg	Yes/ no	Yes
Water service	Yes	Good	Yes	Yes
Public transportation	Yes	Good	No	Yes
Active transportation	Yes	Good	No	Yes
Youth centre	Yes	Avg	Yes	Yes
Municipal Services Building	Yes	Poor	No	Yes
Transit Building	Yes	Poor	No	Yes
Parks Building	Yes	Poor	No	Yes

Community Inventory and Assessment Checklists:

Social, Health, and Cultural Services Inventory and Assessment

- Use this list to identify important cultural and social service assets and the needs that exist in your community.
- If there is something missing from the list add it under “other”.
- If an item doesn’t apply to your community, leave it blank.

Resource Category	Type of Service	Does this exist? Yes/No	Can it be improved? Yes/No
Health	Nutrition	Yes	Yes
	Weight loss	Yes	Yes
	Aids prevention	Yes	Yes
	Substance abuse	Yes	Yes
	Family planning	Yes	Yes
Public Safety	Police protection	Yes	Yes
	Fire protection	Yes	Yes
	Emergency response	Yes	Yes
	Search and rescue	Yes	Yes
Recreation Programs	Small children	Yes	Yes
	Teens	Yes	Yes
	Adults	Yes	Yes
Social Service Programs	Child care	Yes	Yes
	Domestic violence	Yes	Yes
	Seniors	Yes	Yes
	Disability services	Yes	Yes
	Counselling – adults	Yes	Yes
	Counselling – teens	Yes	Yes
	Legal services	Yes	Yes
	Suicide prevention	Yes	Yes
Self Government	Self government status	Yes	N/A
Cultural Programs	Elders group	Yes	N/A
	Music	Yes	Yes
	Subsistence food preparation	Yes	N/A
	Dance group	Yes	Yes
	Arts and crafts	Yes	Yes
	Language programs	Yes	Yes
	Spirit camps	Yes	Yes
	Storytelling	Yes	Yes
	Other		

Community Inventory and Assessment Checklists:

Economic Inventory and Assessment

- Use this list to identify important economic and human resource assets and needs that exist in your community.
- If there is something missing from the list add it under “other”.
- If an item doesn’t apply to your community, leave it blank.

Community Profiles			2007
Source Stats Canada 2001			
Industry	Number of Whitehorse residents employed in the particular industry		
Agriculture and other resource based industries	430		
Manufacture and construction industries	1,185		
Wholesale and retail trade	1,940		
Finance and real estate	505		
Health and education	2,180		
Business services	2,295		
Other services	4,805		
Occupation	Number of Whitehorse residents employed		
Management occupations	1,795		
Business, finance and administration occupations	2,580		
Natural and applied sciences and related occupations	910		
Health occupations	615		
Social science, education, government service and religion	1,665		
Art, culture , recreation and sport	505		
Sales and service occupations	3,000		
Trades, transport and equipment operators and related occupations	1,860		
Occupations unique to primary industry	235		
Occupations unique to processing, manufacturing and utilities	180		

Community Inventory and Assessment Checklists:

Environmental Inventory and Assessment

- Use this list to identify basic environmental assets and the needs that exist in your community.
- If there is something missing from the list add it under “other”.
- If an item doesn't apply to your community, leave it blank.

Environmental Assets/Needs	Do you have it? Yes/No	If this is lacking, does your community need it? Yes/No
Safe drinking water	Yes/ no	Yes
Adequate supply of water	Yes/ no	Yes, need ground water
Certified water treatment operators	Yes	Need more training
Safe sewage disposal and treatment	Yes	Yes
Permitted landfill	Yes/ no	Yes
Recycling program	Yes	Yes
Used oil storage area	Yes / no	Yes
Lead acid battery collection area	Yes	Yes
Developable land	Yes	More Downtown
Fuel spill prevention plan	Yes	Yes
Hazardous waste response plan	Yes	Yes
Erosion control	Yes	Yes
Contaminated sites identified	Yes/ no	Contaminated site on private property
Healthy subsistence food	Yes	Yes
Environmental Education programs	Yes	Yes
Healthy wildlife populations	Yes	Yes
Hazardous waste collection area	Yes / no	Certain days
Protected watershed plan	Yes	Yes
Environmental impact statement	Yes	Yes
Storm Water Treatment	no	Yes if new licenses require the City to Install

Service Agreements with Adjacent Governments: Existing and Potential

The City of Whitehorse has existing service agreements with the Yukon Government and the Kwanlin Dun First Nation Government. The service agreements include fire fighting and solid waste/landfill services.

There are opportunities to expand these services.

Fire Fighting Services with YG

The City of Whitehorse has a Mutual Aid Agreement with the Yukon Government and the following volunteer fire departments: Golden Horn, Mount Lorne, Marsh Lake, Ibex Valley, and Hootalinqua. The Mutual Aid Agreement allows those fire departments to request the services of the other fire departments to respond to fires and emergencies when requested at no charge. The community/hamlet fire departments operate with volunteer fire fighters. In the areas not serviced by an urban system, a water supply is not always readily available. This agreement allows for personnel and equipment to be shared.

The Whitehorse Fire Chief has suggested the agreement be extended to include Carcross, Tagish and Mendenhall.

Solid Waste/Landfill with YG

The City of Whitehorse War Eagle Landfill operates as a regional facility. Residential waste from Mount Lorne, Marsh Lake and Deep Creek are brought to the Whitehorse landfill. The City of Whitehorse charges \$70.00/tonne and invoices the Government of Yukon \$2,500 to \$4,000 dollars a month for tipping fees.

The City of Whitehorse does not accept non residential waste from Mount Lorne, Marsh Lake and Deep Creek. Mount Lorne and Marsh Lake are controlled transfer stations/landfills and Deep Creek is not controlled. Deep Creek and Marsh Lake have seen an increase in metal refuse in the last few years which may attribute in part that it is an uncontrolled facility.

The Whitehorse landfill is the only managed landfill in the territory. There may be opportunities to expand the use of the landfill as a regional landfill for other communities. The Yukon Government has suggested that a 100 mile radius could be considered, this would then include the communities of Carcross, Teslin and Carmacks using the Whitehorse landfill. These communities are currently not operating any waste diversion programs.

Kwanlin Dun First Nation Agreements

The Kwanlin Dun First Nation has a garbage/land fill agreement with the City of Whitehorse. The Kwanlin Dun First Nation provide garbage pick up services in the MacIntyre subdivision. The Kwanlin Dun disposes of the residential waste at the Whitehorse landfill. The City of Whitehorse charges tipping fees to the Kwanlin Dun First Nation for approximately \$2,500 dollars per month.

Following the 2005 Kwanlin Dun Land Claim Agreement the City of Whitehorse owns the developed roads in the McIntyre Subdivision and the Old Village and has easement agreements with the Kwanlin Dun First Nation for the below ground active infrastructure in the McIntyre and Old Village. Due to the road ownership and easement agreements the City of Whitehorse is responsible for the servicing and maintenance of the existing infrastructure. Any new infrastructure that may be developed on Kwanlin Dun lands will be owned by Kwanlin Dun First Nation until such time as it is developed to City of Whitehorse standards and turned over to the City.

The City of Whitehorse and Kwanlin Dun First Nation may choose to work together to develop additional infrastructure and consider operating and servicing agreements at that time.

Ta'an Kwach'an Council Agreements

The Ta'an Kwach'an Council has no current service agreements with the City of Whitehorse. The Ta'an Kwach'an Council are considering the development of a rural residential parcel of land across from the Hidden Valley subdivision which may include some land and/or servicing agreements. The Ta'an Kwach'an Council have worked with the City to bring water and sewer services to a waterfront parcel in the Shipyards Park yet to date have not developed the parcel. As the Ta'an Kwach'an Council makes development and land use decisions there may be additional opportunities to develop and operate infrastructure together and through agreements.

The rural areas of the City are not serviced from the City of Whitehorse water distribution system, but rely on private wells or on trucked water supplied by private businesses that draw water from the City’s distribution system.

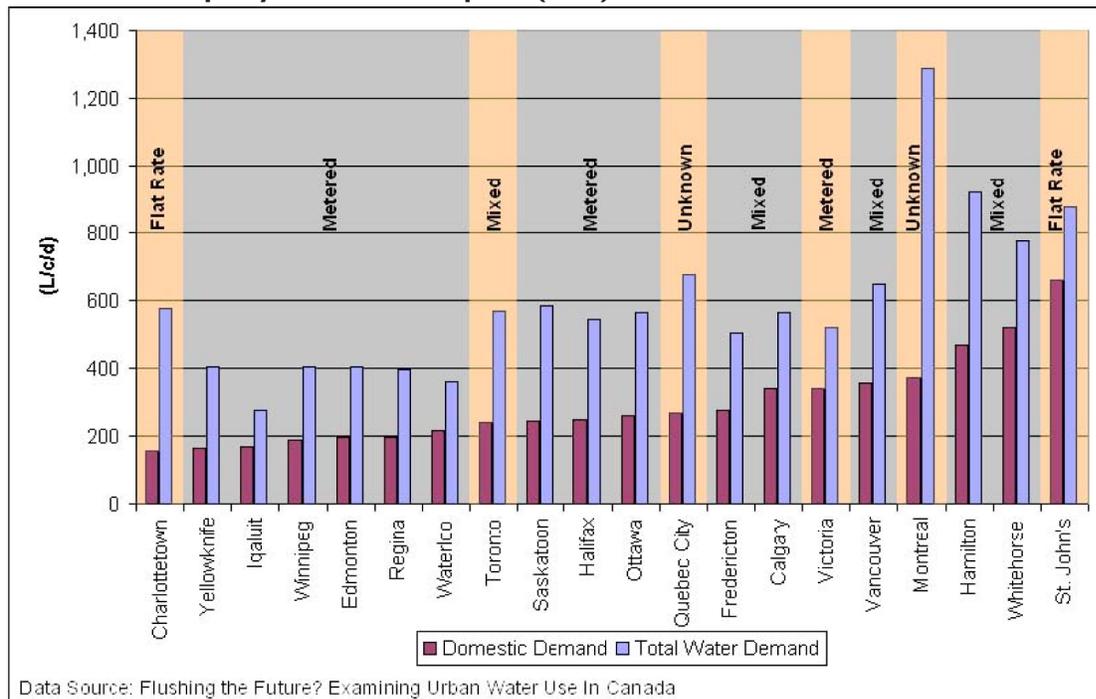
The Kulan, MacDonald, and portions of Marwell Industrial areas although located within the urban district of the City of Whitehorse, are not serviced with water and sewer mains.

The City currently employs sixteen full time persons for water and sewer maintenance. The operators are certified under the Environmental Operations Certification Program of British Columbia . Our training is through British Columbia Water and Waste Association. Operators require ongoing training to keep up their Certifications.

Two existing reservoirs in the older neighbourhoods are undersized and cannot meet the current Fire Underwriter’s Association standards, and the maximum day demand requirements. Future population grow in those areas are also compromised.

The City of Whitehorse is a high water demand city as compared to other Canadian Cities in the “Flushing the Future? Examining Water Use in Canada.”

Canadian Municipality Water Consumption (1999)



The City of Whitehorse 2003 Water and Sewer Study as prepared by Stantec lists a number of reasons for the City’s high water usage. Those reasons include bleeding of water services and mains for protection from freezing weather, lack of metering, low cost to consumer for supply, low conservation efforts and water leakage. The Stantec Report makes a strong case for demand side management to decrease the costs associated with the City’s water distribution system. The report recommends a number of demand strategies for the City to consider which include: continuing with leak detection and repair as required, bleeder reduction, education on conservation, residential metering, rate structuring to encourage conservation, economic incentives, regulations, politics, and low flow plumbing fixtures.

The Livingston Trail Environmental Treatment Facility is a simple three cell lagoon system using primary and secondary treatment cells, followed by long term storage. Discharge occurs annually, and rather than discharging directly into the River, the treated effluent is disposed into a local lake, hydraulically connected to the River. The long term use of this lake is showing signs of failure, as the quantity of flow able to be discharged is less than when it started 10 years ago. A new outfall pipe directly to the River has been approved by the Yukon Water Board and may soon be required to avoid possible failure of the treatment system. Size of the lagoon has been based on lowering the per capita water use, similar to the Canadian Standard of 500 litres per capita per day.

The Porter Creek sewage system collects from four lift stations spread throughout the Porter Creek area and takes it to the Porter Creek gravity force main, located at the northeast corner of the Porter Creek neighbourhood. The system services approximately 4,100 people and has ultimate build out capacity to service 13,300 people. The sewage flows down the escarpment, under the Yukon River, and to the Livingston Trail Environmental Facility. The old Porter Creek lagoons are no longer in use, and this former lagoon area is proposed for remediation and restoration to make way for future residential developments in the lower bench area.

The Crestview Sewage system collects the sewerage from the Crestview neighbourhood only, and is treated at the Crestview Lagoons built over 30 years ago. This system serves approximately 800 people with no plans for expansion. However, there maybe opportunities to close the Crestview Lagoons and transport the sewage through a new development in the lower bench area and to the Livingston Trail Facility, then reclaiming the lagoon area for a new land use.

The City of Whitehorse will defer capital costs associated with sewage disposal if the demand side is more sustainable.

Needs for a more sustainable sewer system:

- Sewer mains need to repaired and/or replaced in the Downtown, Takhini North, Marwell and Hillcrest.
- New sewage outfall needs to be built for the Livingston Trail Treatment Facility
- Old Lagoons in Porter Creek and Whitehorse need to be abandoned
- Crestview Lagoon berms need repair; or close lagoon and transport sewage to Livingston Trail Treatment Facility
- Second pipe across river at Marwell and test and confirm condition of existing pipe.
- Training for sewage operators: Royal Roads
- Infiltration elimination assessment and repair
- Use materials in the construction of the systems that are sustainable.

Needs for a more sustainable road system

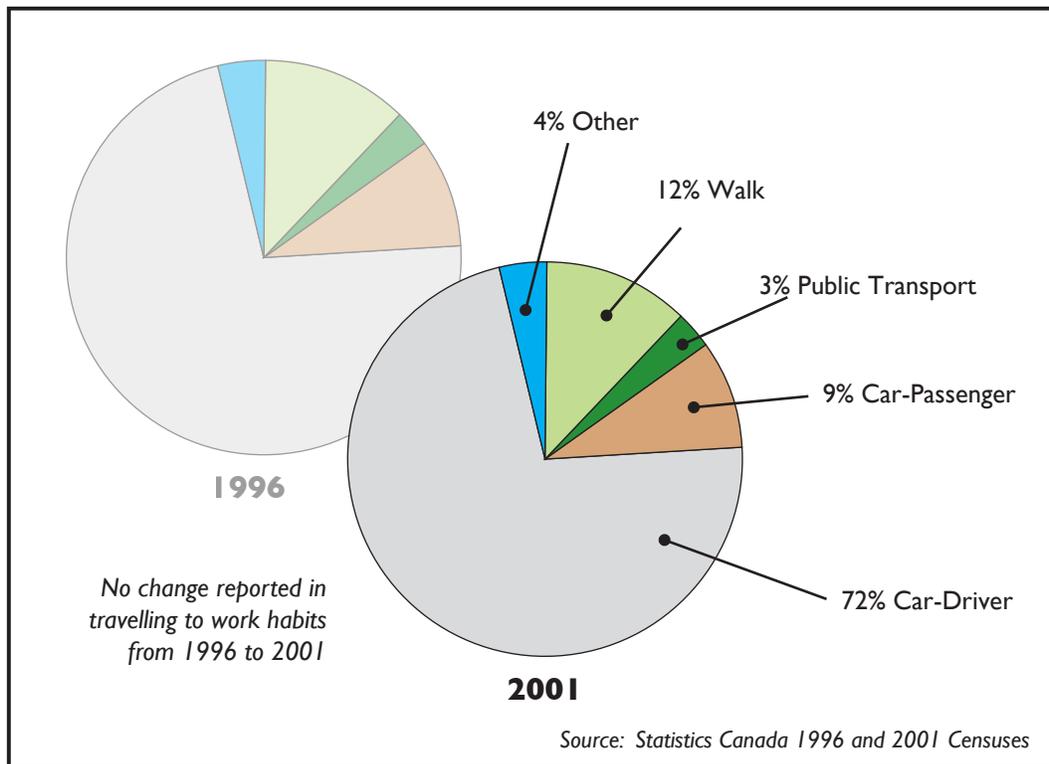
This section deals specifically with roads and does not consider transportation as a whole. Transportation will be considered in the next section.

- Roads need to be rebuilt in Marwell, Downtown, Takhini North and Hillcrest.
- Country Residential Neighbourhood roads require an asphalt service
- Establish and implement a pavement maintenance system.
- Rebuild 6th Avenue
- Reuse asphalt in lanes.

5. Active Transportation

“The traditional approaches to developing transportation plans and facilities within Whitehorse have not typically supported the goals of the community for the environment or the integration of alternative transportation modes such as cycling, walking and transit”. *City of Whitehorse City-Wide Transportation Study UMA 2004.*

Mode of Transportation to Work for Whitehorse Residents



6. Public Transit

The City of Whitehorse operates a transit service within the urban area of Whitehorse connecting sixteen neighbourhoods to the downtown hub. The transit system operates on 35 minute schedule during peak times and a 70 minute schedule during off peak times. The transit fleet includes twelve regular buses and two handy-buses. The fleet is described below.

<i>Number</i>	<i>Year</i>	<i>Size</i>	<i>Capacity seated</i>
4	2006	40 ft. accessible	38
2	2003	30 ft.	30
4	1997	40 ft.	45
2	1981	35 ft.	35
2 handy-buses: 2006, 2000 (the 2000 model is used as a spare)			

The system operates with a full-time manager, a dispatcher and a transit coordinator. There are 21 full-time positions operating the six routes Monday to Thursday from 6:00 a.m. to 7:00 p.m., Friday an extended evening service to 10:00 p.m. and Saturday service 8:00 a.m. to 7:00 p.m. There is currently no service on Sundays and Statutory holidays.

The transit system operates out of a 1980 building in the Marwell area. The building was not designed to house a transit system nor buses and creates some operational problems. The transit building also houses the City's carpenter shop and sign shop.

The four new buses purchased in 2006 are fully accessible. The city bus fleet is equipped with bike carriers to encourage active transportation as part of the customer's mode of transportation. The bus stops are commonly placed at the intersections of trails and roads. The Riverdale transit route is connected with the Millennium trail with a turn around at a main entrance to the trail.

Needs for a More Sustainable Public Transit Service

Buses: In order to maintain the current level of service six new low floor accessible buses are required. In 2008, a new transit bus is budgeted. There is consideration to use MRIF (Municipal Rural Infrastructure Funding) to leverage funds for 3 new buses in 2008.

Stops: Every bus stop needs to be reviewed through the lens of accessibility. Such items that need to improve for the stops include ramps, shelters, benches, schedules and lights (passenger activated and tied into a GPS).

Main Hub Building: The transit system has been operating from an Ogilvie hub location. Ogilvie Street is not a major destination in the City. The hub needs to be located near businesses and employers in the core area. A location near Main Street is preferred. Options to consider include:

- The City purchasing land downtown to facilitate the construction of a new hub;
- Build a new hub on one of the City owned Steele Street surface parking lots; and
- Combine a new hub with the construction of a parkade on one of the Steele Street properties.
- A hub should have public washrooms, a driver rest area and an information kiosk either electronic or staffed.

continued...

Electronic System: Some sustainable applications for transit may include an electronic system such as GPS on buses that are connected to the web, transit office/dispatch and bus stops. A sustainable system needs to increase ridership. This is an approach to better monitoring the fleet and providing customer information as to “where is my bus?”

Other applications of an electronic system may be considered for fare payment and for passenger counting.

Priority Transit System: The following could be considered to establish a transit priority system, making transit a quicker option than the personal vehicle. Items for consideration include: bus only lanes, electronic readers at light controlled intersections, legislated “Yield to the Bus Program”.

Capacity Building/Training: Training is not available in the community. A training program that is specific to bus drivers is needed.

Continuous Marketing: A strong marketing campaign is required to sell the benefits of transit. This is part of the change process to get the public to think more sustainability and make more sustainable choices. Advise the amount of greenhouse gases emitted in a transit run versus 30 one vehicle trips from Riverdale to downtown.

Ridership Incentives: Work with organizations, employers, developers and individuals to increase ridership through incentive programs such as discounted passes or free transit passes with monies being collected through other sources, e.g. Specific transit tax.

The City of Whitehorse offers a fifty percent discount on transit passes for their employees. The discounted bus passes created a marginal increase in bus passes purchased by city employees when they became available at a 50% discount.

Bio Fuel and Hybrid Diesel Electrical: These alternative energy sources for the fleet should be further examined as to sustainability practices and energy savings. The City is currently working with Energy Solutions Center Yukon Government to examine the feasibility of a bio fuel product. The hybrid diesel electric bus could be considered a viable option however the initial capital cost of a new hybrid is approximately double the \$450,000.00 of a regular bus. A cost analysis would need to be completed.

7. Buildings

The City of Whitehorse maintains 89 buildings. The buildings range in size, scope, use and age, from the Canada Games Center to the Marwell Lift Station. The Games Center offers a place of leisure, learning and competition while 85% of the City’s sewage goes through the Marwell Lift Station.

The following buildings are identified by the City of Whitehorse Manager of Building and Safety Services as the City’s main buildings as well as their respective condition.

<i>Building</i>	<i>Condition</i>	<i>Building</i>	<i>Condition</i>
Canada Games Center	Good	2 Mile Hill Pump House	Good
City Hall	Good	Marwell Lift Station	Fair
Takhini Arena	Good	Copper Ridge Lift Station	Fair
Municipal Services Building	Poor	McIntyre Creek Lift Station	Fair
Transit Building	Poor	Various City Reservoirs	Fair
Parks Building	Poor	Firehall #1	Fair
#1 Lift Station (Ogilvie and 2nd)	Fair	Firehall #2	Poor
Selkirk Pump House	Poor		

The Municipal Services Building (MSB) houses the following city departments: Planning and Development Services, Maintenance and Safety Services, Bylaw Services, Engineering and Environment Services, Public Works and Information Services. The building is rated as poor and needs to be replaced. The building has roof problems, is energy inefficient, is a poor place for people to work and not efficient to serve the public, it is not fully accessible and the air movement and ventilation is poor. The building is located downtown and is a poor location for the storage and maintenance of the city's heavy equipment. The building location does not comply with the City of Whitehorse Official Community Plan and Zoning Bylaw.

In 2004 the City of Whitehorse Climate Change Local Action Plan (LAP) identified that city buildings are responsible for 51% of the city (corporation) greenhouse gas (GHG) emissions. In 2001 the biggest energy user and GHG emitter was the Municipal Services Building (MSB). MSB is probably second to the Canada Games Center now in 2007.

Needs for a More Sustainable Building Inventory

- Design, build all new buildings to a LEED certified standard
- Build a LEED Certified new Fire Hall
- Educate and train building maintenance staff and project managers about green building technologies.
- Replace the Municipal Services Building with a LEED Certified building.
- Capture and exchange more heat at the Canada Games Center
- Upgrade City facilities for accessibility improvements
- Assess, evaluate and retrofit existing city buildings to a greener standard more energy efficient standard.

8. City Vehicle Fleet

The City of Whitehorse owns and maintains 114 vehicles. In 2004 the LAP identified 38% of the City corporation GHG emissions coming from the City's vehicle fleet. Specialized heavy equipment is the largest emission's source at 44%, followed by heavy trucks at 31%, vans and trucks 22% and automobiles and others at 3%.

The Manager of Maintenance and Safety Services advised that the City continues to replace its fleet with more efficient and low emission vehicles.

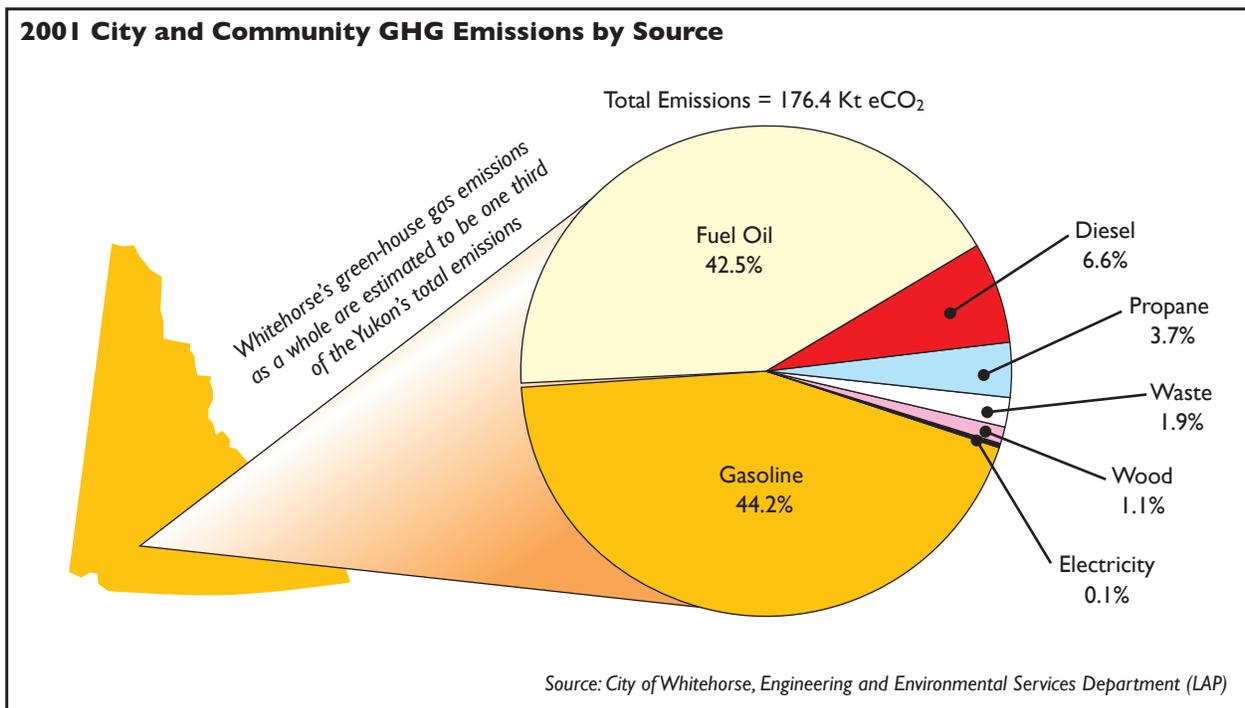
The 2004 LAP recommended four actions for reducing GHG emissions from the city vehicle fleet. Establishing an anti-idling campaign and the purchasing of a bike fleet have been implemented. Implementing a driver training program to reduce fuel consumption and the use of alternative fuel sources has not been implemented.

The City of Whitehorse is currently working with Yukon Government Energy Solutions Center to implement a test bio-fuel project on one City bus. The Manager of Maintenance and Safety Services recommends training of staff on new engine technologies is required.

9. Energy

Whitehorse's green-house gas emissions as a whole are estimated to be one third of the Yukon's total emissions. The activities that consume energy within Whitehorse are influenced by a number of factors, including: land use patterns, infrastructure, provision of services, design and operation including residential, commercial and industrial buildings.

The City of Whitehorse can influence many of these activities through land use decisions, the zoning bylaw, building and development permits and education.



The OCP states that: “Where practical the City may consider pursuing natural energy alternatives for new development. This may be accomplished through educational programs. Examples of natural energy alternatives include the implementation of wood, solar and geothermal power.”
(OCP 2002)

Needs for More Sustainable Energy Use

- Examine the use of natural renewable energy
- Prepare an assessment/inventory of geoexchange potential
- Aim to achieve net –zero energy use
- Make upfront investments in technology for long term benefits
- Build to LEED standards
- Maximize solar access
- Dimming of street lights
- Replace street lights with more energy efficient bulbs

10. Financial: Asset Management: Sustainable Life Cycling Costing

Canadian municipalities have long used their asset management plans to help blueprint and build their municipal roads, sewers, water mains and other capital assets (known in accounting terms as tangible capital assets).

Even so, the Public Sector Accounting Board (PSAB) now recognizes the importance of managing these resources on a sustainable basis and thus requires, under PSAB 3150 that Canadian municipalities report on their tangible capital assets by 2009 – something that was not previously required.

By 2009, all municipalities must:

- Determine Historical Cost and Residual Value on all capital assets
- Determine Useful Lives of assets
- Calculate depreciation expense for all assets
- Record the Net Book Value of Tangible Assets on the Balance Sheet
- Record Depreciation as an Expense on the Income Statement

Compliance with PSAB 3150 will result in municipalities being more informed on what is available in assets and the municipalities' books will more accurately reflect the cost of doing business. PSAB 3150 will therefore, help in sustaining current infrastructure and future growth.

The City of Whitehorse has identified sustainable asset management as an area where training of employees is required.

11. Solid Waste Management

The City's goal is to achieve 50% diversion of waste from the landfill. The City of Whitehorse completed a Solid Waste Management Plan in 1995. The City operates the only managed landfill in the territory and receives waste from the Yukon Government and the Kwanlin Dun First Nation Government. The Yukon Government is considering working with the City to further expand the regional nature of the landfill. Currently the City landfill receives 2,500 to 4,000 tons of residential waste per month from the communities of Mount Lorne, Marsh Lake and Deep Creek.

The City has a city-wide curb side residential composting program. In June of 2007 the pilot project for the two-cart (non-bag) system was implemented in a selected area of the Porter Creek Subdivision and will run for one year. Approximately 500 households in Porter Creek will receive 2 – 240L carts, a green one for compost and a black one for garbage. Feedback from program participants has been overwhelmingly positive in the first 2 months of the program, and compost weights have increased dramatically.

The Solid Waste Management Plan is old. The City requires a new plan which is identified as a capacity building initiative.

Needs for a More Sustainable Solid Waste Management

- Complete a new Solid Waste Management Plan
- Go to a city-wide compost and garbage cart system complete with carts and new trucks
- Complete landfill upgrades to ensure a more sustainable landfill
- Upgrade compost facility and new compost grinder

- 3. Provide a variety of transportation choices.** Neighbourhoods are attractive and have safe infrastructure for walking, cycling and transit, in addition to driving.
- 4. Create diverse housing opportunities.** People in different family types, life stages and income levels can afford a home in the neighbourhood of their choice.
- 5. Encourage growth in existing communities.** Investments in infrastructure (such as roads and schools) are used efficiently, and developments do not take up new land.
- 6. Preserve open spaces, natural beauty, and environmentally sensitive areas.** Development respects natural landscape features and has higher aesthetic, environmental, and financial value.
- 7. Protect and enhance agricultural lands.** A secure and productive land base, such as BC's Agricultural Land Reserve, provides food security, employment, and habitat, and is maintained as an urban containment boundary.
- 8. Utilize smarter and cheaper infrastructure and green buildings.** Green buildings and other systems can save both money and the environment in the long run.
- 9. Foster a unique neighbourhood identity.** Each community is unique, vibrant, diverse, and inclusive.
- 10. Nurture engaged citizens.** Places belong to those who live, work, and play there. Engaged citizens participate in community life and decision-making."

From: <http://www.smartgrowth.bc.ca>

I3. Fire Protection Services

The City of Whitehorse Fire Department responds to an average of 500 calls per year. The primary role of the Whitehorse Fire Department is to protect lives, property and the environment from the effects of fire or other hazardous situations. The Department provides the following services:

- Motor vehicle accident extrication (both inside and outside the City)
- Limited dangerous goods (HazMat) incidents
- Wild fires
- Damage caused by flood, earthquake, power loss, aircraft crashes (off airport property)
- Other natural or human caused emergencies
- Limited rescue services for ice and water incidents
- Mutual aid with the surrounding Fire Departments
- Fire Prevention and Public Education programs
- Monitoring of alarms in specific City and YTG facilities
- Attending to enquiries and complaints from the public after regular office hours
- Dispatching Bylaw and Public Works staff as required after regular office hours
- Confined space rescue
- High angle rescue
- Assist community associations with Yukon Government sponsored neighbourhood FireSmart programs.

Needs for a More Sustainable Healthy Community

- Promote decreased reliance on the healthcare system
- Health promotion and education
- Active living
- Liveable neighbourhoods
- Safe surrounding
- Clean air, clean water, green environment
- Accessible and affordable recreation
- Decentralized services
- Social inclusion of marginalized groups
- Outreach
- Collaborative care options
- Continuum of services

15. Arts Culture and Heritage

Cultural industries are an important sector in the Whitehorse economy. Richard Florida, the author of the “Rise of the Creative Class” argues that the long-term economic and social development of cities relies on attracting and retaining entrepreneurial and creative people. In order to attract creative people a community needs a strong arts and cultural sector. Arts and culture also provides a strong sense of place for a community.

The 2004 Yukon Cultural Industries Labour Force Study identified a number of items that need to be addressed in order to better sustain and develop the cultural labour force.

Discussions with Laurel Parry, Arts and Culture Branch, Yukon Government and Miche Genest, of Heritage Canada further identified ways to sustain the arts and cultural sector.

Needs for a More Sustainable Arts and Cultural Sector

- Sustained funding and support for the arts
- Infrastructure development in the Downtown
- Support First Nation’s cultural heritage
- Increased access to the arts for lower income groups
- Support the NGO’s
- Expand the marketing of Yukon products
- Train Yukon artists in marketing, promotion and business management

LIST OF POTENTIAL PROJECTS :

LIC = Local Improvement Charge WS = Water and Sewer Reserve DCC = Development Cost Charges
 GMF = Green Municipal Funds MRIF = Municipal Rural Infrastructure Fund LR = Land Reserve

POTENTIAL PROJECTS :	Currently Funded	Not funded	Other possible funds
PUBLIC TRANSIT			
6 New Buses		\$2,700,000	MRIF
INFRASTRUCTURE RENEWAL (Water, Sewer, Road, Electrical)			
Hillcrest Reconstruction, Phase 1		\$3,700,000	LIC
Hillcrest Reconstruction, Phase 2		\$3,600,000	LIC
Downtown Reconstruction (See Note)		\$70,000,000	LIC
Black Street, 4th to 8th Avenue		\$5,500,000	LIC
Ogilvie , 2nd to 8th Avenue		\$4,600,000	LIC
Strickland, Alexander, Hanson, Hawkins		\$6,000,000	LIC
6th Avenue, 400 Blocks of Cook & Wheeler		\$5,200,000	LIC
Marwell Upgrading			LIC
Gold, Gypsum, Silver, Industrial Dyke work		\$3,000,000	LIC
Tlingit road, Tungsten, Galena		\$3,500,000	LIC
<i>Subtotal</i>	\$1,350,000	\$101,400,000	
WATER			
Ground Temperature Monitoring Stations	\$50,000		WS
Truck Fill Station at Fire Hall		\$200,000	PRIV
City Wide Water Meters		\$3,000,000	WS/GMF
Porter Creek Reservoir Upgrade		\$4,000,000	WS/MRIF/DCC
Valleyview Reservoir Upgrade		\$4,100,000	WS
Heat Trace Assessment City Wide		\$100,000	
Selkirk Well Field Development		\$3,200,000	WS/DCC/GMF
Selkirk Pump House Improvements		\$6,600,000	WS/DCC
Permanent Water Sampling Station	\$75,000		WS
<i>Subtotal</i>	\$125,000	\$21,200,000	
WASTEWATER			
Livingston Trail Lagoon Outfall Pipe		\$2,200,000	WS
Lagoon Monitoring Wells		\$90,000	WS
Pump House and Small Lift Station Upgrade	\$440,000		WS
Infiltration Elimination Assessment City Wide		\$2,000,000	WS
Marwell Forcemain Condition Study	\$50,000		WS
<i>Subtotal</i>	\$490,000	\$4,290,000	
SOLID WASTE			
Landfill Upgrades	\$275,000		
Composting & Garbage Carts for City Wide Collection		\$1,200,000	
Multi-use Compartmental Garbage/Recycling Trucks		\$1,200,000	
Upgrade Compost Facility		\$125,000	
Paving Landfill Access Road		\$350,000	
<i>Subtotal</i>	\$275,000	\$2,875,000	

Note: Downtown Infrastructure Renewal (upgrading is estimated at \$70,000,000 split over 15 projects)

POTENTIAL PROJECTS :	Currently Funded	Not funded	Other possible funds
COMMUNITY ENERGY SYSTEMS			
Landfill Gas Production Feasibility		\$50,000	
SUSTAINABLE TRANSPORTATION			
Trail Plan Implementation		\$535,000	
Trail Development	\$96,000		
Trail Connections Airport, Alaska Hwy, PorterCreek, Hillcrest, Takhini, CGC		\$500,000	
Hospital Road and Lewes Blvd Intersection Improvements		\$225,000	
Signal Replacement Ogilvie and 4th		\$250,000	
Robert Campbell Bridge Widening for Bike Lane		\$700,000	
Robert Campbell Bridge Deck Repair for Bike Lane		\$200,000	
Sidewalk Upgrades		\$550,000	
Industrial Rd to 2 Mile to Quartz Design		\$200,000	LIC
Industrial Rd to Platinum to Quartz Construction		\$1,520,000	LIC
Industrial 2 Mile to Platinum Design		\$220,000	LIC
Industrial 2 Mile to Platinum Construction		\$1,600,000	LIC
Bike Rack, Bike Lockers, at Various Locations		\$150,000	
Surfacing of Country Residential BST	\$1,550,000		
Surfacing Gravel Roads with Asphalt and /or BST		\$3,000,000	
Winter Sand Pile Pad Water Pollution Protection	\$50,000		
Unpaved Road Reconstruction	\$1,700,000		
<i>Subtotal</i>	\$3,396,000	\$9,650,000	
BUILDING SYSTEM IMPROVEMENTS			
Energy Upgrades Takhini Arena		\$300,000	
Increase Heat Reclamation from Ice Plant at CGC		\$250,000	GMF
Green Building Upgrades City Wide		\$200,000	
Upgrade Heating System at City Hall		\$75,000	
Upgrade Public Safety Buildings to LEED Gold Standard (Fire Hall)		\$3,000,000	GMF
Upgrade Municipal Services Building to LEED Standards		\$12,000,000	GMF/LR
Accessibility Inclusion Upgrades		\$1,000,000	
<i>Subtotal</i>		\$16,825,000	
CAPACITY BUILDING PROJECTS			
Solid Waste Action Plan		\$75,000	
Monitoring Local Area Climate Change Action Plan		\$10,000	
Risk Management re Climate Change/Adaption CAVIAR		\$30,000	
Green Local Purchasing Policy		\$20,000	
GEO Exchange City Wide Sustainability Assessment		\$100,000	
<i>Subtotal</i>		\$235,000	

<i>Total All</i>	\$8,572,000	+	\$162,925,000	=	\$171,497,000
<i>Total Potential Eligible Gas Tax Projects</i>	\$936,000	+	\$47,410,000	=	\$48,346,000

Written Criteria

Description	Explanatory Detail
<p>1. Public Health and Safety</p> <ul style="list-style-type: none"> Risk management Staff Morale Fire Protection Active Transportation Pollution Avoidance 	<p>Public health and safety issues, for the public, are usually thought of with respect to things like fire protection but also include such matters as active transportation, and pollution avoidance. For the corporation of the City of Whitehorse public health and safety would reflect a range of issues from corporate risk management to staff morale. The City's role is to provide safe and reliable services and infrastructure within our fiscal capacity for prevention and suppression of fires, crime prevention and enforcement, development and enforcement of regulatory bylaws, animal control, and environmental protection. On the corporate side, it is the City's role to encourage a corporate culture that recognizes employee contributions and individual potential.</p>
<p>2. Legislated</p> <ul style="list-style-type: none"> Existing City Policy Adopted Policy or Study Core Service Official Community Plan Commitment or Agreement in Place 	<p>Legislated responsibilities are those that are imposed on the City such as the Drinking Water Materials Safety Act [Canadian Drinking Water Standards]. Legislated responsibilities also include those that are delegated to the City of Whitehorse, the main such legislation being the Municipal Act. Much of what are thought of as the City's core services are rooted in the Municipal Act. With its delegated authority, the City of Whitehorse also imposes its own legislation, policies, and standards through bylaws such as the Official Community Plan and other adopted City policies, standards and studies. Legislated responsibilities are also thought of in the context to any legal claims, commitments, or agreements in place that bind the City. The City's role is to provide good governance in accordance with all statutes of the Territory and bylaws of the City along with the City's own bylaw and policy development and review.</p>
<p>3. Accessibility</p> <ul style="list-style-type: none"> Percent of Population Benefiting Quality of Life Improvements <i>(short / long term)</i> Cultural Benefits Social Benefits Resident Complaint Driven City as a Role Model Partnerships How Many Benefit? Customer Service Active Transportation Produce Jobs 	<p>Accessibility criteria would entail answering the question about "are we benefiting the maximum possible percentage of population with any given program or service?" This would involve consideration of quality of life improvements (short / long term). Quality of life improvements could be viewed as broadly as activities that promote job production to initiatives that promote active transportation, access to recreation and any other activities or initiatives that promote cultural and social benefits. Requests for changes to programs and services are often resident complaint-driven, requests for additional customer service, or as a result of partnerships created between the City and one or more, usually non-profit, groups. In this context the City of Whitehorse should attempt to be proactive and should be required to be seen and/or to act as a role model. The City's role would be such that it offers opportunities to encourage people, counting youth, to stay in Whitehorse creating a healthy mix of youth, persons with disabilities, families, and elders. The City's role is also to offer equal accessibility to programs, services, and facilities with respect to persons with disabilities and older citizens. The City has a role to encourage cultural groups work co-operatively to create a friendly and supportive community and to encourage improvements to the quality of life through a wide choice of sport, recreational and cultural activities.</p>

Description	Explanatory Detail
<p>7. Strategic Plan Value</p> <p>Strategic versus Catch-up</p> <p>Social Requirements</p> <p>Funding Available</p> <p>Revenue Generating</p> <p>Partnerships</p>	<p>Strategic Plan values are the fundamental and enduring beliefs which direct the way in which the City makes decisions and undertakes activities. Values guide how the City designs and uses its systems and processes; the manner in which City Council and staff can contribute to the City's success; and the way in which the City interacts with its citizens and other agencies. Currently the City's values are documented as citizen involvement, creativity, decision process transparency, fiscal responsibility, integrity, partnership, respect, and sincerity. Ideally, the City would prefer to be in 'strategic' versus 'catch-up' mode in a proactive way to meet social requirements. The City's role is to apply these values when making decisions.</p>
<p>8. Qualifies for Funding</p> <p>Resource Generation</p>	<p>Funding available or not available – this dictates whether any given program, service, or initiative should be undertaken. Options such as revenue generation or partnership options can enhance a project's viability. Other considerations would be the qualification for external funding and/or any other resource generation possibilities. The City's role is to make service delivery sustainable and by being balanced with public fiscal interest.</p>
<p>9. Staff (or Consultant, etc) Capacity to Do the Work</p>	<p>Staff (or consultant, etc.) capacity to do the work is a limiting criterion. For the City of Whitehorse to deliver its programs and services the existing staffed capacity must be identified and any workforce gaps must be quantified. The gaps should be evaluated against current and future demand for services. A failure to accommodate identified gaps will ultimately create health and safety issues.</p>



Prioritising Gas Tax Projects

At the beginning of this process the City of Whitehorse assembled a list of potential infrastructure projects from past reports, capital plans and the infrastructure assessment. The list included over 60 projects with a cost estimate of over 170 million dollars.

The gas tax allocation for Whitehorse is \$47,774,884.40 (*including the program extension*).

5% ICSP Planning and Capacity Building \$2,388, 749.22

2005/2006	\$2,204,999.28
2006/2007	\$2,204,999.28
2007/2008	\$2,939,999.04
2008/2009	\$3,674,998.80
2009/2010	\$7,349,997.60
2010/2011	\$7,349,997.60
2011/2012	\$7,349,997.60
2012/2013	\$7,349,997.60
2013/2014	\$7,349,997.60

Allocations for Whitehorse to 2014 have been provided by AYC

To prioritize the projects the City of Whitehorse evaluated the projects within nine criteria:

- Public Health and Safety
- Legislated
- Accessibility
- Efficiency
- Environmental Impact
- Sustainable
- Strategic Plan Value
- Funding Available
- Capacity

The criteria was developed using the sustainability principles, the vision, values and goals established at the May 23rd Workshop and Public Open House.

At a council and management workshop on July 17th the projects were rated against the criteria and the top 17 projects have been put forward in this report as the City of Whitehorse's Priority Gas Tax Projects. The estimated cost of these projects is \$45,240,000.00 dollars.

Following the priority gas tax project list are specific project sheets that further describe the project. The project sheets of all the potential projects are included in an appendix to this report.

I to I6 Capital Project Sheets

I. Selkirk Well Development

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	1,620,000	820,000	720,000		\$3,200,000
City:					
LIC:					
YTG:					
GAS:	1,660,000	820,000	720,000		\$3,200,000
Other - specify:					

Project History/Description/Purpose/Need:

The project involves the installation of production wells in the Selkirk Aquifer within the Riverdale subdivision. The wells will increase the volume of groundwater pumped into the existing water distribution system, with the goal of reducing and eventually eliminating Schwatka Lake surface water as a water source for the City of Whitehorse.

This project is a carryover for project that was originally budgeted for completion in 2006.

In 2008, construction is proposed for two wells on the south side of Riverdale. One well would be connected to the existing intake line along Nisutlin Road. In 2009, the second well located in south side of Riverdale would be connected to the discharge line installed 2008. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structures and equipment that would enable LEED certification. Use of well water will reduce the need to use fossil fuels to heat water in the distribution system during the winter months. The ground water well pumphouse would be designed with energy savings option such as solar heating, heat recovery, geothermal heat pumps, air to air heat pumps, more efficient pumps and controls settings.

In 2010, a well near Selkirk Street pumphouse is proposed as backup to the existing wells now in use.

In 2012 or beyond, depending on population growths, additional wells would be installed and connected to the existing water supply system in Hart and in Hyland Crescents, through existing public utility lots. This work will increase fire protection and reduce the need to bleed or circulate water for protection against frozen mains.

Project Analysis: *(How much and when)*

This would be a multiyear project taking place over three years.

2. Selkirk Water Pumphouse Improvements

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan			6,600,000		6,600,000
City:					
LIC:					
YTG:					
GAS:			6,600,000		6,600,000
Other - specify:					

Project History/Description/Purpose/Need:

The existing Selkirk Pumphouse has been in operation since the 1950's and upgrades have been identified as required in previous Water & Sewer Studies. The existing pipes, valves and equipment are showing significant signs of age. The structure is not earthquake resistant and is subject to catastrophic failure.

The pumps and electrical supplies need to be upgraded to meet future water demands as our city increases in population and new areas are developed. The upgraded pumphouse would be designed with energy savings options such as solar heating, heat recovery, geothermal heat pumps, air to air heat pumps, more efficient pumps and controls settings. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structure and equipment that would enable LEED certification

The current annual O & M costs for Selkirk Station is approximately \$150,000 and those costs would increase approximately 35% with the new pumphouse. However, if a new treatment plant were to be built in lieu of groundwater wells, the increase in O & M costs could be over 3 times more.

Project Analysis: *(How much and when)*

The initial phase of the project would be to engage the services of a consultant and to complete a preliminary and detailed design. The second phase would be the construction of the new facility.

3. Livingston Trail Lagoon Outfall Pipe

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	2,120,000				2,120,000
City:					
LIC:					
YTG:					
GAS:	2,200,000				2,200,000
Other - specify:					

Project History/Description/Purpose/Need:

The 1999 Annual Capital Budget for sewage treatment was \$1,470,000. In 1998/99 the City undertook trial discharges of treated effluent to Pot Hole Lake (PHL). The report suggested that PHL could be a viable long term discharge alternative to the Yukon River. The report indicated that the performance of the Pot Hole Lake would degrade over time and funds will be required to undertake construction of the extension of the outfall line from the Pot Hole Lake to the Yukon River in future years, dependent on when the PHL was no longer able to handle the flows of treated effluent.

In 2000, preliminary engineering for the design of the outfall was completed. The concept was approved by the Yukon Water Board and a new Water Use License was approved. During the discharge in 2004, a decrease in the performance of the PHL was noted. Based on the results of the discharge so far in 2005, a further reduction in the volume of water discharged is occurring. In 2006 discharge volumes were slightly higher than 2005 however volumes were lower than the years prior to 2004. Therefore, construction of the outfall to the river should be completed.

It is proposed to be a design/build project: pre-design work has been completed, engineering final design to be completed in 2007, and construction to be undertaken in 2008.

Project Analysis: *(How much and when)*

Work is scheduled for completion in 2008.

4. City Wide Compost Program Improvements

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:		2,400,000			\$2,400,000
Other - specify:	65,000	60,000			\$125,000

Project History/Description/Purpose/Need:

Compost & Garbage Carts

Since 2002, the City of Whitehorse has had a residential compost collection program which involves using biodegradable bags.

In June of 2007 the pilot project for the two-cart (non-bag) system was implemented in a selected area of the Porter Creek Subdivision and will run for one year. Approximately 500 households in Porter Creek received 2 – 240L carts, a green one for compost and a black one for garbage.

In 2008 approximately 6,900 compost and 6,900 garbage carts will be required to implement a City Wide dual cart collection. Carts will be ordered for delivery in the summer of 2008 with distribution and education to take place during the fall of 2008.

3 Garbage Trucks

The dual cart collection system for garbage and compost collection will require new collection trucks. The three new collection trucks will allow for single or dual garbage and compost collection. These trucks will have fully automated lifters and a compactor to allow more material to be carried and dumped. Two of the new trucks will be used on the regular schedule and the other truck will be for backup and overload use.

Many cities have found that automated collection has considerable economic benefits because municipalities are not losing workers to lifting injuries. It was also found that with an automated system, an older worker force can complete the garbage and compost collection.

These vehicles will be powered with alternate source fuels if possible.

Upgrade Compost Facility

The existing compost facility was built in 1999. At present, it takes approximately two years to process the compost. An upgrade to the facility is required so the compost process can be complete in under one year.

With the increase in compostable material coming to the compost facility, the facility will be required to be enlarged. Also it is recommended by consultants that the sections of work surface of the existing facility be upgraded from gravel to a paved surface. The paved surface would allow for less contamination and better surface drainage to the drainage pond.

Project Analysis: *(How much and when)*

The shift to the two-cart system will be completed in the fall of 2008 following evaluation of the Pilot project.

There is a one year time lag between the ordering and receiving of the new collection vehicles.

It will take 2 years to upgrade the Compost facility.

5. Valleyview Reservoir Upgrade

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	4,100,000				\$4,100,000
Other - specify:					

Project History/Description/Purpose/Need:

An upgraded water reservoir at Valleyview is required to meet existing and proposed future water demands. New developments and existing users require a secure water supply for use by the property owners and for emergency fire protection services.

This upgraded reservoir would be designed to meet the existing requirements with future expansion capabilities to meet the needs of new developments proposed in Takhini, airport, Porter Creek, Tankfarm, and Porter Creek Lower Bench.

The 2002 Water & Sewer Study recommended the twinning of the reservoir with a 7,000 m³ cell in the 5-10 year plan, and the construction of a 8,000m³ cell in the 20+ year plan.

Project Analysis: *(How much and when)*

The majority of the work will be completed in 2008.

6. Porter Creek Reservoir Upgrade

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	4,000,000				\$4,000,000
Other - specify:					

Project History/Description/Purpose/Need:

A new water reservoir at Porter Creek is required to meet existing and future water demands. New developments and existing users require a secure water supply for use by the property owners and for emergency fire protection services.

This upgraded reservoir would be designed to meet the existing requirements with future expansion capabilities to meet the needs of new developments proposed and allow for future flows into in Porter Creek, and Porter Creek Lower Bench during demand periods.

The 2002 Water & Sewer Study recommended the twinning of the reservoir with a 5,500 m³ cell in the 0-5 year plan. It identified the reservoir as most critical in terms of expansion. The remote location of this reservoir makes this expansion a priority.

Project Analysis: *(How much and when)*

The majority of the work will be completed in 2009.

7. Lagoon Monitoring Wells

Estimated Capital Cost & Funding Sources

Department: [Public Works](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:	90,000				90,000
LIC:					
YTG:					
GAS:					
Other - specify:					

Project History/Description/Purpose/Need:

The perimeter monitoring wells around the Crestview, Whitehorse and Porter Creek Lagoons will provide for long term groundwater monitoring at each of these sites to determine if the lagoons are leaking effluent into the groundwater table. The installation of these wells will also provide soil stratigraphy for each area along with groundwater depths. The monitoring wells will be required as part of the City's Water License if any of these facilities are decommissioned.

This project is funded as part of the 2007 Capital Budget.

Project Analysis: *(How much and when)*

The installation of the monitoring wells will be completed over a period of two weeks in late 2007.

8. Permanent Water Sampling Station

Estimated Capital Cost & Funding Sources

Department: Public Works

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	25,000	25,000	25,000		\$75,000
Other - specify:					

Project History/Description/Purpose/Need:

City of Whitehorse Pumphouse staff complete field sampling and monitoring of Total and Faecal Coliforms; and residual chlorine on a weekly basis. These samples are taken in the subdivisions at various City facilities, schools and private residences. Some of the locations cannot be used year around, such as schools and outside taps on private residences. The City and the YTG Health requires all locations to be consistent representative sampling stations. Ideally samples should be taken as close to the water mains as possible. Under this project new permanent sampling locations would be established on the mains in the following areas:

- 2008 - Granger, Logan; Arkell Area
- 2009 - Porter Creek Area
- 2010 - Takhini, Range Road

Project Analysis: (How much and when)

The installation work will be staged and completed over three years.

9. Trail Connections

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	250,000	250,000			\$500,000
Other - specify:					

Project History/Description/Purpose/Need:

The development of a multi use trail network that connects the various subdivisions to each other and the downtown core will help meet the City's goal of promoting alternate transportation.

Under this program, connector trails are proposed:

- along the Alaska Highway from the Airport to the existing trail Puckett Gulch Trail;
- along Range Road to the Two Mile Hill Bicycle/Pedestrian trails;
- and from Hillcrest to existing trail network.

As well, this program includes the development and upgrading of the Trans Canada Trail Connector to Porter Creek from the Takhini Arena.

Project Analysis: *(How much and when)*

This would be a multiyear project taking place over a two year period.

10. Sidewalk Upgrades

Estimated Capital Cost & Funding Sources

Department: Public Works

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	\$350,000	\$100,000	\$100,000		\$550,000
Other - specify:					

Project History/Description/Purpose/Need:

Some sections of Riverdale and Marwell/Downtown do not have sidewalks. At the present time, people walk down the side of the roads. This creates a dangerous situation when people are walking with the traffic along the side of the road. Upgrading to a concrete sidewalk would increase pedestrian safety and would encourage more people to walk.

- Lewes Blvd. west side of the street from Selkirk Street to Nisutlin Dr
- Lewes Blvd - east side from Alsek Rd to Hospital Road
- Quartz Road from 2nd Ave to Industrial Rd

Project Analysis: *(How much and when)*

This is a three year program with some sections of the work completed each year.

I I. Accessibility Upgrades

Estimated Capital Cost & Funding Sources

Department: M/S Services

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	\$50,000	\$300,000	\$350,000	\$300,000	\$1,000,000
Other - specify:					

Project History/Description/Purpose/Need:

Provision of funds for the upgrade of City facilities for accessibility improvements. This may include the installation of elevators/ handicap lifts or wheel chair ramps, push button access to public access doors and signage and other accessibility upgrades as required.

Project Analysis: (How much and when)

This would be a multiyear project taking place over three years.

12. Increase Heat Reclamation-CGC

Estimated Capital Cost & Funding Sources

Department: M/S Services

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	\$250,000				\$250,000
Other - specify:					

Project History/Description/Purpose/Need:

Project is for the engineering and completion of work to capture the remaining waste heat from the ice plants at the Canada Games Centre. Currently a large portion of the waste heat is reclaimed and reused in the facility but there is still some waste heat rejected to atmosphere. Work would entail the installation of additional heat exchangers.

Project Analysis: *(How much and when)*

Work would be completed in 2008 with 100% of funds required in 2008.

13. Infiltration Elimination Assessment City Wide

Estimated Capital Cost & Funding Sources

Department: [Engineering](#)

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:	400,000	480,000	660,000	660,000	\$2,200,000
Other - specify:					

Project History/Description/Purpose/Need:

2002 camera work provided an assessment of and categorized sanitary sewer mains and manholes for possible repairs. The degree of infiltration city-wide can then be quantified to estimate whether sewer segments have need for repairs, remediation, or replacement. Elimination of storm water connections to the sanitary sewer system would also be undertaken.

The reduction of infiltration into storm sewer connections and into the sanitary system would reduce the volume of effluent being pumped into the lagoons. Sewage Lift Station pump run times would be reduced, the lagoon life expectancy would be increased and there would be a reduction in the lagoon annual discharge volume.

Project Analysis: *(How much and when)*

This would be a multi year project over a 4 year period.

I4. Bike Racks & Lockers, various locations

Estimated Capital Cost & Funding Sources

Department: Parks & Recreation

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:	150,000				\$150,000
LIC:					
YTG:					
GAS:					
Other - specify:					

Project History/Description/Purpose/Need:

This project includes the purchase of bike racks and bike lockers. The bike racks would be located along commuter routes and adjacent to areas that would typically be stopping and locking locations for commuter bike traffic.

The bike lockers would be located in the downtown core adjacent to typical areas that would be used by commuter bike traffic.

Project Analysis: (How much and when)

The total cost for this un-funded project is estimated at \$150,000.
This work could be completed in 2008.

15. Upgrade Municipal Services Building to LEED Standard

Estimated Capital Cost & Funding Sources

Department: M/S Services

\$\$ Approved in 2007-2010 Plan	2008	2009	2010	2011	Total
City:		\$500,000	\$3,500,000		\$4,000,000
LIC:					
YTG:					
GAS:			\$8,000,000		\$8,000,000
Other - specify:					
					\$12,000,000

Project History/Description/Purpose/Need:

Provision of funds for the upgrade and consolidation of the City's service buildings including Municipal Services Bldg, Purchasing/warehouse, Parks and Rec Workshop, Transit Garage and Carpenter Sign Shop. All of these buildings would be amalgamated into one structure that would make more efficient use of energy resources as well as limiting the amount of necessary trips by staff between buildings.

The current facilities are all old and not energy efficient and in the case of Municipal Services Bldg not located in the appropriate zoning for type of use it is being used for. The existing buildings would be sold with the proceeds used to offset capital construction costs of a new facility.

This is a project that has been identified by staff and management as a priority for several years.

Project Analysis: *(How much and when)*

The initial phase of the project would be to engage the services of a consultant and to complete a needs analysis of existing programs and to find a suitable site to relocate the combined services to. Also as part of the initial phase an appraisal of the existing properties would have to be completed.

The second phase would be the construction.

16. City Wide Water Meters

Estimated Capital Cost & Funding Sources

Department: Public Works

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					
LIC:					
YTG:					
GAS:				3,000,000	\$3,000,000
Other - specify:					

Project History/Description/Purpose/Need:

At present, the City of Whitehorse requires that all businesses have water meters. Each business is charged according to the amount of water they use. Residential homes are presently not metered. All residents are billed a flat rate regardless of the amount of water they use. Whitehorse is well above the national average for water usage.

If water meters were installed, residential home owners would be required to pay for the amount of water they use. The home owners would try to conserve and not waste the treated water.

If less water is used, less energy would be used and lower pumping and treatment costs will occur. Less water going down the drain will also lessen sewage treatment costs.

Water meters would also help the City locate water main breaks.

Project Analysis: *(How much and when)*

The work would be completed over a Spring through Fall period.

17. Upgrade Public Safety Building to LEED Standard (Fire Hall)

Estimated Capital Cost & Funding Sources

Department: M/S Services

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:	6,000,000				6,000,000
LIC:					
YTG:					
GAS:	3,000,000				3,000,000
Other - specify:					
					9,000,000

Project History/Description/Purpose/Need:

Provision of funds to supplement those provided by the City to construct the new Public Safety Building (Fire Hall #2) at the top of 2 Mile Hill on the same property that Fire Hall #2 sits on. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structure that would enable LEED certification.

These upgrades would likely include but not necessarily be limited to lighting, heat recovery, solar walls, passive heat loading and cooling, investigation and possible inclusion of ground water heat exchange, sustainable materials used in construction, landscaping, use of runoff for irrigation and high efficiency heating units.

Geoexchange using a vertical borehole closed loop system for heat exchange is an option. Geoexchange would facilitate the creation of new energy efficient technology that could be used as a model (educational tool) for engineers and contractors in the local building industry. Using this project as a training ground for local companies and apprentices would be facilitated during the design and construction phase of this project.

Project Analysis: (How much and when)

The initial work on programming is complete with the final drawing and construction documents to be completed prior to year for tender in early 2008. The construction completion is anticipated to be October 2008.



The Planning Process

The City of Whitehorse prepared this Integrated Community Sustainability Plan through a public planning process. The process and the invitation to participate have been well advertised through the Yukon News and Whitehorse Star. The Draft Plan was made available August 3rd at City Hall, the Integrated Community Sustainability Office and the Whitehorse Public Library. The Draft Plan is also available on the City of Whitehorse website. Copies of the Draft Plan have been sent to all those who have participated.

The following details the public meetings, public input opportunities and the public notification as required as per the template.

Council and Senior Management Meeting Workshop to discuss planning process: April 12th. Meeting was advertised in the Whitehorse Star and Yukon News April 5th.

Council Adoption of the Integrated Community Sustainability Plan Process at the Regular Scheduled Meeting of April 23rd. Meeting was advertised April 13th and April 20th on the WHTV rolling ads and in the Yukon News and Whitehorse Star. The planning process was presented at the Whitehorse Standing Committee Meeting on April 16th. All meetings of Council are televised and available on the City website.

Advertising for the public to participate in the development of the Vision and Values for the ICSP was placed in the Yukon News and Whitehorse Star May 11th, May 18th and May 21st. These advertisements invited the public to stop by the Whitehorse Sustainability Office and/or attend a Public Open House on May 23rd at the High Country Inn. Forty people attended the workshop and fifteen members of the public attended the open house.

Following the May 23rd Value and Visioning Workshop and the Public Open House the Vision and Values were prepared in draft form and placed in the Yukon News and Whitehorse Star June 22nd, June 29th and July 6th. Comments were asked for either in person, by email or by phone. Comments were provided by two members of the public.

Public Open Houses were held the week of August 13th during the day with an evening open house on August 15th. All open houses were held in LePage Park at the Smith House, (City of Whitehorse Sustainability Office). The Open Houses were advertised in the Whitehorse Star and Yukon News July 27th, August 3rd and August 10th. The comments and Draft ICSP were presented to Council at the August 20th Regular Standing Committee. Council continued to accept comments on the Draft Plan up until September 24th when it was adopted by Council as a Final Plan.

Moved by Councillor Graham, seconded by Councillor Roberts

THAT the recommended changes to pages 26, 41 and 64 of the Integrated Community Sustainability Plan be approved; and

THAT the Integrated Community Sustainability Plan be adopted as amended; and

THAT the amended Integrated Community Sustainability Plan be forwarded to the Review Committee for approval.

Carried Motion # 2007-17-10

The City of Whitehorse hosted a Public Presentation on September 13th to kick-off the Sustainability Charrette with Municipal Manager Richard Quail from Okotoks, Alberta to present the Sustainable Okotoks experience. The Draft ICSP was discussed at this meeting and copies available; 100 people attended the September 13th event.

The consultation process involved a series of interviews with governments, NGO's, the business community and individuals throughout the process.

Like the Kwanlin Dun First Nation, the Ta'an Kwach'an Council own parcels of land within the City of Whitehorse and plan in the future to develop these parcels and share infrastructure with the City.

The Ta'an Kwach'an Council is a recipient of gas tax dollars and has not yet accessed the funds. The Council has done past work on sustainable development and has shared their Draft Sustainable Development Strategy with the City. This document is in draft only and therefore does not form part of this report.

The Ta'an Kwach'an Council has expressed a desire to continue working with the City of Whitehorse on the second phase of the Sustainability Plan.

• **Government of Yukon**

The City of Whitehorse has met and or spoken with representatives from the following departments within the Government of Yukon as part of developing the ICSP:

- Community Services
- Environment
- Energy Mines and Resources
- Health and Social Services
- Education
- Tourism and Culture
- Justice
- Statistic Branch

• **Government of Canada**

The City of Whitehorse has met and or spoken with representatives from the following departments within the Government of Canada as part of developing the ICSP:

- Heritage Canada
- Environment Canada
- Infrastructure Canada
- Natural Resources Canada

A complete listing of those who were interviewed and/or participated in the value and visioning workshop is appended to this report.

Planning Process for Integrated Community Sustainability Plan (ICSP)

PHASE I - Template Completion and Strategic Plan Vision and Values

	Step	Purpose/Content
Community Profile/ Inventory/ Assessment	Community Profile Community Inventory and Assessment	Overview of physical environment, history, people, jobs, economy, culture and other information deemed important Complete Capital Infrastructure, Social Health, Cultural Services, Economic and Capacity Building and Job Training Assessment Checklists
	Evaluate the Inventory in terms of Sustainability	Describe the positives and negatives of the existing infrastructure in terms of meeting the sustainability principles
	Identify existing and potential service agreements	To ensure infrastructure being planned avoids duplication. To consult with KDFN, TKC, and YG. The City has existing agreements with YG and KD. Must be demonstrated that governments worked together.
	Identify Eligible Projects as per Capital Budget	Examine City budget for transit, wastewater, solid waste, community energy systems, active transportation, and building system improvements.
Public Engagement	Stakeholder Interviews	Conduct stakeholder interview with all sectors in community. Excite and engagement the stakeholders.
	Public Visioning Session	One day meeting to develop high level vision and values to be used in template development and charrette preparation.
	Open Downtown Office Displays	Daily Open House for interested public to stop by
	Council/Committee CASM Meetings	Present process, and a have discussion with Council as to their priorities.
Template Report	Identify Infrastructure Priorities and Priority Setting	Create a list of projects and identify how they qualify as per the checklists, the values, goals and sustainability principles. Identify any shared infrastructure opportunities
	Complete Draft Report	Compile the information into a document as per the template
	Consult with the Community on the Draft Report	Hold Open Houses and make draft plan available to all interested, stakeholders and Governments
	Presentation to Planning Committee	Take Draft Report to Council
	Adoption of Template Plan	Council approves or amends Template Plan and then submit to review committee for acceptance. Committee has 40 days to reply.
	Budget	Work with Department Managers to indentify projects for budget consideration. All projects need to be approved by review committee

Stakeholders

Alternative transportation, Doug Hnatiuk (City), City of Whitehorse

ARTS, Laurel Parry (YG, Arts & Culture), Miche Genest (Heritage Canada)

AYC, David Black (AYC), 15-1114 1st Ave, Y1A 1A3

Bald Hill Community Association, Carole Bookless (Community), 22-11th Avenue Y1A 4H7

Buildings, George White (City), City of Whitehorse

Business, Rick Karp (Chamber of Commerce), 101-307 Jarvis Y1A 2H3

City Manager, Dennis Shewfelt (City), City of Whitehorse

Copper Ridge Community Association, Leah Davy (Community) Box 31507 Y1A 6K8

Councillors, Dave Austin, Doug Graham, Jeanine Myhre, Florence Roberts, Jan Stick, Dave Stockdale (City), City of Whitehorse

Crestview Community Association, Jurgen Ponsioen, Susan Russell (Community)

Director/Operation, Brian Crist (City), City of Whitehorse

Director/Administration, Robert Fendrick (City), City of Whitehorse

Downtown Residents Association, Dianne Brendt (Community), 7178 7th Avenue Y1A 1R1

Energy, Doug MacLean (Energy Solutions Center), 206A Lowe Y1A 1W6

Environment, Ian Church (YG), Box 2703 Y1A 2C6

Environment, J. P. Pinard, Lewis Rifkind, Karen Baltgailis (YCS), 302 Hawkins Y1A 1X6

Environment, Bengt Petterson, EBA, Environmental Consultants

Environmental Coordinator, Jen Turner/Sabine Schweiger (City), City of Whitehorse

Financial, Valerie Anderson (City), City of Whitehorse

Fire Department, Clive Sparks (City), City of Whitehorse

Food Bank, Peter Becker/Ross Findlater (Anti-poverty Coalition)

Granger Neighborhood Association, Darielle Talarico (Community), Paulette Ruest, 136 Wilson Y1A 5T3

Health, Brian Kitchen (YG), YG Health and Social Services

Hillcrest Community Association, Doug Mowat (Community)

ICSP Yukon Government Community Services, Anthony Delorenzo (YTG), Box 2703 Y1A 2C6

Infrastructure, Wayne Tuck, Jim McLeod (City), City of Whitehorse, Pat McInroy, YG

Justice, Nils Clarke (Legal Aid)

Leisure Program, Suzette Delmage (City), City of Whitehorse

Mary Lake Community Association, Lois Johnston (Community), 53 Fireweed Dr. Y1A 5T8

Mayor, Bev Buckway (City), City of Whitehorse

McLean Lake Residents Association, Skeeter Miller-Wright, Maryanne Darraugh (Community), Box 31532 Y1A 6K8

Northern Climate Exchange, Michael Westlake, Katherine Sandiford (Climate Change), Box 2799 Y1A 4K4

Planning, Mike Gau (City), City of Whitehorse

Policing, Timothy Walton (RCMP), Whitehorse Detachment, 4100 4th Ave. Y1A 1H5

Porter Creek Community Association, Jeff Marinowske (Community), 64 Almond Place Y1A 5K6

Riverdale Community Association, Doug MacLean (Community), Box 31084 Y1A 2B2

Takhini North Community Association, Mark O'Brien (Community), Box 31763 Y1A 6L3

Takhini West Community Association, Rick Grant (Community)

Valleyview Community Association, Keith Butler (Community), 371 Valleyview Y1A 3C9

Transit, Dave Muir (City), City of Whitehorse

Wolf Creek Community Association, Scott Wilson (Community), 28 Harbottle Road Y1A 5T2

Youth, Vanier Social Justice Committee (Youth), Vanier School, Social Justice Committee Janet Clarke 16 Duke Y1A 4M2

Yukon Community Planning, George Stetkiewicz (YTG), Box 2703 Y1A 2C6

Project rating grid

	<i>Public Health & Safety</i>	<i>Legislated</i>	<i>Accessibility</i>	<i>Replacement or New</i>	<i>Environmental Impact or Protection</i>	<i>Sustainable</i>	<i>Strategic Plan Values</i>	<i>Funding Available</i>	<i>Political Desire</i>	<i>Staff/Consultant Capacity</i>	TOTAL:
Engineering											
1 Compost & Garbage Carts											
2 Downtown Reconstruction											
3 Downtown Reconstruction Beyond 2011											
4 Hillcrest Reconstruction, Phase 1											
5 Hillcrest Reconstruction, Phase 2											
6 Hospital Road and Lewes Blvd Intersection Improvements											
7 Industrial-Quartz to Platinum Design & Construction											
8 Industrial-2 Mile Hill to Quartz Design & Construction											
9 Infiltration Elimination Assessment City Wide											
10 Livingston Trail Lagoon Outfall Pipe											
11 Marwell Upgrading											
12 Paving Landfill Access Road											
13 Porter Creek Reservoir Expansion											
14 Robert Campbell Bridge Deck Repair											
15 Robert Campbell Bridge Widening											
16 Selkirk Pump House Improvements											
17 Selkirk Well Field Development											
18 Signal Replacement Ogilvie and 4th Ave.											
19 Surfacing Gravel Roads with Asphalt and /or BST											
20 Surfacing of Country Residential BST											
21 Trail Connections Airport, Alaska Hwy, Porter Creek, Hillcrest, Takhini, CGC											
22 Unpaved Road Reconstruction											
23 Valleyview Reservoir Upgrade/Expansion											

	Public Health & Safety	Legislated	Accessibility	Replacement or New	Environmental Impact or Protection	Sustainable	Strategic Plan Values	Funding Available	Political Desire	Staff/Consultant Capacity	TOTAL:
Maintenance & Safety Services											
24 3 New Buses											
25 Accessibility Upgrades-Facilities											
26 Upgrade Public Services Building to LEED Standard (New Fire Hall)											
27 Increase Heat Reclamation from Ice Plant at CGC											
28 In-ground Fuel Storage Tank Removal											
29 Energy Upgrades Takhini Arena											
30 MSB Building Replacement											
31 Upgrade City Hall Heating System											
Parks & Recreation											
32 Bike Rack, Bike Lockers, at Various Locations											
33 Trail Development											
34 Trail Plan Implementation											
Public Works											
35 3 Garbage/Compost Trucks with Lifting Devices											
36 City Wide Water Meters											
37 GEO Exchange City Wide Sustainability Assessment											
38 Ground Temperature Monitoring Stations											
39 Heat Trace Assessment City Wide											
40 Lagoon Monitoring Wells											
41 Landfill Gas Production Feasibility											
42 Landfill Upgrades											
43 Marwell Forcemain Condition Study											
44 Permanent Water Sampling Station											
45 Pump House & Small Lift Station Upgrade											
46 Sidewalk Replacement Program											
47 Truck Fill Station at Fire Hall											
48 Upgrade Compost Facility & New Compost Grinder											
49 Winter Sand Pile Pad											

April 10, 2007

Chief Ruth Massie
Ta'an Kwach'an Council
117 Industrial Road
Whitehorse, Yukon Y1A 5A5

Dear Chief Massie:

RE: City of Whitehorse Integrated Community Sustainability Plan (ICSP)

The City of Whitehorse has accessed the Planning and Capacity Building Funds from the Canada-Yukon Gas Tax Agreement; the New Deal for Canadian Cities. We have established a Sustainability Office at 3128 – 3rd Avenue and are working to complete the Yukon Government (ICSP) Template by June this year.

As two governments that live within the same jurisdiction and utilize much of the same infrastructure, with more opportunities to share in the development and operation of new sustainable infrastructure I would like to know how the Ta'an Kwach'an Council wishes to be involved in the development of the City of Whitehorse ICSP.

The City is completing the ICSP in two phases. The first being the completion of the Yukon Template in order to access the infrastructure dollars, followed by the second phase, which is envisioned to be a comprehensive plan that examines and makes recommendations for a new sustainable way to invest, build and manage environmentally sustainable infrastructure for the City of Whitehorse.

The City's schedule for completion of the template is June of this year. We are hoping to access gas tax dollars for infrastructure improvements this year and for budget planning in 2008. We are planning a city-wide visioning session in May for the template and to identify issues for a sustainability charrette in the fall.

I look forward to hearing from you as to how the City and Ta'an Kwach'an Council can work together on this exciting plan.

Sincerely,

Mayor Buckway

April 10, 2007

Chief Mike Smith
Kwanlin Dun First Nation
35 McIntyre Drive
Whitehorse, Yukon Y1A 5A5

Dear Chief Smith:

RE: City of Whitehorse Integrated Community Sustainability Plan (ICSP)

The City of Whitehorse has accessed the Planning and Capacity Building Funds from the Canada-Yukon Gas Tax Agreement; the New Deal for Canadian Cities. We have established a Sustainability Office at 3128 – 3rd Avenue and are working to complete the Yukon Government (ICSP) Template by June this year.

Ms Lesley Cabott is our Integrated Community Sustainability Plan Project Manager. Lesley has met with your Planner, Gillian McKee, to introduce the process administratively and professionally.

As two governments that live within the same jurisdiction and utilize much of the same infrastructure, with more opportunities to share in the development and operation of new sustainable infrastructure I would like to know how the Kwanlin Dun First Nation wishes to be involved in the development of the City of Whitehorse ICSP.

The City is completing the ICSP in two phases. The first being the completion of the Yukon Template in order to access the infrastructure dollars, followed by the second phase, which is envisioned to be a comprehensive plan that examines and makes recommendations for a new sustainable way to invest, build and manage environmentally sustainable infrastructure for the City of Whitehorse.

The City's schedule for completion of the template is June of this year. We are hoping to access gas tax dollars for infrastructure improvements this year and for budget planning in 2008. We are planning a city-wide visioning session in May for the template and to identify issues for a sustainability charrette in the fall.

I look forward to hearing from you as to how the City and Kwanlin Dun can work together on this exciting plan.

Sincerely,

Mayor Buckway

Capital projects sheets

4



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Compost & Garbage Carts City Wide**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	1,200,000				\$ 1,200,000
Other - specify:					\$ -
Total:	\$ 1,200,000	\$ -	\$ -	\$ -	\$ 1,200,000

Project History/Description/Purpose/Need:

Since 2002, the City of Whitehorse has had a residential compost collection program which involves using biodegradable bags. The main complaints about participation in the program involve the cost of the biodegradable bags, the inconvenience of having to purchase the bags, lack of consistent bag supply in the stores and the premature break-down of the biodegradable bags. The 2003 Status on Solid Waste Services Report recommended that the City "advance a two-cart system through the budget process". The two-cart automated system would not require participants to use any specialty bags for compost or garbage collection.

In June of 2007 the pilot project for the two-cart system was implemented in a selected area of the Porter Creek Subdivision and will run for one year. Approximately 500 households in Porter Creek will received 2 – 240L carts, a green one for compost and a black one for garbage.

In 2008 approximately 6,900 compost and 6,900 garbage carts will be required to implement a City Wide dual cart collection. Carts will be ordered for delivery in the summer of 2008 with distribution and education to take place during the fall of 2008.

Project Analysis:

(How much and when)

Project to be completed in the fall of 2008 following evaluation of the Pilot project.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Downtown Reconstruction**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	5,500,000	4,600,000	5,200,000	6,000,000	\$ 21,300,000
Other - specify:					\$ -
Total:	\$ 5,500,000	\$ 4,600,000	\$ 5,200,000	\$ 6,000,000	\$ 21,300,000

Project History/Description/Purpose/Need:

Engineering and construction services for the "Underground Works" and "Surface Works" portion of the Downtown Reconstruction Program.

These "Underground Works" will be done in conjunction with the "Surface Works" and the "Engineering Design Services" projects. The Surface Works portion includes all: road works; shallow utilities; street lights and landscaping improvements. Reconstruction is necessary to improve the look of the City and meet the service needs of businesses and the public. Surface work is a local improvement under the City's Local Improvement Policy. The Underground Works portion includes all: water works; sanitary sewers; storm sewers and building services. Underground Works to be done in conjunction with Surface Works.

The proposed phases are from the City's Downtown District Predesign Report, and are proposed as follows:

Year 2008 is proposed for construction of Phase R3; Black Street - 4th Avenue to 8th

Year 2009 is proposed for construction of portions of ; Ogilvie Street - 2nd Ave. to 8th Avenue, made up from portions of Phase R1 ,R2 and R6

Year 2010 is proposed for construction of ; 6th Ave 400 Block of Cook and Wheeler, made up from portions of R8, R5, R4 and R2

Year 2011 is proposed for construction of Strickland, Alexander, Hanson, Hawkins (Residential Streets)

Projects are subject to approval under the Local Improvement Process, the benefiting properties paying only a portion of the surface works.

Due to the aging infrastructure in these areas maintenance costs are increasing and with the upgrading of u/g infrastructure the need to bleed water for frost protection of services and dead end mains will be eliminated.

Projects are subject to approval under the Local Improvement Process, the benefiting properties paying only a portion of the surface works.

Project Analysis:

This would be a multiyear project taking place over four years.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **DT Reconstruction Beyond 2011**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:				\$ 48,700,000	\$ 48,700,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ -	\$ 48,700,000	\$ 48,700,000

Project History/Description/Purpose/Need:

Engineering and construction services for the "Underground Works" and "Surface Works" portion of the Downtown Reconstruction Program.

These "Underground Works" will be done in conjunction with the "Surface Works" and the "Engineering Design Services" projects. The Surface Works portion includes all: road works; shallow utilities; street lights and landscaping improvements. Reconstruction is necessary to improve the look of the City and meet the service needs of businesses and the public. Surface work is a local improvement under the City's Local Improvement Policy. The Underground Works portion includes all: water works; sanitary sewers; storm sewers and building services. Underground Works to be done in conjunction with Surface Works.

The proposed remaining phases are from the City's Downtown District Predesign Report, and are proposed as follows: Remaining portions of the Residential and Special Phases R2, R6, R4, R7, R5 and S2. Downtown Phases D2,D3, D4 and D5. Years and sequence of work will be determined as budget years advance.

Projects are subject to approval under the Local Improvement Process, the benefiting properties paying only a portion of the surface works.

With the aging infrastructure in these areas maintenance costs are increasing and with the upgrading of U/G infrastructure the need to bleed water for frost protection of services and dead end mains will be eliminated.

Project Analysis:

(How much and when)

These projects would be completed over a number of years and be split over 10 or 11 projects.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Hillcrest Recon-Des & Cons Ph 1**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>		200,000	3,500,000		
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		200,000	3,500,000		\$ 3,700,000
Other - specify:					\$ -
Total:	\$ -	\$ 200,000	\$ 3,500,000	\$ -	\$ 3,700,000

Project History/Description/Purpose/Need:

Meetings with Hillcrest Community Association have expressed desire to see some infrastructure renewal work completed in this area. The community feels that the lack of sound infrastructure is affecting property values and health and safety. Further, Yukon Electrical and Northwestel are also desirable to see some of their infrastructure upgraded as well, and meetings between all groups will be required.

The funds proposed is to commence the detailed design process using a consultant in 2009 which will allow tendering and construction of Phase 1 in 2010. The narrow road rights of way, location of public and private infrastructure will require review and compromise of standards to meet the desires of the community and respecting these challenges. Phases of reconstruction work have not been identified but will be developed in 2007.

Infrastructure renewal is subject to the local improvement process, and is not possible for a few years due to conflicting infrastructure renewal work in other communities. Meetings with the Association have identified these conflicts.

Upgrading of the underground infrastructure will eliminate the need for to bleed water as a method of frost protection for services.

Project Analysis:

(How much and when)

Funds proposed is to commence the detailed design process using a consultant in 2009 which will allow tendering and construction of Phase 1 in 2010.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Hillcrest Recon-Des & Cons Ph 2**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan		200,000			
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		200,000		3,600,000	\$ 3,800,000
Other - specify:					\$ -
Total:	\$ -	\$ 200,000	\$ -	\$ 3,600,000	\$ 3,800,000

Project History/Description/Purpose/Need:

Meetings with Hillcrest Community Association have expressed desire to see some infrastructure renewal work completed in this area. The community feels that the lack of sound infrastructure is affecting property values and health and safety. Further, Yukon Electrical and Northwestel are also desirable to see some of their infrastructure upgraded as well, and meetings between all groups will be required.

The funds proposed is to commence the detailed design process using a consultant in 2009 which will allow tendering and construction of Phase 2 in 2011. The narrow road rights of way, location of public and private infrastructure will require review and compromise of standards to meet the desires of the community and respecting these challenges. Phases of reconstruction work have not been identified but will be developed in 2007.

Infrastructure renewal is subject to the local improvement process, and is not possible for a few years due to conflicting infrastructure renewal work in other communities. Meetings with the Association have identified these conflicts.

Upgrading of the underground infrastructure will eliminate the need for to bleed water as a method of frost protection for services.

Project Analysis:

(How much and when)

Funds proposed is to commence the detailed design process using a consultant in 2009 which will allow tendering and construction of Phase 2 in 2011.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Hospital Rd & Lewes Blv'd Int. Improvements**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	225,000				
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	225,000				\$ 225,000
Other - specify:					\$ -
Total:	\$ 225,000	\$ -	\$ -	\$ -	\$ 225,000

Project History/Description/Purpose/Need:

This project is to install traffic signals or a roundabout at the existing intersection. Traffic studies indicate this intersection is one of the busiest and vehicles travel fast making it difficult to access and egress from the Hospital. A roundabout has been considered for this location based on City's 2002 Walkable Communities report and subsequent transportation study; however, there are some public opinion expressing concerns about a roundabout. Intersection upgrades will improve pedestrian and cyclist safety at this location.

Project Analysis:

(How much and when)

This project planning, design, drawing preparation and construction documents to be completed in January and February of 2008. The construction completion is anticipated to be the fall of 2008.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Industrial-Quartz to Platinum**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:		560,000			\$ 560,000
YTG:					\$ -
GAS:	200,000	960,000			\$ 1,160,000
Other - specify:					\$ -
Total:	\$ 200,000	\$ 1,520,000	\$ -	\$ -	\$ 1,720,000

Project History/Description/Purpose/Need:

Engineering and construction services for the upgrading of underground & surface for Industrial Road from Two Mile Hill to Quartz Road to City standards. Design of the work in 2008 with construction in 2009. The standard will include: curb, gutter, walk, asphalt, water, sanitary & storm, traffic signals, some environmental cleanup of contaminated soils close to 2 Mile Hill, and underground street lighting.

Since this section of Industrial Road is a major corridor for access to Marwell , it is proposed that the construction be paid for using gas tax revenue from federal Government

Predesign from the Marwell Planning and Predesign Study was completed in 2002 and approved by Council.

The City has received numerous requests to complete the paving of the road surface.

Project Analysis:

(How much and when)

Design of the entire project from Two Mile Hill to Platinum will be undertaken in 2008 with Phase 1 and 2 of the construction from Two Mile Hill to Platinum Road to be completed in 2009.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Industrial-2 Mile Hill to Quartz**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:					\$ -
LIC:		598,000			\$ 598,000
YTG:					\$ -
GAS: 220,000	220,000	1,002,000			\$ 1,222,000
Other - specify:					\$ -
Total:	\$ 220,000	\$ 1,600,000	\$ -	\$ -	\$ 1,820,000

Project History/Description/Purpose/Need:

Engineering and construction services for the upgrading of underground & surface for Industrial Road from Two Mile Hill to Quartz Road to City standards. Design of the work in 2008 with construction in 2009. The standard will include: curb, gutter, walk, asphalt, water, sanitary & storm, traffic signals, some environmental cleanup of contaminated soils close to 2 Mile Hill, and underground street lighting.

Since this section of Industrial Road is a major corridor for access to Marwell , it is proposed that the construction be paid for using gas tax revenue from federal Government

Predesign from the Marwell Planning and Predesign Study was completed in 2002 and approved by Council.

The City has received numerous requests to complete the paving of the road surface.

Project Analysis:

(How much and when)

Design of the entire project from Two Mile Hill to Platinum will be undertaken in 2008 with Phase 1 and 2 of the construction from Two Mile Hill to Platinum Road to be completed in 2009.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Infiltration Elimination Assessment City Wide**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	400,000	480,000	660,000	660,000	\$ 2,200,000
Other - specify:					\$ -
Total:	\$ 400,000	\$ 480,000	\$ 660,000	\$ 660,000	\$ 2,200,000

Project History/Description/Purpose/Need:

2002 camera work provided an assessment and categorized of sanitary sewer mains and manholes for possible repairs. The degree of infiltration city-wide can then be quantified to estimate whether sewer segments have need for repairs, remediation, or replacement of all or some of the sections of the sewers maintenance problems could also be identified. Elimination of storm water connections to the sanitary sewer system would also be undertaken.

the reduction of infiltration into and storm sewer connections to the sanitary system would reduce the volume of effluent being pumped into the lagoons. Sewage Lift Station pump run times would be reduced, the lagoon life expectancy would be increased and there would be a reduction in the lagoon annual discharge volume.

Project Analysis:
(How much and when)

This would be a multi year project over a 4 year period.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Livingston Trail Lagoon Outfall Pipe**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>	2,120,000				
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	2,200,000				\$ 2,200,000
Other - specify:					\$ -
Total:	\$ 2,200,000	\$ -	\$ -	\$ -	\$ 2,200,000

Project History/Description/Purpose/Need:

The 1999 Annual Capital Budget for sewage treatment was \$1,470,000. In 1998/99 the City undertook trial discharges of treated effluent to Pot Hole Lake (PHL). The report suggested that PHL could be a viable long term discharge alternative to the Yukon River. The report indicated that the performance of the Pot Hole Lake would degrade over time and funds will be required to undertake construction of the extension of the outfall line from the Pot Hole Lake to the Yukon River in future years, dependent on when the PHL was no longer able to handle the flows of treated effluent.

In 2000, preliminary engineering for the design of the outfall was completed. The concept was approved by the Yukon Water Board and a new Water Use License was approved. During the discharge in 2004, a decrease in the performance of the PHL was noted. Based on the results of the discharge so far in 2005, a further reduction in the volume of water discharged is occurring. In 2006 discharge volumes were slightly higher than 2005 however volumes were lower than the years prior to 2004. Therefore, construction of the outfall to the river should be completed.

It is proposed to be a design/build project: pre-design work has been completed, engineering final design to be completed in 2007, and construction to be undertaken in 2008.

Project Analysis:

(How much and when)

Work is scheduled for completion in 2008.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Marwell Upgrading**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:			3,000,000	3,500,000	\$ 6,500,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ 3,000,000	\$ 3,500,000	\$ 6,500,000

Project History/Description/Purpose/Need:

With the development and expansion being undertaken in the Marwell Industrial Subdivision, there is a need to provide the lot owners with water and sewer services, with the increased traffic the upgrading of the roads to a paved industrial standard including the installation of a storm sewer system to address local drainage issues is required.

Bring water services into the remainder of the Marwell Area, and new sewer mains on Gypsum. Water would be provided to properties fronting onto Gold, Industrial, Silver and Gypsum Roads. Increased water circulation would improve water quality in the area and allow properties to limit use of ground wells in the area. New fire hydrants would protect properties from fires. Watermains in this area may also encourage larger properties to subdivide by making the land more saleable.

Asphalt roads and storm drainage infrastructure would significantly reduce maintenance requirements in the area.

To address the periodic flooding of the area during periods of Yukon River Construction of a dyke along the Yukon River from Quartz Road to Tungsten road will be required.

Project Analysis:

(How much and when)

U/G infrastructure and road works would be completed on Gold, Gypsum, Silver and Industrial Rd. including the Dyke in 2010. In 2011 U/G and surface works would be completed on Tlingit, Tungsten and Galena Roads.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Paving Landfill Access Rd**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		350,000			\$ 350,000
Other - specify:					\$ -
Total:	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000

Project History/Description/Purpose/Need:

The landfill access road is currently a gravel road and requires regular maintenance (grading for wash boarding and dust control) during the spring, summer and fall months dependent upon the amount of precipitation received.

Upgrading of the access road to an asphalt standard would significantly reduce the maintenance requirements.

Project Analysis:

(How much and when)

Work is scheduled for completion in 2009.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Porter Creek Reservoir Upgrade**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan		3,500,000			
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		4,000,000			\$ 4,000,000
Other - specify:					\$ -
Total:	\$ -	\$ 4,000,000	\$ -	\$ -	\$ 4,000,000

Project History/Description/Purpose/Need:

A new water reservoir at Porter Creek is required to meet existing and future water demands. New developments and existing users require a secure water supply for use by the property owners and for emergency fire protection services.

This upgraded reservoir would be designed to meet the existing requirements with future expansion capabilities to meet the needs of new developments proposed and allow for future flows into in Porter Creek, and Porter Creek Lower Bench during demand periods.

The 2002 Water & Sewer Study recommended the twinning of the reservoir with a 5,500 m3 cell in the 0-5 year plan. It identified the reservoir as most critical in terms of expansion. The remote location of this reservoir makes this expansion a priority.

Project Analysis:

(How much and when)

The majority of the work will be completed in 2009.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Robert Campbell Bridge Deck Repairs**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>	300,000				
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	200,000				\$ 200,000
Other - specify:					\$ -
Total:	\$ 200,000	\$ -	\$ -	\$ -	\$ 200,000

Project History/Description/Purpose/Need:

The Robert Campbell Bridge is currently the only access to Riverdale and does not provide a safe bike access. The project to widen the existing 1.6 meter wide sidewalks to 2.4 meters wide would: provide a safe route for pedestrians, isolate cyclists from vehicular traffic while connecting to the Millennium and Robert Service Way multi-use trails.

The City of Whitehorse is seeking to promote alternative modes of transportation to reduce green house gas emissions and increased bicycle bridge use will help to achieve this goal.

The concrete deck requires periodic maintenance and safety repairs.
 2007 for consultant fees to undertake a detailed bridge inspection and preparation of a recommended repairs report.
 2008 Fund provide for the concrete deck repairs, installation of new J-seals and the application of saline sealer over a two year period.

Project Analysis:

(How much and when)

This is a two year project where all funds are committed in the first year in which majority of the work will be completed in the first year followed by a second application of sealant in the 2nd year.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Robert Campbell Bridge Widening**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>		600,000			
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		700,000			\$ 700,000
Other - specify:					\$ -
Total:	\$ -	\$ 700,000	\$ -	\$ -	\$ 700,000

Project History/Description/Purpose/Need:

The Robert Campbell Bridge is currently the only access to Riverdale and does not provide a safe bike access. The project to widen the existing 1.6 meter wide sidewalks to 2.4 meters wide would: provide a safe route for pedestrians, isolate cyclists from vehicular traffic while connecting to the Millennium and Robert Service Way multi-use trails.

The City of Whitehorse is seeking to promote alternative modes of transportation to reduce green house gas emissions and increased bicycle bridge use will help to achieve this goal.

Project Analysis:

(How much and when)

All work will be completed in 2009.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Selkirk Water Pumphouse**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>			6,600,000		
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:			6,600,000		\$ 6,600,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ 6,600,000	\$ -	\$ 6,600,000

Project History/Description/Purpose/Need:

The existing Selkirk Pumphouse has been in operation since the 1950's and upgrades have been identified as required in previous Water & Sewer Studies. The existing pipes, valves and equipment are showing significant signs of age. The structure is not earthquake resistant and is subject to catastrophic failure.

The pumps and electrical supplies need to be upgraded to meet future water demands as our city increases in population and new areas are developed. The upgraded pumphouse would be designed with energy savings options such as solar heating, heat recovery, geothermal heat pumps, air to air heat pumps, more efficient pumps and controls settings. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structure and equipment that would enable LEED certification

The current annual O & M costs for Selkirk Station is approximately \$150,000 and the above costs would be in addition to that amount if a new treatment plant will be built.

Project Analysis:

(How much and when)

The initial phase of the project would be to engage the services of a consultant and to complete a preliminary and detailed design. The second phase would be the construction of the new facility.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Selkirk Well Development**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	1,620,000	820,000	720,000		
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	1,660,000	820,000	720,000		\$ 3,200,000
Other - specify:					\$ -
Total:	\$ 1,660,000	\$ 820,000	\$ 720,000	\$ -	\$ 3,200,000

Project History/Description/Purpose/Need:

The project involves the installation of production wells in the Selkirk Aquifer within the Riverdale subdivision. The wells will increase the volume of groundwater pumped into the existing water distribution system, with the goal of reducing and eventually eliminating Schwatka Lake surface water as a water source for the City of Whitehorse.

This project is a carryover for project that was originally budgeted for completion in 2006.

In 2008, construction is proposed for two wells on the south side of Riverdale. One well would be connected to the existing intake line along Nisutlin Road. In 2009, the second well located in south side of Riverdale would be connected to the discharge line installed 2008. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structures and equipment that would enable LEED certification. Use of well water will reduce the need to use fossil fuels to heat water in the distribution system during the winter months.

In 2009, a well near Selkirk Street pumphouse is proposed as backup to the existing wells now in use. g, heat recovery, geothermal heat pumps, air to air heat pumps, more efficient pumps and controls settings. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structure that would enable LEED certification

In 2012 or beyond, depending on population growths, additional wells would be installed and connected to the existing water supply system in Hart and in Hyland Crescents, through existing public utility lots. This work will increase fire protection and reduce the need to bleed or circulate water for protection against frozen mains.

Project Analysis:

(How much and when)

This would be a multiyear project taking place over three years.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Signal Replacement Ogilvie & 4th Ave.**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>	250,000				
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	250,000				\$ 250,000
Other - specify:					\$ -
Total:	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000

Project History/Description/Purpose/Need:

This project is to replace the existing traffic signals with a completely new set of equipment including new davit poles, bases, light heads, controller, cabinet and new detector loops. The existing signals are old, have been damaged by vehicles, and the majority of the equipment is in need of replacement. New magnetic loops will provide for improved traffic flow by giving more flexibility in traffic control and provide for more efficient traffic flow during peak times. With 4th Avenue being designated as the main bicycle corridor efficient traffic flow through the intersection will enhance cyclist safety and movement at this location.

Project Analysis:

(How much and when)

The work will be completed in 2008.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **BST or ASP of Gravel Rds**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	1,500,000	1,500,000			\$ 3,000,000
Other - specify:					\$ -
Total:	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ 3,000,000

Project History/Description/Purpose/Need:

There are approximately 66 lane kilometers of access roads, such as Grey Mountain Road, in the City of Whitehorse that are currently gravel. These roads require regular maintenance (grading for wash boarding and dust control) during the spring, summer and fall months dependent upon the amount of precipitation received.

Upgrading of these access roads to an asphalt standard would significantly reduce the maintenance requirements.

Project Analysis:

(How much and when)

This is a multi year project with funds to be spent over a 2 year period



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Country Res-BST Surfacing**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>	350,000	400,000	400,000	400,000	
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:	350,000	400,000	400,000	400,000	\$ 1,550,000
Total:	\$ 350,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 1,550,000

Project History/Description/Purpose/Need:

The Rural Residential Road Surfacing Program makes provisions to upgrade secondary roads to BST surface standards. The project will improve service, lower road maintenance costs, and result in a safer and cleaner neighbourhood. It is proposed to BST only straight sections of roadway while the cul-de-sacs would remain graveled. Intersections will be paved where vehicle use is high. NO LIC recovery identified.

A portion of the budget would include repair and resurfacing to existing damaged BST where appropriate and addressing drainage concerns.

Hard surfacing of existing country residential gravel roads with BST will significantly reduce road maintenance costs.

Project Analysis:

(How much and when)

This would be a multiyear project taking place over four years.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Trail Connections**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	250,000	250,000			\$ 500,000
Other - specify:					\$ -
Total:	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ 500,000

Project History/Description/Purpose/Need:

To meet the City's goal of and to promotion alternate transportation the development of a multi use trail network that connect the various subdivisions to each other and the downtown core is an important aspect to the success of the program.

Under this program connector trails are proposed along the Alaska Highway from the Airport to the existing trail Puckett Gulch Trail and along Range Road to the Two Mile Hill Bicycle/Pedestrian trails; Development and upgrading of the Trans Canada Trail Connector to Porter Creek from the Takhini Arena and from Hillcrest to existing trail network .

Project Analysis:

(How much and when)

This would be a multiyear project taking place over a two year period.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Engineering**

Project: **Unpaved Road Reconstruction**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	60,000	60,000	50,000		\$ 170,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 60,000	\$ 60,000	\$ 50,000	\$ -	\$ 170,000

Project History/Description/Purpose/Need:

In recent years, the Public Works Department has been spending more scarce O&M funding on rural gravel road upgrades. Upgrading of the road would return the amount of time and energy required for repairs on these existing roads.

- 2008 - Long Lake Road from Whitehorse Lagoon to Livingstone Trail Lagoon Facility and Pot Hole Lake and a portion of Fish Lake Road
- 2009 - Cut down clay cliffs on Wickstrom Road
- 2010 - McLean Lake Haul Road

Project Analysis:

(How much and when)

This is a multi-year program with individual roads completed each year.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Engineering**

Project: **Valleyview Reservoir Upgrade**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	4,040,000				
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	4,100,000				\$ 4,100,000
Other - specify:					\$ -
Total:	\$ 4,100,000	\$ -	\$ -	\$ -	\$ 4,100,000

Project History/Description/Purpose/Need:

An upgraded water reservoir at Valleyview is required to meet existing and proposed future water demands. New developments and existing users require a secure water supply for use by the property owners and for emergency fire protection services.

This upgraded reservoir would be designed to meet the existing requirements with future expansion capabilities to meet the needs of new developments proposed in Takhini, airport, Porter Creek, Tankfarm, and Porter Creek Lower Bench.

The 2002 Water & Sewer Study recommended the twinning of the reservoir with a 7,000 m3 cell in the 5-10 year plan, and the construction of a 8,000m3 cell in the 20+ year plan.

Project Analysis:

(How much and when)

The majority of the work will be completed in 2008.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: *M/S Services*

Project: *6 New Buses*

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan	1,350,000				
City:	450,000				\$ 450,000
LIC:					\$ -
YTG:					\$ -
GAS:		1,350,000			\$ 1,350,000
Other - MRIF:	900,000				\$ 900,000
Total:	\$ 1,350,000	\$ 1,350,000	-	\$ -	\$ 2,700,000

Project History/Description/Purpose/Need:

2008: Ongoing replacement of existing transit fleet -- 4 units replaced in 2006. 2008 funding identified to be part of MRIF funding application to replace an additional 3 units. Replacement units would be "kneeling" style to allow for greater accessibility.

Coupled with the major repair funding request for 2007 the Transit fleet will have 7 low floor accessible buses and two rebuilt 40 buses. The fleet will either be new buses/less than three years old or rebuilt.

Unless directed otherwise, the fleet will be maintained at 9 units: 6 units for regular scheduled service and 3 spare units. There will be 7 units surplus, 4 in 2007 and 3 in 2008.

Project Analysis:

(How much and when)



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **Accessibility Upgrades-Facilities**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	50,000	300,000	350,000	300,000	\$ 1,000,000
Other - specify:					\$ -
Total:	\$ 50,000	\$ 300,000	\$ 350,000	\$ 300,000	\$ 1,000,000

Project History/Description/Purpose/Need:

Provision of funds for the upgrade of City facilities for accessibility improvements. This may include the installation of elevators/ handicap lifts or wheel chair ramps, push button access to public access doors and signage and other accessibility upgrades as required.

Project Analysis:

(How much and when)

This would be a multiyear project taking place over three years



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **Upgrade Public Svcs Bldg to LEED Standard
(New Fire Hall)**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	6,000,000				\$ 6,000,000
LIC:					\$ -
YTG:					\$ -
GAS:	3,000,000				\$ 3,000,000
Other - specify:					\$ -
Total:	\$ 9,000,000	\$ -	\$ -	\$ -	\$ 9,000,000

Project History/Description/Purpose/Need:

Provision of funds to supplement those provided by the City to construct the new Public Services Building (Fire Hall #2) at the top of 2 Mile Hill on the same property that Fire Hall #2 sits on. The funds supplied from the gas tax would provide the engineering, design, technical support and equipment to upgrade the building to an energy efficient structure that would enable LEED certification.

These upgrades would likely include but not necessarily be limited to lighting, heat recovery, solar walls, passive heat loading and cooling, investigation and possible inclusion of ground water heat exchange, sustainable materials used in construction, landscaping, use of runoff for irrigation and high efficiency heating units.

Should the ground water wells for heat exchange be an option there is also the potential to use the water source as a non-potable source for fire fighting training as well for use in dust control on non-paved roads. This would eliminate the need to pump and treat water that doesn't need it.

Project Analysis:

(How much and when)

The initial work on programming is complete with the final drawing and construction documents to be completed prior to year for tender in early 2008. The construction completion is anticipated to be October 2008.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **Increase Heat Reclamation-CGC**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	250,000				\$ 250,000
Other - specify:					\$ -
Total:	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000

Project History/Description/Purpose/Need:

Project is for the engineering and completion of work to capture the remaining waste heat from the ice plants at the CWG Centre. Currently a large portion of the waste heat is reclaimed and reused in the facility but there is still some waste heat rejected to atmosphere. Work would entail the installation of additional heat exchangers.

Project Analysis:

(How much and when)

Work would be completed in 2008 with 100% of funds required in 2008



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **Energy Upgrades-Takhini Arena**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	100,000	200,000			\$ 300,000
Other - specify:					\$ -
Total:	\$ 100,000	\$ 200,000	\$ -	\$ -	\$ 300,000

Project History/Description/Purpose/Need:

Supply and installation of energy efficiency technology Takhini Arena.

Project would be two components;

- 1) to provide low grade heat and ventilation to the ice surface area by use of solar wall technology on the south end of the arena. This not intended to provide heat to the office/ public areas such as mezzanine, lobby or dressing rooms.
- 2) heat recovery from the ice plants through the use of heat exchangers. The recovered energy could be used to heat the domestic hot water as well as provide some of the required heating load to the facility. As this energy source is only available during periods when the ice plants are in operation there would still be the requirement for 100% backup which already exists.

Project Analysis:

(How much and when)

It is anticipated this project could be completed over two year period; 1/3 of funds for the solar wall required in 2008, the remaining funds for heat recovery in 2009



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **MSB Building Replacement**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
\$\$ Approved in 2007-2010 Plan					
City:		500,000	3,500,000		\$ 4,000,000
LIC:					\$ -
YTG:					\$ -
GAS:			8,000,000		\$ 8,000,000
Other - specify:					\$ -
Total:	\$ -	\$ 500,000	\$ 11,500,000	\$ -	\$ 12,000,000

Project History/Description/Purpose/Need:

Provision of funds for the upgrade and consolidation of the City's service buildings including Municipal Services Bldg, Purchasing/warehouse, Parks and Rec Workshop, Transit Garage and Carpenter Sign Shop. All of these buildings would be amalgamated into one structure that would make more efficient use of energy resources as well as limiting the amount of necessary trips by staff between buildings.

The current facilities are all old and not energy efficient and in the case of Municipal Services Bldg not located in the appropriate zoning for type of use it is being used for. The existing buildings would be sold with the proceeds used to offset capital construction costs of a new facility.

This is a project that has been identified by staff and management as a priority for several years.

Project Analysis:

(How much and when)

The initial phase of the project would be to engage the services of a consultant and to complete a needs analysis of existing programs and to find a suitable site to relocate the combined services to. Also as part of the initial phase an appraisal of the existing properties would have to be completed.

The second phase would be the construction.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **M/S Services**

Project: **Upgrade City Hall Heating System**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	75,000				\$ 75,000
Other - specify:					\$ -
Total:	\$ 75,000	\$ -	\$ -	\$ -	\$ 75,000

Project History/Description/Purpose/Need:

Provision of funds to complete the upgrade of the heating system at City Hall to remove all pneumatic controls and install additional zone valves and a DDC system to provide for more constant heating and cooling. Currently the system is very hard to control given the age of the existing infrastructure that is controlling the system.

The ability to more accurately control the system will promote energy efficiency and reduce fuel consumption.

Project Analysis:

(How much and when)

Work will be mostly completed in 2007- City has allocated \$50,000 to this project in 2007 fiscal year.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Parks & Recreation**

Project: **Bike Racks & Lockers
Various Locations**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	150,000				\$ 150,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 150,000	\$ -	\$ -	\$ -	\$ 150,000

Project History/Description/Purpose/Need:

This project includes the purchase of bike racks and bike lockers. The bike racks would be located along commuter routes and adjacent to areas that would typically be stopping and locking locations for commuter bike traffic.
The bike lockers would be located in the downtown core adjacent to typical areas that would be used by commuter bike traffic.

Project Analysis:

(How much and when)

The total cost for this un-funded project is estimated at \$150,000.
This work could be completed in 2008.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Parks & Recreation**

Project: **Trail Development**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	23,000	23,000	50,000		\$ 96,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 23,000	\$ 23,000	\$ 50,000		\$ 96,000

Project History/Description/Purpose/Need:

This is a project that has been funded in the past by City Council to assist in the development of trail signage, trail grooming in winter, and ongoing trail maintenance on existing trail areas within the City. Partnerships include the KSA.

Project Analysis:

(How much and when)

The cost of \$23,000 per year allows for seasonal grooming of the trails by the KSA and ongoing, signage installation, replacement. Included in this is the repairs to existing trails due to normal wear and tear.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Parks & Recreation**

Project: **Trail Plan Implementation**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	50,000	125,000	170,000	190,000	\$ 535,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 50,000	\$ 125,000	\$ 170,000	\$ 190,000	\$ 535,000

Project History/Description/Purpose/Need:

These funds are not funded and would be to further develop the commuter trail routes within the City. Currently the commuter routes are noted on the City's alternate transportation mapping, but requires significant upgrading for wayfinding, deliniation, and ongoing trail maintenance as well as enhanced development for improved use and decreased user conflicts.

Commuter trails are identified in the City 2005 Bicycling map

Project Analysis:

(How much and when)

Work on these trails would be phased over a 4 year period and would be focused on those commuter routes of highest current use first to ensure priority is given to the most popular routes or those with the greatest need.

- 1 Hamilton Boulevard
- 2 Porter Creek/Crestview
- 3 Downtown
- 4 Riverdale



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **3 Garbage Trucks**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		1,200,000			\$ 1,200,000
Other - specify:					\$ -
Total:	\$ -	\$ 1,200,000	\$ -	\$ -	\$ 1,200,000

Project History/Description/Purpose/Need:

The existing garbage and compost collection vehicles were purchased in 2000. Semi automated cart lifters were installed on these vehicles in 2004 and 2007. The backup collection vehicle was purchased in the 1986.

As the City progresses towards a cart system for garbage and compost collection, new collection trucks will be required. The three new collection trucks will allow for single or dual garbage and compost collection. These trucks will be fully automated lifters to pick up the carts and deposit the carts material into the identified material bin of the truck. There will be a compactor on each of the vehicles to allow more material to be dumped and carried. These trucks will make the collection system for efficient. Two of the new trucks will be used on the regular schedule and the other truck will be for backup and overload use.

Many Cities have found that automated collection has considerable economic benefits because municipalities are not loosing workers to lifting injuries. It was also found that with an automated system, an older worker force can complete the garbage and compost collection.

These vehicles will be powered with alternate source fuels if possible.

Project Analysis:

(How much and when)

There is a one year time lag between the ordering and receiving of the new collection vehicles



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **City Wide Water Meters**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:				3,000,000	\$ 3,000,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000

Project History/Description/Purpose/Need:

At present, the City of Whitehorse requires that all businesses have water meters. Each business is charged according to the amount of water they use.

Residential homes are presently not metered. All residents are billed a flat rate regardless of the amount of water they use. Whitehorse is well above the national average for water usage.

If water meters were installed, residential homes owners would be requires to pay for the amount of water they use. The home owners would try to conserve and not waste the treated water.

If less water is used, less energy and lower pumping and treatment costs will occur. Less water going down the drain will also realize less sewage treatment costs.

Water meters also helps the City to locate water main breaks

Project Analysis:

(How much and when)

The work would be completed over a Spring through Fall period.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Geothermal Exchange City Wide**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:		100,000			\$ 100,000
Other - specify:					\$ -
Total:	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000

Project History/Description/Purpose/Need:

Extracting heat from ground sources, water sources and municipal sewer pipes could be used to heat homes and businesses in existing areas of Whitehorse. The heating system would reduce the need to heat homes and businesses with gas, wood or electric power.

This study would determine which areas of the City would be able to benefit from this type of heat.

Project Analysis:

(How much and when)

This study would be completed over a one year period..



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Ground Temp Monitoring Stations**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:		20,000	30,000		\$ 50,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ -	\$ 20,000	\$ 30,000	\$ -	\$ 50,000

Project History/Description/Purpose/Need:

Public Works re-activated existing ground temperature monitoring stations in 2002. These stations monitor the amount of frost that is in the ground. The measurements from these stations help to better determine when water bleeders and boilers should be turned on and shut off. The proposed 2009 and 2010 programs would be for the installation of six new monitoring stations in areas not presently covered by the existing monitoring stations thus improving the effectiveness of the program.

Project Analysis:

(How much and when)

This work would be completed over a two year period.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Heat Trace Assessment**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:			100,000		\$ 100,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000

Project History/Description/Purpose/Need:

All water services within Whitehorse require freeze protection to keep the water services from freezing under the cold weather months.

From the 1970 to present, most new residential water services use heat trace as their method of freeze protection. With this method of freeze protection, there is no bleeding of water so no treated water is wasted.

For the past few years, Public Works has noticed an increase in failures of older heat traces. The water service line is operational but the heat trace wire has failed. A correct repair would be to dig up the yard and road and replace the heat trace. This is not practical. Many of the existing heat trace failures have been converted to Thermostatically Controlled Bleeders. (TCB) TCB's do bleed treated water into the sewer system.

This City wide assessment of heat traced water services will determine how the older heat traced lines can be replaced or modified without major repairs to the road or the resident's property. The City does not want to waste additional water by the installation of more TCB's

Project Analysis:

(How much and when)

This assessment work would be completed over a one year period. The implementation of the recommendations would be future multiple years.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Lagoon Monitoring Wells**

Estimated Capital Cost & Funding Sources

	2007	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	90,000				\$ 90,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 90,000	\$ -	\$ -	\$ -	\$ 90,000

Project History/Description/Purpose/Need:

The perimeter monitoring wells around the Crestview, Whitehorse and Porter Creek Lagoons will provide for long term groundwater monitoring at each of these sites to determine if the lagoons are leaking effluent into the groundwater table. The installation of these wells will also provide soil stratigraphy for each area along with groundwater depths. The monitoring wells will be required as part of the City's Water License if any of these facilities are decommissioned.

This project is funded as part of the 2007 Capital Budget.

Project Analysis:

(How much and when)

The installation of the monitoring wells will be completed over a period of two weeks in late 2007.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Landfill Gas Production Feasibility**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:			50,000		\$ 50,000
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ 50,000	\$ -	\$ 50,000

Project History/Description/Purpose/Need:

An byproduct of landfilling garbage and other materials is the production of methane gas. Many communities have a collection system to harness the methane gas. This gas is then refined and used for energy production.

The project would determine if there is enough methane gas being produced at the existing Whitehorse Landfill to require the installion a methane gas extraction system. This study woudl also investigate if there is enough methane gas for energy production.

Project Analysis:

(How much and when)

This program would be completed over a one year period.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Landfill Upgrades**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	40,000	2,000	125,000		\$ 167,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 40,000	\$ 2,000	\$ 125,000	\$ -	\$ 167,000

Project History/Description/Purpose/Need:

A landfill operations review was completed in 2001 that identified priority issues associated with improving ongoing landfill operations. Some of the capital works associated with these issues would be completed over the following years:
 2007 - Upgrade of landfill access road, concrete pads for transfer station, installation of phone lines (\$60,000)
 2008 - Installation of 3 gas monitoring stations in the landfill
 2009 - Installation of 3 new water/leachate monitoring wells
 2010 - Supply and installation of new scale.

Project Analysis:

(How much and when)

The landfill upgrade program is a multi year program, with individual components completed each year.



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Marwell Forcemain Condition Study**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	50,000				\$ 50,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ 50,000	\$ -	\$ -	\$ -	\$ 50,000

Project History/Description/Purpose/Need:

The steel Marwell Forcemain from the Marwell Lift Station, under the river and over to the Whitehorse lagoon area is 30 years old. A condition inspection is required to determine the remaining amount of life left in this forcemain. This single pipe forcemain carries all the sewage for Whitehorse with the exception of Porter Creek and Crestview to the Livingstone Trail Sewage Lagoon. There is no backup river crossing if this pipe breaks. Sewage from all serviced areas of Whitehorse with the exception of Porter Creek and Crestview flows through this forcemain

If this assessment is not completed, the City will not know the condition of the major sewer forcemain and will continue to be no backup forcemain pipe. If the main breaks, the City will be dumping raw sewage into the Yukon River.

Project Analysis:

(How much and when)

This non-destructive testing of the pipe will be complete over a one month period. Results from this assessment will identify any problems and any future work to be completed.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **Permanent Water Sampling Station**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	25,000	25,000	25,000		\$ 75,000
Other - specify:					\$ -
Total:	\$ 25,000	\$ 25,000	\$ 25,000	\$ -	\$ 75,000

Project History/Description/Purpose/Need:

City of Whitehorse Pumphouse staff complete field sampling and monitoring of Total and Faecal Coliforms; and residual chlorine on a weekly basis. These samples are taken in the subdivisions at various City facilities, schools and private residences. Some of the locations cannot be used year around, such as schools and outside taps on private residences. The City and the YTG Health requires all locations to be consistent representative sampling stations. Ideally samples should be taken as close to the water mains as possible. Under this project new permanent sampling locations would be established on the mains in the following areas:

- 2008 - Granger, Logan; Arkell Area
- 2009 - Porter Creek Area
- 2010 - Takhini, Range Road

Project Analysis:

(How much and when)

This installation work will be staged and completed over three years



City of Whitehorse Potential Eligible Capital Projects (2008 - 2011)

Department: **Public Works**

Project: **Pumphouse & Small Lift Station Upgrades**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:	265,000	75,000	100,000		\$ 440,000
LIC:					\$ -
YTG:					\$ -
GAS:				250,000	\$ 250,000
Other - specify:					\$ -
Total:	\$ 265,000	\$ 75,000	\$ 100,000	\$ 250,000	\$ 690,000

Project History/Description/Purpose/Need:

These upgrades have been identified as part of the 1999 Station Audit. If the pumps, controls and generator connections were upgraded, these stations would be compatible with the other new controls in other stations that have been upgraded. Some of the existing equipment is obsolete and high energy users. Minor code and ventilation upgrades will also be completed. There will be a decrease in electrical, pumping and callout costs, as a result of this project. The following upgrades are required:

- 2007 - Robonic Control Transfer Switch and Soft Starts at Marwell Lift Station. (\$92,000)
- 2008 - Pump Replacement and Gen Set at Wann Lift Station. , new fire-pump for Crestview Booster Station not included in 2008 approved budget (\$300,000)
- 2009 - Small Lift Station Control Upgrades.
- 2010 - Gen Set at Marwell Lift Station.
- 2011 - Inline Emacerator and new motor valve and controls with pipe modifications for PC Flush Tank (not funded in budget)

Project Analysis:

(How much and when)

This is multi-year budget with specific work that will completed each year.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **Sidewalk Replacement Program**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:	350,000	100,000	100,000		\$ 550,000
Other - specify:					\$ -
Total:	\$ 350,000	\$ 100,000	\$ 100,000	\$ -	\$ 550,000

Project History/Description/Purpose/Need:

Some sections of Riverdale and Marwell/Downtown do not have sidewalks . At the present time , people just walk down the side of the roads. This creates a dangerous situation when the people are walking with the traffic along the side of the road. Upgrading to a concrete sidewalk would increase pedestrian safety and would encourage more people to walk..

Lewes Blvd. west side of the street from Selkirk Street to Nisutlin Dr
 Lewes Blvd - east side from Alsek Rd to Hospital Road
 Quartz Road from 2nd Ave to Industrial Rd

Project Analysis:

(How much and when)

This is a two year program with some sections of the work completed each year.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)
Truck Fill Station**

Department: **Public Works**

Project: **Truck Fill Station**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:	250,000				\$ 250,000
Total:	\$ 250,000	\$ -	\$ -	\$ -	\$ 250,000

Project History/Description/Purpose/Need:

The existing bulk water filling facility is connected to the Takhini Firehall. It is old, inefficient and there are many public health and occupational health related concerns to the infrastructure. The facility is very important as it serves both private and commercial potable water supply needs for a significant portion of rural residents. This is also a revenue generator for the City. The proposed facility will work on a cardlock system and have 2 fill points one for residential and one for commercial tankers.

This project with the bulk water controls to provide for online chlorine monitoring. The need for this project comes from the requirement in the proposed YTG Water Regulation that water distributed through the bulk water loader must have a chlorine residual of 0.4ppm. The only way to ensure this is to have an online chlorine analyzer at the new bulk loading station. The analyser would continuously monitor the chlorine residual and the station could be set to shut down if the residual fell below the specified level.

Project Analysis:

(How much and when)

This work would be completed in conjunction with the construction of the new Public Safety Building..



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **Upgrade Compost Facility &
Purchase New Grinder**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:					\$ -
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:	65,000	60,000			\$ 125,000
Total:	\$ 65,000	\$ 60,000	\$ -	\$ -	\$ 125,000

Project History/Description/Purpose/Need:

The existing compost facility was built in 1999. At present, it takes approximately two years to process the compost. An upgrade to the facility is required so the compost process can be completed in under one year.

There are no compost grinders presently in the Yukon.

With the increase in compostable material coming to the compost facility, the facility will be required to be enlarged. Also it is recommended by consultants that the sections of work surface of the existing facility be upgraded from gravel to a paved surface. The paved surface would allow for less contamination and better surface drainage to the drainage pond.

Project Analysis:

(How much and when)

This is a two year program.



**City of Whitehorse
Potential Eligible Capital Projects (2008 - 2011)**

Department: **Public Works**

Project: **Winter Sand Pile Pad**

Estimated Capital Cost & Funding Sources

	2008	2009	2010	2011	Total
<i>\$\$ Approved in 2007-2010 Plan</i>					
City:			50,000		\$ 50,000
LIC:					\$ -
YTG:					\$ -
GAS:					\$ -
Other - specify:					\$ -
Total:	\$ -	\$ -	\$ 50,000	\$ -	\$ 50,000

Project History/Description/Purpose/Need:

Winter sand piles with up to 3% sand are stored on native ground at the Kulan and Mountainview Public Works' yards. The storm water and snow runoff from these piles drains directly down into the ground. Many jurisdictions are requiring that winter sand piles be stored on concrete pads with drainage collection systems.

This work would have site grading and the construction of concrete pads with drainage collection systems completed at the Kulan and Mountainview yards to allow for the proper storage of winter sand.

Project Analysis:

(How much and when)

This program would be completed over a one year period.

