



# Committee Agenda

**Committee Meeting of Council**  
**September 26, 2011**  
**at 6:00 p.m.**

# MEETINGS

**FOR THE WEEK OF  
SEPTEMBER 26<sup>TH</sup>, 2011**

Monday, September 26, 2011

6:00 p.m.

Committee Meeting of Council  
Council Chambers, 2<sup>nd</sup> Floor

# PUBLIC MEETING

**HELD UNDER THE  
PLANNING ACT**

Monday, September 26, 2011

6:00 p.m.

Official Plan Amendment, Zoning  
By-Law Amendment and Plan of  
Subdivision Application  
Jack and Helen Norman  
Four Mile Lake Road

**COMMUNITY SERVICES COMMITTEE**

Monday, September 26, 2011

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**Chairperson: Councillor Lawlor**  
**Vice-Chair: Councillor Mendicino**  
**Member: Councillor Vaillancourt**  
**Ex-Officio: Mayor McDonald**

CS-2001-35 Rezoning applications by Consolidated Homes Ltd. – Golf Club Road (D14/2001/CHLTD/GOLFCLUB).

CS-2003-37 Condominium application by Rick Miller on behalf of New Era Homes Ltd. - McKeown Avenue (D07/2003/NEHL/ MCKEOWN).

CS-2004-29 Rezoning and Plan of Subdivision applications by Rick Miller on behalf of Grand Sierra Investments Ltd. - Sage Road (D12/D14/2003/GSIL/ SAGERD).

► **CS-2010-21 Official Plan Amendment, Rezoning & Plan of Subdivision applications by Goodridge Planning Solutions on behalf of Jack & Helen Norman - Four Mile Lake Road (D09/D14/ D12/2010/NORMN/FOURMILE).**

CS-2011-04 Motion moved by Councillor Mayne on January 24, 2011 re Designated Off-Leash Dog Area (R00/2011/PARKS/DOGPARK).

CS-2011-16 Plan of Subdivision application by Miller & Urso Surveying Inc. on behalf of 873342 Ontario Inc. (Kenalex Development Inc.) - Phase II, Trillium Woods Subdivision (Booth Road) (D12/2011/KENAL/BOOTHRD2).

# CS-2010-21

Draft recommendation:

“That the proposed Official Plan Amendment, Zoning By-Law Amendment and Rural Residential Estate Subdivision Application (22 Lots) by Goodridge Planning Solutions on behalf of Jack & Helen Norman, for the property legally described as Concession 2, Part of the North Half of Broken Lot 13, Parcel 716 W/F, PIN 49127-0758 (LT), Four Mile Lake Road, be DENIED.”

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**INTER OFFICE**

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**City of North Bay  
Planning Services**

**MEMO**

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**To:** Cathy Conrad, City Clerk  
**From:** Peter Carello, Senior Planner, Current Operations  
**Subject:** Resolution No. 3 - Planning Advisory Committee  
**Date:** July 22, 2010

Quoted below is Resolution No. 3 passed at the regular meeting of the Planning Advisory Committee held on Wednesday, July 21<sup>st</sup>, 2010:

Resolution No. 3

“That the Planning Advisory Committee recommend the following to City Council:

That the proposed Official Plan Amendment, Zoning By-law Amendment and Rural Residential Estate Subdivision Application (22 Lots) by Goodridge Planning Solutions on behalf of Jack & Helen Norman for the property legally described as Concession 2, Part of the North Half of Broken Lot 13, Parcel 716 W/F, PIN 49127-0758 (LT) (Four Mile Lake Road), be DENIED.”



Peter Carello  
Senior Planner, Current Operations

North Bay Planning Advisory Committee

Resolution No. 3

Date: July 21, 2010

Moved By: Mark King

Seconded By: Walter King

“That the Planning Advisory Committee recommend the following to City Council:

- 1) That the proposed Official Plan Amendment, Zoning By-law Amendment and Rural Residential Estate Subdivision Application (22 Lots) by Goodridge Planning Solutions on behalf of Jack & Helen Norman for the property legally described as Concession 2, Part of the North Half of Broken Lot 13, Parcel 716 W/F, PIN 49127-0758 (LT) (Four Mile Lake Road), be DENIED.”

“CARRIED”

W. King  
Chair

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## **INTER OFFICE**

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# ***City of North Bay***

### **MEMO**

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**To:** Chair and Members, Planning Advisory Committee

**From:** Peter Carello, Senior Planner

**Subject:** Proposed Official Plan Amendment, Zoning By-law Amendment and Draft Approval of a Rural Residential Estate Subdivision Application (22 Lots) by Goodridge Planning Solutions on behalf of Jack & Helen Norman - Four Mile Lake Road, City of North Bay

**Date:** July 20<sup>th</sup>, 2010

### **Recommendation**

That the application to amend the Official Plan and the Zoning By-law and the application for Draft Approval of a Rural Residential Estate Subdivision Application (22 Lots) by Goodridge Planning Solutions on behalf of Jack & Helen Norman for Concession 2, Part of the North Half of Broken Lot 13, Parcel 716 W/F, PIN 49127-0758 (LT) in the former Township of Widdifield BE DENIED.

### **Site**

The subject property is located along Four Mile Lake Road (see Schedule "A" attached), north-east of the North Bay Jack Garland Airport. The site has 810.0 metres (2,657.48 feet) of frontage on Four Mile Lake and an area of 39.53 hectares (97.67 acres).

The property is designated "Rural Area" in the City of North Bay's Official Plan and is zoned "Rural (A)" under the City of North Bay's Zoning By-law No. 28-80.

The property lies outside the City's Settlement Boundary and municipal services are not available to the property.

The property fronts onto Four Mile Lake and is within the Trout Lake Watershed. Four Mile Lake is identified as a major inflowing watercourse to Trout Lake, which is North Bay's source of drinking water.

Adjacent properties are mixed use. There is considerable residential development near the subject property. A large aggregate operation is in close proximity to the subject property, approximately 300 metres to the south. Jack Garland Airport, a Rural-Commercial property and a second large aggregate operation are also in close proximity.

### **Proposal**

The applicants are requesting approval for a Draft Plan of Subdivision in order to permit the development of a twenty-two (22) lot Rural Residential Estate subdivision. The applicants are proposing to re-designate the property under the Official Plan from "Rural Area" to "Estate Development". The Applicants also propose to rezone the property from "Rural (A)" to "Rural Residential Estate (RRE)" under the City of North Bay's Zoning By-law No. 28-80.

### Provincial Policy Statement (PPS 2005)

This proposal has been reviewed in the context of the Provincial Policy Statement (PPS 2005), the document which provides policy direction on matters of provincial interest related to land use planning and development.

#### Airports

The subject property is located near North Bay's Jack Garland Airport. Section 1.6.7 of the PPS 2005 provides direction regarding development near airports. This section of the PPS 2005 states that:

- 1.6.7.1 *Planning for land uses in the vicinity of airports shall be undertaken so that:*
- a) *the long-term operation and economic role of airports is protected; and*
  - b) *airports and sensitive land uses are appropriately designed, buffered and/or separated from each other to prevent adverse effects from odour, noise and other contaminants.*
- 1.6.7.2 *Airports shall be protected from incompatible land uses and development by:*
- a) *prohibiting new residential development and other sensitive land uses in areas near airports above 30 NEF/NEP, as set out on maps (as revised from time to time) that have been reviewed by Transport Canada; and*
  - b) *considering redevelopment of existing residential uses and other sensitive land uses or infilling of residential and other sensitive land uses in areas above 30 NEF/NEP only if it has been demonstrated that there will be no negative impacts on the long-term function of the airport;*

The majority of the subject property is situated above the 35 NEF and all of the proposed new lots to be created through this application are situated above the 30 NEF, as established by Transport Canada. The proposed development would be in direct conflict with Section 1.6.7.2 of the PPS 2005, which prohibits the creation of new residential lots above the 30 NEF Contour.

#### Aggregate

Mapping provided by the Ministry of Northern Development and Mines identifies the subject property as being an aggregate resource area. Section 2.5.2 of the PPS 2005 discusses the protection of the mineral aggregate resources.

*"In areas adjacent to or in known deposits of mineral aggregate resources, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:*

- a) *resource use would not be feasible; or*
- b) *the proposed land use or development serves a greater long-term public interest; and*
- c) *issues of public health, public safety and environmental impact are addressed."*

The applicants have claimed the subject property would not be a feasible source for aggregate extraction. The applicants' agent has provided some justification for his determination aggregate extraction is not feasible. The calculations utilized to estimate the value of the aggregate are based on a test pit drilled by the owner, with the results being evaluated by his agents. Further, the level of analysis provided by the applicants' agent is not of sufficient detail to adequately demonstrate the lack of feasibility.

As such, the applicants have not met Section 2.5.2.5 of the PPS 2005.



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Section 2.5.2.4 of the PPS 2005 states "*Mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact*".

As mentioned, there is a well established aggregate operation in short proximity to the subject property. A property to the south was once subject to a Zoning By-law Amendment to permit aggregate extraction and they have indicated their intention to expand their operations in this area in the future. Though this application was ultimately abandoned, due in part to the opposition of neighbouring residential property owners, owners of the aggregate operation have stated that it is their intention to expand their operations on this property.

Further residential development in the area would be incompatible with any future development or expansion of the aggregate operations to the south of the subject property. The proposal is inconsistent with Section 2.5.2.4 of the PPS 2005.

#### Water

Section 2.2 of the PPS 2005 provides direction to developments that will impact water sources. As this proposal will impact a watercourse that flows to Trout Lake, this Section of the PPS 2005 is pertinent to this application.

Section 2.2.1 of the PPS 2005 states that "*Planning authorities shall protect, improve or restore the quality and quantity of water by:*

- a) using the watershed as the ecologically meaningful scale for planning;*
- b) minimizing potential negative impacts including cross-jurisdictional and cross-watershed impacts;...*
- d) implementing necessary restrictions on development and site alteration to protect all municipal drinking water supplies"*

The proposed development would result in a 22-lot rural residential estate subdivision on Four Mile Lake within the Trout Lake Watershed. The North Bay Mattawa Conservation Authority comments on Sections 2 and 3 of the PPS 2005 as part of their review of Planning Act applications on behalf of the City of North Bay. Both the City's and the North Bay Mattawa Conservation Authority's review of the applicants' proposal and accompanying studies conclude that this development is not consistent with this section of the PPS 2005. Their full comments are attached as Appendix A to this report.

#### Official Plan

The subject property is designated "Rural Area" in the City of North Bay's Official Plan, within the Trout Lake watershed. It has frontage on Four Mile Lake, a major inflowing watercourse to Trout Lake, the source of North Bay's drinking water supply.

Section 2.7.11 of the Official Plan is consistent with the Provincial Policy Statement with regard to the protection of lands surrounding an Airport Industrial Park. The current Official Plan as well as the new Official Plan for the City of North Bay adopted by Council and before the Ministry of Municipal Affairs recognizes the need to protect the Airport and its Noise Exposure Forecast contour for the future economic development for the City of North Bay.

The City of North Bay's Official Plan clearly states its intention to limit development in the Trout Lake Watershed. Section 2.10.7.2 states "*It is the intent of this plan to strictly control or limit the nature and extent of development along the shoreline of Trout Lake, including second-tier or backshore development, development on islands in Trout Lake, development along streams flowing into Trout*

*Lake, as identified by the North Bay-Mattawa Conservation Authority on the schedule to the City of North Bay Fill, Construction and Alteration to Waterways Regulations and development in the Trout Lake Watershed in general. This will be achieved by generally prohibiting the creation of new lots which front on Trout Lake or on a stream flowing into Trout Lake, enforcing larger setback distances from the shoreline of Trout Lake or a stream flowing into Trout Lake, by discouraging the removal of natural vegetation within the setback zone, by enforcing appropriate stormwater management policies which minimizes flows, erosion, siltation and nutrients, by strictly regulating lot design features through environmental education. The general intent of these measures is to minimize the disturbance of shoreline ecosystems and where they are affected by development, to restore natural ecosystem functions. It is the objective of these controls to maintain or improve the existing level of water quality, to maintain or improve the existing level of aesthetic and recreational qualities and to improve the lake's fishery."*

The proposed 22-lot rural residential estate subdivision is in contravention of the general intent of this policy.

As Trout Lake is the source of North Bay's drinking water, protecting its water quality is one of the fundamental objectives of the Official Plan. Section 2.10.8.3 is integral to achieving this goal, restricting the creation of new lots within 300 metres of Trout Lake and inflowing watercourses. This Section of the Official Plan states *"it will be the policy of Council to continue to prohibit the creation of new lots or dwelling units by consent, Plan of Subdivision or Plan of Condominium along the un-serviced shoreline of Trout Lake over the next five (5) year review period. The prohibition on lot creation also applies to lands within 300 metres of the One Mile Bay and Four Mile Bay basins, major inflowing streams and watercourses flowing into Trout Lake"*

The property is currently one parcel that is developed with a single detached dwelling unit. The proposed rural residential estate would result in a net increase of 21 new lots (for a total of 22 lots), each within 300 metres of Four Mile Lake. This would be in direct conflict with Section 2.10.8.3 and its stated intent of prohibiting new lot creation within 300 metres of major inflowing watercourses that flow into Trout Lake.

Section 2.10.8.7 of the Official Plan permits limited lot creation in the Trout Lake watershed when it can be determined that the new lots will be "non-impact lots".

This section states non-impact lots are those that are in excess of 300 metres from the shoreline of any major inflowing watercourse. New development proposals that are within 300 metres it must be accompanied by technical justification studies that demonstrate that the lots will not have a negative impact on the watershed.

Each of the proposed lots are within the 300 metre setback. The applicants did submit a Site Evaluation Report (SER), written by Michalski Nielsen Associates Limited. The report recommends standard septic technology and endeavours to identify appropriate locations for the placement of all the septic systems required to accommodate the 22 new lots.

The City of North Bay's Environmental Services Department reviewed the Site Evaluation Report in a memo dated January 29, 2010. The memo states the Michalski Nielsen Associates report is based on *"a conventional rural development approach on the subject lands with no special controls based on the presence of an iron rich B soil horizon soil observed at 14 soil probe sites of which 3 were subject to limited chemical analysis. This report describes the unconsolidated surface cover (in Section 4.2) as "the majority of the property and adjacent lands are dominated by bedrock with shallow discontinuous mantle of tills and/or sediments". Ten of fourteen soil sample sites hit refusal (interpreted as reaching bedrock) at an average depth of 0.55m. The Northern Ontario Engineering Terrain Study Septic*

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*System Capability Map (5044) suggests that this type of surface geology is rated as poor for siting septic systems. The Michalski Nielsen Report reference obscure literature and reaches general conclusions that are not accepted by the City as scientifically valid.*

All of the proposed new lots are situated within 300 metres from Four Mile Lake's shoreline. Based on the applicants' inability to meet the 300 metre minimum setback from the Four Mile Lake and the City's and the North Bay Mattawa Conservation Authority's rejection of the Michalski Nielsen Associates' Site Evaluation Report, the proposal does not meet the test to be considered "non-impact lots" as described in Section 2.10.8.7 of the Official Plan.

Section 2.10.4 of the Official Plan discusses the establishment of Rural Residential Estates. Subsection c) states "*each development shall be limited to twelve (12) lots so as to maintain the rural character of an area and to ensure that existing services are not overtaxed and no new services will be required*".

The proposed Rural Residential Estate would create a twenty two (22) lot subdivision. This would alter the rural character of the neighbourhood by considerably increasing the population of the neighbourhood, which could result in an increase in demand for services. As such, the proposal is contrary to Section 2.10.4 of the Official Plan.

Schedule A2 of the Official Plan identifies the property as being a "Primary Aggregate Resource Deposit". Subsection i) of Section 2.10.4 of the Official Plan discourages locating Rural Residential Estates in close proximity to pits and quarries, stating that "*locations chosen for rural estate development shall not infringe on lands with a potential for mineral aggregate, forestry and agricultural production, or lands with a potential for recreational development. In addition, rural estate development will not be permitted within 304m of legally existing pits and quarries*".

The subject property is approximately 300 metres from a property that has a long-standing use as an aggregate operation. There have previously been incidents of conflict between the rural neighbourhood that surrounds Four Mile Lake and the aggregate operation. Creating a new 22-lot Rural Residential Subdivision would further compound this situation. As such, the subject application is contradictory to Section 2.10.4 i) of the Official Plan.

Based on the information provided, it is my professional opinion the proposed development is not in conformity with the Official Plan.

### **Zoning By-law**

The subject property is currently zoned "Rural (A)". A "Rural (A)" zone permits the following uses:

- agricultural and forestry uses;
- cemeteries;
- commercial agricultural uses;
- conservation areas;
- hobby farm;
- public and private recreational uses;
- existing single detached dwellings and new single detached dwellings on a lot created pursuant to Section 50 or 53 of the Planning Act, R.S.O. 1990 as amended;
- accessory uses to the above; and
- accessory home based businesses in accordance with Section 3.35.

The applicants are proposing to rezone the subject lands to a “Rural Residential Estate (RRE)” zone.

The “Rural Residential Estate (RRE)” zone permits the following uses:

- single detached dwellings;
- local park and playground;
- accessory uses to the above; and
- accessory home based businesses in accordance with Section 3.35.

The proposed rural estate subdivision is able to meet all regulations of the Zoning By-law No. 28-80.

### Correspondence

This proposal was circulated to property owners within 120 metres (400 feet) of the subject lands, as well as to several municipal departments and other agencies that may have an interest in this matter.

In terms of the correspondence received the Ministry of Transportation, Chief Building Official, Fire Prevention Officer, and the Secretary-Treasurer of the Municipal Heritage Committee offered no objections to the proposal.

The Director of Parks, Recreation and Leisure Services advises that the proposed parkland dedication is unacceptable as it is a low lying wetland area with a watercourse. It is unsuitable for future parkland development. The amount of proposed parkland dedication is less than half of the required 5% parkland dedication.

Engineering Design and Approvals stated that prior to the proposed Plan of Subdivision being approved; the applicants would be required to complete a Stormwater Management Plan. Also, the road width as shown would need to be extended to 26 metres.

The Manager of Environmental Services reviewed the proposed Plan of Subdivision from the perspective of meeting the general compliance with the City’s Trout Lake watershed management policies, focusing primarily on the report completed by Michalski Nielsen Associates. The Manager of Environmental Services rejected the conclusions made in the Michalski Nielsen Associates’ report. A copy of the memo outlining the Manager of Environmental Services’ concerns is attached as Appendix A to this report.

The North Bay Mattawa Conservation Authority’s Director of Planning and Development has stated they have been in consultation with the applicants since 2007 and have consistently stated they would be unable to support the subject application for numerous reasons. The Conservation Authority’s primary concerns pertain to the proposed placement of the septic systems associated with this application. The NBMCA states “*All of the proposed 22 lots are within 300 meters of the shoreline of Four Mile Lake.*

*The proposed location for the sewage disposal systems is generally 30-40 meters from Four Mile Lake. This proposal, similar to previous proposals, is not consistent with the Trout Lake policies and is not supported by the Conservation Authority. It is for this reason that the Conservation Authority is recommending that the City deny the application.”*

The NBMCA also rejected some of the conclusions made by the Michalski Nielsen Associates’ report and the proposed impact the subdivision would have on the Lakeshore Capacity Model in place on Four Mile Lake. The NBMCA states “*The Lakeshore Capacity Model takes into account the phosphorus load from conventional sewage disposal systems. The model does allow for the phosphorus load to be*

*varied if phosphorus abatement or phosphorus removal technologies are used. The handbook states that, "Currently the Ontario Government hasn't acknowledged any technologies (including phosphorus removal technologies) as being suitable to be installed with, or instead of small-scale subsurface sewage treatment systems for individual dwellings, cottages or other small buildings.*

*The Michalski Nielsen report "Site Evaluation Report – 1000 Four Mile Lake Road, City of North Bay" (August 2009) suggests that phosphorus will be retained in the native "B" Horizon soils and thus there will be zero to near-zero impact to Trout Lake. I would suggest it is premature to make such a statement of zero to near-zero impact in the absence of a Lakeshore Capacity Assessment and the detailed studies required for such an assessment. Due to the complex, scientific requirements of such an analysis, if the application were to proceed, it is recommended that the report be reviewed by a qualified professional and/or the Ministry of Municipal Affairs and Housing, through the one-window plan review process."*

The NBMCA also noted concerns regarding the presence of an existing barn and its lack of conformity with Minimum Distance Separation Calculations. The NBMCA wrote "Section 2.3.3.3 of the PPS, 2005 states "New land uses, including the creation of lots, and new or expanding livestock facilities shall comply with the minimum distance separation (MDS) formulae." As you are aware, there is a small barn on the property which houses 1-2 horses. MDS calculations indicate a separation distance of 85 meters. The site plan submitted with the application did not indicate the distance from the barn to proposed lot lines; however, it would appear that the proposed easterly lot line of Lot #2 encroaches into this 85 meter setback, and thus would be in contravention of Section 2.3.3.3 of the PPS."

The NBMCA also expressed concerns regarding the natural hazards on the subject property, including "Four Mile Lake and its floodplain (359.85 meters C.G.D.); the noted areas of steep slopes; an intermittent tributary; and associated wetland areas."

The entirety of the North Bay-Mattawa Conservation Authority's comments is attached to the report as part of Appendix A to this report.

The City of North Bay received considerable correspondence from citizens regarding the proposed subdivision. The majority of the correspondence was opposed to the proposed Plan of Subdivision. The following summarizes the concerns expressed:

- Water Quality of Four Mile Lake: Residents of the area stated that they were concerned about the proximity of the proposed septic systems to Four Mile Lake's shoreline and the impact this would have on the water quality and phosphorus levels of Four Mile Lake.
- Trout Lake Watershed: As Four Mile Lake is part of the Trout Lake Watershed, many expressed concerns about the impact that this development would ultimately have on Trout Lake and the City's source of drinking water.
- Character of the Neighbourhood: Several individuals stated that the proposed development would be inconsistent with the rural character of the neighbourhood and were concerned that it would have a negative impact on their privacy.
- Nature/Wildlife: Several individuals expressed their concern that the proposed development would have a negative impact on wildlife located within the area.
- NEF Contours: One neighbour stated that she was concerned that the proposed development would negatively impact the community's economic base.

Two neighbours submitted letters in support of the proposed application. One neighbour was of the opinion people should have access to lakes within the municipality. Both expressed their opinion the proposed Plan of Subdivision would make use of state of the art technology that would mitigate any potential negative impacts on the neighbourhood, such as water quality, noise and light pollution.

The Planning Advisory Committee meeting was held on May 19, 2010 and was attended by a large proportion of neighbourhood residents. Ten members of the public made a formal presentation that evening, with eight of the presenters in opposition to the proposed development and two in favour. Most of the individuals that presented also submitted written correspondence. The opinions expressed at PAC are similar to the written correspondence and have been appropriately summarized in the bulleted list above.

### Summary

The applicants pre-consulted with municipal Staff on several occasions over the last decade. The applicants were advised that their proposed Official Plan Amendment, Zoning By-law Amendment and Rural Residential Estate Subdivision would be in direct contravention to numerous policies contained in the Provincial Policy Statement (PPS 2005) and the City of North Bay's Official Plan and could not be supported. Formal rejection in the form of written correspondence was provided to the applicants on two separate occasions.

Despite this information, the applicants chose to proceed with the full knowledge that Planning staff could not recommend approval, based on existing policies.

The proposed 22-lot Plan of Subdivision would result in the creation of 21 new lots, each of which would be located above the 30 NEF. The applicants' agent stated "*Appropriate mitigative methods are recommended to ensure conformity with Section 1.6.7*". However, Section 1.6.7 of the PPS 2005 does not provide the opportunity for mitigation measures. The Provincial Policy Statement explicitly prohibits the creation of new lots above the 30 NEF contour. As the City of North Bay is investing considerable resources to establish a new aviation industrial park within the 1,000 acres of vacant land at North Bay Jack Garland Airport, protection of the integrity of the 30 NEF from incompatible residential land use has been addressed in the new Official Plan that was adopted by City Council and is before the Ministry of Municipal Affairs and Housing for approval.

Mapping provided by the Provincial government shows that the subject property potentially contains aggregate. The applicants' proposal is also not in conformity with policies under both the Provincial Policy Statement (PPS 2005) and the Official Plan regarding the protection of aggregate resources.

The subject property is situated near a large aggregate operation. The owners of the aggregate operation have purchased additional lands close to the subject property with the intent of expanding their operations in the future. Further residential development in the area would be incompatible with any future development or expansion of the aggregate operations to the south of the subject property that are protected by Section 2.5.2.4 of the PPS 2005.

The proposed subdivision is inconsistent with several policies in the Official Plan that focus on the protection of North Bay's source of drinking water, Trout Lake. Specifically, the proposed Plan of Subdivision is in direct conflict with 2.10.8.3, which prohibits new lot creation within 300 metres of a major inflowing watercourse, which includes Four Mile Lake and its tributaries.

The Site Evaluation Report submitted by the applicants recommends standard septic system technologies. Based on the applicants' inability to meet the 300 metre minimum setback from the Four Mile Lake and the City's and the North Bay Mattawa Conservation Authority's rejection of the Michalski Nielsen Associates' Site Evaluation Report, the proposal does not meet the test to be considered "non-impact lots" as described in Section 2.10.8.7 of the Official Plan.

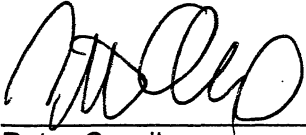
The proposed development exceeds the maximum of twelve (12) lots that can be created by rural

Draft Plan of Subdivision/Official Plan Amendment/Zoning By-law Amendment

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residential estate subdivision, as outlined by Section 2.10.4 c) of the Official Plan. The intent of the policy to limit the number of lots created is to ensure that the rural character of the neighbourhood is maintained. The proposed twenty-two (22) lot subdivision is in excess of this policy and again is inconsistent with the intent of the Official Plan.

In reviewing the proposal, it is my professional opinion the application is not in conformity with the Official Plan and the end use is inconsistent with the Provincial Policy as set out in the Provincial Policy Statement (PPS 2005).



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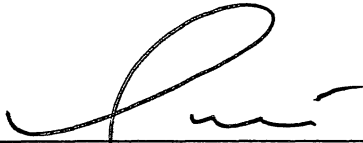
Peter Carello  
Senior Planner, Current Operations

PC/dlb

attach.

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I concur with the recommendations contained in this report.



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Steve McArthur  
Senior Planner

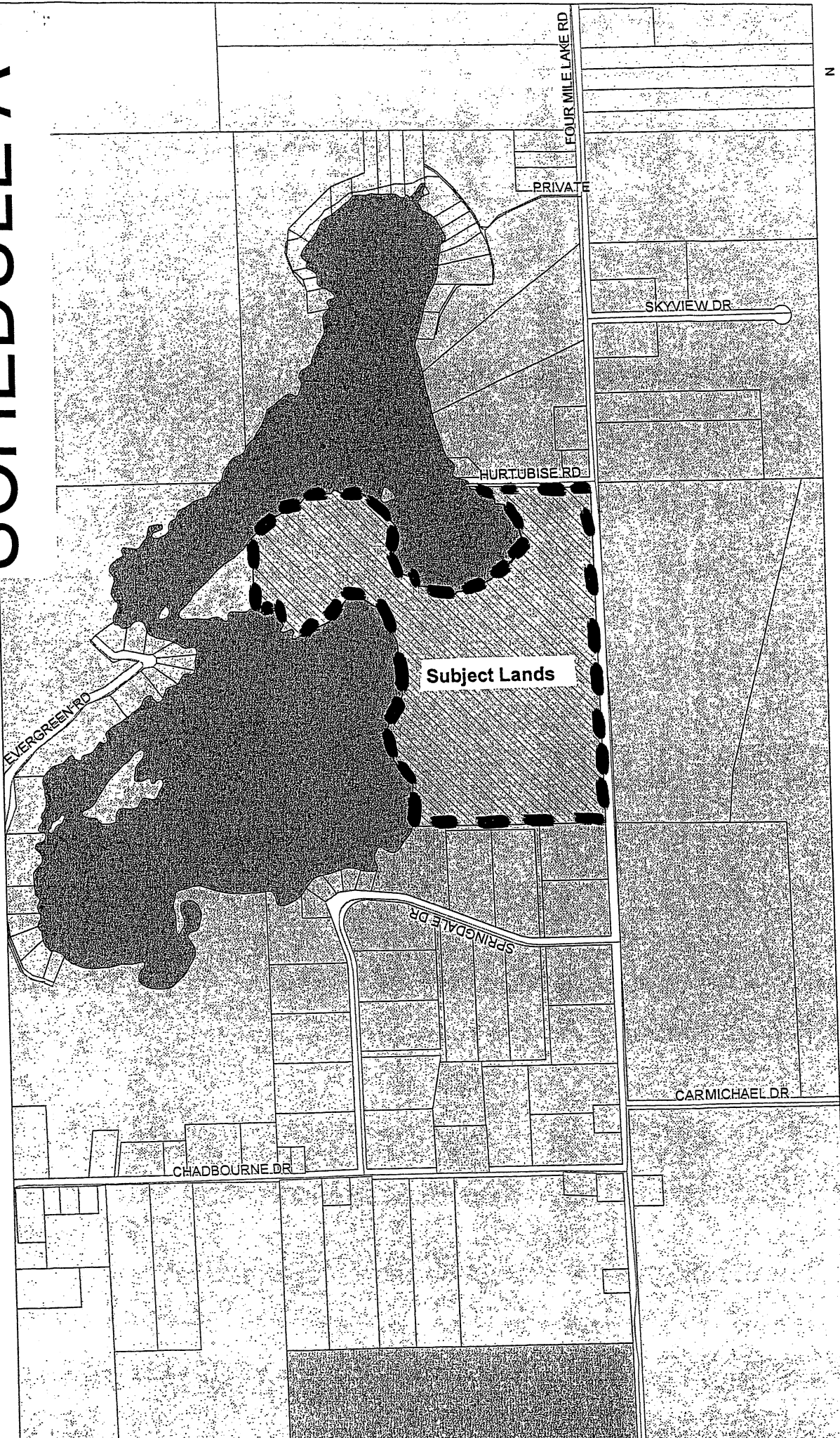


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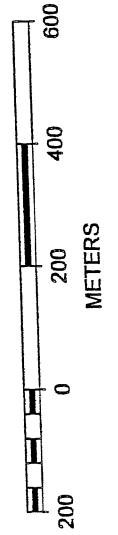
Jerry Knox  
Managing Director Community Services



# SCHEDULE A



SCALE 1 : 12,377





# SCHEDULE B

DRAFT PLAN OF SUBDIVISION  
 PART OF THE NORTH HALF OF  
 BROKEN LOT 13, CONCESSION 2  
 GEOGRAPHIC TOWNSHIP OF WIDDIFIELD  
 CITY OF NORTH BAY  
 DISTRICT OF NIPISSING  
 GOODRIDGE PLANNING SOLUTIONS



METRIC  
 DISTANCES AND ELEVATIONS  
 SHOWN ON THIS PLAN ARE  
 IN METRES AND CAN BE  
 CONVERTED TO FEET  
 BY DIVIDING BY 0.3048.

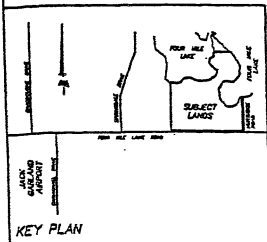
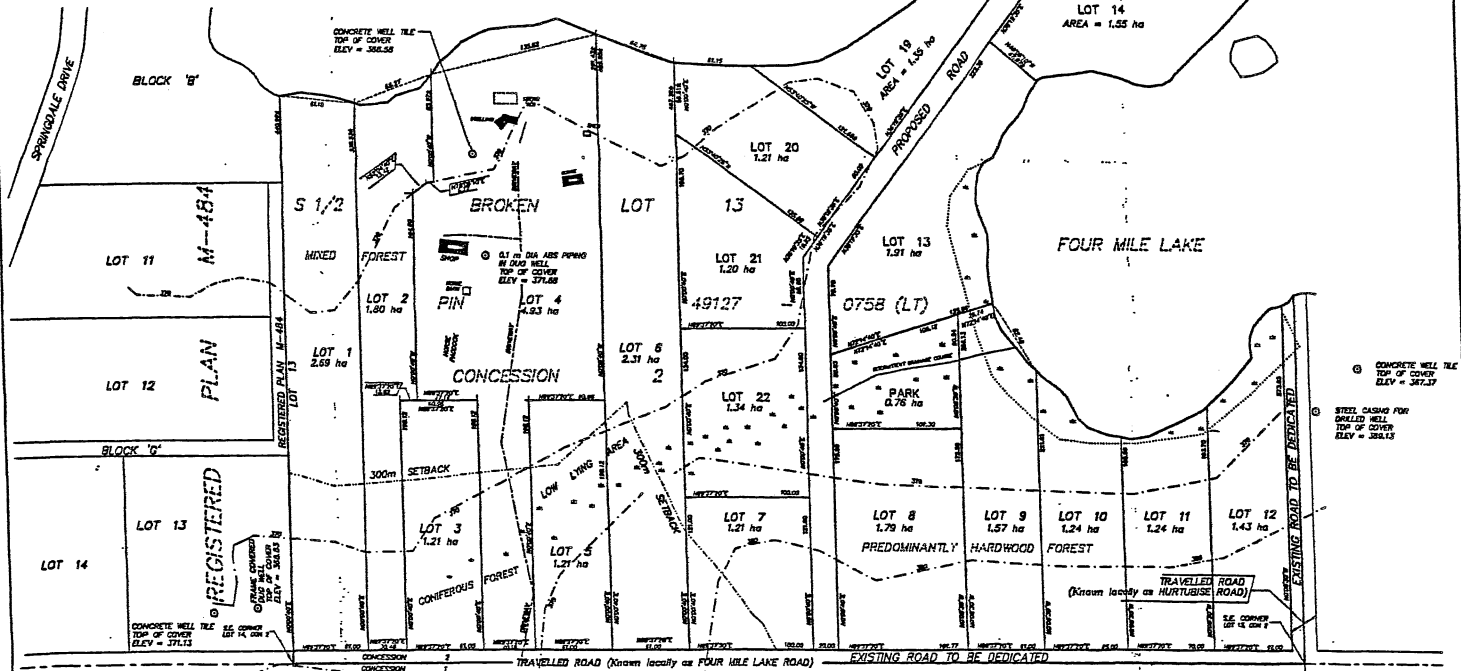
ADDITIONAL INFORMATION REQUIRED  
 UNDER THE PLANNING ACT.

- (a) SEE PLAN
- (b) SEE PLAN
- (c) SEE PLAN
- (d) SEE PLAN (LAND USE ANALYSIS)
- (e) NORTH - FOUR MILE LAKE
- (f) SOUTH - RURAL RESIDENTIAL/AGGREGATE OPERATIONS
- (g) EAST - RURAL RESIDENTIAL
- (h) WEST - RURAL ESTATE LOT RESIDENTIAL
- (i) SEE PLAN
- (j) SEE PLAN
- (k) TREATED SURFACE WATER OR INDIVIDUAL DRILLED WELLS
- (l) SANDY LOAM - SCATTERED BOULDERS (REFER TO GEO-TECHNICAL REPORT)
- (m) SEE PLAN
- (n) YEAR ROUND ROAD MAINTENANCE, HYDRO, BELL & GARBAGE
- (o) NIL

I HEREBY CONSENT TO THE FILING OF THIS  
 PLAN FOR DRAFT APPROVAL.

*John Norman*  
 JOHN NORMAN  
 REGISTERED CO-OWNER OF  
 PLAN 49121-0758 (L1)

*Jack Norman*  
 JACK NORMAN  
 REGISTERED CO-OWNER OF  
 PLAN 49121-0758 (L1)



BEARING NOTE  
 BEARINGS ARE AZIMUTHIC, DERIVED FROM THE WEST LIMIT  
 OF LOT 13, CONCESSION 2, SHOWN ON PLAN 368-8228  
 HAVING A BEARING OF N40°04'00"E.

LAND USE ANALYSIS  
 LOTS 1 TO 22 - RURAL ESTATE LOT RESIDENTIAL - 37.15 ha  
 PARK - 0.78 ha  
 ROADS - 2.60 ha  
 TOTAL AREA OF SUBDIVISION = 40.51 ha

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS  
 TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO THE  
 ADJACENT LANDS ARE ACCURATELY AND CORRECTLY  
 SHOWN ON THIS PLAN.

NORTH BAY, ONTARIO  
 OCTOBER 19, 2008

*Paul Goodridge*  
 PAUL GOODRIDGE, OLS  
 GOODRIDGE WALKER LIMITED

GPS  
 GOODRIDGE PLANNING SOLUTIONS  
 LAND USE PLANNING AND PROFESSIONAL ENGINEERING  
 88 BYRON ROAD, COLLINGWOOD, ONTARIO L9Y 4K6  
 TEL: 705-871-1111 FAX: 705-871-1112

**Appendix A – City of North Bay’s and  
North Bay Mattawa Conservation  
Authority’s Analysis of the Site  
Evaluation Report By Michalski Nielsen  
Associates**

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**INTER OFFICE**

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**MEMO**

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*City of North Bay  
Engineering, Environmental Services & Works*

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**To: Steve McArthur, Senior Planner**

**From: Peter Bullock, Manager of Environmental Services**

**Subject: Site Evaluation Report, 1000 Four Mile Lake Road, City of North Bay prepared for Helen and Jack Norman (in support of a Plan of Subdivision to Create 22 Lots)**

**File:**

**Date: January 29, 2010**

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I have reviewed the above report from the perspective of meeting the general compliance with the City's Trout Lake watershed management policies. The City of North Bay has established restrictive development policies within Trout Lake basin to protect the quality of water within levels deemed acceptable to the community and to protect aquatic habitat. These policies are part of a coordinated approach that is both comprehensive and inter-jurisdictional. The City's strategy relies on the Provincial Lakeshore Capacity Model which models enrichment impacts from development on lakes. The applicant has not properly modelled the impact of the proposed development on the receiving aquatic environments (both Four Mile Lake and Trout Lake) and offers no mitigation strategy to compensate for impacts that will result if the development is approved. The technical arguments that suggest that this assessment is not relevant are rejected. Should these arguments be accepted or imposed the impact to the City's ability to protect its natural resource features would be significantly affected.

Michalski Nielsen Associates predicates a conventional rural development approach on the subject lands with no special controls based on the presence of an iron rich B soil horizon soil observed at 14 soil probe sites of which 3 were subject to limit chemistry analysis. This report describes the unconsolidated surface cover (in Section 4.2) as "the majority of the property and adjacent lands are dominated by bedrock with a shallow discontinuous mantle of tills and/or sediments". Ten of fourteen soil sample sites hit refusal (interpreted as reaching bedrock) at an average depth of 0.55 m. The Northern Ontario Engineering Terrain Study Septic System Capability Map (5044) suggests that this type of surficial geology is rated as poor for siting septic systems. The Michalski Nielsen Report references obscure literature and reaches general conclusions that are not accepted by the City as scientifically valid.

The purpose of the submitted document is to force a confrontation with the City to give the developer an opportunity to challenge the Lakeshore Capacity Model approach to managing nutrients impacts from shoreline development on lakes and streams. In order for the City to defend its management approach and to protect Trout Lake and its contributing watersheds it will need to mount a proper defence supported with expert opinions. It is recommended that the City seek an independent review of this Site Evaluation Report prepared by Michalski Nielsen Associates so that a comprehensive defence strategy is properly defined and implemented.

DATE:

TIME:

**NORTH BAY-MATTAWA CONSERVATION AUTHORITY**

July 16, 2010

Corporation of the City of North Bay  
200 McIntyre St. E., P. O. Box 360  
NORTH BAY, Ontario P1B 8H8

**Sent by Fax: 474-5928****Attention: Peter Carello, Senior Planner, Current Operations**

Dear Mr. Carello:

**Re: Proposed Plan of Subdivision, Official Plan Amendment & Zoning  
By-Law Amendment - Norman  
Con. 2, Pt. N ½ Lot 13; Pcl. 716 W/F  
1000 Four Mile Lake Road  
City of North Bay  
Our File No.: P31-33/NB/10**

This office has received and reviewed the proposed application for a proposed Plan of Subdivision, Official Plan Amendment & Zoning By-Law Amendment for the above-mentioned property. The following comments are based on a review of the application with respect to the mandate of the Conservation Authority: Ontario Regulation 177/06 (*Development, Interference with Wetlands & Alteration to Shorelines & Watercourses*) as per Section 28 of the Conservation Authorities Act of Ontario and Part 8 (Private Sewage Disposal Systems) of the Ontario Building Code. In addition to those comments, the Conservation Authority provides advice to the municipality with regard to Sections 2 (Wise Use and Management of Resources) and 3 (Protecting Public Health and Safety) of the Provincial Policy Statement 2005, as well as conformity to the Official Plan and Zoning By-Law.

The Conservation Authority has pre-consulted with the applicants regarding development of this property since 2007. At that time the Conservation Authority stated that they would not support the creation of new lots on Four Mile Lake that were not consistent with the Trout Lake policies in the City of North Bay's Official Plan. Our position has not changed.

The Conservation Authority conducted site inspections on the property on June 10 and July 15, 2010. As you are aware, the property has frontage on Four Mile Lake which is part of the Trout Lake watershed. Four Mile Lake and creek would be considered an "inflowing" stream of Trout Lake. The main relevant sections of the Official Plan, in my opinion, are:

**Section 2.10.8.3:**

"Therefore, it will be the policy of Council to continue to prohibit the creation of new lots or dwelling units by consent, Plan of Subdivision or Plan of Condominium along the un-serviced shoreline of Trout Lake over the next five (5) year review period. The prohibition on lot creation also applies to lands within 300 metres of the One Mile Bay and Four Mile Bay basins, major inflowing streams and watercourses flowing into Trout Lake as identified by the North Bay-Mattawa Conservation Authority and to further prohibit the creation of any new lot within 300 linear metres of the un-serviced shoreline of Trout Lake on lands deemed to constitute "second tier" or "back lot"."; and

**Section 2.10.8.4:**

"New lots may be created in keeping with the policies contained within Subsections 2.10.1, 2.10.4 and 2.10.24 of this Plan from existing Parcels that are considered "second tier" or that have a portion of the original parcel falling within 300 metres of the un-serviced portion of the Trout Lake shoreline or a major inflowing stream, provided that no portion of the lot to be created falls within 300 m of the un-serviced shoreline of Trout Lake or a major inflowing stream."

The City of North Bay adopted these and other policies to protect the water quality of Trout Lake, the source of the City's drinking water, and to ensure consistency with Section 2.2 of the Provincial Policy Statement (PPS), 2005.

All of the proposed 22 lots are within 300 meters of the shoreline of Four Mile Lake. The proposed location for the sewage disposal systems is generally 30-40 meters from Four Mile Lake. This proposal, similar to previous proposals, is not consistent with the Trout Lake policies and is not supported by the Conservation Authority. It is for this reason that the Conservation Authority is recommending that the City deny the application.

Although the Conservation Authority cannot support the application based on the Trout Lake Policies it is felt that it was important to note other concerns with the application. The Ministry of the Environment is the agency responsible for protecting water quality. The Ministry, in partnership with the ministries of Natural Resources and Municipal Affairs and Housing developed a Lakeshore Capacity Handbook to assist municipalities with assessing development on inland lakes and meeting their obligations under the PPS to protect water quality. The assessment is consistent with watershed management in that it considers upstream sources and downstream receptors when assessing the development capacity of a lake. All lakes have to be taken into consideration and modeled to make accurate predictions. To my knowledge a Lake

Capacity Assessment has not been undertaken for the subject application.

The Lakeshore Capacity Model takes into account the phosphorus load from conventional sewage disposal systems. The model does allow for the phosphorus load to be varied if phosphorus abatement or phosphorus removal technologies are used. The handbook states that, "Currently the Ontario Government hasn't acknowledged any technologies (including phosphorus removal technologies) as being suitable to be installed with, or instead of small-scale subsurface sewage treatment systems for individual dwellings, cottages or other small buildings.

The Michalski Nielson report "*Site Evaluation Report – 1000 Four Mile Lake Road, City of North Bay*" (August 2009) suggests that phosphorus will be retained in the native "B" Horizon soils and thus there will be zero to near-zero impact to Trout Lake. I would suggest it is premature to make such a statement of zero to near-zero impact in the absence of a Lakeshore Capacity Assessment and the detailed studies required for such an assessment. Due to the complex, scientific requirements of such an analysis, if the application were to proceed, it is recommended that the report be reviewed by a qualified professional and/or the Ministry of Municipal Affairs and Housing, through the one-window plan review process.

Section 2.3.3.3 of the PPS, 2005 states that "*New land uses, including the creation of lots, and new or expanding livestock facilities shall comply with the minimum distance separation (MDS) formulae.*" As you are aware, there is a small barn on the property which houses 1-2 horses. MDS calculations indicate a separation distance of 85 meters. The site plan submitted with the application did not indicate the distance from the barn to proposed lot lines; however, it would appear that the proposed easterly lot line of Lot #2 encroaches into this 85 meter setback, and thus would be in contravention of Section 2.3.3.3 of the PPS.

Schedule A2 (Aggregate Resource Protection Areas) of the City of North Bay's Official Plan indicates prime aggregate resource deposits on the property. Section 2.5.2.5 of the PPS states that "In areas adjacent to or in known deposits of mineral aggregate resources, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if: a) resource use would not be feasible; b) the proposed land use or development serves the greater long-term public interest; and c) issues of public health, public safety and environmental impact are addressed. To my knowledge, the applicant has not addressed this issue.

Other points, for your information, are that the property is regulated by the Conservation Authority under Ontario Regulation 177/06, *Development, Interference with Wetlands & Alteration to Shorelines & Watercourses (DIA)*. This regulation is pursuant to Section 28 of the Conservation Authorities Act of Ontario. There are natural hazard areas on this property including: Four Mile Lake and its floodplain (359.85 meters C.G.D.); the noted

4

areas of steep slopes; an intermittent tributary; and associated wetland areas. The Conservation Authority is the approval authority, in this area, for Part 8 of the Ontario Building Code (private on-site sewage disposal systems).

In summary, the Conservation Authority recommends refusal of the application as it is not consistent with: the Trout Lake Policies in the City of North Bay's Official Plan; and Section 2 of the PPS.

Trusting this is satisfactory. Should you have any questions, please do not hesitate to contact this office at 474-5420. For administrative purposes, please forward any decisions and resolutions regarding this matter.

Yours truly,



Paula Scott  
Director, Planning & Development

**MINUTES OF THE PUBLIC MEETING OF  
CITY COUNCIL HELD UNDER THE *PLANNING ACT*  
HELD MONDAY, August 23, 2010**

**PRESENT:** Mayor Fedeli, Councillors Chirico, Campbell, Vaillancourt, Vrebosch-Merry, Mayne, Bain, Koziol, Mendicino, Anthony

1. Jack & Helen Norman - Four Mile Lake Road

Councillor Anthony explained the purpose of the meeting.

The Deputy City Clerk advised that notice of the meeting was given by prepaid first class mail on the 3<sup>rd</sup> day of July, 2010 to all owners of property within 120 metres of the subject property and by the posting of a placard on the subject property.

Peter Carello explained the purpose of the applications.

Councillor Anthony asked for public presentations in support of or objecting to the rezoning.

Brenda McLay - 1300F Four Mile Lake Road

- opposed to development
- support of reports from North Bay-Mattawa Conservation Authority and City staff
- primary concern for lake (spring fed lake)
- presentation provided to Council

William Parfitt - 1800 Four Mile Lake Road

- protection of the lake should be the responsibility of the people that live on the lake
- these lots would pay waterfront taxes
- could not provide aggregate
- proposed development would have state of the art septic systems
- why protect these lands and take from other parks?

Al Sage - 1300 Four Mile Lake Road

- summer resident
- taught geology and geography for 30 years
- err on the side of caution
- unreliable water levels this summer - nothing is reliable

Paul Goodridge - 116 Byers Road

- agent for the applicants
- recognizes that there are a number of studies against this proposal
- requested that staff report not be accepted at this time
- have additional reports being prepared
- City has approved in excess of 130 lots within the NEF Contour Area
- provided copy of *Draft* Assessment Report from the North Bay-Mattawa Conservation Authority
- introduced Mr. Michael Michalski
  - 42 years of lake experience
  - Sr. Environmental expert
  - well recognized for his expertise

Michael Michalski - 16 Robert Boyer Lane, Bracebridge

- Michalski Nielsen Associates Limited
- spoke re: his report
- disagrees with Peter Bullock's memorandum



- disagrees with North Bay-Mattawa Conservation Authority - Lake Capacity Model not done
- soils conditions
- lakeshore capacity has been criticized, should rely on practical measures (Bracebridge uses this model)
- 300m is not scientifically justifiable, but it is the Ministry of the Environment's position
- this a warm water lake

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MAYOR VIC FEDELI

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CITY CLERK CATHERINE CONRAD

**MINUTES OF THE PUBLIC MEETING OF  
CITY COUNCIL HELD UNDER THE *PLANNING ACT*  
HELD MONDAY, JULY 18<sup>TH</sup>, 2011**

**PRESENT:** Mayor McDonald, Councillors Chirico, Koziol, Anthony, Maroosis, Bain, Mayne, Vrebosch-Merry, Vaillancourt, Mendicino, Lawlor

1. Jack & Helen Norman - Four Mile Lake Road

Councillor Lawlor explained the purpose of the meeting.

The Deputy City Clerk advised that notice of the meeting was given by an advertisement in the Nugget on the 25<sup>th</sup> day of June, 2011 and by the posting of a placard on the subject property.

Mayor McDonald declared a conflict of interest as his family owns property on Four Mile Lake Road.

Beverley Hillier explained the purpose of the applications.

Councillor Lawlor asked for public presentations in support of or objecting to the Official Plan Amendment, Zoning By-Law Amendment or Plan of Subdivision.

Paul Goodridge, 116 Byers Road, Callander

- agent for the applicants
- four (4) issues:
  - i) policy
  - ii) environmental
  - iii) aggregate
  - iv) NEF contours
- i) policy - proposal / application
  - could have proposed family severances
  - 300m takes you back to the beaver pond
  - lots are non-impact lots
  - RRE are permitted under the Official Plan (O.P.)
  - did not apply under the Minimal Impact lots [i.e. as with Lechlitrer and Orsi lots on Trout Lake - City settled these and were ratified by the Ontario Municipal Board(O.M.B.)]
  - staff mistaken re septic tank technology
  - have a peer review on systems - good systems with proven fifteen (15) year record
  - O.P. does support the creation of these lots on the basis of new technology
  - this will not present a precedent as this is the last application under the existing O.P. (new O.P. does not have Ministerial approval)
  - these lots do meet the provincial standards and zoning requirements
  - there is no rationale to deny
  - need to take into consideration the size of these lots
  - considers this an infilling between two (2) existing subdivisions
  - introduced Michael Michalski and cited his qualifications

Michael Michalski

- limited his comments to the septic systems
- referred to his letter to Peter Carello
- report was prepared in 2009
- phosphorous and soils
- refuted Peter Bullocks' report
- monitoring fields - sewage systems better than many sewage treatment plants
- tile seal / wells and monitory programs
- conventional system - reduces phosphorus
- estimated life of the proposed system will be doubled
- sensitivity analysis is phosphorus, gets into Four Mile Lake - will be non-detectable

- these will be non-impact lots with restriction to phosphorus
- 300m guideline was established by the Ministry of the Environment - no science to it, O.M.B. hearing says this is a poor planning tool

Paul Goodridge

ii) Aggregate

- study provided by Knight Piesold - quite capable
- not significant aggregate - sand only
- City gets money from Ministry of Natural Resources for aggregate
- municipal taxes will be substantial
- this aggregate removal would require an open-pit
- the sand acts as a filter
- it should not be developed for aggregate

iii) NEF contours

- based on military aircraft
- City relying on the NEF 30 contour
- the contours are out-of-date

Meeting deferred until September at which time Mr. Goodridge will have an opportunity to finish his presentation. A supplemental staff report has also been requested.

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DEPUTY MAYOR PETER CHIRICO

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CITY CLERK CATHERINE CONRAD

**ENGINEERING & WORKS COMMITTEE**

Monday, September 26, 2011

Page 1

**Chairperson: Councillor Vrebosch-Merry**  
**Vice-Chair: Councillor Mayne**  
**Member: Councillor Bain**  
**Ex-Officio: Mayor McDonald**

EW-2010-03

Report from A. Korell/J. Houston dated March 26, 2010 re Kate Pace Way west end bike route connection between Memorial Drive and Gormanville Road (R05/2010/KPWTR/WESTENDR).

**GENERAL GOVERNMENT COMMITTEE**

Monday, September 26, 2011

Page 1

**Chairperson:** Councillor Chirico  
**Vice-Chair:** Councillor Koziol  
**Members:** Councillors Anthony, Maroosis  
**Ex-Officio:** Mayor McDonald

GG-2011-04 Motion from Councillor Anthony dated January 10, 2011 re Council remuneration (F16/2011/CNB/COUNCIL).

GG-2011-16 Report from C.M. Conrad dated August 2, 2011 re Election campaign signs (C07/2011/ELECT/GENERAL).

► **GG-2011-17 Report from M. Karpenko dated August 29, 2011 re Long-Range Financial Plan Water and Wastewater Operations (F10/2011/LRFP/WATER).**

GG-2011-18 Report from D.G. Linkie dated August 31, 2011 re Power assisted bicycles (T00/2011/TRANS/GENERAL).

# GG-2011-17

Draft recommendation.

- “That
- a) City Council approve the Long-Range Financial Plan - Water and Wastewater Operations in accordance with Ontario Regulation 453/07;
  - b) City Council endorse the Long-Range Financial Plan - Water and Wastewater Operations as financially viable;
  - c) the Long-Range Financial Plan be submitted to the Ministry of Municipal Affairs and Housing in accordance with the *Safe Drinking Water Act*; and
  - d) the Long-Range Financial Plan - Water and Wastewater Operations be made available for public review at the City Clerk’s Office and on the City’s website in accordance with the Ontario Regulation 453/07.”

CITY OF NORTH BAY

REPORT TO COUNCIL

Report No: CORP 11-151

Date: August 29, 2011

Originator: Margaret Karpenko

Subject: Long-Range Financial Plan Water and Wastewater Operations

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RECOMMENDATION:

That City Council approve the Long-Range Financial Plan Water and Wastewater Operations in Accordance with Ontario Regulation 453/07 and;

That City Council endorse the Long-Range Financial Plan Water and Wastewater Operations as financially viable and;

That the Long-Range Financial Plan be submitted to the Ministry of Municipal Affairs and Housing in accordance with the Safe Drinking Water Act and;

That the Long-Range Financial Plan Water and Wastewater be made available for public review at the City Clerks office, and on the City's website, in accordance with the Ontario Regulation 453/07.

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BACKGROUND:

In response to recommendations made by Justice O'Connor's Walkerton Inquiry, the Ministry of the Environment (MOE) introduced regulation (O.Reg.453/07) under the Safe Drinking Water Act, 2002 (SDWA) that prescribes the requirement for Financial Plans to be prepared as part of the Municipal Drinking Water Licensing Program set out in Part V of the SDWA. Therefore, The City of North Bay, along with other Ontario municipalities that are responsible for the provision of drinking water, are required to meet the requirements set out in the Financial Plans Regulations O.Reg.453/07. Further, a resolution of City Council is also required to state that the drinking water system is financially viable and is to be forwarded with the approved plan to the Ministry of Municipal Affairs and Housing in accordance with the Safe Drinking Water Act (SDWA).

Under Ontario Regulation 453/07 the financial plan must include:

- Income Statements (revenues, expenses, and surplus or deficit)
- Balance Sheets (financial assets, capital assets, total liabilities, net debt)
- Cash flow statements (cash receipts and payments)

The Financial Plan will have to be updated before every renewal application of a License (ie. every five years), and provided to the Ministry of Municipal Affairs and Housing.

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The City of North Bay received the Drinking Water License on April 11, 2011. As such we are required to submit the Long-Range Term Financial Plan to the Minister no later than October 2011.

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The Long-Range Financial Plan (LRFP) provides a framework for guiding the annual budget as well as, financial planning over a longer horizon. The LRFP is a tool that helps understand through a model, the implications that today's decisions may have on future budgets. Therefore, LRFP's are living documents that need to be updated as assumptions and economic conditions change. It is anticipated that updates for the following items will be required:

- Amendments to assumptions, projections and strategies as required, based on changes in the municipal environment
- Future changes in current operating and capital spending and funding levels
- Confirm or amend key financial goals and strategies that should guide future planning
- Spur development actions in response to long-term strategies

#### THE MODEL:

The model connects the inter-relationship between all components of the Long-Range Financial Plan; therefore, any change to assumptions will potentially impact several areas of the LRFP. All factors impacting the water and wastewater capital and operating budget were examined. This includes the application of the Long-Term Capital funding policy, development charge by-laws and interest rates on financing and reserve balances.

It should also be noted that the financial reports enclosed are generated and presented in accordance with section PS1200 of the Canadian Institute of Chartered Accountants (CICA); therefore, as with the City's Financial Statements they do not easily correspond to the City's budget.

The model and long-term reports were generated by BMA Management Consulting Inc. Administration now has the model and will continue to use and update the model on an annual basis to ensure the long-term sustainability of the water and wastewater systems. The model will also be used to project the impact and long-term implications of business decisions made. The updating and reporting will occur with the annual budget process. The goal is to ensure that the City's water and wastewater operations are in sound financial position and services can be provided on a sustainable basis. Lastly, the model will assist in determining and ensuring the long-term affordability of the water system to our ratepayers.

#### HIGHLIGHTS:

- There is an adjustment required in 2012 to fully separate the water and wastewater requirements as previously the budget was combined. The adjustment in 2012 will increase water rates by 20.6% and reduce the sewer charges by 9.2%. Therefore, the net projected impact in 2012 is 11.4%. Subsequent to the adjustment in 2012 the annual increases for water average 4.15% annually, likewise the projected increases in wastewater rates average 4.7% annually.
- Annual contributions to capital are increasing in accordance with the Long-Term Capital Funding Policy
- The combined water and wastewater reserves remain in a positive position throughout the ten year plan. However, moving forward legislation requires the reserves to be managed independently. This highlights some potential challenges from 2012 to 2014 and in 2019 for wastewater. Available solutions would include increasing rates more



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than the current plan suggests, reducing and/or smoothing the timing of the capital plan for sewer in the years that are projecting a deficit or increasing the amount of debt issued. A fulsome discussion of these options and the impacts they have to the LRFP will be presented during the 2012 budget deliberations. Also, expenditures within the approved Capital Budget are presented to City Council prior to the commencement of each project.

- Debt charges to revenue remain below the OMB requirement of 25% throughout the plan; however, beginning in 2015 the plan indicates that the projected water debt to revenue ratio will be above the City's internal policy of 15%. As this relates to future years, a discussion of our internal debt policy will also take place during 2012 budget deliberations.

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RECOMMENDED OPTION:

That City Council approve the Long-Range Financial Plan Water and Wastewater Operations in Accordance with Ontario Regulation 453/07 and;

That City Council endorse the Long-Range Financial Plan Water and Wastewater Operations as financially viable and;

That the Long-Range Financial Plan be submitted to the Ministry of Municipal Affairs and Housing in accordance with the Safe Drinking Water Act and;

That the Long-Range Financial Plan Water and Wastewater be made available for public review at the City Clerks office, and on the City's website, in accordance with the Ontario Regulation 453/07.

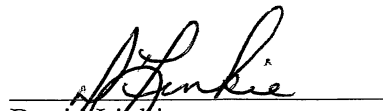
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Respectfully submitted,

  
Margaret Karpenko, CMA

Chief Financial Officer / Treasurer

I concur in this report and recommendation.

  
David Linkie  
Chief Administrative Officer

Personnel designated for continuance: Chief Financial Officer/Treasurer

Attach: Development of Long-Range Financial Plan Water and Wastewater Operations In Accordance with O.Reg. 453/07



Development of Long-Range Financial Plan  
Water and Wastewater Operations  
In Accordance with O.Reg. 453/07  
062-301A



City of North Bay

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***City of North Bay  
Water and Wastewater Long Range Financial Plan  
Forecast***



## Introduction to Long Range Financial Planning

### Water/Wastewater Long Range Financial Planning

The City of North Bay, along with other Ontario municipalities that are responsible for the provision of drinking water, are required to meet the requirements set out in the Financial Plans Regulations O.Reg.453/07. While the regulations are directed at **water systems**, the approach as encouraged by the Province and being undertaken by the City was to undertake a similar process for the City's **wastewater systems**.

The financial environment for municipal government has fundamentally changed. The City of North Bay has to fund programs and services it provides within a limited funding framework—namely, it must address rising costs, the demands of growth, increased service responsibilities related to regulatory and legislative requirements and an aging infrastructure with relatively flat revenue streams.

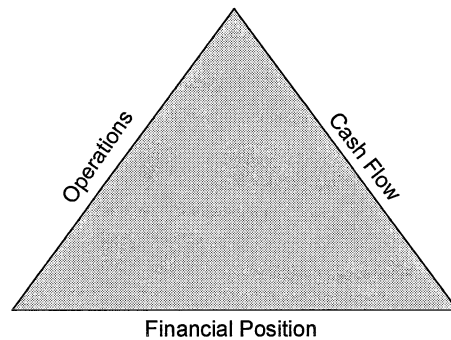
The City of North Bay is taking a proactive approach and has recognized the need for a long-term financial planning process that assesses the financial implications of current and proposed policies as well as Council approved decisions in its water and wastewater operations. The goal is to ensure that the City's water and wastewater operations are in a sound financial position and services can be provided on a sustainable basis.

Ontario Reg. 453/07 provides the following parameters with regards to s.30 (1) part b of the Safe Drinking Water Act for new water systems:

- Financial plan must be approved by Council resolution (or governing body) indicating that the drinking water system is financially viable;
- Financial plan must include a statement that the financial impacts have been considered and apply for a minimum six year period (commencing when the system first serves the public);
- Financial plan must include detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e. the components of a "Statement of Operations" as per PSAB) for each year in which the financial plans apply;
- Financial plans are to be made available to the public upon request and at no charge;
- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge; and
- Notice of the availability of the financial plans is to be given to the public.

The components of the financial plans indicated by the regulation are consistent with the requirements for financial statement presentation as set out in section PS1200 of the Canadian Institute of Chartered Accountants (CICA) Public Sector Accounting Handbook.

The categories can be found in three statements:



The Statement of Operations summarizes the revenues and operating expenses for a given period. The Statement of Financial Position reports on whether enough revenue was generated in a period to cover the expenses in the period and whether sufficient resources have been generated to support current and future activities. The Statement of Cash Flow reports on how activities were financed for a given period which provides a measure of the changes in cash for that period.

The categories of financial information have been developed;

- to ensure that they provide a sound picture of the financial position of a drinking water system;
- to ensure that they are aligned with municipal financial statements prepared on a full accrual accounting basis, beginning on January 1, 2009; and
- to ensure consistent financial planning for municipal water services.

The goal is to provide the City with a realistic and informed view of operating and capital expenditures needed over time to maintain the integrity and health of its physical infrastructure and to accommodate growth and new environmental standards. As such, a Long Range Financial Plan (LRFP) creates a more purposeful approach to long-term financial management and helps align short term actions with long term financial strategies.

This document puts the City's water and wastewater financial condition in perspective, discusses the current challenges and risks and provides a sustainable financial forecast. The plan also provides a framework for guiding the annual budget and the financial planning over a longer horizon. The LRFP helps to understand the implications that today's decisions have on future budgets. The LRFP is a living document that needs to be updated as assumptions and economic conditions change.

### Principles of Financial Sustainability

The Ministry of the Environment released a guideline (“Towards Financially Sustainable Drinking-Water and Wastewater Systems”) that provides possible approaches to achieving sustainability. The Province’s Principles of Financially Sustainable Water and Wastewater Services are provided below:

- **Principle #1:** Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.
- **Principle #2:** An integrated approach to planning among water, wastewater, and storm water systems is desirable given the inherent relationship among these services.
- **Principle #3:** Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.
- **Principle #4:** Life-cycle planning with mid-course corrections is preferable to planning over the short-term, or not planning at all.
- **Principle #5:** An asset management plan is a key input to the development of a financial plan.
- **Principle #6:** A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.
- **Principle #7:** Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.
- **Principle #8:** Financial Plans are “living” documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.
- **Principle #9:** Financial plans benefit from the close collaboration of various groups, including engineers, accountants, auditors, utility staff, and municipal council.

The LRFP will be instrumental in the City’s ability to meet the Provincial reporting requirements included in O.Reg. 453/07 for water operations and has been developed in recognition of the above noted principles.



**Importance of a Long Range Financial Plan**

A LRFP is a framework to guide the City in planning and decision-making to help ensure that the City:

- Has a plan to protect and maintain its assets;
- Has a reasonable degree of stability and predictability in the rate burden;
- Has a fair sharing in the distribution of resources between current and future ratepayers;
- Has sustainable cash flows in the long term;
- Maximizes its financial flexibility;
- Minimizes financial vulnerability during economic downturns; and
- Maintains programs and services at their desired levels.

**General Approach to Preparing the City's LRFP**

The LRFP identifies the key financial strategies that will influence the building of a sustainable long-term financial future and takes into account:

- Expected expenses and capital outlays for each year of the plan;
- Expected revenues for each year and their source;
- Performance measures to enable assessment of the Council's strategic priorities;
- Assumptions that have been used in the development of the LRFP; and
- Sensitivity analysis on key assumptions most likely to affect long-range financial planning and sustainability to ensure that the City is aware of the key levers that will impact the LRFP and that should be monitored over time.



### The LRFP is Dynamic—Regular Updates Will Be Undertaken

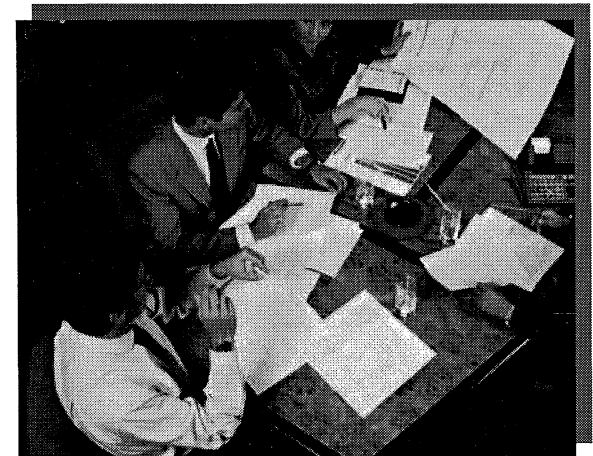
Although great effort has been made to present accurate financial projections, based upon the data available at this time, a LRFP is a dynamic document and should be updated and re-evaluated, on an ongoing basis. As such, the 2010 Water and Wastewater LRFP should be considered a work-in-progress.

It is not an exercise in precision, rather it is intended for use as a forecasting tool to ensure that the City is on the right course to meet its financial obligations and future challenges. The intent is to provide Council with regular updates to this document, so it will be useful in the ongoing cycle of business planning and budgeting.

Financial plans are only required to be updated in conjunction with every application for licence renewal (i.e. every 5 years), however, there are many potential circumstances that could occur within the short to medium term that would affect the assumptions in the projections for operating and capital. Council priorities, planning policies, changes to service levels, consumption projections and infrastructure requirements, will certainly lead to changes and the LRFP should be adjusted to reflect these changes as they occur.

It is anticipated that updates to the LRFP will:

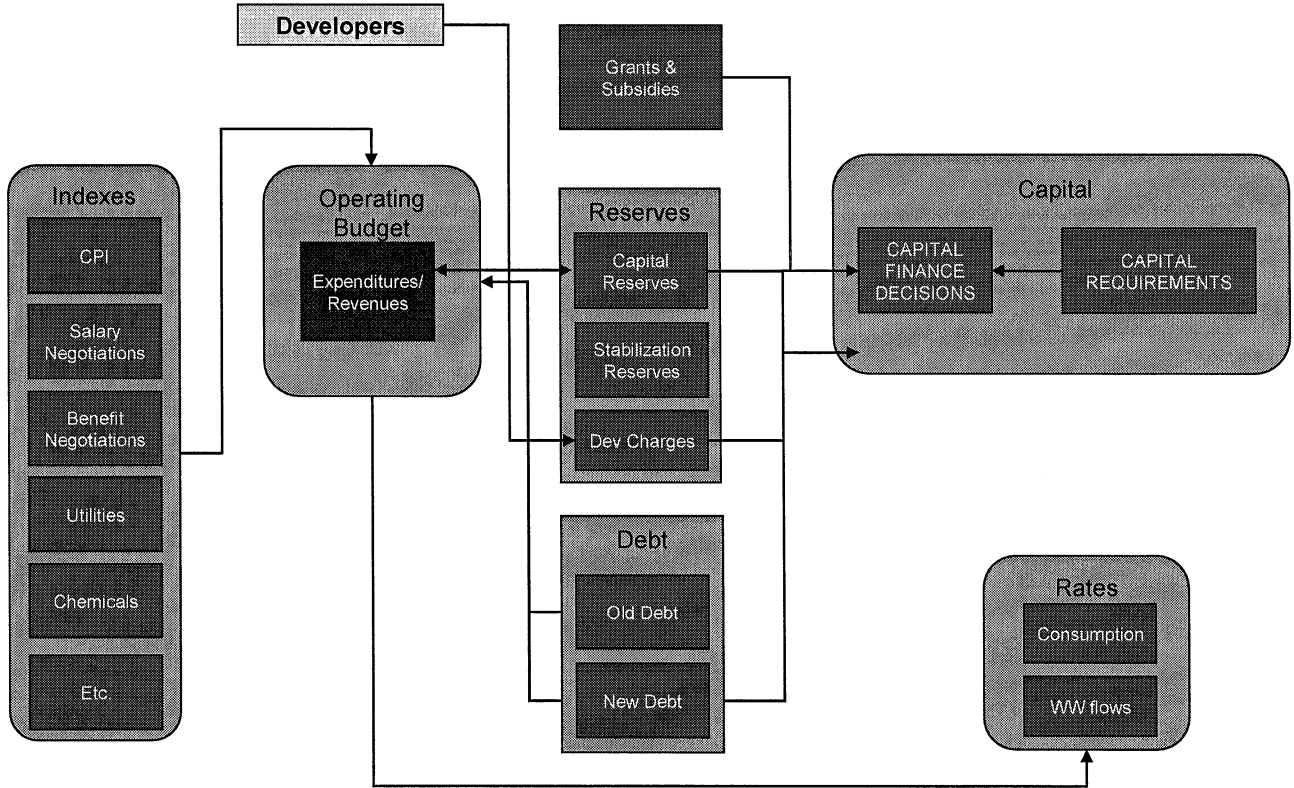
- Amend the assumptions, projections and strategies, as required, based on changes in the municipal environment;
- Continue building awareness of future changes in current operating and capital spending and funding levels;
- Assist the City in determining the extent of its financial challenges;
- Reconfirm the key financial goals and strategies that should guide future planning; and
- Spur the development of actions in future business plans that would respond to the long-term strategies.



Water and Wastewater Model and Situational Analysis

Model Development

The LRFP is developed based on an analysis of all factors impacting the capital and operating budget, including financing plans, consumption and wastewater flow forecasts. This forecast also includes assumptions with respect to growth and development charge revenues, interest rates impacting reserves and debt issuance. As shown below, due to the inter-relationship between all components of the plan, changes in any of the assumptions will potentially have an impact throughout the LRFP.



## Water and Wastewater Forecast

### Key Assumptions

The following provides the key assumptions in the Forecast:

- **Capital Projects**—Water and Wastewater Capital Forecast is based on the capital needs as identified by the City, in consideration of what is affordable. The plan includes \$72.8 million for water and \$94.7 million for wastewater capital expenditures for over the next 10 years.
- **Water & Wastewater Capital Reserves**—The opening balance for 2011 Water and Wastewater Capital Reserves and Reserve Funds are based on the year-end estimated balance for 2010.
- **Sources of Financing**—Capital Reserves were used as the primary source of financing.
- **Debt** - use Infrastructure Ontario's rate for a 10 year term at 3.78%, based on January 19, 2011.
- **Service Standards**—Water and wastewater programs are maintained at their current service levels.
- **Expenditure Increases**—based on:
  - Salary, wage and benefit increases based on future projected increases (2.0% annually);
  - Miscellaneous expenses (2% annually); and
  - Water and wastewater City operating (12% - 2012 and 3% thereafter)
  - Rate contributions vary annually and have been used to ensure full funding of the capital plan.
- **Disposals**—assumes no disposals of tangible capital assets.
- **Useful Life**—based on the City's tangible capital asset policies.

**Water Asset Inventories**

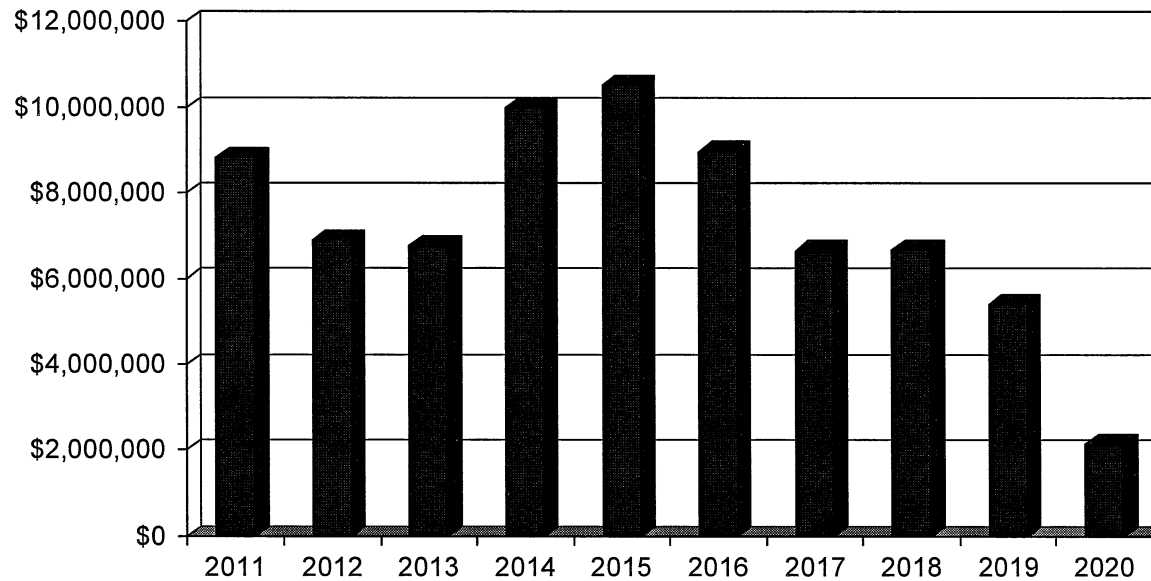
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Opening TCA Balance</b>											
Treatment	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630	\$ 42,884,630
Distribution	\$ 69,944,047	\$ 75,469,047	\$ 84,287,547	\$ 91,179,547	\$ 97,945,047	\$ 107,935,547	\$ 118,435,047	\$ 127,395,547	\$ 134,044,047	\$ 140,708,047	\$ 146,115,547
<b>Additions</b>											
Treatment											
Distribution	\$ 5,525,000	\$ 8,818,500	\$ 6,892,000	\$ 6,765,500	\$ 9,990,500	\$ 10,499,500	\$ 8,960,500	\$ 6,648,500	\$ 6,664,000	\$ 5,407,500	\$ 2,152,000
<b>Closing Balance</b>	<b>\$ 118,353,677</b>	<b>\$ 127,172,177</b>	<b>\$ 134,064,177</b>	<b>\$ 140,829,677</b>	<b>\$ 150,820,177</b>	<b>\$ 161,319,677</b>	<b>\$ 170,280,177</b>	<b>\$ 176,928,677</b>	<b>\$ 183,592,677</b>	<b>\$ 189,000,177</b>	<b>\$ 191,152,177</b>
<b>Opening Accumulated Amortization</b>											
Treatment	\$ 384,905	\$ 1,099,649	\$ 1,814,393	\$ 2,529,137	\$ 3,243,880	\$ 3,958,624	\$ 4,673,368	\$ 5,388,112	\$ 6,102,856	\$ 6,817,600	\$ 7,532,343
Distribution	\$ 21,316,475	\$ 22,320,462	\$ 23,442,030	\$ 24,655,491	\$ 25,959,158	\$ 27,396,032	\$ 28,972,900	\$ 30,669,240	\$ 32,454,228	\$ 34,328,069	\$ 36,274,009
<b>Amortization Expense</b>											
Treatment	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744	\$ 714,744
Distribution	\$ 1,003,987	\$ 1,121,567	\$ 1,213,461	\$ 1,303,667	\$ 1,436,874	\$ 1,576,867	\$ 1,696,341	\$ 1,784,987	\$ 1,873,841	\$ 1,945,941	\$ 1,974,634
<b>Ending Accumulated Amortization</b>	<b>\$ 23,420,111</b>	<b>\$ 25,256,423</b>	<b>\$ 27,184,627</b>	<b>\$ 29,203,038</b>	<b>\$ 31,354,656</b>	<b>\$ 33,646,268</b>	<b>\$ 36,057,352</b>	<b>\$ 38,557,083</b>	<b>\$ 41,145,668</b>	<b>\$ 43,806,353</b>	<b>\$ 46,495,731</b>
<b>Net Book Value</b>	<b>\$ 94,933,566</b>	<b>\$ 101,915,754</b>	<b>\$ 106,879,550</b>	<b>\$ 111,626,639</b>	<b>\$ 119,465,521</b>	<b>\$ 127,673,409</b>	<b>\$ 134,222,825</b>	<b>\$ 138,371,594</b>	<b>\$ 142,447,009</b>	<b>\$ 145,193,824</b>	<b>\$ 144,656,446</b>

**Wastewater Asset Inventories**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Opening TCA Balance</b>											
Treatment	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434	\$ 12,412,434
Collection	\$ 61,075,824	\$ 63,265,824	\$ 69,093,324	\$ 75,778,324	\$ 82,821,824	\$ 89,974,324	\$ 96,219,824	\$ 100,810,324	\$ 108,732,824	\$ 126,092,824	\$ 145,076,324
<b>Additions</b>											
Treatment											
Collection	\$ 2,190,000	\$ 5,827,500	\$ 6,685,000	\$ 7,043,500	\$ 7,152,500	\$ 6,245,500	\$ 4,590,500	\$ 7,922,500	\$ 17,360,000	\$ 18,983,500	\$ 12,909,000
<b>Closing Balance</b>	<b>\$ 75,678,258</b>	<b>\$ 81,505,758</b>	<b>\$ 88,190,758</b>	<b>\$ 95,234,258</b>	<b>\$ 102,386,758</b>	<b>\$ 108,632,258</b>	<b>\$ 113,222,758</b>	<b>\$ 121,145,258</b>	<b>\$ 138,505,258</b>	<b>\$ 157,488,758</b>	<b>\$ 170,397,758</b>
<b>Opening Accumulated Amortization</b>											
Treatment	\$ 4,084,351	\$ 4,250,912	\$ 4,417,473	\$ 4,584,034	\$ 4,750,595	\$ 4,917,156	\$ 5,083,717	\$ 5,250,278	\$ 5,416,839	\$ 5,583,400	\$ 5,749,961
Collection	\$ 19,776,239	\$ 20,583,266	\$ 21,467,993	\$ 22,441,853	\$ 23,509,627	\$ 24,672,767	\$ 25,919,181	\$ 27,226,801	\$ 28,640,055	\$ 30,284,775	\$ 32,182,609
<b>Amortization Expense</b>											
Treatment	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561	\$ 166,561
Collection	\$ 807,027	\$ 884,727	\$ 973,860	\$ 1,067,774	\$ 1,163,140	\$ 1,246,414	\$ 1,307,620	\$ 1,413,254	\$ 1,644,720	\$ 1,897,834	\$ 2,069,954
<b>Ending Accumulated Amortization</b>	<b>\$ 24,834,178</b>	<b>\$ 25,885,466</b>	<b>\$ 27,025,887</b>	<b>\$ 28,260,222</b>	<b>\$ 29,589,923</b>	<b>\$ 31,002,898</b>	<b>\$ 32,477,079</b>	<b>\$ 34,056,894</b>	<b>\$ 35,868,175</b>	<b>\$ 37,932,570</b>	<b>\$ 40,169,085</b>
<b>Net Book Value</b>	<b>\$ 50,844,080</b>	<b>\$ 55,620,292</b>	<b>\$ 61,164,871</b>	<b>\$ 66,974,036</b>	<b>\$ 72,796,835</b>	<b>\$ 77,629,360</b>	<b>\$ 80,745,679</b>	<b>\$ 87,088,364</b>	<b>\$ 102,637,083</b>	<b>\$ 119,556,188</b>	<b>\$ 130,228,673</b>

**Water Capital Budget—Type of Project and Financing Plan**

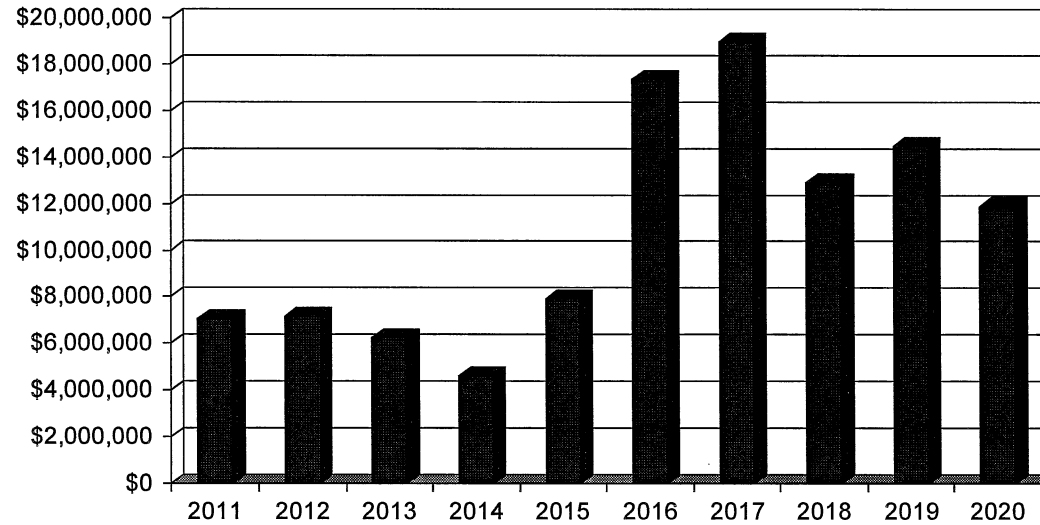
As shown below, the City’s 10-year Water Capital Budget is \$72.8 million.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Capital Budget	\$ 8,818,500	\$ 6,892,000	\$ 6,765,500	\$ 9,990,500	\$ 10,499,500	\$ 8,960,500	\$ 6,648,500	\$ 6,664,000	\$ 5,407,500	\$ 2,152,000	\$ 72,798,500
<b>Financing Plan</b>											
Developer Contributions	\$ 3,375,000	\$ 1,687,500	\$ 1,687,500	\$ 4,625,000							\$ 11,375,000
Development Charges	\$ 150,000	\$ 200,000	\$ 206,000	\$ 212,000	\$ 218,500	\$ 225,000	\$ 232,000	\$ 239,000	\$ 246,000	\$ 253,500	\$ 2,182,000
Prov/Fed Funding											\$ -
Debt	\$ 2,500,000	\$ 2,200,000	\$ 1,100,000	\$ 2,700,000	\$ 3,000,000	\$ 3,000,000	\$ 1,200,000	\$ 1,800,000	\$ 500,000	\$ -	\$ 18,000,000
Contributions from Reserve	\$ 2,793,500	\$ 2,804,500	\$ 3,772,000	\$ 2,453,500	\$ 7,281,000	\$ 5,735,500	\$ 5,216,500	\$ 4,625,000	\$ 4,661,500	\$ 1,898,500	\$ 41,241,500
<b>Total</b>	<b>\$ 8,818,500</b>	<b>\$ 6,892,000</b>	<b>\$ 6,765,500</b>	<b>\$ 9,990,500</b>	<b>\$ 10,499,500</b>	<b>\$ 8,960,500</b>	<b>\$ 6,648,500</b>	<b>\$ 6,664,000</b>	<b>\$ 5,407,500</b>	<b>\$ 2,152,000</b>	<b>\$ 72,798,500</b>

**Wastewater Capital Budget—Type of Project and Financing Plan**

As shown below, the City’s 10-year Wastewater Capital Budget is \$94.7 million.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Capital Budget	\$ 5,827,500	\$ 6,685,000	\$ 7,043,500	\$ 7,152,500	\$ 6,245,500	\$ 4,590,500	\$ 7,922,500	\$ 17,360,000	\$ 18,983,500	\$ 12,909,000	\$ 94,719,500
<b>Financing Plan</b>											
Developer Contributions	\$ 1,125,000	\$ 562,500	\$ 562,500	\$ 1,125,000	\$ 4,000,000						\$ 7,375,000
Development Charges	\$ 150,000	\$ 200,000	\$ 206,000	\$ 212,000	\$ 218,500	\$ 225,000	\$ 232,000	\$ 239,000	\$ 246,000	\$ 253,500	\$ 2,182,000
Prov/Fed Funding						\$ 666,667	\$ 666,667	\$ 9,333,333	\$ 9,333,333		\$ 20,000,000
Debt	\$ -	\$ 800,000	\$ 1,900,000	\$ 300,000	\$ -	\$ -	\$ 1,800,000	\$ 1,200,000	\$ 2,500,000	\$ 3,000,000	\$ 11,500,000
Contributions from Reserves	\$ 4,552,500	\$ 5,122,500	\$ 4,375,000	\$ 5,515,500	\$ 2,027,000	\$ 3,698,833	\$ 5,223,833	\$ 6,587,667	\$ 6,904,167	\$ 9,655,500	\$ 53,662,500
<b>Total</b>	<b>\$ 5,827,500</b>	<b>\$ 6,685,000</b>	<b>\$ 7,043,500</b>	<b>\$ 7,152,500</b>	<b>\$ 6,245,500</b>	<b>\$ 4,590,500</b>	<b>\$ 7,922,500</b>	<b>\$ 17,360,000</b>	<b>\$ 18,983,500</b>	<b>\$ 12,909,000</b>	<b>\$ 94,719,500</b>

**Reserve Fund and Debt Policy Summary**

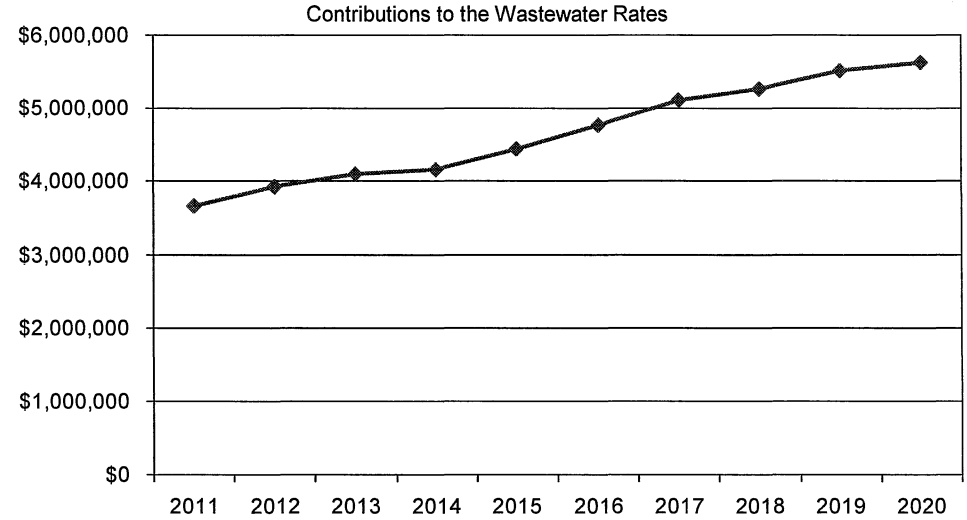
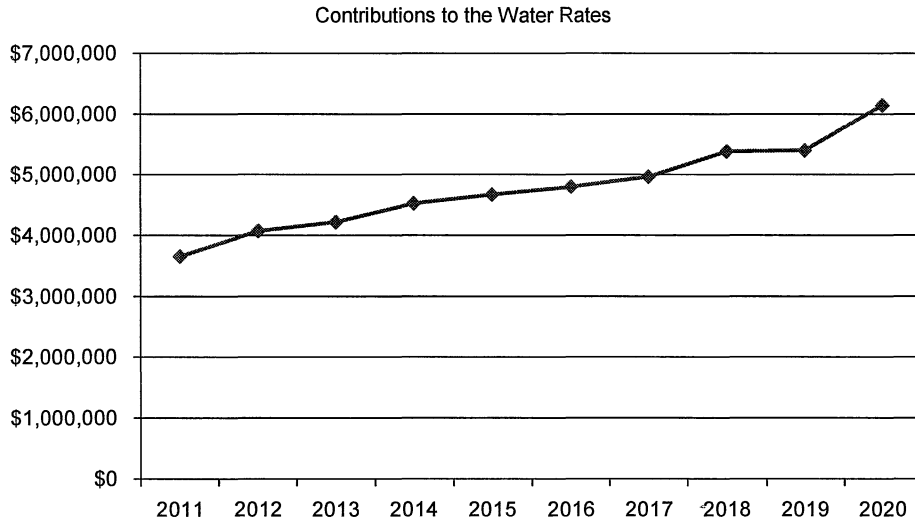
Adequate reserves are important to mitigate the City's financial risk and to strengthen the City's ability to withstand negative impacts on revenues from economic fluctuations and unforeseen expenditure requirements. Reserves and reserve funds are accumulated net revenues which are set aside for future expenditures. Reserves and reserve funds are a critical component of a municipality's long-term financing plan. The importance of maintaining reserves is to:

- Provide stability of water and wastewater rates in the face of variable and uncontrollable factors (e.g. interest rates, changes in subsidies, increase in fuel prices);
- Provide financing for one-time or short-term requirements without permanently impacting the tax and utility rates;
- Make provisions for acquisition and replacement of assets and infrastructure that are currently being consumed and depreciated;
- Avoid spikes in funding requirements of the capital budget by reducing reliance on long-term debt borrowing;
- Provide a source of internal financing;
- Ensure adequate cash flows;
- Provide flexibility to manage debt levels and protect the municipality's financial position; and
- Provide for liabilities that have been incurred in the current year but will not be paid for until future years.

"Debt management may be defined as the process of providing for the payment of interest and principal payments on existing debt, and the planning for new debt issuance at a level which will optimize borrowing cost and not impair the financial position of the municipality." (Ministry of Municipal Affairs and Housing). Together with the General Reserve and Reserve Fund Policy, the Debt Management Policy sets fiscally-prudent financial targets to ensure that the City can adequately plan for and fund future capital needs in a responsible manner. Targets for achieving a favourable financial position have been established for debt and reserves; debt charges for water/wastewater should not exceed 15% of revenues.

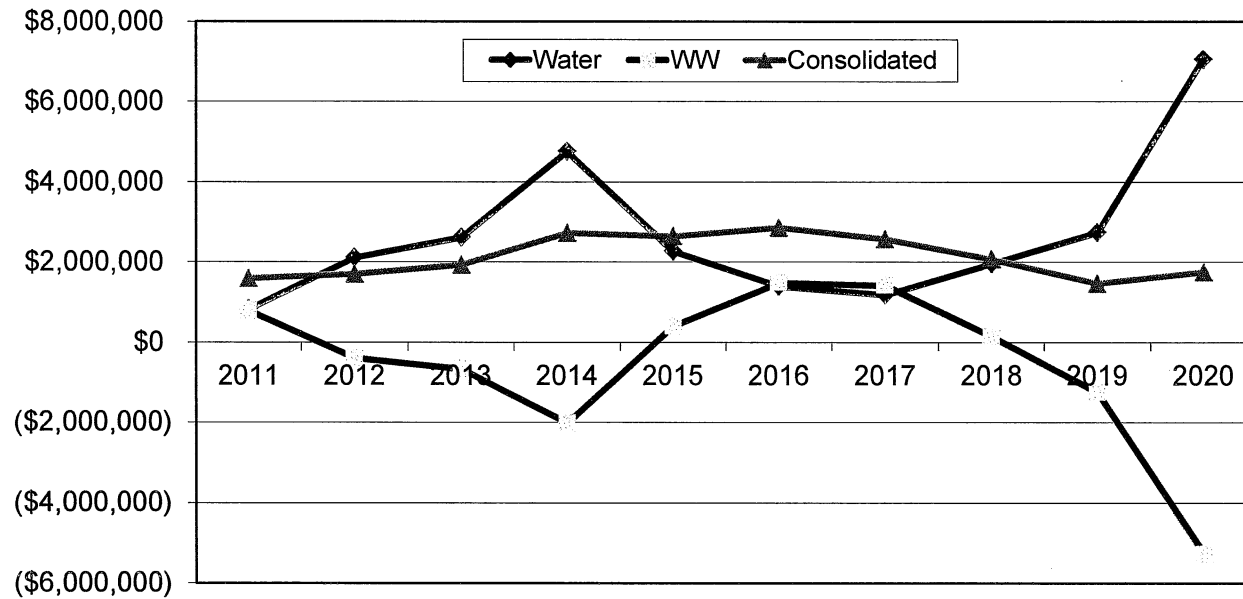


Water and Wastewater Rates Contributions



As shown above, annual contributions from rates are being made with a gradual increase to smooth the impact on rates and to move toward full cost recovery. (Note there is an adjustment required in 2012 to fully separate the water and wastewater requirements as this was previously shown as a combined budget).

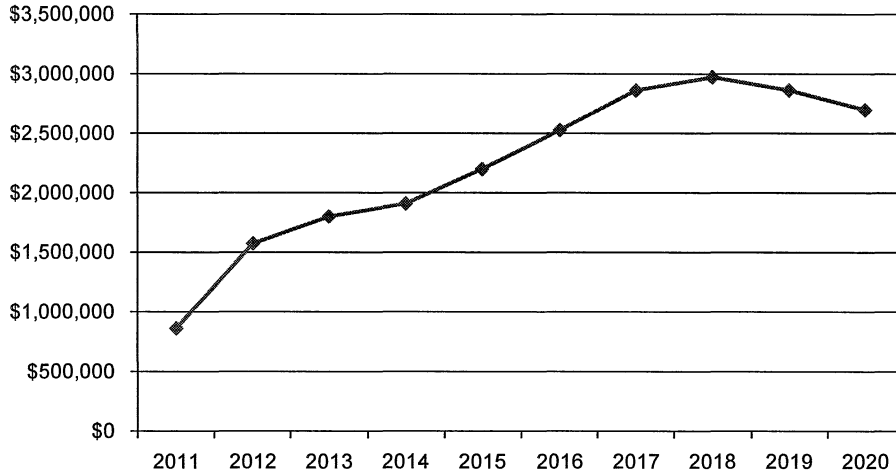
Water and Wastewater Reserve Fund Summary



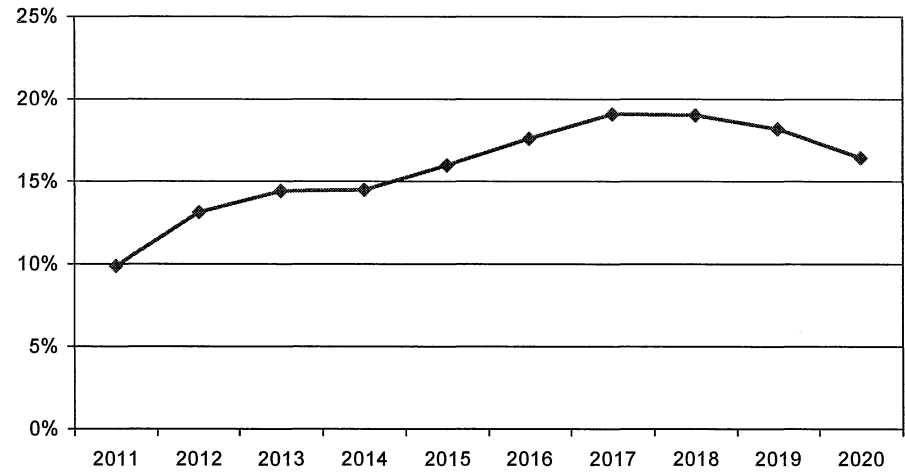
As shown above, while the annual contributions are increasing in water and wastewater in accordance with the City’s capital contribution policy, and in an effort to keep the City’s Debt Policy of debt issuance at \$3 million or less each year, the consolidated water and wastewater reserves are projected to stay in a positive position throughout the plan. Reserves are currently being managed on a combined basis. Moving forward, legislation requires that reserves be managed independently. The combined reserves remain in a positive position throughout the 10 year period.

**Water Debt Summary**

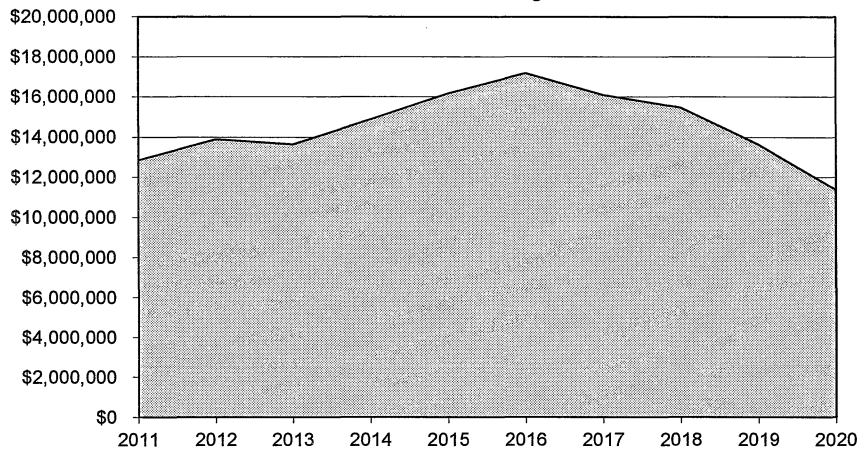
Water Debt Charges



Water Debt Charges as a % of Water Rate Revenues



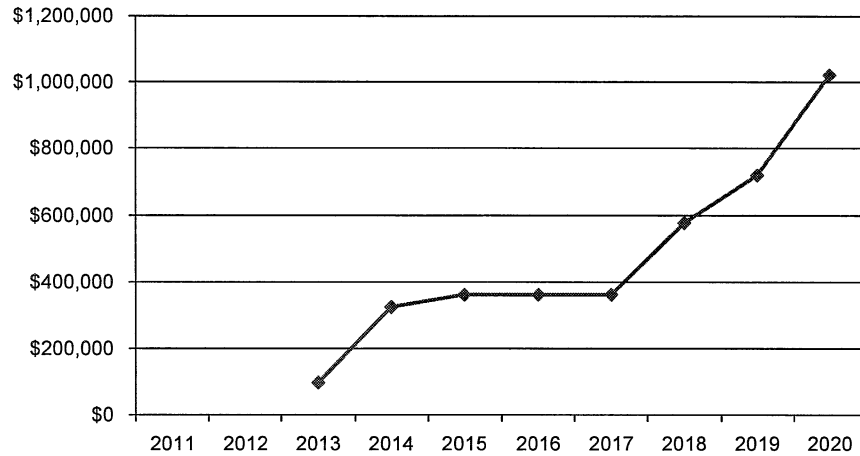
Water Debt Outstanding



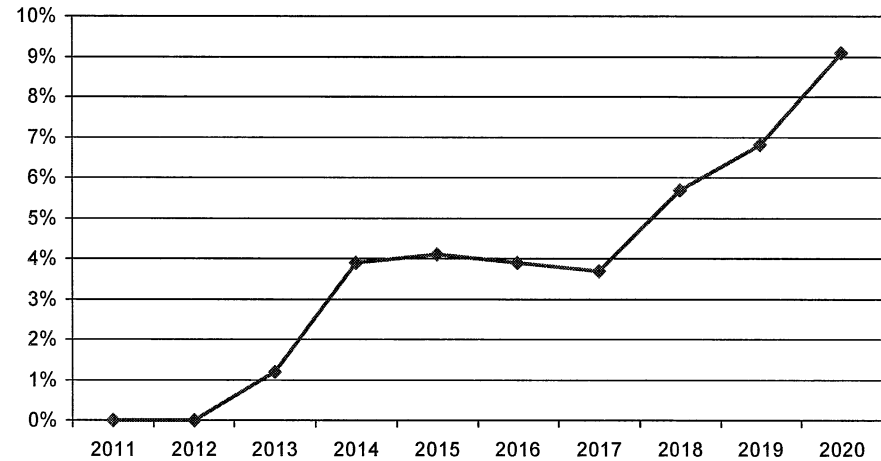
As shown in the graphs, the City's debt charges are increasing in Water until 2019 but remains below the OMB requirement of 25% throughout the plan.

**Wastewater Debt Summary**

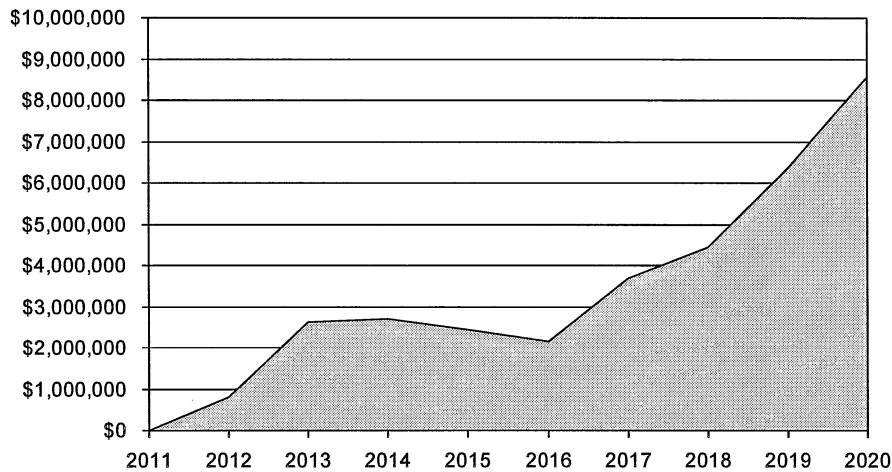
WW Debt Charges



WW Debt Charges as a % of WW Rate Revenues



WW Debt Outstanding



As shown in the graphs, the City's debt charges are increasing in Wastewater but remains below the OMB requirement of 25% throughout the plan.

**Summary of Operating Budget Requirements**

The City’s objective in establishing the Water and Wastewater rates is to avoid large fluctuations from year to year and to ensure rates are set at a level to adequately cover current operating costs, maintain and repair the City’s existing asset base and replace assets where appropriate.

Efforts are being made in this plan to gradually grow/maintain the Reserves to provide a source of funding for the ongoing replacement/refurbishment of capital assets. The following tables reflect the forecast expenditure requirements.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Rate Revenue Requirements	\$ (9,467,100)	\$ (11,419,032)	\$ (11,935,262)	\$ (12,481,262)	\$ (13,057,478)	\$ (13,663,433)	\$ (14,301,726)	\$ (14,975,040)	\$ (15,032,144)	\$ (15,791,899)
Wastewater Rate Revenue Requirements	\$ (9,034,100)	\$ (8,202,462)	\$ (8,584,614)	\$ (8,985,740)	\$ (9,406,798)	\$ (9,848,797)	\$ (10,312,795)	\$ (10,799,902)	\$ (11,311,289)	\$ (11,848,181)
Total Rate Revenue Requirements	\$ (18,501,200)	\$ (19,621,494)	\$ (20,519,876)	\$ (21,467,001)	\$ (22,464,276)	\$ (23,512,230)	\$ (24,614,520)	\$ (25,774,943)	\$ (26,343,433)	\$ (27,640,080)
% change in Water		20.6%	4.5%	4.6%	4.6%	4.6%	4.7%	4.7%	0.4%	5.1%
% change in Wastewater		-9.2%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
Total % change		6.1%	4.6%	4.6%	4.6%	4.7%	4.7%	4.7%	2.2%	4.9%

As shown above the annual increases in consolidated water and wastewater expenditures range from 2.2% to 4.9% from 2013 to 2020.

**Supporting Policies and Recommendations**

***Stabilization Reserves***

The purpose of Stabilization reserves is to provide a contingency for unforeseen events and stabilize fluctuations caused by one-time expenditures or revenue shortfalls. The City of North Bay currently does not have separate stabilization reserves for its water, wastewater operations which is recommended in the future. Water and wastewater operations are volatile and highly contingent on weather and economic conditions, therefore, based on best practice research, the target balance for these stabilization reserves should be set at 10% - 15% of expenditures. Funding for these reserves should be from future years operating surpluses.

***Recommendation***

That separate water and wastewater stabilization reserves be established with a target balance of 10% - 15% of expenditures

***Capital Reserves***

Best practice research reflects a need to ensure that there are sufficient capital reserves available for the timely replacement/refurbishment of assets. Accumulated deferred maintenance has a cost. Regular reviews of remaining life and condition of assets are required to determine the annual reserve contributions to ensure that infrastructure rehabilitation/replacement schedules can be met.

***Recommendation***

That an analysis be undertaken, of the condition and lifecycle of the underlying water, wastewater assets to determine the appropriate annual transfers required to ensure that sufficient funds are available for the timely replacement of the assets.

**Supporting Policies and Recommendations**

***Rate Structure***

The City of North Bay is embarking on a universal metering program. Despite industry trends in rate making, as stated by the Canadian Waterworks Association (CWWA), there is and always will be a lot of variation in rate setting practices given that there is no single rate setting approach or rate structure. A variety of alternative rate structures can be used, depending on the goals and objectives of the municipality. Manuals published by the American Waterworks Association (AWWA), the CWWA and InfraGuide describe a number of options for developing and setting rates which should be taken into account in the recommendations for an appropriate rate structure for the City of North Bay.

The rate structure selected by a municipality should achieve cost recovery objectives and an equitable allocation of costs among customers. Other local objectives such as revenue stability, economic development and conservation should also be considered in rate structure design.

***Recommendation***

That after the implementation of water meters, the City of North Bay establish goals and objectives related to water and wastewater and review the rate structure to ensure that it is aligned with the established goals and objectives.

**Supporting Policies and Recommendations**

***The Long Range Financial Plan is Dynamic***

Although great effort has been made to present accurate financial projections, based upon the data available at this time, LRFP is a dynamic document and should be updated and re-evaluated on an ongoing basis. It is anticipated that updates to the LRFP will:

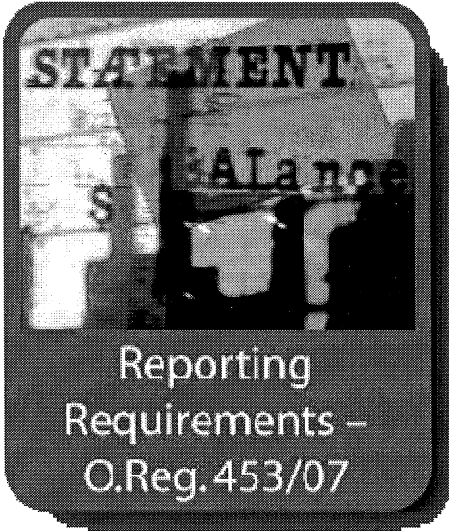
- Amend the assumptions, projections and strategies, as required, based on changes in the municipal environment
- Continue building awareness of the results of 10-year projections of current operating and capital spending and funding levels
- Assist the City in determining the extent of its financial challenges
- Reconfirm the key financial goals and strategies that should guide future planning
- Spur the development of actions in future business plans that would respond to the long-term strategies

***Recommendation***

That the assumptions used in the LRFP be modified and refined at least annually, as new information becomes available that materially changes the forecast.



Reporting Requirements—O.Reg. 453/07



**Water and Wastewater Reporting Requirements—O.Reg. 453/07**

While the O. Reg. 453/07 only applies to Water, the City has prepared statements for both water and wastewater operations. Paragraph 4 of subsection 3(1) of the regulation requires that financial plans include the following:

1. Details of the proposed or projected **financial position** of the drinking water system itemized by:
  - a. total financial assets
  - b. total liabilities
  - c. net debt
  - d. non-financial assets that are tangible capital assets, tangible capital assets under-construction, inventories of supplies and prepaid expenses
  - e. changes in tangible capital assets that are additions, donations, write-downs and disposals
2. Details of the proposed or projected **financial operations** of the drinking water system itemized by:
  - a. Total revenues, further itemized by water rates, user charges and other revenues
  - b. Total expenditures itemized by amortization expenses, interest expenses and other expenses
  - c. Annual surplus or deficit
  - d. Accumulated surplus or deficit
3. Details of the drinking water systems proposed or projected gross **cash receipts or gross cash payments (cash Flows)** itemized by:
  - a. Operating transactions that are cash received from revenues, cash paid for operating expenses and financing charges
  - b. Capital transactions that are proceeds on sale of tangible capital assets and cash used to acquire capital assets
  - c. Investing transactions that are acquisitions and disposal of investments
  - d. Financial transactions that are proceeds from the issuance of debt and debt repayment
  - e. Changes in cash and cash equivalents during the year
  - f. Cash and cash equivalents at the beginning and end of the year

**Statement of Financial Operations—Water**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Water Total Revenues</b>										
Rate Revenues	\$ 9,467,100	\$ 11,419,032	\$ 11,935,262	\$ 12,481,262	\$ 13,057,478	\$ 13,663,433	\$ 14,301,726	\$ 14,975,040	\$ 15,032,144	\$ 15,791,899
Proceeds from Other Sources	\$ 3,525,000	\$ 1,887,500	\$ 1,893,500	\$ 4,837,000	\$ 218,500	\$ 225,000	\$ 232,000	\$ 239,000	\$ 246,000	\$ 253,500
Interest Revenues	\$ 12,375	\$ 20,242	\$ 52,399	\$ 64,963	\$ 118,504	\$ 56,247	\$ 34,387	\$ 29,015	\$ 48,525	\$ 67,978
Miscellaneous Revenues	\$ 155,000	\$ 158,100	\$ 161,262	\$ 164,487	\$ 167,777	\$ 171,133	\$ 174,555	\$ 178,046	\$ 181,607	\$ 185,239
<b>Total Revenues</b>	<b>\$ 13,159,475</b>	<b>\$ 13,484,874</b>	<b>\$ 14,042,423</b>	<b>\$ 17,547,711</b>	<b>\$ 13,562,259</b>	<b>\$ 14,115,812</b>	<b>\$ 14,742,668</b>	<b>\$ 15,421,102</b>	<b>\$ 15,508,276</b>	<b>\$ 16,298,616</b>
<b>Water Total Expenses</b>										
<b>Water Distribution</b>										
Personnel Costs	\$ 1,802,195	\$ 1,838,239	\$ 1,875,004	\$ 1,912,504	\$ 1,950,754	\$ 1,989,769	\$ 2,029,564	\$ 2,070,156	\$ 2,111,559	\$ 2,153,790
Purchase of Goods	\$ 432,500	\$ 441,150	\$ 449,973	\$ 458,972	\$ 468,152	\$ 477,515	\$ 487,065	\$ 496,807	\$ 506,743	\$ 516,878
Services and Rents	\$ 623,200	\$ 635,664	\$ 648,377	\$ 661,345	\$ 674,572	\$ 688,063	\$ 701,824	\$ 715,861	\$ 730,178	\$ 744,782
Internal Transfers	\$ 623,000	\$ 635,460	\$ 648,169	\$ 661,133	\$ 674,355	\$ 687,842	\$ 701,599	\$ 715,631	\$ 729,944	\$ 744,543
Cost Allocations	\$ 583,000	\$ 594,660	\$ 606,553	\$ 618,684	\$ 631,058	\$ 643,679	\$ 656,553	\$ 669,684	\$ 683,077	\$ 696,739
<b>Water Treatment Plant and Pumping Station</b>										
City Operated	\$ 1,602,400	\$ 1,788,389	\$ 1,842,040	\$ 1,897,302	\$ 1,954,221	\$ 2,012,847	\$ 2,073,233	\$ 2,135,430	\$ 2,199,493	\$ 2,265,477
<b>Total Operating Expenses</b>	<b>\$ 5,666,295</b>	<b>\$ 5,933,562</b>	<b>\$ 6,070,117</b>	<b>\$ 6,209,940</b>	<b>\$ 6,353,111</b>	<b>\$ 6,499,716</b>	<b>\$ 6,649,839</b>	<b>\$ 6,803,568</b>	<b>\$ 6,960,993</b>	<b>\$ 7,122,208</b>
<b>Debt Charges</b>										
Debt Charges - Interest Payments	\$ 260,000	\$ 413,296	\$ 451,950	\$ 445,525	\$ 493,722	\$ 543,068	\$ 580,704	\$ 542,916	\$ 523,483	\$ 458,605
<b>Amortization Expense</b>										
Water Assets	\$ 1,836,311	\$ 1,928,205	\$ 2,018,411	\$ 2,151,618	\$ 2,291,611	\$ 2,411,085	\$ 2,499,731	\$ 2,588,585	\$ 2,660,685	\$ 2,689,378
<b>Total Expenses</b>	<b>\$ 7,762,606</b>	<b>\$ 8,275,062</b>	<b>\$ 8,540,478</b>	<b>\$ 8,807,083</b>	<b>\$ 9,138,445</b>	<b>\$ 9,453,869</b>	<b>\$ 9,730,274</b>	<b>\$ 9,935,068</b>	<b>\$ 10,145,161</b>	<b>\$ 10,270,191</b>
<b>Annual Surplus/(Deficit)</b>	<b>\$ 5,396,869</b>	<b>\$ 5,209,811</b>	<b>\$ 5,501,946</b>	<b>\$ 8,740,629</b>	<b>\$ 4,423,814</b>	<b>\$ 4,661,944</b>	<b>\$ 5,012,394</b>	<b>\$ 5,486,034</b>	<b>\$ 5,363,115</b>	<b>\$ 6,028,425</b>

**Statement of Cash Flow/Cash Receipts—Water**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Revenues</b>	\$ 13,159,475	\$ 13,484,874	\$ 14,042,423	\$ 17,547,711	\$ 13,562,259	\$ 14,115,812	\$ 14,742,668	\$ 15,421,102	\$ 15,508,276	\$ 16,298,616
<b>Cash Paid For</b>										
Operating Costs	\$ 5,666,295	\$ 5,933,562	\$ 6,070,117	\$ 6,209,940	\$ 6,353,111	\$ 6,499,716	\$ 6,649,839	\$ 6,803,568	\$ 6,960,993	\$ 7,122,208
Debt Repayment - Debt Interest	\$ 260,000	\$ 413,296	\$ 451,950	\$ 445,525	\$ 493,722	\$ 543,068	\$ 580,704	\$ 542,916	\$ 523,483	\$ 458,605
<b>Cash Provided From Operating Transactions</b>	\$ 7,233,180	\$ 7,138,016	\$ 7,520,357	\$ 10,892,247	\$ 6,715,425	\$ 7,073,028	\$ 7,512,125	\$ 8,074,618	\$ 8,023,800	\$ 8,717,803
<b>Capital Transactions</b>										
Acquisition of TCA	\$ 8,818,500	\$ 6,892,000	\$ 6,765,500	\$ 9,990,500	\$ 10,499,500	\$ 8,960,500	\$ 6,648,500	\$ 6,664,000	\$ 5,407,500	\$ 2,152,000
<b>Finance Transactions</b>										
Proceeds from Debt Issues	\$ 2,500,000	\$ 2,200,000	\$ 1,100,000	\$ 2,700,000	\$ 3,000,000	\$ 3,000,000	\$ 1,200,000	\$ 1,800,000	\$ 500,000	\$ -
Debt Repayment - Principal	\$ (600,000)	\$ (1,159,717)	\$ (1,352,334)	\$ (1,460,085)	\$ (1,706,198)	\$ (1,986,944)	\$ (2,278,487)	\$ (2,430,247)	\$ (2,338,177)	\$ (2,245,050)
<b>Increase/(Decrease) in Cash Equivalents</b>	\$ 314,680	\$ 1,286,299	\$ 502,523	\$ 2,141,661	\$ (2,490,273)	\$ (874,415)	\$ (214,862)	\$ 780,371	\$ 778,123	\$ 4,320,753
<b>Cash and Cash Equivalents at Beginning Balance</b>	\$ 495,000	\$ 809,680	\$ 2,095,979	\$ 2,598,502	\$ 4,740,163	\$ 2,249,890	\$ 1,375,475	\$ 1,160,613	\$ 1,940,983	\$ 2,719,106
<b>Cash and Cash Equivalents at Ending Balance</b>	\$ 809,680	\$ 2,095,979	\$ 2,598,502	\$ 4,740,163	\$ 2,249,890	\$ 1,375,475	\$ 1,160,613	\$ 1,940,983	\$ 2,719,106	\$ 7,039,859

**Statement of Financial Position—Water**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Financial Assets</b>										
Cash	\$ 809,680	\$ 2,095,979	\$ 2,598,502	\$ 4,740,163	\$ 2,249,890	\$ 1,375,475	\$ 1,160,613	\$ 1,940,983	\$ 2,719,106	\$ 7,039,859
<b>Liabilities</b>										
Debt - Principal Outstanding	\$ 12,850,000	\$ 13,890,283	\$ 13,637,948	\$ 14,877,864	\$ 16,171,666	\$ 17,184,723	\$ 16,106,237	\$ 15,475,990	\$ 13,637,814	\$ 11,392,764
<b>Net Financial Assets</b>	\$ (12,040,320)	\$ (11,794,304)	\$ (11,039,447)	\$ (10,137,701)	\$ (13,921,776)	\$ (15,809,248)	\$ (14,945,624)	\$ (13,535,007)	\$ (10,918,708)	\$ (4,352,906)
<b>Non-Financial Assets</b>										
Tangible Capital Assets	\$ 101,915,754	\$ 106,879,550	\$ 111,626,639	\$ 119,465,521	\$ 127,673,409	\$ 134,222,825	\$ 138,371,594	\$ 142,447,009	\$ 145,193,824	\$ 144,656,446
Accumulated Surplus	\$ 89,875,434	\$ 95,085,246	\$ 100,587,192	\$ 109,327,820	\$ 113,751,633	\$ 118,413,576	\$ 123,425,970	\$ 128,912,002	\$ 134,275,116	\$ 140,303,541
Cash as a % of Net Fixed Assets	0.8%	2.0%	2.3%	4.0%	1.8%	1.0%	0.8%	1.4%	1.9%	4.9%
Debt as a % of Net Fixed Assets	12.6%	13.0%	12.2%	12.5%	12.7%	12.8%	11.6%	10.9%	9.4%	7.9%

The Statement of Financial Position shows that at the end of 2011, the City's water system will be in a net debt position of \$12.0 million and is forecast to be in a net debt position of \$4.4 million in 2020. The accumulated surplus increases from \$89.9 million to \$140.3 million due to an increase in tangible capital assets.

**Statement of Financial Operations—Wastewater**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Wastewater Total Revenues</b>										
Rate Revenues	\$ 9,034,100	\$ 8,202,462	\$ 8,584,614	\$ 8,985,740	\$ 9,406,798	\$ 9,848,797	\$ 10,312,795	\$ 10,799,902	\$ 11,311,289	\$ 11,848,181
Proceeds from Other Sources	\$ 1,275,000	\$ 762,500	\$ 768,500	\$ 1,337,000	\$ 4,218,500	\$ 891,667	\$ 898,667	\$ 9,572,333	\$ 9,579,333	\$ 253,500
Interest Revenues	\$ 8,875	\$ 19,464	\$ -	\$ -	\$ -	\$ 9,724	\$ 36,754	\$ 35,033	\$ 2,963	\$ -
Miscellaneous Revenues	\$ 100,200	\$ 102,204	\$ 104,248	\$ 106,333	\$ 108,460	\$ 110,629	\$ 112,841	\$ 115,098	\$ 117,400	\$ 119,748
<b>Total Revenues</b>	<b>\$ 10,418,175</b>	<b>\$ 9,086,631</b>	<b>\$ 9,457,362</b>	<b>\$ 10,429,073</b>	<b>\$ 13,733,758</b>	<b>\$ 10,860,817</b>	<b>\$ 11,361,057</b>	<b>\$ 20,522,366</b>	<b>\$ 21,010,985</b>	<b>\$ 12,221,429</b>
<b>Wastewater Total Expenses</b>										
<b>Operating Expenses</b>										
Personnel Costs	\$ 1,071,805	\$ 1,093,241	\$ 1,115,106	\$ 1,137,408	\$ 1,160,156	\$ 1,183,359	\$ 1,207,027	\$ 1,231,167	\$ 1,255,790	\$ 1,280,906
Purchase of Goods	\$ 158,600	\$ 161,772	\$ 165,007	\$ 168,308	\$ 171,674	\$ 175,107	\$ 178,609	\$ 182,182	\$ 185,825	\$ 189,542
Services and Rents	\$ 187,300	\$ 191,046	\$ 194,867	\$ 198,764	\$ 202,740	\$ 206,794	\$ 210,930	\$ 215,149	\$ 219,452	\$ 223,841
Internal Transfers	\$ 279,900	\$ 285,498	\$ 291,208	\$ 297,032	\$ 302,973	\$ 309,032	\$ 315,213	\$ 321,517	\$ 327,947	\$ 334,506
<b>Administration</b>										
Cost Allocations	\$ 708,700	\$ 722,874	\$ 737,331	\$ 752,078	\$ 767,120	\$ 782,462	\$ 798,111	\$ 814,074	\$ 830,355	\$ 846,962
<b>WW Treatment Plant and Pumping Station</b>										
City Operated	\$ 1,760,800	\$ 1,929,465	\$ 1,987,349	\$ 2,046,970	\$ 2,108,379	\$ 2,171,630	\$ 2,236,779	\$ 2,303,882	\$ 2,372,999	\$ 2,444,189
<b>Total Operating Expenses</b>	<b>\$ 4,167,105</b>	<b>\$ 4,383,896</b>	<b>\$ 4,490,869</b>	<b>\$ 4,600,560</b>	<b>\$ 4,713,041</b>	<b>\$ 4,828,385</b>	<b>\$ 4,946,669</b>	<b>\$ 5,067,970</b>	<b>\$ 5,192,369</b>	<b>\$ 5,319,946</b>
<b>Debt Charges</b>										
Debt Charges - Interest Payments	\$ -	\$ -	\$ 29,085	\$ 95,582	\$ 97,678	\$ 87,561	\$ 77,054	\$ 131,585	\$ 158,075	\$ 227,298
<b>Amortization Expense</b>										
Wastewater Assets	\$ 1,051,288	\$ 1,140,421	\$ 1,234,335	\$ 1,329,701	\$ 1,412,975	\$ 1,474,181	\$ 1,579,815	\$ 1,811,281	\$ 2,064,395	\$ 2,236,515
<b>Total Expenses</b>	<b>\$ 5,218,393</b>	<b>\$ 5,524,318</b>	<b>\$ 5,754,289</b>	<b>\$ 6,025,843</b>	<b>\$ 6,223,693</b>	<b>\$ 6,390,127</b>	<b>\$ 6,603,538</b>	<b>\$ 7,010,837</b>	<b>\$ 7,414,838</b>	<b>\$ 7,783,759</b>
<b>Annual Surplus/(Deficit)</b>	<b>\$ 5,199,782</b>	<b>\$ 3,562,313</b>	<b>\$ 3,703,073</b>	<b>\$ 4,403,230</b>	<b>\$ 7,510,065</b>	<b>\$ 4,470,689</b>	<b>\$ 4,757,519</b>	<b>\$ 13,511,529</b>	<b>\$ 13,596,147</b>	<b>\$ 4,437,671</b>

**Statement of Cash Flow/Cash Receipts—Wastewater**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Total Revenues</b>	\$ 10,418,175	\$ 9,086,631	\$ 9,457,362	\$ 10,429,073	\$ 13,733,758	\$ 10,860,817	\$ 11,361,057	\$ 20,522,366	\$ 21,010,985	\$ 12,221,429
<b>Cash Paid For</b>										
Operating Costs	\$ 4,167,105	\$ 4,383,896	\$ 4,490,869	\$ 4,600,560	\$ 4,713,041	\$ 4,828,385	\$ 4,946,669	\$ 5,067,970	\$ 5,192,369	\$ 5,319,946
Debt Repayment - Debt Interest	\$ -	\$ -	\$ 29,085	\$ 95,582	\$ 97,678	\$ 87,561	\$ 77,054	\$ 131,585	\$ 158,075	\$ 227,298
<b>Cash Provided From Operating Transactions</b>	\$ 6,251,070	\$ 4,702,734	\$ 4,937,408	\$ 5,732,931	\$ 8,923,040	\$ 5,944,871	\$ 6,337,333	\$ 15,322,811	\$ 15,660,542	\$ 6,674,185
<b>Capital Transactions</b>										
Acquisition of TCA	\$ 5,827,500	\$ 6,685,000	\$ 7,043,500	\$ 7,152,500	\$ 6,245,500	\$ 4,590,500	\$ 7,922,500	\$ 17,360,000	\$ 18,983,500	\$ 12,909,000
<b>Finance Transactions</b>										
Proceeds from Debt Issues	\$ -	\$ 800,000	\$ 1,900,000	\$ 300,000	\$ -	\$ -	\$ 1,800,000	\$ 1,200,000	\$ 2,500,000	\$ 3,000,000
Debt Repayment - Principal	\$ -	\$ -	\$ (67,110)	\$ (229,076)	\$ (263,053)	\$ (273,170)	\$ (283,677)	\$ (445,584)	\$ (563,386)	\$ (794,773)
<b>Increase/(Decrease) in Cash Equivalents</b>	\$ 423,570	\$ (1,182,266)	\$ (273,202)	\$ (1,348,645)	\$ 2,414,487	\$ 1,081,200	\$ (68,843)	\$ (1,282,773)	\$ (1,386,344)	\$ (4,029,587)
<b>Cash and Cash Equivalents at Beginning Balance</b>	\$ 355,000	\$ 778,570	\$ (403,696)	\$ (676,898)	\$ (2,025,542)	\$ 388,945	\$ 1,470,145	\$ 1,401,302	\$ 118,529	\$ (1,267,815)
<b>Cash and Cash Equivalents at Ending Balance</b>	\$ 778,570	\$ (403,696)	\$ (676,898)	\$ (2,025,542)	\$ 388,945	\$ 1,470,145	\$ 1,401,302	\$ 118,529	\$ (1,267,815)	\$ (5,297,402)

**Statement of Financial Position—Wastewater**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Financial Assets</b>										
Cash	\$ 778,570	\$ (403,696)	\$ (676,898)	\$ (2,025,542)	\$ 388,945	\$ 1,470,145	\$ 1,401,302	\$ 118,529	\$ (1,267,815)	\$ (5,297,402)
<b>Liabilities</b>										
Debt - Principal Outstanding	\$ -	\$ 800,000	\$ 2,632,891	\$ 2,703,815	\$ 2,440,762	\$ 2,167,592	\$ 3,683,916	\$ 4,438,332	\$ 6,374,947	\$ 8,580,175
<b>Net Financial Assets</b>	\$ 778,570	\$ (1,203,696)	\$ (3,309,788)	\$ (4,729,357)	\$ (2,051,818)	\$ (697,447)	\$ (2,282,614)	\$ (4,319,804)	\$ (7,642,762)	\$ (13,877,577)
<b>Non-Financial Assets</b>										
Tangible Capital Assets	\$ 55,620,292	\$ 61,164,871	\$ 66,974,036	\$ 72,796,835	\$ 77,629,360	\$ 80,745,679	\$ 87,088,364	\$ 102,637,083	\$ 119,556,188	\$ 130,228,673
Accumulated Surplus	\$ 56,398,862	\$ 59,961,175	\$ 63,664,248	\$ 68,067,478	\$ 75,577,542	\$ 80,048,231	\$ 84,805,750	\$ 98,317,279	\$ 111,913,426	\$ 116,351,096
Cash as a % of Net Fixed Assets	1.4%	-0.7%	-1.0%	-2.8%	0.5%	1.8%	1.6%	0.1%	-1.1%	-4.1%
Debt as a % of Net Fixed Assets	0.0%	1.3%	3.9%	3.7%	3.1%	2.7%	4.2%	4.3%	5.3%	6.6%

The Statement of Financial Position shows that at the end of 2011, the City's wastewater system will be in a net surplus position of \$0.8 million and is forecast to be in a net debt position of \$13.9 million in 2020. The accumulated surplus increases from \$56.4 million to \$116.4 million due to an increase in tangible capital assets.