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<td></td>
<td>Jennifer Moore, Northumberland County</td>
<td>Jan 29 2014</td>
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EXECUTIVE SUMMARY

The County of Northumberland has a diverse inventory of assets that must be in good working order to provide the quality services the County’s citizens have come to expect. The asset management strategy provides an organizational context of asset rehabilitation and replacement needs and prioritizes the corrective works in a consistent, objective and transparent format.

The Asset Management Plan (AMP) documents how the County will manage the assets under our stewardship to provide the level of service our community requires. Key to understanding this process is that assets exist ONLY to provide a SERVICE. If a service is no longer required then the asset is no longer required. Community needs across the Country are not the same and therefore, core to the AM process, is for us to completely understand what the community expects (in the way of services) from the County administration. The plan includes the elements shown in the adjacent figure.

In summary the Plan will document:

- What (assets) do we own?
- What condition are they in?
- What are they worth?
- What do we need to do to them?
- When do we need to do it?
- What will it cost and how will we fund it?

Our first AM Plan covers six (6) major asset groups (additional asset groups will be added as the Plan is updated). For each major asset group there is a separate Appendix which contain specific details. The six groups can be found in the following appendices:

- Appendix 1 - Transportation – Roads
- Appendix 2 - Transportation – Structures
- Appendix 3 - Waste - Material Recovery Facility – Equipment

1 Adapted from Infraguide – Federation of Canadian Municipalities 2005
Appendix 4 - Facilities
Appendix 5 - Social Housing
Appendix 6 - Long Term Care – Golden Plough Lodge

Each appendix contains discussion and analysis specific to the asset group, on the following topics:

- State of the infrastructure
- Levels of service
- Asset Management strategy
- Financial strategy

We anticipate the AM Plan will be updated on a regular basis and during the next cycle of improvements additional County assets will be examined. Future assets to be included are the fleet currently managed by the transportation department, Paramedics fleet and equipment, landfills/transfer stations and corporate departments.

The asset management plan addresses a 60 year horizon, which was considered to be long enough to allow for all of the life cycle treatments needed to achieve the maximum useful life of the assets.

The plan development brought together a wide cross section of county staff led by the Finance Department. Staff from public works, operations, community and social services, long term care, information technology and GIS attended workshops, providing a wide range of data and information. An external consultant was retained to lead the plan development, including support from RIVA Online.

Existing data and reports were used to develop the AMP. Documents such as the County Strategic Plan and the ten year Financial Plan. No new data collection initiatives were undertaken and any concerns with the data used is noted in the report under "Opportunities for improvement".

The County has had significant financial challenges in the past, but is now much more financially stable as we have made up much of the ground previously lost. We continue to project stable increases over the next several years as we continue on the path of financial rebuilding. The 2014 draft budget recommends a 2.5% levy increase which meets the target set by Council.

The majority of the capital expenditures will be directed to the Transportation (50%) and Waste (29%) departments. These departments manage the bulk of the County’s infrastructure. Social Housing and Facilities also manage a significant portion of the County assets. However, most 2014 expenditures are repairs and maintenance.

Since 2009, the revised Public Sector Accounting Board (PSAB) standards have been in place. These standards required that clear definitions of capital be adopted by municipalities. The table below summarizes the acquisition or historic value (PSAB value) for each asset grouping and also their replacement values in current dollars. Of particular note is that the replacement values are almost five times that of their original (book) cost and must be a factor when considering long term financial
sustainability. The County began the development of a long term 10 year plan as part of the 2012 budget process which has been revised as part of the current budget process.

<table>
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</tr>
<tr>
<td>Structures</td>
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<tr>
<td>Material Recovery Facility (Equipment)</td>
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Facilities:

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<tr>
<td>Corporate Buildings</td>
<td>16,292,442</td>
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<tr>
<td>Road Depots</td>
<td>3,804,292</td>
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<td>Material Recovery Facility</td>
<td>4,964,658</td>
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<tr>
<td>Social Housing</td>
<td>12,345,586</td>
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<tr>
<td>Golden Plough Lodge</td>
<td>15,617,336</td>
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<tr>
<td><strong>Totals</strong></td>
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While this long term plan meets operating and basic capital needs, it does not allow the County to make any significant progress in reducing the infrastructure deficit. This is not unique to Northumberland as it is a challenge facing municipalities across the Province. The 10 year forecast projects that the County will be able to fund most projects through a combination of the current year levy and reserves. In the period between 2014 and 2020, the amount of debt principal outstanding should steadily decline. The largest projected new debt at this time would be for the rebuild of the Golden Plough Lodge. It has been included in the long term plan for 2021.

The proposed 2014 budget provides a financial plan to progress initiatives in all departments that are fully aligned with the four focus areas in our strategic plan. The budget incorporates the principals of the County’s mission to be a best practices leader of County government and a collaborative partner with our member municipalities and community partners.

The proposed 2014 budget sees very few changes from previous years. Once again, all major programs and services are maintained. The operations are reasonably well funded and departments are able to effectively deliver services with this proposed budget. The infrastructure needs will be a challenge in the long term but the proposed budget provides the immediate needs identified by each department.

The tough financial decisions over the past decade have led to dramatic improvements in the financial health of the County. Even with the relief from Provincial uploads, the downloaded programs continue to

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2 Values estimated from Consolidated Schedule of Tangible Capital Assets December 31, 2012
be a financial burden. This budget allows the County to stay the course and continue moving toward a sustainable level of funding. The information developed through the AMP process will form a critical component of future budgets and revisions to the long term plan.
REPORT FORMAT

The structure of the report follows the recommendations of the Ministry of Infrastructure. There is a general introduction section followed by a discussion on level of service. Following that there is a brief introduction for each of the following topics:

- State of the infrastructure
- Current and future levels of service
- AM Strategy
- Financial Strategy

Our first AM Plan covers six (6) major asset groups (additional asset groups will be added as the Plan is updated). For each major asset group there is a separate Appendix which contain specific details and covers four topics as illustrated in the graphic. The six groups can be found in the following appendices:

- Appendix 1 - Transportation – Roads
- Appendix 2 - Transportation – Structures
- Appendix 3 - Waste - Material Recovery Facility – Equipment
- Appendix 4 - Facilities
- Appendix 5 - Social Housing
- Appendix 6 - Long Term Care – Golden Plough Lodge

Figure 1 Contents of each appendix
INTRODUCTION

Northumberland County is a thriving, south-eastern Ontario community strategically positioned along Highway 401 to access both Toronto and Kingston within a 1 to 1.5 hour drive. Northumberland County offers a range of living experiences from historic towns to scenic rolling rural areas to spectacular water settings on Rice Lake, the Trent River and Lake Ontario. The County of Northumberland is the upper tier level of municipal government that weaves together seven diverse, yet complementary municipalities. The seven municipalities are:

- Township of Alnwick/Haldimand
- Municipality of Brighton
- Town of Cobourg
- Township of Cramahe
- Township of Hamilton
- Municipality of Port Hope
- Municipality of Trent Hills

SERVICES PROVIDED

The County provides a number of services overseen by the County’s Departments who report to the Chief Administrative Officer as shown below.

- Community and Social Services
- Finance
- Transportation and Waste
- Long Term Care (Golden Plough Lodge)
- County Clerk
- Human Resources
- Economic Development and Tourism
- Northumberland Paramedics
Key County Services

These departments provide the following services:

- Construction and maintenance of roads, bridges and related infrastructure
- County Forest Management
- Agricultural support and liaison
- Corporate Services—CAO, Clerk, Human Resources, Finance
- Emergency Management
- Social Housing
- Information Technology Systems
- Records Management and Archives
- Waste Management Services
- Health and Safety
- Land Ambulance
- Long-term Care Home
- Ontario Early Years Centres
- Ontario Works Administration
- Provincial Offences Act Administration
- Child Care Subsidy Administration
- Economic Development and Tourism
- Facility Management

ASSETS

All of these services require assets to support them. The range of assets supported and managed are as follows:

- Roads
- Bridges & large culverts
- Retaining walls
- County Facilities
- Social Housing facilities
- Long-term care facilities
- Material Recovery Facility (MRF)
- EMS Stations
- Public Works Yards
- Salt and sand storage domes
- Fleet
- The County Forest
- Technology systems

COMMUNITY GOALS

The asset management strategy is an ever-evolving proactive framework of practices and policies under which an organization can consistently manage its infrastructure to meet broader corporate priorities and community goals. The framework will require periodic updates as the County's business and community environment changes.

We completed our Strategic Plan in 2011 and it was adopted by Council January 2012. Our strategic priorities help shape the County's budget, while ensuring we continue to invest in our community for the

greatest return for all and continue to reinvent ourselves so we are well-positioned to attract business into the county.

From this Strategic Plan four focus areas were developed:

1. Economic Renewal & Prosperity
2. Sustainable Infrastructure & Services
3. Supportive Communities
4. Employer/Workplace of Choice

Each year as part of the budget planning process, the eight County departments carry out a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, covering all aspects of their service responsibilities. These situational analyses are key to the identification of the County’s critical priorities for not only the coming year, but also for five to ten years into the future.

The first three focus areas require the development and maintenance of a variety of assets whereas the fourth concerns knowledge management.

PURPOSE OF THE ASSET MANAGEMENT PLAN

The County of Northumberland has a diverse inventory of assets that must be in good working order to provide the quality services the County’s citizens have come to expect. The asset management strategy provides an organizational context of asset rehabilitation and replacement needs and to prioritize the corrective works in a consistent, objective and transparent format.

The Asset Management Plan (AMP) documents how the County will manage the assets under our stewardship to provide the level of service our community requires. Key to understanding this process is that assets exist ONLY to provide a SERVICE. If a service is no longer required then the asset is no longer required. Community needs across the Country are not the same and therefore, core to the AM process, is for us to completely understand what the community expects (in the way of services) from the County administration. The plan includes

![Figure 3 The Asset Management process](image-url)
the elements shown in Figure 3. In summary the Plan will document:

- What (assets) do we own?
- What condition are they in?
- What are they worth?
- What do we need to do to them?
- When do we need to do it?
- What will it cost and how will we fund it?

This plan, the first of its type for the County, will initially cover the following asset groups/types:

- Transportation - Roads
- Transportation - Bridges and major culverts (greater than 3m in diameter) & retaining walls
- Waste management - The Material Recovery Plant
- County Facilities (Courthouse and the County Building)
- Social Housing
- Long term care - Golden Plough Lodge (GPL) Home for the Aged

Responsibilities are shown in the following graphic and the scope of this first AM Plan was determined based on the Provincial Asset Management Plan requirements as well as asset materiality.

Note the responsibility for managing the facilities (buildings) is currently held jointly between the operating department and the Facilities Department.

---

4 Adapted from InfraGuide – Federation of Canadian Municipalities 2005
FUTURE PLANS

We anticipate the AM Plan will be updated on a regular basis and during the next cycle of improvements additional County assets will be included. Future assets to be included are the fleet currently managed by the transportation department, Paramedics, landfills/transfer stations and corporate departments. Some key outcomes from the Plan will be to balance the levels of service expected to the available funding and to ensure that we are doing the right thing to the right asset at the right time.

PLAN TIMELINE

The asset management plan addresses a 60 year horizon, which was considered to be long enough to allow for all of the lifecycle treatments needed to achieve the maximum useful life of the assets. Other plans are likely to address the same timeline with the exception of relatively short lived assets such as fleet and technology.

PLAN DEVELOPMENT APPROACH

The plan development brought together a wide cross section of county staff led by the Finance Department. Staff from public works, operations, community and social services, long term care, information technology and GIS attended workshops, providing a wide range of data and information. An external consultant was retained to lead the plan development, including support from RIVA Online. RIVA Decision Support is an asset analysis, life cycle forecasting and modeling tool. Representatives from other county departments also attended the workshop and review sessions to gain an understanding of the requirements and expectations with regard to future plans.
Project participants (workshop attendees) are shown in the following table.

Table 1 Project participants

<table>
<thead>
<tr>
<th>Department</th>
<th>Participants</th>
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<tr>
<td><strong>Public Works: Transportation and Waste</strong></td>
<td>Mo Pannu Director, Transportation &amp; Waste</td>
</tr>
<tr>
<td>Waste</td>
<td>Karl Allen Manager, Material Recovery Facility</td>
</tr>
<tr>
<td>Waste</td>
<td>Adam McCue Manager, Planning &amp; Technical Support</td>
</tr>
<tr>
<td>Transportation</td>
<td>Cora Tinney GIS Intern</td>
</tr>
<tr>
<td>Waste</td>
<td>Zaina Alhilou Engineer in Training</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>Lisa Horne Manager, Housing Services</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Mike Banks Manager, Environmental Services</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Mark Mills Manager, Road Operations</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Steve Wilson Special Projects Coordinator</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Danny McBride Supervisor</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Steve McConnell Supervisor</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>John Cane Supervisor</td>
</tr>
<tr>
<td>Operations – Roads</td>
<td>Les Holzmann Supervisor</td>
</tr>
<tr>
<td>Operations – Facilities</td>
<td>Mark McIntosh Manager, Facilities</td>
</tr>
<tr>
<td>Operations – Facilities</td>
<td>Crystal Julia Administrative Clerk</td>
</tr>
<tr>
<td>Operations – Facilities</td>
<td>Brandon Upton Maintenance Technician</td>
</tr>
<tr>
<td>Operations – Facilities</td>
<td>Dan Wheeler Maintenance Technician</td>
</tr>
<tr>
<td>Operations – Facilities</td>
<td>Steve White Pluming Inspector</td>
</tr>
<tr>
<td>Administration</td>
<td>Jennifer Moore Director, Finance</td>
</tr>
<tr>
<td>Administration</td>
<td>Glen Dees Manager, Financial Services</td>
</tr>
<tr>
<td>Administration</td>
<td>Matthew Nitsch Manager, Financial Planning</td>
</tr>
<tr>
<td>Administration</td>
<td>Jessica Beckett Intern, Finance</td>
</tr>
<tr>
<td>IT</td>
<td>Larry Dean Manager, IT</td>
</tr>
<tr>
<td>Consultants</td>
<td>Norah Prior Project Manager, Prior &amp; Prior</td>
</tr>
<tr>
<td>Consultants</td>
<td>Dick Edwards AM Specialist, Prior &amp; Prior</td>
</tr>
<tr>
<td>Consultants</td>
<td>Steve Wong AM System Specialist, Prior &amp; Prior</td>
</tr>
<tr>
<td>Consultants</td>
<td>Orest Werbowy RIVA OnLine</td>
</tr>
</tbody>
</table>
In recent years the County has developed a number of strategic documents that have described in part, the purpose and reasoning behind the various services the County provides. These documents are as follows:

- County Strategic Economic Plan 2011-2015
- Cycling Master Plan (2012)
- Salt Management Plan
- Transportation Master Plan – in progress (expected 2015)
- Housing & Homelessness Plan (2013)
- Annual departmental business plans
- Waste Management Plan – in progress
- Asset Management Policy – in progress

All of these strategic planning or master plan documents provide guidance into the services and expectations of the community. They guide the mid-term (5-10 years) tactical goals as well as the annual operational activities. In turn the service expectations are delivered through the assets. This concept is illustrated in Figure 4.

So one of the major goals (and benefits) of developing the AM Plan is to consolidate all of the existing strategic documents to ensure that they are all compatible, transparent and accessible.
As part of the initial work, we teamed with a consultant to, not only guide us through the process, but also to carry out a gap analysis of our current practices and processes. The approach is illustrated in Figure 5.

Essentially we reviewed how we currently operate and compared it to “standard or best practice”. While there is no specific framework developed for public agencies, we used the framework suggested by the IAM which provides guidance to organizations as to how mature our County is in developing an asset management plan and culture. While not a perfect framework, it does provide some useful insight into any shortcomings we may have and therefore opportunities to improve. A summary of the results of this review is available under separate cover.

OPPORTUNITIES FOR IMPROVEMENT

The following opportunities for improvement were identified in the gap analysis (2013).

Organizational

- Finalize the AM Policy and governance framework
- Appoint an AM coordinator

---

5 Institute of Asset Management
Asset Condition and Life Cycle Analysis

- Continue to enhance asset data (completeness and accuracy) for all asset types
- Develop and document a condition inspection/evaluation program for Facilities
- Document existing data collection programs
- Develop a single source for asset data
- Enhance road construction data by recording construction completion history in the GIS asset inventory
- Incorporate any new techniques and practices into the strategy models as they become more commonly used and understood
- Use historic condition indices and future information as they become available to gradually improve the deterioration curve and to enhance knowledge around condition, performance, reliability and asset residual life data
- Update costs as they become available
- Track failure modes (incidences of failure) to better understand consequences of failure and risk of failure.

Process

- Develop processes to capture full life cycle costing data on major asset types to enable life cycle comparisons to be done
- Develop processes to capture maintenance costing data on major asset types (as opposed to activity)
- Develop processes to capture and evaluate effects of various rehabilitation treatments on assets

Levels of Service

- Document current and future LOS
- Develop current and future performance measures’
- Develop stakeholder/customer surveys specific to asset infrastructure levels of service
- Link asset performance to business goals
- Benchmark with other organizations

Long Term Funding Strategy and Plan

- Develop a process for updating long term AM plans

Systems and Data

- Define the requirements, purchase and implement a new Maintenance Management System
- Continue the implementation of a single data repository in GIS
• Identify those work and maintenance activities that would have a major impact on asset condition
• Ensure that all condition data is captured
• Develop a Data Management Plan
  a. Eliminate redundant data sources
  b. Establish data stewards
  c. Develop data standards
  d. Establish a data collection plan for all asset groups

CONTINUOUS IMPROVEMENT PLAN

There are always opportunities to improve the way we carry out our short and long term activities. This is also true for the development of the AM Plan. Figure 6 illustrates the various levels of an AM Plan development.

Some of the data requirements necessary for this first undertaking were not available or we were uncertain of its completeness or accuracy. This is to be expected, especially with the number of changes in responsibility that have occurred since downloading of services and assets began 10-15 years ago.

However, this provides opportunities for the County to put a plan in place to improve the reliability of the data used so that more accurate projections result.

In developing the Plan different asset categories (roads, social housing, facilities) will have different challenges. Some are very mature in that the County has always managed them such as the road asset, whereas the provision of social housing for example is a recent service downloaded from the province in 2002.

Regardless of the asset category, the AM Plan will develop an improvement plan for each one. This will be documented and monitored and revised at each update.

---

6 From the International Infrastructure Management Manual -2011
STATE OF THE LOCAL INFRASTRUCTURE (SOTI)

INTRODUCTION

This section of the AM Plan describes in some detail the assets we own, their condition, measured either by an inspection survey or assumed deterioration based on life expectancy and their respective value. The context of this section in the overall AM Plan is shown on Figure 7.

As mentioned for each of the major asset groups covered in this first Plan, there is a separate appendix and each contain the following sections.

- State of the infrastructure
- Levels of service
- Asset Management strategy
- Financial strategy

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

The confidence level of an asset management plan is determined by examining the factors that influence the integrity and completeness of the plan. The technical projections computed by RIVA Modeling are based on condition data, treatment strategies, as well as history (construction dates). Of these, condition data, where available, is considered to be comprehensive and reliable.

In each of the appendices the current data sources and data management practices are described for the respective asset.

7 www.rivamodeling.com
ASSET PROFILES & INVENTORY

This respective appendix of the report outlines the following:

- The asset types included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the GIS asset register/inventory database. It also addresses:

- Assumptions regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (outstanding) and a condition assessment policy (practice is long standing but no formal policy exists)

ASSET PORTFOLIO VALUE

To understand the County’s investment in public works infrastructure and to focus on the need for renewal, it is helpful to understand the value of the assets in question. Since the introduction of the tangible capital asset reporting standards in 2009 (Public Sector Accounting Board Standard PS 3150), the County has been collecting this data and the tables included in the appendices reflect the current data derived from the PSAB requirements.

ASSUMPTIONS & CONFIDENCE LEVEL

A description of the assumptions made to derive the information together with an assessment as to the confidence level of the data used.
DESIRED LEVELS OF SERVICE (LOS)

INTRODUCTION TO LEVELS OF SERVICE (LOS)

Levels of service fall into a number of categories – customer expectations, legislated which are typically reflected in operational standards such as response times, and technical levels of service such as condition values, which define the practices to be applied to the assets to allow them to meet customer expectations and operational standards.

One of the goals of a well-established asset management program is to match an acceptable level of service to an acceptable level of funding at an acceptable level of risk. This requires that the public accept the level of service on offer at a cost they are willing to support. Council is expected to approve the level of service for which the public is willing to pay. The dialogue needed to understand and manage the complexities in a transparent manner is just beginning. The provincial government has raised the profile of the discussion and a few municipalities have begun the journey.

Legislative standards described in the provincial Minimum Maintenance Standards are likely the most recognizable for most municipalities. These were followed by similar regulations for sidewalk inspection and subsequent maintenance. With the exception of the regulations for bridge inspections, there are few other mandatory requirements for municipalities in Ontario.

With these in mind, some municipalities have initiated level of service reviews to better understand the current levels of service and related costs, and to investigate the options for higher (or lower) levels of service with public input.
The fundamental question we have to ask is:

"ARE WE DELIVERING THE RIGHT SERVICE AT THE RIGHT LEVEL OF SERVICE AT THE RIGHT COST?"

Figure 9 shows the context of levels of service in the AM Plan:

LEVEL OF SERVICE CONCEPTS

Most existing levels of service or performance standards are technical in nature with an implied measurement. That is they are some form of measurement such as congestion level, or number of road patrols or amount of time to bare pavement in winter. A key differentiator with the AM philosophy is that these technical standards must relate to a customer level of service which in turn relates to one or more of the strategic initiatives of the County. To provide some idea of the concept and definitions of these terms as well as usage please refer to Table 2.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service attributes/Community Values</td>
<td>Aspects or characteristics of a service</td>
<td>Accessibility, affordability, reliability, safety</td>
</tr>
<tr>
<td>Levels of Service</td>
<td>What the organization intends to deliver – LoS describe attributes of the service from a customer point of view</td>
<td>Provision of a safe road; Road network is convenient; Transport network offers choices for travel</td>
</tr>
<tr>
<td>Customer performance measure</td>
<td>How the customer receives or experiences the service. These are typically included in public documents and are non-technical.</td>
<td>Appearance of facilities; Ease of dealing with County Staff; %/No of road closures p.a.</td>
</tr>
<tr>
<td>Technical Performance measures</td>
<td>What an organization does to deliver the service. These support customer measures and typically are used internally to measure performance against service levels</td>
<td>% of facilities that meet disability standards; Condition of class 1 roads; %/No of customers within x m of a transit route</td>
</tr>
</tbody>
</table>
With many current AM initiatives underway, some municipalities have initiated level of service reviews to better understand the current levels of service and related costs, and to investigate the options for higher (or lower) levels of service with the public. The County will begin this exercise as part of our improvement plan.

**REASONS FOR DEVELOPING LEVELS OF SERVICE**

One the main objectives of AM planning is to match LoS the County delivers to the LoS expectations of the community.

Every activity contains two factors

- The cost of the service and
- The level of service

AM planning enables the relationship between these two factors to be managed. Well defined LoS can be used to:

- **CONCENTRATE**
  - Focus efforts & resources
  - On agreed on service levels
  - Less “service level by assumption”

- **COMMUNICATE**
  - Service expectations and choices
  - Increased service = increased costs
  - Discussion of trade-offs & risks

- **NEGOTIATE**
  - With Community and Council
  - Service Levels Costs & Budgets
  - Reinvestments for Renewal
PERFORMANCE MEASURES & TARGETS

Key to any level of service is the ability to measure whether the LoS is being achieved. These are often referred to as performance measures (PM) or key performance indicators (KPIs). Again, using the Minimum Maintenance Standards legislation as an example the County tracks how many road patrols are undertaken and records any deficiencies. These measures should apply to both the technical and customer facing service levels and at each level of the organization. The problem in the past has been that most PM/KPIs have been asset or activity based at the operational level with no customer measures. LoS need to include some statement(s) that demonstrate the LoS is being achieved (current and future target).

LoS should be developed for all asset groups and be (SMART), allowing PM/KPIs to be developed to track current and future targets:

- **S**pecific
- **M**easurable & Meaningful
- **A**chievable
- **R**ealistic and
- **T**imely

CURRENT LEVELS OF SERVICE (LOS) & MEASURES

All existing levels of service and (performance) measures have been identified and documented. These are discussed in the respective appendix by major asset group. Figure 10 illustrates this activity in the overall process.
ASSET MANAGEMENT STRATEGY

INTRODUCTION

The AM strategy section describes how we plan to achieve the level of service for the respective asset group. Appendices 1-6 includes sections describing:

- Non-infrastructure solution such as policies
- Life cycle planning strategies
- Demand management and the implication of growth
- Procurement

PROCUREMENT - A COUNTY PERSPECTIVE

In December 2001, a new Municipal Act (*Municipal Act, 2001, S.O. 2001, Chapter 25*), was passed by the Ontario Legislature. The Act gives municipalities a broad new flexibility to deal with local circumstances, and to react quickly to local economic, environmental or social changes. A new feature of the Act is the transparency/accountability provisions aimed at ensuring taxpayers can easily understand how their municipality operates. As part of this requirement, municipalities must develop policies – adopted by bylaw or in the case of local boards by resolutions – that will be used for procuring goods and services. This procurement guide will help municipalities and local boards fulfill this requirement. The County’s *Procurement By-Law 37-11* was passed in Dec 2011. All County departments adhere to this By-Law. Further, this by-law is reviewed and updated every five years at a minimum or more frequently if required.

PROCUREMENT METHODS

Departments work with Purchasing to ensure they are on compliance with the by-law including standard RFP/tenders/etc. Whether it’s an RFP or tender for the purchase may vary but these requirements are documented in the by-law. The only time a department will use different documents is where there is an approved exception under the by-law i.e. service agreements for services provided by agencies on behalf of Social Services and generally these arrangements are for services and do not impact assets.

RISK MANAGEMENT (ASSOCIATED WITH AMP)

The County does not currently have the data to assess risk. Improvement will be planned for the next update. The County is taking steps to work with resources such as our insurers to begin developing risk management plans. These plans will be formally documented and implemented. In the interim, the County relies on the knowledge and experience of qualified staff to ensure significant risks are mitigated through...
the normal operational procedures even though many of these practices have not been formally documented.

**COMPARATIVE ANALYSIS – OPTIONS TO PROVIDE LOS**

True comparative analysis requires the examination of different methods of construction and rehabilitation to ensure that the most economical methods are selected – i.e. lowest life cycle cost (to build and maintain) for any specific asset type. Most organizations have detailed construction specifications and therefore the emphasis in the past few years has been on the maintenance aspects of asset preservation.

Each rehabilitation activity has a (different) cost and provides some (different) expected additional life. How is the decision made to select the lowest life cycle strategy? Which is the most economical? The decision is even more complex when considering multiple rehabilitation activities over the life of the asset.

This type of analysis is often referred to as “advanced asset management” as it requires significant data capture and subsequent analysis. As we are in the early stages of asset management development the County does not currently have the data for comparative assessments. In the interim, as with risk assessment, the County relies on the knowledge and experience of qualified staff as well as technical literature, to ensure that appropriate methods of rehabilitation are selected.
Each year the County budget process kicks off in the late summer to plan for the next year’s financial requirements. The 2014 budget process started even earlier as the budget presentation process has been advanced to the December Council meeting. The advancement will allow even earlier tendering of projects and purchases and hopefully provide more advantageous pricing. This also allows 2014 initiatives to move forward with funding in place. It also demonstrates ongoing improvements in the budget process and long term planning. Beginning in 2012, staff developed a 10 year, long term financial plan for each County department. The long term plan includes both operating revenues and expenditures as well as capital. It projects levy impacts as well as the impacts to debt levels and reserves over the 10 year period. Staff have revised that forecast to include changes in Provincial funding, refining estimates based on new information, prioritizing projects and using reserves to achieve a stable annual levy increase again in 2014. As per direction from County Council, the 2014 draft budget and 10 year financial plan are based on an annual levy increase of 2.5% after assessment growth. This is the 4th consecutive year with a stable levy increase after more than a decade of volatility in the County tax rates.

The draft 2014 budget and long term financial plan are aligned with the County’s Strategic Plan, approved December 14, 2011. The strategic plan identifies four focus areas:

1. Economic Renewal and Prosperity
2. Sustainable Infrastructure and Services
3. Supportive Communities
4. Employer of Choice

The draft budget funds the continuation of all current programs and services although some specific programs will see minor modifications that are the result of changes to Provincial subsidies and/or program guidelines and legislation as well as a continual drive to ensure the best value for the programs delivered by the County. It also identifies financial resources to advance initiatives identified in the strategic plan such as plans to promote economic renewal and prosperity. Each department has prepared business plans and issue papers that clearly map their plans and projects to the corporate strategic plan. The detailed business plans are available on the County website or in printed copy upon request.
Figure 11 provides a clear picture of the actual changes in the County levy compared to inflation and program changes. The green line shows the major decrease in the County levy through the 1990’s when Council was considering “should the County disappear?”

Budgets were slashed across all departments. However, program responsibilities such as County Roads stayed the same, so by 2000 the County’s programs were seriously underfunded. From 1998-2001, a range of former Provincial and Federal programs, such as Social Housing and EMS, were downloaded to the County with daunting financial costs. From 2000-2005, the levy increases were steep as Council struggled to meet its responsibilities to fund and operate all the former and new downloaded services. The red line represents the Consumer Price (CPI) and shows how theoretically the County levy should have been increased to sustain its original program responsibilities only. The blue line is a theoretical line showing how the levy should have been increased from 1993 to today to handle the original and downloaded program responsibilities. While this chart shows significant financial challenges in the past, the County is much more financially stable as we have made up much of the ground previously lost. We continue to project stable increases over the next several years as we continue on the path of financial rebuilding.

IMPACT OF PROVINCIAL UPLOADS/DOWNLOADS

OVERVIEW

The Province recently issued the annual Ontario Municipal Partnership Fund (OMPF) notices to municipalities across the Province. The data reported on these notices does not provide a complete picture of the full impact of Provincial uploads and downloads over the past 15 years. The impacts were covered in detail in the 2013 budget report and given the ongoing financial impact of those changes it is important to include a summary of changes again in 2014.

There were several programs and costs downloaded to the County in 1999-2001. The net levy impact of these programs in 2013 was $22.1M. This reflects the costs incurred by the local taxpayer after any upload benefits. The uploads of ODSP, OW and court security costs began in 2008. Despite the uploads, the County’s annual costs are almost $2.5M higher than they were in 2007 before the uploads started. The downloaded programs currently represent 48% of the County levy.
The County is finally forecasting some relief in the OW costs as a result of the upload now that case loads have leveled off and inflation is relatively stable. Unfortunately, there continues to be increased demand for funding on the downloaded County roads and an ongoing need within Social Housing. The completion of the County’s asset management plan identifies significant funding requirements for future infrastructure needs in both Transportation and Social Housing as well as in departments operated by the County prior to the downloads.

**UPLOAD/DOWNLOAD BACKGROUND**

The ongoing changes to Provincial funding though uploaded costs, downloaded costs and transfer payments has created some confusion as to the actual financial impact of these changes. The recent OMPF funding notifications by the Province are attributing significant benefits to the County as a result of uploading programs. However, the data provided in the OMPF notifications only tells a small piece of the whole story. Data has been collected going back to 1999 to show the broader impact of both the uploaded and downloaded costs.

The County operations were dramatically changed in the late ’90s and early ’00s as the Province downloaded several programs and significantly changed the funding structure of others. In a very short period of time, the County became responsible for many additional programs and services. Unfortunately, this came at a time when the County budget had been ‘gutted’ and could not support the County’s former core programs and services, let alone reasonably accommodate all of the downloaded costs. The County was mandated to operate these programs and to meet all of the legislated requirements of the programs. In order to fund the mandatory downloaded programs in 1999 and beyond, further cuts had to be made to the County’s original budget areas such as Roads and Waste Management.

The impacted programs were:

- Transportation (Hwy 28, 2, 45 & 30 including all bridges and safety devices)
- Paramedics
- Ontario Works
- Social Housing
- Children’s Services
- ODSP
- MPAC
- Health Unit
- Provincial Offences
- Court Security
The table below highlights the levy impact of each downloaded program at several points in time over the past 15 years. For ODSP and OW, the levy impact below is after the upload benefit.

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
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<td>EMS</td>
<td>0</td>
<td>2,009</td>
<td>3,467</td>
<td>4,399</td>
<td>5,601</td>
<td>5,790</td>
<td>5,731</td>
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<td>Social Housing</td>
<td>0</td>
<td>2,353</td>
<td>3,494</td>
<td>4,022</td>
<td>5,156</td>
<td>5,617</td>
<td>5,504</td>
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<tr>
<td>Transportation</td>
<td>0</td>
<td>1,780</td>
<td>4,234</td>
<td>4,342</td>
<td>3,444</td>
<td>3,966</td>
<td>4,631</td>
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<tr>
<td>Ontario Works</td>
<td>2,143</td>
<td>1,637</td>
<td>1,863</td>
<td>2,139</td>
<td>3,000</td>
<td>2,835</td>
<td>2,637</td>
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<tr>
<td>Health Unit</td>
<td>1,234</td>
<td>1,723</td>
<td>1,688</td>
<td>1,655</td>
<td>1,779</td>
<td>1,833</td>
<td>1,878</td>
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<tr>
<td>MPAC</td>
<td>1,016</td>
<td>971</td>
<td>1,129</td>
<td>1,210</td>
<td>1,241</td>
<td>1,328</td>
<td>1,341</td>
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<tr>
<td>Children’s Services</td>
<td>0</td>
<td>589</td>
<td>651</td>
<td>589</td>
<td>644</td>
<td>674</td>
<td>602</td>
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<tr>
<td>Court Security</td>
<td>0</td>
<td>0</td>
<td>252</td>
<td>303</td>
<td>303</td>
<td>275</td>
<td>253</td>
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<td>ODSP</td>
<td>3,622</td>
<td>3,453</td>
<td>4,661</td>
<td>3,916</td>
<td>0</td>
<td>0</td>
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<td>POA</td>
<td>(438)</td>
<td>(572)</td>
<td>(804)</td>
<td>(878)</td>
<td>(604)</td>
<td>(421)</td>
<td>(504)</td>
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<tr>
<td><strong>Levy Impact</strong></td>
<td><strong>7,577</strong></td>
<td><strong>13,943</strong></td>
<td><strong>20,635</strong></td>
<td><strong>21,697</strong></td>
<td><strong>20,564</strong></td>
<td><strong>21,897</strong></td>
<td><strong>22,073</strong></td>
</tr>
<tr>
<td>OMPF Funding</td>
<td>0</td>
<td>(167)</td>
<td>(167)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Total Levy Impact</strong></td>
<td><strong>7,577</strong></td>
<td><strong>13,776</strong></td>
<td><strong>20,468</strong></td>
<td><strong>21,697</strong></td>
<td><strong>20,564</strong></td>
<td><strong>21,897</strong></td>
<td><strong>22,073</strong></td>
</tr>
</tbody>
</table>

**CURRENT UPLOAD BENEFITS**

The 2014 OMPF notifications from the Province identify an estimated $9.3M in upload benefit for the County. Unfortunately, several components of this number are calculated by the Province and County staff are unable to reproduce the provincial calculations. The upload can be divided into two types of benefits: OW and ODSP.

As mentioned above, the ODSP upload has created some room within the County to budget to help rebuild the budgets for other underfunded programs as well as complete some capital projects. However, the benefit of $6.3M reported by the Province is drastically overstated. The County actually paid $4.7M in 2007. This equates to approximately $5.5M in 2013 dollars after adjusting for annual levy increases. The County levy increases have been far less than the estimated 5%+ annual increases to the ODSP program being incurred by the Province. The County may have theoretically incurred those expenses if we continued to pay for the program but this is not the case. The County has not realized benefits of the magnitude suggested by the Province in their reporting.
Similarly, the Province has estimated an OW upload benefit of $1.7M in 2014. The County expects to see a real benefit in 2014 for the first time since the OW uploads began. Until this year, the County’s share of OW costs have increased faster than the upload. During the period of the upload, the County’s OW costs have increased almost $1M which has been funded through the levy.

The upload of costs to the Province has benefited the County. However, this benefit needs to be considered in relation to the cost increases in the other downloaded programs which more than offset the budget savings. The downloaded programs represented approximately half of the County’s 2013 budget and will again in 2014. As noted previously, the upload has created some budget flexibility for the County but unfortunately there are still significant financial pressures within other departments.

### 2014 BUDGET OVERVIEW

The 2014 draft budget recommends a 2.5% levy increase which meets the target set by Council. This increase is somewhat higher than the 2013 inflation rate of 1.1% as reported by Statistics Canada for the month of September 2013. However, core inflation was reported at 1.3%. The annual inflation rate is effectively unchanged to the same month in 2012. The sustained period of lower inflation as well as the general economic conditions have benefitted the County in several ways:

- Purchases of capital and equipment have been trending less than anticipated and in some cases less than historical costs due to the strong competition for business
- Fuel and utility prices have remained stable
- Asphalt cement prices have been favourable

Many of the County’s expenditures move independently of inflation such as social services programs and long term care. Additionally, the County has not fully re-established sustainable budgets for all departments such as transportation and waste. Therefore, we will continue to slightly outpace inflation in the near term. That said, the current economic climate has allowed the County to gain some ground with reserves being increased and consideration being given to future infrastructure needs.

In 2013, the County benefitted from:

- Generally mild to normal winter weather
- Stable asphalt cement prices
- Competitive markets producing favourable pricing for most tenders and RFPs
- Higher than expected POA revenues
- More stable fuel and utility prices and
- Provincial subsidies for Paramedics, long term care and most Social Services programs met or exceeded budget expectations
However, the County was financially challenged by:

- Lower than expected Waste revenues
- Changes to funding for specific programs such as child care and
- OMERS rate increase

All of these trends have been reflected in the 2014 budget in addition to other factors including:

- Additional 11.4% upload to the Province for the County’s portion of OW program costs in 2014
- Reserve allocations for future projects
- Use of conservative estimates where Provincial subsidies are subject to change or unconfirmed for 2014
### Table 3 The 2014 draft budget (cash basis)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levy</td>
<td>43.3M</td>
<td>45.0M</td>
<td>46.6M</td>
</tr>
<tr>
<td>Grants &amp; Subsidies</td>
<td>29.8M</td>
<td>31.0M</td>
<td>32.8M</td>
</tr>
<tr>
<td>Other Revenue</td>
<td>15.1M</td>
<td>15.8M</td>
<td>15.9M</td>
</tr>
<tr>
<td>Debenture</td>
<td>3.2M</td>
<td>3.2M</td>
<td>3.2M</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$91.4M</td>
<td>$95.0M</td>
<td>$98.5M</td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating</td>
<td>77.0M</td>
<td>80.3M</td>
<td>81.5M</td>
</tr>
<tr>
<td>Capital</td>
<td>14.9M</td>
<td>14.4M</td>
<td>17.2M</td>
</tr>
<tr>
<td>Debt Principal Repayment</td>
<td>1.2M</td>
<td>1.3M</td>
<td>1.3M</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td>$93.1M</td>
<td>$96.0M</td>
<td>$100.0M</td>
</tr>
<tr>
<td><strong>Reserves</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer to Reserve</td>
<td>3.9M</td>
<td>3.5M</td>
<td>3.9M</td>
</tr>
<tr>
<td>Prior Year Project Carryover</td>
<td>(2.5M)</td>
<td>(3.0M)</td>
<td>(3.2M)</td>
</tr>
<tr>
<td>Transfer from Reserve</td>
<td>(3.1M)</td>
<td>(1.5M)</td>
<td>(2.2M)</td>
</tr>
<tr>
<td><strong>Net Change in Reserves</strong></td>
<td>($1.7M)</td>
<td>($1.0M)</td>
<td>(1.5M)</td>
</tr>
<tr>
<td><strong>Total Expenditures &amp; Reserves</strong></td>
<td>$91.4M</td>
<td>$95.0M</td>
<td>$98.5M</td>
</tr>
</tbody>
</table>
Table 4 The 2014 draft budget (accrual basis)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Budget</td>
<td>91.4M</td>
<td>95.0M</td>
<td>98.5M</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Debt Principal Repayment</td>
<td>1.2M</td>
<td>1.3M</td>
<td>1.5M</td>
</tr>
<tr>
<td>• Capital</td>
<td>14.9M</td>
<td>14.4M</td>
<td>17.2M</td>
</tr>
<tr>
<td>• Debenture Financing</td>
<td>3.2M</td>
<td>3.2M</td>
<td>3.2M</td>
</tr>
<tr>
<td></td>
<td>($19.3M)</td>
<td>($18.9M)</td>
<td>($21.9M)</td>
</tr>
<tr>
<td>Add:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Amortization</td>
<td>$7.9M</td>
<td>$7.7M</td>
<td>8.2M</td>
</tr>
<tr>
<td>• Future Employee Benefits Liability</td>
<td>0.2M</td>
<td>0.2M</td>
<td>0.2M</td>
</tr>
<tr>
<td>• Landfill Post Closure Liability</td>
<td>0.2M</td>
<td>0.2M</td>
<td>0.5M</td>
</tr>
<tr>
<td></td>
<td>$8.3M</td>
<td>$8.1M</td>
<td>$8.9M</td>
</tr>
<tr>
<td>Accrual Based Budget</td>
<td>$80.4M</td>
<td>$84.2M</td>
<td>$85.5M</td>
</tr>
</tbody>
</table>
LEVY

Each County department is funded through multiple sources. The proposed $46.60M levy is split across the County operating departments as outlined in the graph below. Approximately 32% of the levy is directed to the Transportation division as the Federal Gas Tax is the only other significant source of revenue for roads maintenance and construction projects. About 23% of the levy goes to the Community and Social Services division. This is split almost evenly between Social Housing and Social Services programs. Paramedics require 12% of the levy to fund the County’s portion of operating costs as well as capital. The Waste division receives about 10% of the levy and the Golden Plough Lodge is allocated 8% of the levy. Waste has multiple other sources of revenue such as bag tags, tipping fees and the sale of recycled materials. The Golden Plough Lodge receives a Provincial subsidy and accommodation revenue from residents in addition to the levy. A further 7% of the levy funds the County’s required payments to the Health Unit and MPAC. The balance of the levy funds various smaller departments including Economic Development, Tourism, the Forest and Emergency Planning and Health and Safety. The relative departmental levy allocations for 2014 are effectively the same as the prior year.

Figure 12 2014 Levy by department
The County funds its programs, services and infrastructure through a number of sources. The largest single source of revenue, almost 50%, is the property taxes or the tax levy. An additional 34% of County operations are funded by grants and subsidies from the Provincial and Federal governments. Several departments generate significant revenue for their programs through rents, sale of recycled materials, accommodation fees for long term care and Provincial Offences fines.

Figure 13 Revenue sources
In 2014, approximately 42% of operating expenditures will be spent on staffing costs due to the fact that many services provided by the County are labour intensive such as long term care and paramedics. About 22% of the County's operating budget is spent on Social Services programs although a significant portion of these costs are flow-through dollars and are funded directly by the Province. The County spends 14% of their operating costs on contract services which include all forms of services including engineering, auditing, legal, repairs and maintenance and a number of other specialized services.

The majority of the capital expenditures will be directed to the Transportation (50%) and Waste (29%) departments. These departments manage the bulk of the County's infrastructure. Social Housing and Facilities also manage a significant portion of the County assets. However, most 2014 expenditures are repairs and maintenance. The most notable change from 2013 is the increase in capital for Economic Development with the agri-food project. The balance of the capital budget will be spent in Paramedics and at the Golden Plough Lodge.
Key capital projects & purchases in 2014 include:

- Remediation of the Eagleson landfill site (deferred from prior years)
- Roads and bridge work
- Development of an accessible forest trail
- Ontario Agri-food Venture Centre
- Closure and final cover of Seymour landfill
- MRF container line upgrade
- Equipment replacement
  - Snow Plow
  - 2 ½ ton trucks, 1 1 ton truck
  - Vacuum excavator and flusher unit
  - 10 ton trailer
  - Excavator
  - Skidsteer
- Social Housing and corporate building upgrades and equipment replacement

**Figure 15 2013 Capital expenditures**

Since 2009, the revised Public Sector Accounting Board (PSAB) standards have been in place. These standards required that clear definitions of capital be adopted by municipalities. Capital is generally defined as new or replacement projects or purchases greater than $5,000 with a useful life of more than one year. Where high value purchases are made to improve or expand upon an existing asset, it is measured against specific criteria to determine whether it will be recorded as a capital or operating expenditure. Examples of the criteria include extending the useful life of the asset and the value of the improvements relative to the total value of that asset.
10 YEAR FINANCIAL PLAN

The development of a long term financial plan is essential to ensuring the ongoing financial sustainability of the County. A long term plan requires staff to identify future needs and creates a financial roadmap to ensure those needs can be meet without creating significant and unexpected tax increases. A thorough understanding of long term needs and related costs is essential to achieving sustainable infrastructure and services. The financial plan developed by staff projects annual 2.5% levy increases. This was achieved through the balancing of priorities across the County’s operating departments and using reserves to stabilize levy increases and minimize the need for debt.

The Bank of Canada’s target range for inflation is 1 to 3 percent with the monetary policy aimed at the 2% target midpoint. Staff assumed this level of inflation for the purpose of the long term plan with slightly higher factors for more volatile items such as utilities and fuel. Some assumptions were revised downward for 2014 with exceptionally low inflation levels and a stabilization of utility prices. Where future prices are extremely difficult to project on a 10 year horizon such as asphalt, a lump sum amount has been used with project specifications to be increased or decreased as funding permits.

A long term plan is an ‘evergreen’ document or a constant work in progress. The first 10 year plan was developed as part of the 2012 budget process. Changes in legislation, unplanned events such as severe weather, and the economy can all have dramatic impacts on one or many years. Therefore, the original document has been revised as part of the current budget process to reflect new information such as changes to Provincial subsidies or current economic conditions. The chart below depicts the volatility in the levy increases/decreases between 1993 and 2009. The long term financial plan projects a steady level of increases at 2.5%. This modest level of increase should allow the County to continue providing services at the current level. While this rate of levy increase will allow us to meet our immediate needs, it will not be sufficient in the long term to adequately address major infrastructure needs such as bridge reconstruction and the eventual replacement of major corporate and housing assets. The County will require funding from Provincial and Federal governments or take on additional debt as large infrastructure replacements are required in the longer term.

Figure 16 Levy increases/decreases between 1993 and 2009

% Change in Levy
While this long term plan meets operating and basic capital needs, it does not allow the County to make any significant progress in reducing the infrastructure deficit. This is not unique to Northumberland as it is a challenge facing municipalities across the Province.

Projects that are on the horizon for 2022 and beyond are:

- Golden Plough Lodge rebuild as mandated by the Ministry of Health and Long Term Care
- Several major bridge projects including Campbellford
- Implementation of the Waste Master Plan including organics and landfill space
- Implementation of the Transportation Master Plan
- Social Housing repairs & maintenance needs as well as demand for increased affordable housing across the County

RESERVES

Reserves are an important tool for long term planning. As part of the long term planning process, reserves are being set aside to pay for future capital projects and unexpected operating expenses such as extreme weather events.

The County’s reserve position has improved dramatically over the past 5 years. However, we continue to fall short of the Provincial average when looking at reserve contributions as a percentage of operating expenses. The portion of departmental budgets allocated to reserves has increased but planned reserve contributions need to be further enhanced in future budgets. The Ministry of Municipal Affairs and Housing has assigned a risk rating of low based on the County’s level of reserves in 2012. While this metric is important, it should be noted that MMAH uses all reserves for its evaluation. In 2012, this included $3.0M in project carryovers which were only established as temporary reserves. Even after adjusting for the temporary reserves, the County has made significant progress in building reserves.

Table 5 Total reserves and discretionary reserve funds as a % of operating expenses

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>6.1%</td>
<td>23.9%</td>
</tr>
<tr>
<td>2008</td>
<td>10.0%</td>
<td>28.1%</td>
</tr>
<tr>
<td>2009</td>
<td>12.9%</td>
<td>30.7%</td>
</tr>
<tr>
<td>2010</td>
<td>13.9%</td>
<td>30.9%</td>
</tr>
<tr>
<td>2011</td>
<td>27.3%</td>
<td>35.0%</td>
</tr>
<tr>
<td>2012</td>
<td>34.2%</td>
<td>37.1%</td>
</tr>
</tbody>
</table>

The County’s reserves as a percentage of operating expenses have steadily increased between 2007 and 2012. There has been significant progress to increase reserve contributions. However, the ongoing operational needs will continue to prevent reserve contributions from accelerating as quickly as required. The development of a long term financial plan identifies future capital needs and provides a plan for ongoing reserve contributions and withdrawals for major capital projects. Given the number of major projects coming up in the next 10-20 years, the County’s reserves will need to continue to grow.

The preliminary data available from the Asset Management Plan suggests that despite efforts to save for future projects, the County will still fall far short of the funds needed for infrastructure over the next several decades. The data presented above is helpful to illustrate our progress. However, benchmarking
against other upper tier municipalities should be done with caution. Each municipality provides a different range of programs and services and operate different infrastructure. The trends are useful but it is not an ‘apples to apples’ comparison.

Figure 17 Forecasted yearend reserve balance

<table>
<thead>
<tr>
<th>Reserve</th>
<th>2013 (est)</th>
<th>2014 Additions</th>
<th>2014 Reductions</th>
<th>2014 (est)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Funds/General Reserve</td>
<td>8,441,783</td>
<td>460,000</td>
<td>120,000</td>
<td>8,781,783</td>
</tr>
<tr>
<td>Social Housing Reserve</td>
<td>6,031,007</td>
<td>1,170,196</td>
<td>280,000</td>
<td>6,921,203</td>
</tr>
<tr>
<td>WSIB Reserve</td>
<td>2,722,439</td>
<td>150,000</td>
<td></td>
<td>2,872,439</td>
</tr>
<tr>
<td>GPL Rebuild Reserve</td>
<td>1,708,000</td>
<td>545,000</td>
<td></td>
<td>2,253,000</td>
</tr>
<tr>
<td>Waste Services Capital Reserve</td>
<td>1,432,804</td>
<td>1,150,000</td>
<td>613,491</td>
<td>1,969,313</td>
</tr>
<tr>
<td>Roads Operating Reserve</td>
<td>1,000,000</td>
<td></td>
<td></td>
<td>1,000,000</td>
</tr>
<tr>
<td>Social Services Reserve</td>
<td>699,000</td>
<td></td>
<td>45,000</td>
<td>654,000</td>
</tr>
<tr>
<td>Ambulance Base Reserve</td>
<td>433,000</td>
<td>50,000</td>
<td></td>
<td>483,000</td>
</tr>
<tr>
<td>EMS Vehicle &amp; Equipment Reserve</td>
<td>472,021</td>
<td></td>
<td></td>
<td>472,021</td>
</tr>
<tr>
<td>Emergency Planning Reserve</td>
<td>424,124</td>
<td>20,000</td>
<td>20,000</td>
<td>424,124</td>
</tr>
<tr>
<td>Roads Construction Reserve</td>
<td>2,319,033</td>
<td>95,000</td>
<td>2,075,700</td>
<td>338,333</td>
</tr>
<tr>
<td>Human Resources Reserve</td>
<td>300,000</td>
<td></td>
<td></td>
<td>300,000</td>
</tr>
<tr>
<td>Roads Capital Reserve</td>
<td>231,787</td>
<td></td>
<td></td>
<td>231,787</td>
</tr>
<tr>
<td>Insurance Claims Reserve</td>
<td>93,930</td>
<td>100,000</td>
<td>50,000</td>
<td>143,930</td>
</tr>
</tbody>
</table>

There will be a minimum of $3.2M placed in reserves at the end of 2013 to carryover funds for projects that were incomplete at yearend (primarily roads and several smaller projects). Estimated yearend reserve balances are detailed in the chart below. At this time, a firm target of reserve balances has not been established but the development of a reserve strategy is a priority for 2014 now that the asset management data is available. The targets have been based on projections of future needs and developed on a department by department basis.
<table>
<thead>
<tr>
<th>Reserve</th>
<th>2013 (est)</th>
<th>2014 Additions</th>
<th>2014 Reductions</th>
<th>2014 (est)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPL Capital Reserve</td>
<td>145,458</td>
<td></td>
<td>15,000</td>
<td>130,458</td>
</tr>
<tr>
<td>Workplace Safety Program Reserve</td>
<td>64,468</td>
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<td>64,468</td>
<td></td>
</tr>
<tr>
<td>GPL Donations Reserve</td>
<td>42,176</td>
<td></td>
<td>42,176</td>
<td></td>
</tr>
<tr>
<td>Other Operating Reserves</td>
<td>34,550</td>
<td></td>
<td>20,400</td>
<td>14,150</td>
</tr>
<tr>
<td>IT/Phone System Replacement Reserve</td>
<td>63,000</td>
<td>21,000</td>
<td>84,000</td>
<td></td>
</tr>
<tr>
<td>Ec Dev and Tourism Operating Reserve</td>
<td>34,000</td>
<td></td>
<td>34,000</td>
<td></td>
</tr>
<tr>
<td>Facilities Capital Reserve</td>
<td>548,065</td>
<td>66,000</td>
<td>750,000</td>
<td>(135,935)</td>
</tr>
<tr>
<td>Forest Reserve</td>
<td>38,216</td>
<td>38,217</td>
<td>300,000</td>
<td>(223,567)</td>
</tr>
<tr>
<td>Technological Reserve (Ec Dev)</td>
<td>298,057</td>
<td>150,000</td>
<td>1,050,009</td>
<td>(601,953)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$27,576,917</td>
<td>$4,015,412</td>
<td>$5,457,601</td>
<td>$26,134,728</td>
</tr>
</tbody>
</table>

Other liquidity measures indicate significant improvements in the cash position of the County and these measures are directly related to the improved reserve position. The Total Cash & Temporary Investments as a % of Operating Expenditures as well as Net Working Capital as a % of Total Municipal Operating Expenditures were rated by MMAH as low risk and moderate risk respectively. The Net Working Capital metric was downgraded in 2011 to moderate risk. This reflects a reduction in the cash account and an increase in investments. The investments are primarily short to moderate term in nature and remain fairly liquid. Therefore, the risk is less than that presented in the MMAH data.

**Figure 18** Total cash & temporary investments as a % of operating expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4.3%</td>
<td>30.1%</td>
</tr>
<tr>
<td>2008</td>
<td>9.8%</td>
<td>36.4%</td>
</tr>
<tr>
<td>2009</td>
<td>8.3%</td>
<td>36.8%</td>
</tr>
<tr>
<td>2010</td>
<td>17.3%</td>
<td>37.4%</td>
</tr>
<tr>
<td>2011</td>
<td>32.1%</td>
<td>41.8%</td>
</tr>
<tr>
<td>2012</td>
<td>39.3%</td>
<td>44.9%</td>
</tr>
</tbody>
</table>

**Figure 19** Net working capital as a % of total municipal operating expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-0.5%</td>
<td>23.3%</td>
</tr>
<tr>
<td>2008</td>
<td>5.4%</td>
<td>28.0%</td>
</tr>
<tr>
<td>2009</td>
<td>7.1%</td>
<td>27.8%</td>
</tr>
<tr>
<td>2010</td>
<td>13.4%</td>
<td>26.3%</td>
</tr>
<tr>
<td>2011</td>
<td>8.3%</td>
<td>27.5%</td>
</tr>
<tr>
<td>2012</td>
<td>4.6%</td>
<td>30.2%</td>
</tr>
</tbody>
</table>
DEBT

The County’s debt level continues to be at a very manageable level. It is well below the annual repayment limit set by MMAH. Debt has been added slowly over the past 5 years in order to finance large capital projects that could not be funded without debentures. There was no new debt incurred in 2012 or 2013 so progress has been made to pay down the principal outstanding. However, the Eagleson Landfill remediation project may be funded through debt in 2014. This was approved in previous budgets however, it was deferred pending Ministry approvals. Given the favourable reserve position and the relatively low return on investments, we evaluate internally ‘loaning’ the funds to the Waste department rather than assuming external debt. A full business case analysis will completed once the project is moving forward to fund the project in the most effective manner.

The 10 year forecast projects that the County will be able to fund most projects through a combination of the current year levy and reserves. In the period between 2014 and 2020, the amount of debt principal outstanding should steadily decline. The largest projected new debt at this time would be for the rebuild of the Golden Plough Lodge. It has been included in the long term plan for 2021. The project has not been developed sufficiently to have detailed cost estimates available. Therefore, $30M has been used as a placeholder which is expected to cover the rebuild cost and allow for some cost escalation over the 10 year period. Some reserves are being set aside over the next 10 years and it is anticipated that over $20M of the project will be funded through a long term debenture.

Figure 20 Forecasted yearend debt (principal)

The debt repayment schedule below also shows that the amount of budget dollars required to service the debt will steadily decrease until 2020. The County’s annual debt repayment remains well below the
maximum permitted (Annual Repayment Limit) by the Province. The 2013 limit set by the Province was $12,711,000.

Figure 21 Debt repayment schedule

MMAH provides two sustainability metrics to identify concerns with a municipality’s ability to continue to pay for servicing long term debt commitments. The County’s position had weakened for both of these metrics due to the increase in long term debt since 2006 but showed improvement with no new debt in 2012. The Net Financial Assets or Net Debt as a % of Own Purpose Taxation metric is rated low as well as the risk rating for Net Financial Assets or Net Debt as a % of Total Operating Revenue. This metric should show steady improvement as there is no new debt planned in the next 5 years.

Table 6 Net financial assets or net debt as a % of total operating revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-25.4%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>2008</td>
<td>-19.9%</td>
<td>6.1%</td>
</tr>
<tr>
<td>2009</td>
<td>-25.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td>2010</td>
<td>-34.2%</td>
<td>3.0%</td>
</tr>
<tr>
<td>2011</td>
<td>-22.0%</td>
<td>5.5%</td>
</tr>
<tr>
<td>2012</td>
<td>-27.3%</td>
<td>10.6%</td>
</tr>
</tbody>
</table>

The recent debt has been at relatively low interest rates which is not reflected in the metrics. These low rates have helped keep the cost to service debt at a minimum. The metric measuring debt servicing cost continues to be risk rated as low by MMAH and the County remains very close to the provincial averages.
The 2014 draft budget provides a financial plan to progress initiatives in all departments that are fully aligned with the four focus areas in our strategic plan. The budget incorporates the principles of the County’s mission to be a best practices leader of County government and a collaborative partner with our member municipalities and community partners.

The proposed 2014 budget sees very few changes from previous years. Once again, all major programs and services are maintained. The operations are reasonably well funded and departments are able to effectively deliver services with this proposed budget. There continues to be some challenges with Provincial funding within Social Services. However, while funding is still not adequate in areas such as long term care, there has been progress made in recent years. Costs are generally being contained with departments being able to accomplish more with the same or less funding.

The infrastructure needs will be a challenge in the long term but the proposed budget provides the immediate needs identified by each department. The budget allows for some reserve contributions as we continue to look forward.

The tough financial decisions over the past decade have led to dramatic improvements in the financial health of the County. Even with the relief from Provincial uploads, the downloaded programs continue to be a financial burden. This budget allows the County to stay the course and continue moving toward a sustainable level of funding.

Table 7  Debt servicing cost as a % of total operating revenue

<table>
<thead>
<tr>
<th></th>
<th>County</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2008</td>
<td>1.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td>2009</td>
<td>1.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>2010</td>
<td>2.1%</td>
<td>1.9%</td>
</tr>
<tr>
<td>2011</td>
<td>2.3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2012</td>
<td>2.2%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
APPENDIX 1 – TRANSPORTATION - ROADS

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESMENT POLICY & PRACTICES

The County of Northumberland completes a condition survey of our road network every two years. In 2012, our staff completed the biennial update of the pavement condition index (PCI) survey using the evaluation system developed by the Ontario Good Roads Association. This system provides a series of standardized factors used to develop a “snapshot” of the physical condition of the entire road network.

The PCI survey is the foundation for the development of the 5-year road construction program, along with traffic count updates and collision data. The road network is composed of road sections that are reasonably consistent throughout their length according to the following factors: roadside environment, surface type, condition, cross section, speed limit or a combination of these factors.

Field data is obtained through a visual examination of the road system and includes: structural adequacy, level of service, maintenance demand, horizontal and vertical alignment, surface and shoulder width, surface condition, and drainage. Field data is collected using a Flexible Pavement Condition Evaluation Form, measuring the severity and density of distress, as well as ride comfort. The PCI is then calculated using the Riding Condition (RCR) and Surface Distress Manifestation (DMI,) resulting in a number between 0 and 100. The PCI rating largely determines the priority of road rehabilitation and reconstruction, as each road section is classified as ‘Now’, ‘ 1 to 5’ or ‘6 to 10’ year needs based on the PCI. In addition, any service expansions, such as turning lanes, for new developments are taken into consideration. The associated costs for these projects are based on previous years rehabilitation or construction costs, the type of construction (i.e. urban or rural) and type of rehabilitation (i.e. shave and pave, cold in place, expanded or overlay).

The average PCI is summarized into five (5) groups and defined as follows:

<table>
<thead>
<tr>
<th>Condition</th>
<th>PCI Rating</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>&gt;85</td>
<td>Requiring little or no maintenance or rehabilitation</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>76 to 85</td>
<td>Requires rehabilitation within 6-10 years</td>
</tr>
<tr>
<td>1 to 5 years</td>
<td>56 to 75</td>
<td>Requires rehabilitation within 1-5 years</td>
</tr>
<tr>
<td>Now - Rehabilitate</td>
<td>50 to 55</td>
<td>Requires rehabilitation within the next year</td>
</tr>
<tr>
<td>Now - Reconstruct</td>
<td>&lt;50</td>
<td>Requires reconstruction within the next year</td>
</tr>
</tbody>
</table>
This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the GIS inventory database and various excel databases. It also addresses:

- Assumptions and confidence levels regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (to be documented) and a condition assessment policy (practice is long standing but no formal policy exists)

### ASSET PROFILES & INVENTORY

The major roadway asset types that are managed by the department are shown in the following table. In this first AM Plan, only the roads and structures have been addressed. Structures are discussed in Appendix 2.

**Table 8 Major asset types - roads, structures**

<table>
<thead>
<tr>
<th>Major Asset Type</th>
<th>Sub Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>County Class 1 through 6</td>
</tr>
<tr>
<td></td>
<td>Asphalt surface</td>
</tr>
<tr>
<td></td>
<td>Surface treated</td>
</tr>
<tr>
<td>Structures</td>
<td>Bridges</td>
</tr>
<tr>
<td></td>
<td>Culverts &gt;3m</td>
</tr>
<tr>
<td></td>
<td>Retaining Walls</td>
</tr>
<tr>
<td>Drainage</td>
<td>Curbs &amp; Gutter</td>
</tr>
<tr>
<td></td>
<td>Storm Sewer</td>
</tr>
<tr>
<td></td>
<td>Catch basins and ditch inlets</td>
</tr>
<tr>
<td></td>
<td>Minor culverts &lt;3m</td>
</tr>
<tr>
<td></td>
<td>Ditch systems</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>Concrete</td>
</tr>
<tr>
<td></td>
<td>Asphalt</td>
</tr>
<tr>
<td>Safety devices/hardware</td>
<td>Traffic Signs</td>
</tr>
<tr>
<td></td>
<td>Cable Guide Rail and Steel Beam Guide Rail</td>
</tr>
<tr>
<td></td>
<td>Guide rails</td>
</tr>
<tr>
<td></td>
<td>Warning lights</td>
</tr>
<tr>
<td></td>
<td>Pavement markings</td>
</tr>
</tbody>
</table>
### Road classification system

The following road functional classifications are used in the Road Needs program. Treatment strategies are evaluated based on combination of pavement type, road classification and the underlying sub-base.

#### i. Classification by pavement type

The Road Needs program uses the following pavement (surface) type classifications. The quantity of county roads that fall into each class is shown in the next table.

- Paved (asphalt cement)
- Surface treated

**Table 9 Road inventory by surface type**

<table>
<thead>
<tr>
<th>By surface type</th>
<th>Length (km)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C (asphalt cement)</td>
<td>409.51</td>
<td>82%</td>
</tr>
<tr>
<td>Surface treated</td>
<td>93.65</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>503.16</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### ii. Classification by traffic characteristics

The county road network is also analysed and managed using a hierarchical system that reflects both the volume of traffic (average annual daily traffic or AADT) and the posted speed limit. The categories or classes are based on standards described in the provincial guidelines for maintenance standards and is based on *Ontario Regulation 239/02*. The quantity of county roads that fall into each class is shown below. Note that while there are six (6) functional classes the County road network falls exclusively into classes 2 through 4.
Table 10 Road inventory by functional class

<table>
<thead>
<tr>
<th>Functional Class</th>
<th>Length (km)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2</td>
<td>40.61</td>
<td>8%</td>
</tr>
<tr>
<td>Class 3</td>
<td>347.78</td>
<td>69%</td>
</tr>
<tr>
<td>Class 4</td>
<td>114.76</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>503.15</td>
<td></td>
</tr>
</tbody>
</table>

Figure 22 Percent of road inventory by functional class

1. Also, it is important to note that Northumberland County has approximately 121km of roadway designated as an Emergency Detour Route for Highway 401 when closures occur and therefore experience heavy traffic volumes during this time. Over the past five years, there have been, on average, five Highway 401 closures a year that require traffic to use a portion of the Emergency Detour Route through Northumberland County.

ASSET PORTFOLIO VALUE

- The acquisition/historical cost is the cost of originally acquiring the asset. The total roads acquisition value was estimated from the County’s Tangible Capital Asset (TCA) data (a combined valuation of roads and structures) using 85.27% of the total: $136,615,187 Eighty-five point two seven is the approximate split of their replacement values. The valuations shown below were then distributed in the same ratio as their replacement value.
- The depreciated Cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the
NRBCPI$^8$ index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.

- The replacement Cost is the estimated cost of replacing the asset in current dollars. The following replacement costs (per kilometer) were used to develop the valuations is shown in Table 11:

Table 11 Summary of pavement reconstruction / replacement cost by surface type

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Classification by surface type</th>
<th>Estimated Reconstruction Cost per km$^9$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavement</td>
<td>Paved rural arterial (asphalt cement)</td>
<td>$1,75M</td>
</tr>
<tr>
<td></td>
<td>Paved urban cross-section arterial</td>
<td>$1,75M</td>
</tr>
<tr>
<td></td>
<td>Surface treated</td>
<td>$70,000</td>
</tr>
</tbody>
</table>

Table 12 Financial Valuations - Roads

<table>
<thead>
<tr>
<th>Financial Valuations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Type</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>A/C (asphalt cement)</td>
</tr>
<tr>
<td>Surface Treated</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

$^{8}$ Non-residential Building Construction Price index
$^{9}$ These costs include: surface, base and sub-base
$^{10}$ Values estimated from Consolidated Schedule of Tangible Capital Assets December 31, 2012
INSTALLATION PROFILES

This chart shows the age distribution of the road network. The current age is derived from the as recorded construction date or implied installation date. The “Count” (y-axis) reflects the number of road sections. The County road network has been separated into 205 sections.
CONDITION PROFILES

The following charts show the breakdown of the current condition of the road network assets using the condition groupings below. The health/condition profiles are shown by road section count and length. Additional metrics are also included which show the distribution of the existing PCI by road classification.

<table>
<thead>
<tr>
<th>Condition</th>
<th>PCI Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>&gt;85</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>76 to 85</td>
</tr>
<tr>
<td>1 to 5 years</td>
<td>56 to 75</td>
</tr>
<tr>
<td>Now - Rehabilitate</td>
<td>&lt; 56</td>
</tr>
</tbody>
</table>

*Figure 23 Road condition profile by section count*
Figure 24 Road condition profile by length (kms)

Health Profile

<table>
<thead>
<tr>
<th>Condition</th>
<th>Length (kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>100</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>125</td>
</tr>
<tr>
<td>1 to 5 years</td>
<td>150</td>
</tr>
<tr>
<td>Now...</td>
<td>25</td>
</tr>
</tbody>
</table>

Average PCI by Road Class

Average PCI by Surface Type

Average PCI

Class 2  | 70
Class 3  | 70
Class 4  | 70

Asphalt Cement | Surface Treated
CONSUMPTION PROFILES

This chart shows how much of their estimated lives have been consumed. Using the assumptions discussed in the following section the chart shows that almost 200 (of the 205) road sections have reached 70% of its life expectancy or 500kms (of the 503 kms.).

Consumption profile of Roads by road section
LEVELED OF SERVICE

The Department maintains and repairs the road system in compliance with The Municipal Act, The Public Transportation and Highway Improvement Act and The Highway Traffic Act. In 2002, Ontario Regulation 239/02, Minimum Maintenance Standards for Municipal Highways, Ontario Regulation 104/97, Standards for Bridges became law, which specifies requirements for road maintenance. This applies to both summer maintenance activities as well as snow and ice removal in the winter.
In order to provide summer and winter maintenance and operations, the County Roads department has a fleet of 45 vehicles ranging from snow plows to excavators and operates out of two maintenance yards equipped with sand domes, garages, equipment and materials storage, etc.

The primary services (winter control, road maintenance and capital improvements) are accomplished through county forces. Larger rehabilitation and resurfacing projects are completed by contracted services.

The table below summarizes the average PCI of our road network from 2003 to 2012 survey.

**Table 13 2003-2012 PCI range**

|--------------------|--------| |--------| |--------| |--------| |--------| |--------| |
| Adequate >85       |       |  | 121.92 |  | 24%     |  | 245.22 |  | 49%     |  |
| 6 to 10 years      | 76 to 85 |  | 152.29 |  | 30%     |  | 86.09  |  | 17%     |  |
| 1 to 5 years       | 56 to 75 |  | 209.34 |  | 42%     |  | 119.86 |  | 24%     |  |
| Now - Reconstruct  | 50 to 55 |  | 19.54  |  | 4%      |  | 51.53  |  | 10%     |  |
| Now - Reconstruct  | <50    |  |        |  |        |  |        |  |        |  |

The change in PCI between 2003 and 2012 is shown in Table 13 and Figure 25
The average target condition PCI level for our road network is 70 and was selected under County Council direction. A PCI of 70 for a regional type of municipality like Northumberland County is considered an adequate rating.

The current road network average is 74. While this average exceeds the target PCI, the road section conditions range from a low of 30 to a high of 96 and the County is working towards having all roads meet the target standard. In addition, as a result of the recent Federal stimulus funding the average condition has greatly improved – an artificial jump as this funding has now ended. Also the Department has concerns over the level of confidence in the condition data collected during the most recent update and plans to re-examine the data with more objectivity.

ISSUES IMPACTING LEVELS OF SERVICE (LOS)

Changing expectations of motorists

Population growth and the resulting increased traffic volumes will place continuing pressures on roadway capacity. The aging of the population will lead to pressures to upgrade the general safety aspects of the roadway system. Older drivers on more congested roads will need larger factors of safety to maintain and lessen existing accident levels.
As drivers who are accustomed to higher standards in urban areas such as the Greater Toronto Area relocate to Northumberland County, driver expectations are raised with respect to road standards and the potential for accidents and litigation increases.

Increasingly, road authorities are involved in litigation related to road maintenance, design and installation of various road elements such as exposed bridge abutments, unprotected embankments, road conditions due to weather impacts, etc. This provides an increasing incentive to ensure proper construction and maintenance of our County road system.

**Legislative**

In February 2010, the Legislative assembly of Ontario passed into a law making several additional amendments to O. Reg. 239/02 Minimum Maintenance Standards for municipal highways under the municipal act. One of the changes was under section 11 pertaining to roadway signs. Under section 11 (0.1) the minimum standard for frequency of inspecting regulatory and warning signs to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is changed to once per year (Reg. 23/10, s. 7 (1)).

A recent legal decision in an Ontario Court that dismissed a Township’s reliance on meeting the Minimum Maintenance Standards as a defense will exert more pressure for higher maintenance standards and additional financial pressures on the County.

Increasingly road authorities are involved in litigation related to the design and installation of various road elements such as exposed bridge abutments, unprotected embankments, etc. This provides increasing incentive to ensure proper construction and maintenance of our County road system.
ASSET MANAGEMENT STRATEGY

NON-INFRASTRUCTURE SOLUTIONS

The non-infrastructure solutions to roads asset management are limited given that there is a significant rural component to the community. Other modes of transportation are extremely limited in this setting. In fact, there is increased demand for the roads infrastructure to support other methods of transportation such as cycling as society tries to reduce the impact of vehicles. Public transit is only available in the most urban areas and creates an infrastructure demand on the lower tier municipalities with little or no change to the use of County assets.

LIFECYCLE PLANNING - STRATEGIES

Proposed strategy

The roads construction program addresses ongoing management of four main components of the County Roads System:

- Pavement Rehabilitation and Maintenance
- Traffic Safety Measures (traffic signals, guiderail)
- Bridge Rehabilitation and Maintenance (covered in Appendix 2)
- System Expansions (turning lanes, bike paths, new structures)

Pavement rehabilitation and maintenance

Research and statistical evidence into the most timely and cost effective cycle of pavement resurfacing for a County level road indicates that most hot mix asphalt pavements placed on a sound road base will perform well for 18-20 years. If the road receives a major resurfacing at that time, the new pavement can be counted on to perform well for a further 18-20 years. If an asphalt pavement is down more than 20-22 years, the road structure will start to deteriorate more rapidly and there is a real risk of losing the road base entirely. This happens when the native sub-base material (i.e. the natural ground underneath the gravel) start to pump up into the granular base. Once this happens, the road can no longer be resurfaced and must be reconstructed at a cost of roughly 7 times the cost of resurfacing. The corresponding lifespan for a surface treated road is 5 years.

With this information in mind, we can determine a base resurfacing budget that will allow us to reduce the need for doing costly road reconstruction. As shown in Table 10, in order for the County to complete resurfacing in the recommended time frame, we should be completing the following amount of resurfacing each year:

- 21.4 km of surface treated roads;
• 18.45 km of paved rural roads; and,
• 1.4 km of paved urban roads.

The cost to complete the recommended (minimum or base) resurfacing programs would be $8.4 million as shown in Table 14.

Table 14 Recommended resurfacing base budget

<table>
<thead>
<tr>
<th>Type of Road</th>
<th>Total kms</th>
<th>Recommended Resurfacing Frequency</th>
<th>kms/year</th>
<th>Cost/km</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface treated</td>
<td>107</td>
<td>5 years</td>
<td>21.4</td>
<td>$15,000</td>
<td>$321,000</td>
</tr>
<tr>
<td>Paved (rural)</td>
<td>369</td>
<td>20 years</td>
<td>18.45</td>
<td>$400,000</td>
<td>$7,380,000</td>
</tr>
<tr>
<td>Paved (urban)</td>
<td>28</td>
<td>20 years</td>
<td>1.4</td>
<td>$500,000</td>
<td>$700,000</td>
</tr>
</tbody>
</table>

Recommended Base Budget for Resurfacing $8,401,000

Table 15 Pavement rehabilitation treatments

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Condition</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crack Sealing</td>
<td>Where cracks occur</td>
<td>3 years after resurfacing or reconstruction</td>
</tr>
<tr>
<td>Micro surfacing</td>
<td>When condition is still generally good, usually at 76-85 (6-10 years)</td>
<td>A minor treatment to sustain and prolong pavement life; intervention at appropriate time between major treatments</td>
</tr>
<tr>
<td>Shave and Pave</td>
<td>When surface condition is deteriorating but the underlying structure is still good, and curb exists to allow for such treatment; future deterioration is likely moderate</td>
<td>A major treatment in lieu of removal of curbs and full road excavation</td>
</tr>
<tr>
<td>Overlay</td>
<td>Similar to Mill and Overlay, except it applies to roads without curbs</td>
<td>In lieu of expanded asphalt, cold in place or pulverizing</td>
</tr>
<tr>
<td>Expanded/Cold-in-place</td>
<td>When surface condition is poor but the underlying structure is still good, and future deterioration of the substructure is likely moderate</td>
<td>A major treatment in lieu of reconstruction</td>
</tr>
<tr>
<td>Re-construction</td>
<td>When surface and underlying structure conditions are poor; and future deterioration even with repavement is likely severe</td>
<td>A complete reconstruction</td>
</tr>
</tbody>
</table>
Maintenance activities

Maintenance activities are undertaken as part of planned maintenance and in response to complaints or failures. They are the responsibility of the Operations Division of the Transportation Department. Maintenance activities include:

- Hot mix patching
- Cold mix patching
- Shouldering (gravel shoulders)
- Utility cut preparation and support
- Utility cut from utility companies and complaints
- Crack sealing
- Infrared maintenance
- Sweeping
- Grass cutting
- Guide rail repairs and installation
- Tree/brush removal
- Road ditching
- Flood control
- Debris pick-up
- Catch basin cleaning and repairs
- Traffic sign repairs and installation
- Traffic signal maintenance and repairs
- Street light maintenance and repairs

The annual maintenance program identifies activities (using inspections and the Maintenance Management System - MMS) that preserve the County’s infrastructure. The goal is to provide the highest possible LoS with available resources.

DEMAND MANAGEMENT

The County has been growing at a historic rate of between 1 and 1.5%. The County is in the process of developing a Transportation Master Plan and is currently in the Request for Proposal (RFP) stage.

Transportation system expansion

The County does not have a general Development Charges (DC) By-Law and generally does not collect fees for development. The exception is in Cobourg’s east end which does have DC. However, during any development submission the County actively seeks and receives cost-sharing from the developer for any modifications to the infrastructure due to the development.
As part of the 2013 work plan, the Transportation Department intends to commence the master planning review of the County’s transportation system in an effort to rationalize the transportation network to ensure continuity and consistency.

**PROCUREMENT**

We adhere to Procurement By-Law 37.11.

The primary services include winter control, road maintenance and capital improvements, which is accomplished through a blend of county forces and private contractors.

The County procures third party resources for both operational services and construction. While both have standards and guidelines, neither subscribes to performance based contracting at this time. All pavement treatments are performed by third party contractors with inspection activities provided by County and third party staff.

For work (any service provided to the County - purchasing, engineering services or contractor services) costing less than $50,000 (award of work does not require Council approval within the annual department budget):

- A Request for Quotation (RFQ) may be sent out, at the discretion of the engineer, to at least three selected consultants or contractors. The lowest bidder is awarded the work. This procedure is generally followed when the work is already determined by County staff.

- A Request for Proposal (RFP) may be sent out to retain consultants. This procedure is generally followed when the work is not determined by the County. A two-step evaluation of the received proposals takes place:
  1. The proposals are evaluated based on technical merit. Only those earning a passing percentage, as identified in the RFP, move on to the next stage of the evaluation process.
  2. The price of the passing proposals is disclosed. The consultant with the highest combined rating of technical merit and price is awarded the work.

For work costing more than $50,000 (award of work requires Council approval):

- An RFQ may be issued as indicated above. Rarely used for work valued over $50,000.

- An RFP may be issued as indicated above.

- A Tender may be issued to retain a consultant or a contractor based on the nature of the work. In this case, the work usually involves major reconstruction work. Award of the work is based solely on the lowest bid, given that the bidder meets all other requirements set by the County.
FINANCE STRATEGY

BACKGROUND

The mandatory road maintenance program is funded from base levy funds as the County endeavours to meet the needs of the travelling public, to support the movement of goods and services throughout our region and to support growth. Cost-of-living increases are typically experienced in the areas of materials and supplies used in road maintenance activities, such as fuel, road salt, gravel, negotiated contract settlements and other products.

The overall condition of the transportation system is a reflection of an attractive and prosperous community and it is imperative that the County develop a self-sustaining base capital budget needed to sustain the vital transportation infrastructure.

EXPENDITURE FORECAST

2013 BUDGET

The 2013 Transportation department budget is $19.8M. This includes road maintenance for winter and summer, surface treatment and construction activities. The department is primarily funded by the levy but also receives Federal Gas Tax funding. The department also receives full cost recovery for providing surface treatment services to the member municipalities.

It has been a priority to ramp-up the Roads and Bridges construction budget. The budget includes increases to the roads construction base budget by $400k and the bridge program by $100k. A further $560k is included to fund the replacement of equipment which is part of the 10 year capital plan. Also related to the 10 year capital plan $300k to build an additional four bay vehicle storage building at the Cobourg Yard.

In addition to the ongoing maintenance and construction work scheduled for 2013, the Transportation Department will:

- Develop a Transportation Master Plan
- Implement the Cycling Master Plan
- Consider special area development charges
- Continue to work on Environmental Assessments for County Road 2 and the Campbellford Bridge

Almost $8M will be spent on improving the County’s 503km road system in 2013.
**ACTUAL EXPENDITURES**

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non–infrastructure solutions</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Repairs and Maintenance</td>
<td>3,659,348</td>
<td>4,148,639</td>
<td>4,057,300</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>299,322</td>
<td>350,338</td>
<td>461,795</td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>7,343,321</td>
<td>2,277,929</td>
<td>7,870,460</td>
</tr>
<tr>
<td>Disposal</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:
- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
- Capital items have an individual value greater than 5K

**REVENUES**

Between 1995 and 2002, the money that was allocated from the property tax levy for road construction and maintenance was not increased at a rate that would allow the County to cover the loss of provincial funding, the additional roads downloaded by the Province, or the increased cost of labour and materials to maintain them. In fact, the levy was decreased each year so that, by 2001, there was only $358K for the levy funded capital roads and bridges program.

During the 2002 budget process, a multi-year strategy was adopted in order to gradually ramp up the County tax levy funding to a level that would maintain the County road system at an acceptable level. This program was adopted by Council to increase the capital roads levy by $400,000 each year, thus reducing the draw on the Highway Reserve by a corresponding $400,000 per year. Up until 2001, this strategy did not allocate any additional money for the reconstruction of the County road system; it only shifted the source of the funding from the Capital Reserve to the County Levy.

Since 2002, the roads capital program has grown through an annual levy increase of $400,000. In 2008, the bridge maintenance levy was further increased by $100,000. However, in 2009, the annual $400,000 increase to the roads and bridges levy was cancelled for that budget year and, in 2010 and 2011, the
annual increase was reduced by $100,000 for that budget year. In 2012, the amount of $400,000 for roads and $100,000 for bridges was approved under this strategy.

In 2009, the County was allocated $4,019,360.00 of stimulus funding under the Federal and Provincial Building Canada Fund - Communities Component (BCF-CC) for the rehabilitation of transportation infrastructure.

The Canadian federal government has invested in environmentally sustainable municipal infrastructure through the transfer of Federal Gas Tax revenue to municipalities. In 2013, the County received $2,468,018 of Federal Gas Tax funds to support the capital construction program.

Currently, the County receives $2,468,018 in Federal Gas Tax annually. We understand this funding is permanent although will be adjusted slightly based on revised allocation formulas and indexing. The amount we receive has been stable in recent years. The amount may change somewhat into the future but we expect it will not change significantly based on our current understanding of the program. While Gas Tax can fund many different types of projects, the County has earmarked those funds exclusively for roads and bridges at this time. In addition to the Gas Tax, the roads and bridges program was funded by $13,859,338 in tax levy as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Operations</td>
<td>$8,872,356</td>
</tr>
<tr>
<td>Road Construction</td>
<td>$4,986,982</td>
</tr>
<tr>
<td>Total</td>
<td>$13,859,338</td>
</tr>
</tbody>
</table>

Road construction includes both road capital and bridge work. The split between the 2 asset types will vary from year to year depending on the specific projects that are most urgent.

Council has committed to increase the roads budget by $400,000 annually and the bridge budget by $100,000 annually. This commitment is honoured most years and is included in our 10 year plan.

There are no other sources of guaranteed funding for road or bridge assets. We have been reasonably successful with applications for one-time infrastructure funding when it is made available.
LIFE CYCLE COSTS

To develop the existing metrics of the road network as well project the needs for the long term, the life expectancy and rehabilitation cycle assumptions are shown in the following table.

<table>
<thead>
<tr>
<th>Road Surface type</th>
<th>Useful / Max Potential life years</th>
<th>Rehab Life cycle years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Cement (AC)</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>Surface treated (ST)</td>
<td>30</td>
<td>6</td>
</tr>
</tbody>
</table>

An explanation of the terms used in this table are shown in the accompanying graph. To achieve the maximum life we assume that all necessary maintenance and rehabilitation has been done.

![Graph showing lifecycle of road surfaces](image)

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using the lifecycle activities in the table above the projected condition as well as funds required is shown below.

The following graph shows projected condition to 2060 assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our network.
The required cash flow to provide for these lifecycle rehabilitation activities is shown below. The figures include both rehabilitation and replacement activities. The annuity required is $20,721,377.

Comments on the cash flow graph

- As is the case with most municipalities there is an inherent backlog in the planned work. This is illustrated by the large financial infusion required to bring the road network up to the expected level of service during the first 5-6 years.
- The other large cash infusions in years 2033 and 2051 reflect replacements as road bases begin to reach the end of their life.
ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

The following table lists the rehabilitation and renewal strategies for pavement in more detail and includes lifecycle unit costs for each pavement treatment that were used to develop the short term plans (1-10 years). Note that the costs below for the various strategies do not include traffic control, administration costs, unrecoverable HST and any contingency costs.

Table 16 Costs for rehabilitation treatments

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Unit Cost (2013) $ per linear metre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crack Sealing</td>
<td>$1.00</td>
</tr>
<tr>
<td>Microsurfacing</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats</td>
<td>$5.00/sq. m.</td>
</tr>
<tr>
<td>• 1 Coat</td>
<td>$3.00/sq.m.</td>
</tr>
<tr>
<td>Shave and Pave</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats - 50mm base / 40mm top</td>
<td>$241.00</td>
</tr>
<tr>
<td>• 1 Coat - 60mm</td>
<td>$170.00</td>
</tr>
<tr>
<td>Overlay</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats - 50mm base / 40mm base</td>
<td>$230.00</td>
</tr>
<tr>
<td>• 1 Coat - 60mm</td>
<td>$169.00</td>
</tr>
<tr>
<td>Cold in Place</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats – 50mm/40mm</td>
<td>$283.00</td>
</tr>
<tr>
<td>• 1 Coat – 60mm</td>
<td>$230.00</td>
</tr>
<tr>
<td>Pulverize and Add 0.15 of Gran ‘A’</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats – 50mm/40mm</td>
<td>$280.00</td>
</tr>
<tr>
<td>• 1 Coat - 60mm</td>
<td>$225.00</td>
</tr>
<tr>
<td>Expanded Asphalt</td>
<td></td>
</tr>
<tr>
<td>• 2 Coats – 50mm/40mm</td>
<td>$326.00</td>
</tr>
<tr>
<td>• 1 Coat – 60mm</td>
<td>$285.00</td>
</tr>
</tbody>
</table>

Data confidence

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>
Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

**Table 17 Data confidence - Roads**

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>B+</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B-</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

**FUNDING SHORTFALLS**

Variances in operating costs can result from extreme weather conditions that may be experienced during a heavier than normal winter season or during extreme summer rain storm events. The County has developed a Road Maintenance Reserve equal to 50% of the annual winter maintenance budget to support periods when extreme weather events impact the base operating budget.

The County operates its own surface treatment program which offers a high quality product to the area municipalities while providing a stable and continuous revenue source to support the operating budget as well as ensure a stable qualified workforce and share the capital cost of equipment.

The budget to maintain the County roads system had been grossly *under-funded* for several years, with the result that the condition of County roads and bridges were deteriorating at a rate that exceeded the County’s ability to maintain them.

The investments made by County Council since 2003 has had a measurable impact on the County road network. Funds provided through capital roads levy increases in combination with Federal and Provincial grants has resulted in improvements to the overall condition of the road network with:

- Road system adequacy [i.e. the number of roads that are considered adequate or have reached our target PCI of 70] improvements from 24% in 2003 to 57% in 2012.

However, this has partially been achievable with the unsustainable grants provided by the higher levels of government. Windfall grants from senior levels of government should not be relied upon as a regular source of sustainable infrastructure funding.

County roads carry higher traffic volumes and truck traffic than local roads and on average need to be resurfaced every 18-20 years. Further, the limited base budget does not address the other road needs, such as traffic safety measures, bridges, or service expansion.

In recent years, County staff has been successful in securing grants from senior levels of government as the various programs were unveiled through applications for capital and stimulus funding. In particular, the Federal Gas Tax Fund (which represents 37% of our road construction program revenue) has now been made permanent though a federal legislation.
However, the sustainable funding for the roads construction program remains as a significant issue for the department. In 2002, a multi-year strategy was established with the intent to develop base levy funding for major road and bridge repairs. The desirable funding target of $10 million required to maintain the condition of transportation assets is identified in this Business Plan through a slow but steady progression of levy increases. Windfall grants from senior levels of government should not be relied upon as a regular source of sustainable infrastructure funding.

In 2001, the base budget for roads construction was only $358,000, allowing the County to resurface each section of the County road system every 250 years (2001 costs). The 2013 base budget for roads construction at $4.719 million would allow for each section of road to be resurfaced every 40 years (2012 costs) whereas the desirable level is to resurface every 18-20 years, still a steep challenge ahead.

As Council considers budget funding requests, the seemingly minor delaying of a road construction project for “just one more year” can result in the potential for road base failure requiring that more costly full reconstruction methods be utilized at 7 times the cost of rehabilitation techniques.

Improvements made to the transportation network may be jeopardized by a number of external pressures which are outside of the control of the County. Weather events are becoming more intense with particular impacts on the condition of our transportation infrastructure. For example, heavy rainfall events cause damage and washouts to roadsides and to properties “downstream” of County ditches and culverts. Material costs continue to rise for highly demanded products, such as fuel, asphalt cement, road salt, parts and other supplies, all factored into the budget required to operate the mandatory maintenance programs.
APPENDIX 2 – TRANSPORTATION - STRUCTURES

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

The Province of Ontario passed amendments in 1997 to existing legislation in the *Highway Traffic Act* (HTA), *The Bridges Act* (BA) and the *Public Transportation and Highway Improvement Act* (PTHIA) that required all bridge and culvert structures with a span greater than 3m to be inspected under the direction of a Professional Engineer at no greater than two year intervals. Structures with a span less than 3m are to be inspected under the direction of a Professional Engineer at no greater than four year intervals. The inspection methodology and reporting must be in accordance with the Ontario Structure Inspection Manual – (OSIM or equivalent). The County of Northumberland completes a condition survey of our major structures (bridges, retaining walls and culverts >3m) every two years and structures <3m are surveyed every four years unless a more frequent inspection is recommended by the Engineer.

The 2011 update to the biennial bridge inspections of the County’s largest structures was conducted by a team of Engineering Consultants from G. D. Jewell Engineering and County staff in accordance with the OSIM. The next inspection is to be completed by the end of 2013 for structures >3m and in 2014 for structures <3m.

Results are presented in hard and soft copy formats. The location, type and dimensions of each structure are noted. The elements of each structure are listed with inspection remarks and recommendations (if any). A final table containing all structures’ names, ID’s, the recommended rehabilitation costs and rehabilitation time is included with the final report. County staff uses the recommendation table to decide which structures should be included in the Five Year Capital Project Plan for rehabilitation.

This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the biennial bridge survey and our GIS asset register/inventory database. It also addresses:
Assumptions and confidence levels regarding the content of the section and how it was derived
A policy outlining how the data will be validated (to be completed) and a condition assessment policy (practice is long standing but no formal policy exists)

**ASSET PROFILES & INVENTORY**

Structures include all bridges, culverts with a diameter in excess of 3 metres and retaining walls. The structure inventory is shown below. The County of Northumberland has an inventory of 118 structures on 503 kilometres of arterial roadways; 45 bridges and 68 culverts of span greater than 3.0 metres and 5 retaining walls.

**Table 18 Bridge & structure inventory**

<table>
<thead>
<tr>
<th>Classification of structures</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges</td>
<td>45</td>
</tr>
<tr>
<td>Culverts (&gt;3m)</td>
<td>68</td>
</tr>
<tr>
<td>Retaining Walls</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>118</strong></td>
</tr>
</tbody>
</table>
The acquisition/historical cost is the cost of originally acquiring the asset. The total structures acquisition value was estimated from the County's Tangible Capital Asset (TCA) data (a combined valuation of roads and structures) using 14.47% of the total: $90,580,844. Fourteen point four-seven is the approximate split of their replacement values. The valuations shown below were then distributed in the same ratio as their replacement value.

The depreciated cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the NRBCPI\textsuperscript{11} index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.

The replacement cost is the estimated cost of replacing the asset in current dollars. Due to the nature of the asset the replacement value is unique to each one. Bridges range from $228,000 (Burnley Bridge) to $19.3M (Trent River Bridge) with an average of $2.6M. Culverts range from $40,000 to $580,000 with an average of $157,500. Retaining Walls range from $20,000 to $30,000 with an average of $22,000.

### Table 19 Financial Valuations - Structures

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost\textsuperscript{12}</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges</td>
<td>$21,660,304</td>
<td>$7,838,662</td>
<td>$114,085,595</td>
</tr>
<tr>
<td>Culverts</td>
<td>$2,032,283</td>
<td>$336,612</td>
<td>$10,710,200</td>
</tr>
<tr>
<td>Retaining Wall</td>
<td>$21,343</td>
<td>$36,788</td>
<td>$110,000</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$23,713,930</td>
<td>$8,212,062</td>
<td>$124,905,795</td>
</tr>
</tbody>
</table>

\textsuperscript{11} Non-residential Building Construction Price Index

\textsuperscript{12} Values estimated from Consolidated Schedule of Tangible Capital Assets December 31, 2012
INSTALLATION PROFILES

This chart shows the age distribution of the structures (bridge, culverts and retaining walls). The current age is derived from the as recorded construction date or implied installation date. The “Count” (y-axis) reflects the number of assets in the respective age group.

Generally, the expected lifespan of a structure can range from 50 to 75 years. The County’s bridges range in age from 2 to 90 years (having been built between 1922 through 2010). Eighty-two percent (82%) of the bridges range from 33 to 62 years old (built between 1950 and 1979).
CONDITION PROFILES

The following charts show the breakdown of the current condition of the structures (bridge, culverts and retaining walls) assets using the grouping below. A summary graph metrics is also included which show the distribution of the existing BCI (note: the retaining walls are not subject to regular evaluation).

<table>
<thead>
<tr>
<th>Condition</th>
<th>BCI Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>&gt;85</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>76 to 85</td>
</tr>
<tr>
<td>1 to 5 years</td>
<td>56 to 75</td>
</tr>
<tr>
<td>Now - Rehabilitate</td>
<td>&lt; 56</td>
</tr>
</tbody>
</table>
LEVELS OF SERVICE

We are required to maintain our bridges & major structures in accordance with ... *Ontario Regulation 104/97*, Standards for Bridges

We monitor our compliance/performance through biennial bridge inspections of the County’s largest structures conducted by a team of Engineering Consultants and County staff in accordance with the Ontario Standard Inspection Manual (OSIM). Through these inspections, bridge rehabilitation work is determined.

ISSUES IMPACTING LEVELS OF SERVICE (LOS)

Changing expectations of motorists

As with the road network, population growth and the resulting increased traffic volumes will place continuing pressures on structure capacity. The aging of the population will lead to pressures to upgrade the general safety aspects of the roadway/transport system. Older drivers on more congested roads will need larger factors of safety to maintain and lessen existing accident levels.

As drivers who are accustomed to higher standards in urban areas such as the Greater Toronto Area relocate to Northumberland County, driver expectations are raised with respect to road standards and the potential for accidents and litigation increases.

Increasingly, road authorities are involved in litigation related to road maintenance, design and installation of various road elements such as exposed bridge abutments, unprotected embankments, road conditions due to weather impacts, etc. This provides an increasing incentive to ensure proper construction and maintenance of our County road system.
ASSET MANAGEMENT STRATEGY

NON-INFRASTRUCTURE SOLUTIONS

Not applicable

LIFECYCLE PLANNING - STRATEGIES

Structure rehabilitation and maintenance

The County has 112 bridges and major culverts that require ongoing repairs, maintenance, and occasional replacement. Prior to 2003, there was no base budget to address bridge rehabilitation and maintenance.

Preventative maintenance is initiated through the following ways:

- Feedback and recommendations from the County’s road supervisors while out on their regular road patrols. If a deficiency is observed that requires attention, it is reported and remedial action is taken immediately
- Through a review of OSIM\textsuperscript{13} report recommendations for various structures.

Once problem structures are identified, maintenance is completed through the following:

- By in-house staff, if the appropriate resources are available
- If engineering design is required, County staff, or a consultant, will complete the design and retain a contractor to complete the work
- If the work is minor, it becomes part of the “Time and Material Contract” which is completed by a contractor on a yearly basis.

DEMAND MANAGEMENT

The County has been growing at a historic rate of between 1 and 1.5%. The City is in the process of developing a Transportation Master Plan and is current in the Request for Proposal (RFP) stage.

Transportation system expansion

The County does not have a Development Charges (DC) By-Law and generally does collect fees for development. The exception is in Cobourg’s east end which does have DC. However, during any development submission the County actively seeks and receives cost-sharing from the developer for any modifications to the infrastructure due to the development.

\textsuperscript{13} Ontario Structure Inspection Manual
As part of the 2013 work plan, the Transportation Department intends to commence the master planning review of the County’s transportation system in an effort to rationalize the transportation network to ensure continuity and consistency.

**PROCUREMENT**

We adhere to Procurement By-Law 37.11.

For work (defined as any service provided to the County and could be purchasing, engineering services or contractor services) costing less than $50,000 (award of work does not require Council approval):

- A Request for Quotation (RFQ) may be sent out, at the discretion of the Engineer, to at least three selected consultants or contractors. The lowest bidder is awarded the work. This procedure is generally followed when the work is already determined by County staff.
- A Request for Proposal (RFP) may be sent out to retain consultants. This procedure is generally followed when the work is not determined by the County. A two-step evaluation of the received proposals takes place:
  1. The proposals are evaluated based on technical merit. Only those earning a passing percentage, as identified in the RFP, move on to the next stage of the evaluation process.
  2. The price of the passing proposals is disclosed. The consultant with the highest combined rating of technical merit and price is awarded the work.

For work costing more than $50,000 (award of work requires Council approval):

- An RFQ may be issued as indicated above. Rarely used for work valued over $50,000.
- An RFP may be issued as indicated above.
- A Tender may be issued to retain a consultant or a contractor based on the nature of the work. In this case, the work usually involves major reconstruction work of a County structure. Award of the work is based solely on the lowest bid, given that the bidder meets all other requirements set by the County.

The County has a yearly “Time and Material Contract” which is completed by a contractor on a yearly basis. The selection process uses the “Tender process” for work in excess of $50,000, described above.

The County procures third party resources for both operational services and construction. While both have standards and guidelines, neither subscribes to performance based contracting at this time. All bridge repairs/treatments are performed by third party contractors with inspection activities provided by County and third party staff.
FINANCE STRATEGY

PROPOSED STRATEGY

Federal Gas Tax Revenue for 2013 will provide significant resources to permit other road infrastructure repairs to proceed and will make levied funds available to support the 2013 bridge program. The County will continue to ramp up funding for the bridge program.

The expected outcome of the bridge repair program will be the rehabilitation of the most severely deteriorated bridges based on the projected timelines.

EXPENDITURE FORECAST

2013 BUDGET

The following proposed 5-year schedule is intended to address the most critical bridge needs:

- Ganaraska Bridge – 2013 (Construction)
- Mason Creek Bridge - 2013 (Design and Tender Prep), 2015 (Construction)
- Bridge Repairs on various structures identified in <1 year Rehabilitation needs in the OSIMs - 2013
- Bickle Bridge, Shelter Valley Creek Bridge, Pratt’s Mill Bridge, Garden Hill Bridge – 2016 (Design and Tender Prep), 2017 (Construction)
- CPR Overhead Bridge – 2014 (Construction)
- Keogan Boundary Bridge – 2017 (Design and Tender Prep)
- CNR Overhead Bridge – 2013 (Design and Tender Prep), 2015 (Construction)

If these projects are unable to proceed, the deterioration of the bridges will continue to the stage where the option to rehabilitate will not be available and will require bridge replacement or closure.

It is recommended that the base budget for bridges from $650,000 to $750,000 and that Council continue to support levy increases to protect the integrity of the County’s bridges.

This figure does not include any allocation for the County’s share of the Brighton grade separation or a potential new bridge in Campbellford.
ACTUAL EXPENDITURES

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th></th>
<th>2010 $</th>
<th>2011 $</th>
<th>2012 $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and Maintenance</td>
<td>934,749</td>
<td>196,606</td>
<td>442,239</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>1,494,664</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:

- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
- Capital items have an individual value greater than 5K

REVENUES

Federal Gas Tax Revenue for 2013 will provide significant resources to permit other road infrastructure repairs to proceed and will make levied funds available to support the 2013 bridge program.

Currently, the County receives $2,468,018 in Federal Gas Tax annually. We understand this funding is permanent. The amount we receive has been stable in recent years. The amount may change somewhat into the future but we expect it will not change significantly based on our current understanding of the program. While Gas Tax can fund many different types of projects, the County has earmarked those funds exclusively for roads and bridges at this time. In addition to the Gas Tax, the roads and bridges program was funded by $13,859,338 in tax levy as follows:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Operations</td>
<td>$8,872,356</td>
</tr>
<tr>
<td>Road Construction</td>
<td>$4,986,982</td>
</tr>
<tr>
<td>Total</td>
<td>$13,859,338</td>
</tr>
</tbody>
</table>

Road construction includes both road capital and bridge work. The split between the 2 asset types will vary from year to year depending on the specific projects that are most urgent.

Council has committed to increase the roads budget by $400,000 annually and the bridge budget by $100,000 annually. This commitment is honoured most years and is included in our 10 year plan.
There are no other sources of guaranteed funding for road or bridge assets. We have been reasonably successful with applications for one-time infrastructure funding when it is made available. However, this type of funding is unreliable and inconsistent.

**LIFE CYCLE COSTING**

To develop the existing metrics of the structures as well project the needs for the long term, the life expectancy and rehabilitation cycle assumptions are shown in the following table.

<table>
<thead>
<tr>
<th>Structure type</th>
<th>Useful / Max Potential life yrs</th>
<th>Rehab Life cycle yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges</td>
<td>Various Frames</td>
<td>80</td>
</tr>
<tr>
<td>Culverts</td>
<td>Mostly Concrete. Some Pipe.</td>
<td>70</td>
</tr>
<tr>
<td>Retaining Wall</td>
<td>Concrete or Stone</td>
<td>50</td>
</tr>
</tbody>
</table>

An explanation of the terms used in the table are shown in the accompanying graph. To achieve the maximum life we assume that all necessary maintenance and rehabilitation has been done. Where the rehabilitation cycle is shown as zero – the assumption is that no rehabilitation was done.

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using the lifecycle activities above the projected condition as well as funds required is shown below. The graph shows projected condition to 2060 assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our assets.
Average annual cost
$2,649,072

Average annual cost
$239,383
Comments on the cash flow graph

Long term funding for these assets present a significant challenge. This is due to their relatively long life expectancy and the resulting need for replacement. This challenge is compounded by the fact that one of the bridges under stewardship, the Trent River Bridge, is estimated to cost approximately $20M to replace. This can be seen in the graphs above where there are huge spikes in the funding need and reflects replacement costs for those assets. A long term view is critical to ensure funds are allocated on an annual basis so that the financial requirements are manageable.

In addition, life expectancy for assets such as bridges can be inaccurate – these are only estimates and can be off by 5-10 years. To address this, a sensitivity analysis will be run in the future that uses different maximum lives to determine the financial impacts.
ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

The costs for bridge rehabilitation or replacement, are determined on a project by project basis.

Data confidence

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>

Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

Table 20 Data confidence - Structures

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>B+</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B-</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

FUNDING SHORTFALLS

There will be a significant need within the very near future to ensure that the continuity and integrity of the bridge infrastructure remains sound due to the continued aging of the infrastructure.

The summarized bridge repair deficit is as follows:

<table>
<thead>
<tr>
<th>Needs</th>
<th>2007</th>
<th>2009</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year (NOW)</td>
<td>$2,330,588</td>
<td>$637,900</td>
<td>$1,180,000</td>
</tr>
<tr>
<td>1-5 Year</td>
<td>$2,270,500</td>
<td>$3,965,000</td>
<td>$4,921,800</td>
</tr>
<tr>
<td>Total</td>
<td>$4,601,088</td>
<td>$4,602,900</td>
<td>$6,101,800</td>
</tr>
</tbody>
</table>
The ‘Now’ or less than one year bridge rehabilitation needs are increasing at a rapid pace compared to previous years. The Bridge Needs Report submitted to the County by Jewell Engineering lists the Ganaraska Bridge on County Road 74/Dale Road at the top, with an estimated rehabilitation cost of $605,000, excluding engineering design, tender preparation and contract administration costs. Nine other structures are listed with rehabilitation costs ranging from $15,000 to $180,000. The Ganaraska Bridge rehabilitation was approved in the 2012 budget and the remaining bridges on the ‘Now’ or less than one year bridge rehabilitation needs are proposed in the 2013 bridge program.

The increase in the 1-5 Year category is attributed to more detailed rehabilitation cost estimates for the CPR Overhead Bridge east of the Municipality of Port Hope and the CNR Overhead Bridge east of the Town of Cobourg on County Road 2, and also due to the continued aging of various bridge elements on a number of other structures.

A program must be developed to address repairs to the County’s bridges and for the less significant (preventative maintenance) repairs required to other County bridges in order to maintain this vital component of the County’s transportation system.

Currently, for the next 5 years, the actual available budget for bridge repairs is only $1.8M to address $6.1M in bridgework of identified needs. In 2010, a $50,000 increase to the levy for bridge rehabilitation was authorized. In 2011 and 2012 Council increased the base budget for bridges by $100,000 to place the levy at $650,000.

In 2006, a 10 year - $2.27M debenture was secured through the OSIFA\textsuperscript{14} program to help to fund the bridge program. The annual debenture payment of $285,000 is funded through the annual bridge rehabilitation budget of $650,000, leaving the actual available budget for repairs at only $365,000.

\textsuperscript{14} Ontario Strategic Infrastructure Funding Authority
Further debentures are not being proposed to support the bridge program though the OSIFA program due to the impact on annual capital funds.

The annual bridge rehabilitation budget of $650,000 will prove to be insufficient for major and minor bridge repairs. The deterioration of the bridges will accelerate and become increasingly costly if the necessary preventative maintenance is not carried out.
APPENDIX 3 – MATERIAL RECOVERY FACILITY: EQUIPMENT

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

The Material Recovery Facility (MRF) utilizes maintenance and production reports along with factory recommended maintenance guidelines as a basis for equipment assessments.

This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the MRF Capacity & Capability Assessment report\(^{15}\) and the GIS asset register/inventory database. It also addresses:

- Assumptions regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (to be completed) and a condition assessment policy (practice is long standing but no formal policy exists)

\(^{15}\) AECOM 2010-2011
Waste Management services offered by Northumberland County include the collection, processing and disposal of residential and Industrial, Commercial and Institutional (IC&I) waste and recyclables, the composting of yard waste and the management of household hazardous waste (HHW) and electronic waste.

Currently, the County contracts out the curbside collection of waste and recyclable materials to a third party and owns and operates a Material Recovery Facility (MRF), which processes residential and IC&I recyclable materials. With the exception of separated yard waste, collected waste is currently being landfilled. The County owns one active landfill site and two waste transfer stations. The County also pays for the operation of a second transfer station which is managed and staffed by the Municipality of Port Hope and used solely by its Ward 2 residents.

The County of Northumberland has continued to provide residents and the IC&I sector with successful diversion programs including; the operation of a single stream recyclables MRF; leaf and yard waste composting sites; scrap metal, tire, and drywall recycling programs; and four household hazardous and electronics waste depots. Furthermore, waste reduction/diversion efforts have improved through the maintenance of our County-wide bag tag system and continuous improvement programs have been implemented through the establishment of a collection bylaw (No. 15-10) which regulates our waste services system. In addition to its 3 active disposal sites (1 landfill and 2 transfer stations) the County is responsible for the perpetual care of seven closed landfills (Baltimore, Bewdley, Cramahe, Eagleson, Grafton, Hastings and Port Hope).

The MRF comprises of both facilities and equipment. The facility assets part of the operation is included in Appendix 4 the Facilities section. The following table describes the various items of major equipment in the MRF.
Table 21 Material Recovery Facility - equipment inventory

<table>
<thead>
<tr>
<th>Main Component</th>
<th>Sub Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Infeed Components</td>
<td>Bag Breaker</td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>200 Belt (main infeed)</td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>Metering Drum</td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>200 Sorting Station</td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>Triple Deck Screen</td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>Air Drum Separator (ADS)</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>206 Sorting Station</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>100 Incline Belt (main)</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>110 Sorting Station</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Trommel Screen</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Overhead Magnet</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Air Classification System</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>100 Sorting Station</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Eddy Current Separator</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Container Baler belt</td>
</tr>
<tr>
<td>Container Line Components</td>
<td>Container Baler</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>500 Infeed Belt (IC&amp;I main)</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>500 Sorting Station</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>Fines Screen</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>Fiber Optical Sorter</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>504 Sorting Station</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>502 Sorting Station</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>Fiber Baler belt</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>Fiber Baler</td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>Air Compressor</td>
</tr>
<tr>
<td>Rolling Stock Equipment</td>
<td>1 Loader</td>
</tr>
<tr>
<td>Rolling Stock Equipment</td>
<td>1 Skidsteer</td>
</tr>
<tr>
<td>Rolling Stock Equipment</td>
<td>1 Skidsteer</td>
</tr>
<tr>
<td>Rolling Stock Equipment</td>
<td>2 Forklifts</td>
</tr>
<tr>
<td>Rolling Stock Equipment</td>
<td>1 Lift</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Electrical Room</td>
</tr>
</tbody>
</table>
**ASSET PORTFOLIO VALUE**

- The acquisition cost is the cost of the asset when it was originally purchased.
- The depreciated cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the NRBCPI\(^{16}\) index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.
- The replacement cost is the estimated cost of replacing the asset in current dollars

**Table 22 Financial Valuation - MRF (plant)**

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container Line Components</td>
<td>3,657</td>
<td>950,000</td>
<td></td>
</tr>
<tr>
<td>Fiber Line Components</td>
<td>539,285</td>
<td>1,885,000</td>
<td></td>
</tr>
<tr>
<td>Main Infeed Components</td>
<td>587,980</td>
<td>1,590,000</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>12,164</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>5,894,712</strong></td>
<td><strong>1,143,086</strong></td>
<td><strong>4,555,000</strong></td>
</tr>
</tbody>
</table>

In the following graphs the y-axis (“Count”) reflects the number of components within each asset sub group.

\(^{16}\) Non-residential Building Construction Price Index
INSTALLATION PROFILES

![Age Profile](chart)

CONDITION PROFILES

![Health Profile](chart)
CONSUMPTION PROFILES

![Consumption Profile Graph](image_url)

- **Percent Life Consumed**
- **Count**

Legend:
- RECF-A000001 - Miscellaneous
- RECF-A000001 - Fiber Line Components
- RECF-A000001 - Main Infeed Components
- RECF-A000001 - Container Line Components
LEVELS OF SERVICE

LEGISLATIVE

MRF and waste services initiatives are in response to Bill 201 of the Municipal Act, the Environmental Protection Act, Regulation 101, Regulation 347, and various Municipal Bylaws.

The Waste Diversion Act (Bill 90) was passed in 2002, which requires producers to develop a plan for funding successful waste diversion programs. Waste Diversion Ontario’s (WDO) mandate is to address waste diversion in the province by developing a strategy to fund 50% of municipal Blue Box net operating costs, and to develop, fund and implement diversion programs for organics, HHW, scrap tires, used oil and other materials.

Mandatory programs:

- Recycling of Blue Box Materials (O. Reg. 101/94)
- Landfills & Transfer Stations (O. Reg. 347)

The County is committed to pro-actively managing its operating and closed landfills in an environmentally sound manner to minimize existing and future environmental impacts and maintain compliance with O. Reg. 347.

Our current performance indicators at the MRF are:

- Tonnes processed
- Capture of materials processed (residual rate)

Figure 27 Waste collection performance indicators
Northumberland County monitors material by:

- Using certified weigh scales
- Using the Geoware computer application to record all vehicles weights (inbound and outbound)
- Weighing all materials recycled – bales and materials processed loose
- Compiling daily production sheets
- Compiling downtime records

**ISSUES IMPACTING LEVELS OF SERVICE (LOS)**

The operation of the MRF is a unique County function in that it operates similar to private sector MRF. The sale of recyclable materials are subject to the ups and downs of the global markets and this can make it very challenging to plan funding for major capital repairs when the level of levy subsidization can be volatile at times. Further, the level of service is enhanced by the processing of materials from the City of Kawartha Lakes. This makes the operation more efficient and provides a modest revenue stream to assist with the cost of maintaining the infrastructure.
ASSET MANAGEMENT STRATEGY

NON-INFRASTRUCTURE SOLUTIONS

Northumberland County is currently undertaking a Long Term Waste Management Master Plan. The MRF operation is part of this plan.

LIFECYCLE PLANNING – STRATEGIES

Lifecycle planning is conducted through production/maintenance analysis along with manufacturers suggested recommended replacement schedules. There is also continual monitoring of technologies to optimize operations when this equipment is nearing end of life.

DEMAND MANAGEMENT

Residential and IC&I growth, increasing recyclable materials from outside the County, and the influx of seasonal residents will generate steady increases in waste services demand in Northumberland County. These trends will continue into the foreseeable future. All levels of government are working with waste generators to reduce waste through alternatives and / or reductions in product packaging. The Waste Management Master Plan will evaluate the future demand on services as well as evaluate all proven and cost effective disposal methods.

PROCUREMENT

We adhere to Procurement By-Law 37.11.
FINANCE STRATEGY

EXPENDITURE FORECAST

2013 BUDGET

The Waste Services 2013 budget is $15.5M. Currently this amount is not categorized to allow for separate analysis of asset preservation. This total budget includes the Material Recovery Facility (MRF) operations, curbside collection, landfill operation, closed landfill monitoring, the Household Hazardous Waste (HHW) program and the planning and education activities as well as capital projects. The MRF capital requirements are generally funded by an increase to the levy in the year when replacements are needed. Further, the County often applies for one-time Provincial funding for very large capital projects.

ACTUAL EXPENDITURES

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and Maintenance</td>
<td>$213,753</td>
<td>$110,629</td>
<td>$253,648</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>N/A</td>
<td>$491,773</td>
<td>$355,694</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:
- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
- Capital items have an individual value greater than 5K

REVENUES

The budget is based on the support from revenues of the sale of recyclable materials. The MRF operation is not totally funded by revenues and there has been an ongoing tax levy contribution each year.

Northumberland County obtains some funding for our recycling programs from Stewardship Ontario, as mandated in the Waste Diversion Act. Based on the funding formula being used to administer this legislation, the County of Northumberland will receive approximately $752,000 to support its 2013 residential recycling operating initiatives.
A summary of the department’s 2012 budgeted revenue is shown below:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of Materials</td>
<td>1,316,778</td>
</tr>
<tr>
<td>WDO(^{17}) Funding</td>
<td>751,660</td>
</tr>
<tr>
<td>Tipping Fees</td>
<td>183,318</td>
</tr>
<tr>
<td>County Levy</td>
<td>1,456,907</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>3,708,663</strong></td>
</tr>
</tbody>
</table>

**LIFE CYCLE COSTING**

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using industry standard lifecycle activities the projected condition as well as funds required is shown below. The graph shows projected condition to 2060 assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our assets.

\(^{17}\) Waste Diversion Ontario
Comments on the cash flow graph

Similar to other major assets, long term funding for these assets present a significant challenge. This is due to the replacement cycles of some major equipment components. This can be seen in the graphs above where there are spikes in the funding need and is reflects replacement costs for those assets. A long term view is critical to ensure funds are allocated on an annual basis so that the financial requirements are manageable.

ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

The County’s 10 year financial plan addresses the replacement of major capital within that time horizon but it does not set aside any funds for the replacement of assets that are required beyond 10 years.
**Data confidence**

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>

Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

**Table 23 Data confidence - MRF (Equipment)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>A-</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

**FUNDING SHORTFALLS**

Budget shortfalls can occur within the MRF budget due to market conditions. The County sells recyclable materials on an open market and global factors influence prices. The sale of materials can fluctuate significantly. In particular, the market for certain materials such as fibre or glass can drop so low the County is paying to get rid of material. The tipping fees revenue is not guaranteed but fairly steady and there is a contract in place for the processing of Kawartha Lakes materials. The levy has fluctuated depending on the capital equipment replacement needs and available WDO funding.

Northumberland mainly uses brokers to market recyclable materials. Past experience has illustrated that brokers have access to numerous end-markets, reduce the risk tolerances and can move materials in volatile economic conditions as they generally deal in greater volumes with mills and end users. A common practice is to monitor revenue indicators such as: price per tonne, gross revenue, net revenue and shipping costs which are analyzed continuously to ensure the County is marketing materials at the best revenue possible.
APPENDIX 4 – FACILITIES

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

In order to create the 10 Year Plans for all the County Buildings we reviewed all building components for each building and used surveys when they were available, building information from archives, and if the work was recent enough we extract data from drawings and specifications. Once an install date was developed we attached a lifespan to each component. The component’s lifespan data was derived from construction component web sites as well as in-house knowledge. At the completion of the data collection exercise a 10 year plan was developed for each building, taking into account the changes to the OB18C including the disability standards, the fire code, and the energy green act.

Most of the big departments i.e. Waste, Roads, and Housing are in the middle of producing master plans which will be greatly assist the department. These plans will provide the opportunity to do more long range planning concerning major projects. Currently the 10 year plans are reviewed with the Directors and Managers from all departments (Waste including waste sites and the MRF, Roads, Housing and Paramedics. This dialogue ensures that work planned for the upcoming year is prioritized and scheduled.

This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the GIS inventory database and various excel databases. It also addresses:

- Assumptions and confidence levels regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (to be completed) and a condition assessment policy (practice is long standing but no formal policy exists)

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Ontario Building Code

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ASSET PROFILES & INVENTORY

The Facilities Department provides advice and maintenance services to all County Departments as well as the Northumberland Non-Profit Housing Corporation. We are responsible for the repairs and maintenance at all County owned buildings, infrastructure and grounds.

Asset profiles include 344 Social Housing units, corporate buildings, three (3) Roads depots, five (5) Paramedic bases and three (3) Waste sites. Waste sites are not addressed in this first AM Plan.

The Department assists in the development of short-term and long-term maintenance and infrastructure for budgets for all County departments and is responsible for the implementation of all capital building projects and/or providing project management services to all County departments.

Our facility inventory (the Social Housing inventory is shown in Appendix 5) is grouped into three (3) categories:

- Corporate Buildings
- Road Depots/Yards
- MRF – non equipment (i.e. building component)

The inventory of our facilities is summarized in the following table. Note that some facilities are shared with other County departments to maximize efficiency and reduce cost.

Table 24 Facility Inventory – corporate buildings

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Location</th>
<th>Use/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courthouse</td>
<td>860 William Street</td>
<td>Cobourg</td>
<td>Corporate 80% leased to Province</td>
</tr>
<tr>
<td>County Headquarters</td>
<td>555 Courthouse Rd</td>
<td>Cobourg</td>
<td>Corporate, office building</td>
</tr>
<tr>
<td>Food4All, Tourism, EMS</td>
<td>600 William Street</td>
<td>Cobourg</td>
<td>Corporate 6 tenants – Food Bank, Tourism, EMS, United Way, CFDC, EARN</td>
</tr>
<tr>
<td>Port Hope EMS</td>
<td>423 Croft St.</td>
<td>Port Hope</td>
<td>Office/garage building</td>
</tr>
<tr>
<td>Name</td>
<td>Address</td>
<td>Location</td>
<td>Use/Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Veronica Street Yard Depot</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td>Main Building and Mechanics Bay, Quonset Hut, Waste Building, 2 salt sheds, 1 sand dome</td>
</tr>
<tr>
<td>Veronica Street Sand Dome</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td></td>
</tr>
<tr>
<td>Veronica Street Salt Shed - Old</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td></td>
</tr>
<tr>
<td>Veronica Street Salt Shed - New</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td></td>
</tr>
<tr>
<td>Veronica Street Quonset Hut</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td></td>
</tr>
<tr>
<td>Veronica Street Waste Building</td>
<td>60 Elgin St. W.</td>
<td>Cobourg</td>
<td></td>
</tr>
<tr>
<td>Morganston Yard Depot</td>
<td>4218 County Rd. 25</td>
<td>Morganston</td>
<td>Office/ Garage building, equipment storage building, 1 salt shed, 1 sand dome</td>
</tr>
<tr>
<td>Morganston Yard 4 bay garage</td>
<td>4218 County Rd. 25</td>
<td>Morganston</td>
<td></td>
</tr>
<tr>
<td>Morganston Sand Dome</td>
<td>4218 County Rd. 25</td>
<td>Morganston</td>
<td></td>
</tr>
<tr>
<td>Morganston Salt Shed</td>
<td>4218 County Rd. 25</td>
<td>Morganston</td>
<td></td>
</tr>
<tr>
<td>Roseneath Yard Depot</td>
<td>County Rd. 45</td>
<td>Roseneath</td>
<td>EMS/ Roads co shared office/garage building, sand dome</td>
</tr>
<tr>
<td>Roseneath Sand Dome</td>
<td>County Rd. 45</td>
<td>Roseneath</td>
<td></td>
</tr>
<tr>
<td>Plainville Sand Dome</td>
<td></td>
<td>Plainville</td>
<td>Sand dome</td>
</tr>
</tbody>
</table>
Table 26 MRF inventory - facility

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Location</th>
<th>Use/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Recovery Facility - Non plant</td>
<td>280 Edwardson Road</td>
<td>Grafton</td>
<td>Recovery facility</td>
</tr>
</tbody>
</table>

**ASSET PORTFOLIO VALUE**

For the purposes of assessment and valuation the inventory has been broken down into the following components.

<table>
<thead>
<tr>
<th>Asset Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
</tr>
<tr>
<td>Electrical</td>
</tr>
<tr>
<td>Exterior</td>
</tr>
<tr>
<td>Interior</td>
</tr>
<tr>
<td>Life/Safety</td>
</tr>
<tr>
<td>Mechanical</td>
</tr>
<tr>
<td>Structural</td>
</tr>
</tbody>
</table>

These asset types were used to develop the replacement valuations shown in the table below using industry standard costs.

- The acquisition/historical cost is the cost of originally acquiring the asset. The total acquisition value was estimated from the County’s Tangible Capital Asset (TCA) data (a combined valuation of all buildings) using 30.73% of the total: $30,481,933 for corporate buildings, 7.17% for Road Depots and 9.36% for the MRF building. The various percentages are the respective portion of the total combined replacement value.
- The depreciated cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the NRBCPI\textsuperscript{19} index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.
- The replacement cost is the estimated cost of replacing the asset in current dollars.

\textsuperscript{19} Non-residential Building Construction Price Index
### Table 27 Financial valuation - Corporate buildings

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>0</td>
<td>26,668,049</td>
<td>50.00%</td>
</tr>
<tr>
<td>Electrical</td>
<td>577,905</td>
<td>890,000</td>
<td>1.67%</td>
</tr>
<tr>
<td>Exterior</td>
<td>8,478,328</td>
<td>20,785,549</td>
<td>38.97%</td>
</tr>
<tr>
<td>Interior</td>
<td>1,055,127</td>
<td>2,049,500</td>
<td>3.84%</td>
</tr>
<tr>
<td>Life/Safety</td>
<td>217,836</td>
<td>455,000</td>
<td>0.85%</td>
</tr>
<tr>
<td>Mechanical</td>
<td>1,857,981</td>
<td>2,479,000</td>
<td>4.65%</td>
</tr>
<tr>
<td>Structural</td>
<td>8,743</td>
<td>9,000</td>
<td>0.02%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16,292,442</strong></td>
<td><strong>12,195,920</strong></td>
<td><strong>53,336,098</strong></td>
</tr>
</tbody>
</table>

### Table 28 Financial valuation - Road Depots

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical</td>
<td>40,514</td>
<td>48,000</td>
<td>0.39%</td>
</tr>
<tr>
<td>Exterior</td>
<td>539,207</td>
<td>2,431,000</td>
<td>19.52%</td>
</tr>
<tr>
<td>Interior</td>
<td>99,596</td>
<td>184,000</td>
<td>1.48%</td>
</tr>
<tr>
<td>Mechanical</td>
<td>305,605</td>
<td>601,000</td>
<td>4.83%</td>
</tr>
<tr>
<td>Road Depot</td>
<td>0</td>
<td>6,227,000</td>
<td>50%</td>
</tr>
<tr>
<td>Structural</td>
<td>743,933</td>
<td>2,963,000</td>
<td>23.79%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,804,292</strong></td>
<td><strong>1,728,855</strong></td>
<td><strong>12,454,000</strong></td>
</tr>
</tbody>
</table>

### Table 29 Financial valuation - MRF facility

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical</td>
<td>30,720</td>
<td>32,000</td>
<td>0.20%</td>
</tr>
<tr>
<td>Exterior</td>
<td>314,672</td>
<td>7,718,329</td>
<td>47.49%</td>
</tr>
<tr>
<td>Interior</td>
<td>107,001</td>
<td>227,000</td>
<td>1.40%</td>
</tr>
<tr>
<td>Mechanical</td>
<td>20,768</td>
<td>124,000</td>
<td>0.76%</td>
</tr>
<tr>
<td>MRF</td>
<td>0</td>
<td>8,126,329</td>
<td>50.00%</td>
</tr>
<tr>
<td>Structural</td>
<td>6,964</td>
<td>25,000</td>
<td>0.15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,964,658</strong></td>
<td><strong>480,125</strong></td>
<td><strong>16,252,658</strong></td>
</tr>
</tbody>
</table>

In the following graphs the y-axis (“Count”) reflects the number of components within each asset sub group.
INSTALLATION PROFILES

Corporate Buildings:

Road Depots:
The following rating scale was used to categorize the condition/health of the three groups of facilities.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>100-85</td>
</tr>
<tr>
<td>Good</td>
<td>84 to 70</td>
</tr>
<tr>
<td>Fair</td>
<td>69 to 50</td>
</tr>
<tr>
<td>Poor</td>
<td>&lt; 50</td>
</tr>
</tbody>
</table>
Corporate Buildings:

Road Depots:

MRF:
CONSUMPTION PROFILES

Corporate Buildings

![Consumption Profile Graph](image-url)
Roads Depots

Consumption Profile

[Graph showing consumption profile with various categories]

[Legend for the graph]

Northumberland County
MRF:

Consumption Profile

Count

Percent Life Consumed

- RECF-A000001-Electrical
- RECF-A000001 - Material Recovery Facility - Non plant
- RECF-A000001-Interior Finishes
LEVELS OF SERVICE

LEGISLATIVE

We adhere to the Ontario Building Code and must keep buildings to the standards within the Fire Code under the Fire Protection and Prevention Act. When dealing with our residential units we must follow directives within the Residential Tenancies Act as well as the Municipal Freedom of Information and Protection of Privacy Act. We provide our services under Ontario Regulation 350/06: Social Housing Reform Act; Residential Tenancies Act – Bill #109.


Our LoS are measured by most of the Codes and Acts mentioned above and by the Departments we support within the County. Our targets are set by the department we support within the County as laid out in the 10 Year capital plans.

ISSUES IMPACTING LEVELS OF SERVICE (LOS)

Changes in legislative codes could cause unexpected rises in expenditures and inability to meet LoS. Examples of these are:

- Disability Act, Fire Code
- Energy Green Act
- Human Rights Code
- Resident Tenancies Act,
ASSET MANAGEMENT STRATEGY

NON-INFRASTRUCTURE SOLUTIONS

To ensure we are current with the latest building codes and efficiencies we plan regular training sessions including: software and Trade Certificates courses.

LIFECYCLE PLANNING - STRATEGIES

To develop the 10 year plans we develop Preventive Maintenance programs on all heating, ventilation and air-conditioning (HVAC) equipment, hot water tanks, electrical equipment as well as the interior and exterior paint of all of our facilities.

Maintenance activities

Regular maintenance is performed on facilities to maintenance the general appearance of the buildings as well as ensuring safety of staff and visitors.

DEMAND MANAGEMENT

Demand management is provided by the departments for whom we provide service.

PROCUREMENT

We adhere to Procurement By-Law 37.11. In addition we have a pre-approved Contractor list. This list is reviewed on an annual basis to ensure compliance with our policies. We use standard procurement documentation where available. For example, we use CCDC\textsuperscript{20} standard contract documents on projects over $250,000. These documents are kept up-to-date by the County Purchasing Manager. We use in-house staff to complete smaller projects generally under $5000.

We have completed a review of cost efficiency (in-house vs. out-sourcing) relating to several key trades for example:

- Electrical
- HVAC, [heating & cooling]
- Mechanical
- plumbing,
- Carpentry and
- Painting

\textsuperscript{20} Canadian Construction Documents Committee
The results of this review were the recruitment of staff for painting and HVAC. The other specialties are generally performed by contracted services at this time.

FINANCE STRATEGY

The Facilities department is part of Transportation and is primarily funded through allocations to the various operating departments (Roads, Waste, EMS and Corporate). Funding is provided through the Corporate County levy and Provincial funding programs.

EXPENDITURE FORECAST

The Facilities related expenditures budgeted for 2013 are $4,232,352. The bulk of this will go to support the operation, maintenance and upkeep of corporate buildings, roads depots and MRF buildings. The majority of these expenditures will be funded by the levy while a small portion is covered by MRF revenue and Waste Diversion Ontario (WDO) funding. The spending in these areas is in line with the 10 year capital plans.
ACTUAL EXPENDITURES

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th>Facilities (including roads depots)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and Maintenance</td>
<td>765,891</td>
<td>415,224</td>
<td>761,024</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>534,585</td>
<td></td>
<td>1,199,395</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>860,930</td>
<td></td>
<td>1,033,142</td>
</tr>
<tr>
<td>Totals</td>
<td>$2,161,406</td>
<td>$415,224</td>
<td>$2,993,561</td>
</tr>
</tbody>
</table>

Notes:
- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
- Capital items have an individual value greater than 5K

REVENUES

The Facilities department is part of Transportation and is primarily funded through allocations to the various operating departments (Roads, Waste, EMS and Corporate). Funding is provided through the Corporate County levy and Provincial funding programs. Annual inflation rates drive our costs for materials, fuel and utilities.

LIFE CYCLE COSTING

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using industry standard lifecycle activities the projected condition as well as funds required is shown below. In addition we tested the sensitivity of the maximum life assumption of the building. The current TCA\textsuperscript{21} documents use a value of 50 years. In the following graphs both 50 and 75 years were used. While the timing of the investment changes only the Corporate Buildings group resulted in a change in the annuity. The graph shows projected condition to 2060

\textsuperscript{21} Tangible Capital Asset
assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our assets.

**Corporate Buildings:**

![Condition For Buildings chart]

Cost model using a 50 year building life:
Average annual cost
$987,703 (50 year life)
Road Depots:

Average annual cost $433,319 (75 year life)

Average annual cost $433,319 (50 year life)

Cost model for a 50 year building life
MRF:

Cost model for a building life of 50 years

Average annual cost $263,518 (75 year life)
Comments on the cash flow graphs

Long term funding for these assets present a significant challenge. This is due to their relatively long life expectancy and the resulting need for replacement of the building itself as opposed to the components. This can be seen in the graphs above where there are spikes in the funding need and is reflects replacement costs for those assets. A long term view is critical to ensure funds are allocated on an annual basis so that the financial requirements are manageable. Effective maintenance programs may be able to extend the useful of some of these assets.

ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

The 10 year financial plan addresses the need for repairs and maintenance as well as the replacement of certain capital components. However, the financial plan does not address the eventual replacement of any facilities.

Data confidence

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>

Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

Table 30 Data confidence - Facilities

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>B+</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B-</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

FUNDING SHORTFALLS

The corporate buildings are currently adequately funded for repairs and minor capital improvements. The challenge will be funding for major assets replacement into the future. A further challenge will be the funding of facility expansion if, or when, the County is required to expand programs or services.
APPENDIX 5 – SOCIAL HOUSING

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

The Housing Division and Facilities Department completes annual health and safety unit inspections. Staff from Housing and Facilities attend onsite and inspect during the months of April and May all 344 individual units in addition to walk through of the common areas and outside property. The inspections provide staff the opportunity to view the condition of each unit, ensure all smoke alarms inside the units are working and provide annual training to the tenant on how to test and maintain the alarm. These inspections allow staff to ensure the units are in good safe condition. We identify any possible areas of concern such as hoarding behaviour or damage to the unit and ensure the tenant is thriving within their rented space.

The Facilities Department identified the need for property specific fire safety plans geared to ensuring that tenants of the individual buildings know what to do in the case of fire. These plans are user friendly and provide information to the tenant on resources and building description, emergency procedures, Fire drills, control of fire hazards, maintenance procedures for the fire protection systems. It is intended to assist those in the building to have an orderly evacuation at the time of an emergency and to provide a minimum degree of flexibility to achieve the necessary fire safety for the building. Once each location’s Fire Plan has been reviewed with the tenants the Facilities Department holds the annual fire drill as per the Ontario Fire Code. All site fire plans are reviewed and signed annually by the local Fire Department as per the fire code.

In December 2001, BDO Dunwoody and Trow Consulting Engineers were commissioned to complete Building Condition Assessments and to develop an Asset Management Model (AMM) of the Northumberland County social housing stock. The AMM is a valuable tool used to develop an asset management system that can be used by Northumberland County and social housing providers to manage the social housing portfolio. In 2005/2006 an energy audit was conducted to evaluate the social housing units transferred at download. Some of the individual housing providers have had more recent studies done.

The County is in the process of commissioning building appraisals for all housing properties which is scheduled to be complete by the end of 2013 one purpose of which is to get a firm understanding of building costs.

The Building Condition Assessment reports have provided Northumberland County Housing Corporation and housing providers with a forecast of building requirements and capital expenditures over a 20 year period.
The AMM has provided Northumberland County with an understanding of the capital reserve requirements of the social housing portfolio. The current property tax market value assessment of the social housing stock is approximately $35 - $40 million dollars; however the current replacement reserves are not adequate to ensure the maintenance of the value in the County’s social housing assets.

This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the GIS inventory database and various excel databases. It also addresses:

- Assumptions and confidence levels regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (to be completed) and a condition assessment policy (practice is long standing but no formal policy exists)

**ASSET PROFILES & INVENTORY**

As the designated Service Manager under the *Housing Service Act, 2011*, the Housing Services Division of Community and Social Services for Northumberland County is responsible for the administration and delivery of housing and homelessness programs and initiatives to eligible residents of Northumberland County.

The inventory of our social housing units is summarized in the following table

### Table 31 Social Housing Inventory

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elgin Street East</td>
<td>265-327 Elgin Street, East</td>
<td>Cobourg</td>
</tr>
<tr>
<td>Francis Court</td>
<td>2 Francis Street</td>
<td>Brighton</td>
</tr>
<tr>
<td>Holland Court</td>
<td>24 Queen Street</td>
<td>Port Hope</td>
</tr>
<tr>
<td>Maple Court</td>
<td>8 King Street W</td>
<td>Colborne</td>
</tr>
<tr>
<td>Midland Court</td>
<td>12 Meade Street</td>
<td>Brighton</td>
</tr>
<tr>
<td>Midland Court</td>
<td>12 A Meade Street</td>
<td>Brighton</td>
</tr>
<tr>
<td>Name</td>
<td>Address</td>
<td>Location</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Percy Manor</td>
<td>6 Percy Street</td>
<td>Colborne</td>
</tr>
<tr>
<td>Scriven Boulevard</td>
<td>7 Scriven Boulevard</td>
<td>Port Hope</td>
</tr>
<tr>
<td>Sunrise Court</td>
<td>111 Front Street S</td>
<td>Campbellford</td>
</tr>
<tr>
<td>Sunrise Court</td>
<td>112 Front Street S</td>
<td>Campbellford</td>
</tr>
<tr>
<td>Wellington Court</td>
<td>41 Wellington Street</td>
<td>Port Hope</td>
</tr>
<tr>
<td>Wellington Court</td>
<td>43 Wellington Street</td>
<td>Port Hope</td>
</tr>
<tr>
<td>Wellington Court</td>
<td>45 Wellington Street</td>
<td>Port Hope</td>
</tr>
<tr>
<td>Windemere</td>
<td>330 King Street, East</td>
<td>Cobourg</td>
</tr>
</tbody>
</table>

**ASSET PORTFOLIO VALUE**

For each of the 14 buildings the following components or asset categories are evaluated.

<table>
<thead>
<tr>
<th>Asset Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
</tr>
<tr>
<td>Electrical</td>
</tr>
<tr>
<td>Exterior</td>
</tr>
<tr>
<td>Facility Component</td>
</tr>
<tr>
<td>Interior</td>
</tr>
<tr>
<td>Life/Safety</td>
</tr>
<tr>
<td>Mechanical</td>
</tr>
<tr>
<td>Structural</td>
</tr>
</tbody>
</table>
These asset types were used to develop the replacements valuations shown in the table below using industry standard costs.

- The acquisition/historical cost is the cost of originally acquiring the asset. The total acquisition value was estimated from the County’s Tangible Capital Asset (TCA) data (a combined valuation of all buildings) using 23.28% of the total: $30,481,933. Twenty-three point two-eight is the respective portion of the total combined replacement value.
- The depreciated cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the NRBCPI\(^2\) index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.
- The replacement cost is the estimated cost of replacing the asset in current dollars

**Table 32 Financial valuation - Social housing**

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Acquisition Cost</th>
<th>Depreciated Cost</th>
<th>Replacement Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>0</td>
<td>20,207,694</td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td>440,232</td>
<td>1,506,200</td>
<td></td>
</tr>
<tr>
<td>Exterior</td>
<td>2,143,880</td>
<td>10,221,094</td>
<td></td>
</tr>
<tr>
<td>Interior</td>
<td>1,552,817</td>
<td>3,617,600</td>
<td></td>
</tr>
<tr>
<td>Life/Safety</td>
<td>545,652</td>
<td>996,800</td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td>1,350,060</td>
<td>2,686,000</td>
<td></td>
</tr>
<tr>
<td>Structural</td>
<td>94,275</td>
<td>1,180,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,345,586</strong></td>
<td><strong>6,126,916</strong></td>
<td><strong>40,415,388</strong></td>
</tr>
</tbody>
</table>

In the following graphs the y-axis (“Count”) reflects the number of components within each asset sub group.

---

\(^2\) Non-residential Building Construction Price Index
LEVELS OF SERVICE

LEGISLATIVE

The Housing Services Act, 2011 (HSA) became the legislative framework for the administration and funding of social housing programs delivered by Service Managers. The HSA governs the provisions of the rent-g geared-income program, centralized waitlist, and transfer of assets, rights, liabilities and obligations of housing programs by senior levels of government, the service manager and the housing providers.

This new piece of legislation will also require that Service Managers develop a ten year Housing and Homelessness plan for their community and submit this to the province for review by 2014. Housing staff must also be knowledgeable regarding the following Acts and Regulations:

- The Housing Services Act
- The Residential Tenancies Act
- The Ontario Human Rights Code
- The Ontarians with Disability Act 2005
- The Municipal Freedom of Information and Protection of Privacy Act
- Local by-laws for the townships and municipalities within Northumberland County

We are therefore mandated to:

- Maintain prescribed service level standards under the Housing Services Act, 2011
- Deliver the Rent-geared-income program
- Management of the Centralized Waitlist for Social Housing
- Management of the Local Housing Corporation (the County operated social housing units)
- Governors of the designated Non-profit housing providers in Northumberland County under the Housing Services Act, 2011
- Administer the Strong Communities Rent Supplement Program and the Commercial Rent Supplement Programs
- Delivery of the Community Homelessness Prevention Initiative (CHPI)

We monitor our compliance/performance using:

- The Service Manager Annual Income Report
- Operational reviews on non-profits
- Policy development related to housing service act compliance
- Arrears policy
- Internal review complaints
- Rent revenues
- Unit turnover time,
- Energy savings
We comply with the Ontario Building Code and Fire Code at all times, Regular internal property reviews quarterly and annually, Energy Green Act

Our target is a 100 RGI 23.

**ISSUES IMPACTING LEVELS OF SERVICE (LOS)**

The limited number of subsidized housing units, the lack of private sector development in affordable rental housing and the historical lack of funding from the provincial and federal governments have heightened the awareness of the importance and need for increased affordable housing and upkeep of our current social housing.

The passing of the 2009 *Poverty Reduction Act Bill 152* meant that Ontario is now focused on a future where everyone has the chance to achieve their potential and contribute to the future of the province. This Act builds on the *Poverty Reduction Strategy* that supports the importance of strong, healthy communities as an integral part towards eliminating poverty.

IN 2009 the Ministry of Municipal Affairs and Housing began developing a Long Term Affordable Housing Strategy to look at ways of improving Ontario residents’ access to adequate, suitable and affordable housing.

Studies support the belief that affordable housing must include a range of housing options from government subsidized social housing to private housing, rental and owner-occupied. It is through this mixture that sustainable communities are nurtured and therefore it is important to strive for a mix of good homes that support a range of household sizes, ages and incomes.

As part of Ontario’s Long-Term Affordable Housing Strategy (LTAHS), the province introduced the *Housing Services Act, 2011* with the Ontario Housing Policy Statement, aimed at putting people first, creating strong partnerships, supporting affordable options and accountability. The new Act is less prescriptive and allows for more service manager flexibility to address local needs however the senior levels of government offered no new sustainable funding.

Without a predictable form of funding, the ability to deliver much of what is promised will be difficult. The cost for utilities has markedly increased; legislative changes to acts such as Human Rights and Duty to accommodate are creating increased delivery costs for housing providers as are challenges in areas such as hoarding and bedbug outbreaks.

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23 Rent Geared to Income
INTRODUCTION

The relationship with facilities and housing overlaps in several key areas of service delivery. The first is the actual unit viewing and offering of units. Housing identifies and arranges for perspective tenants to do unit viewings, facilities conducts the viewings and this includes a full tour of the site, such as parking, laundry, stairs, mail, common areas and the unit itself. The applicant than signs off they were shown all areas. This ensures full awareness of what the building has to offer. Facilities and housing overlap at time of move out, facilities does a unit inspection prior to move out, works with housing to identify what units are priority for quick turnover and work on chargeback for damages. The two departments also overlap with ongoing tenant/asset management.

Unit inspections are conducted to ensure the building is being viewed with a mind to the condition of the unit and the health and welfare of the tenant. In situation with infestation or hoarding, both facilities and housing staff work together to ensure the tenant is comfortable and educated on what needs to happen and the facilities staff work to ensure the unit is repaired or treated.

In the case of accommodations, if a tenant puts in writing to housing they have needs that require accommodation; both facilities and housing staff attend the unit and determine the extent of the need and solutions.

The Housing Buildings are reviewed on a quarterly and annually basis to insure the 10 year Housing Capital Plan is current. All estimates come from Facilities and are developed from contractors quotes. Facilities manage the Housing Capital Budget which is reviewed annually by the Director of Social Services and the Council Coordinators.

NON INFRASTRUCTURE SOLUTIONS

The department has requested the purchase of a vehicle for the Community Outreach Workers as it will be more cost effective than the current mileage paid out to employees.

An Operational Review Process was completed on all non-profit providers to ensure compliance with the Act. This will provide a full state of the union of all the housing providers. This will assist the department in identifying risks, best practices, and overview of the health and viability of the non-profit providers and aging housing stock.

Operational reviews are completed on our 10 non-profit housing providers, involved in this is staff from housing and finance. It looks at board governance, RGI tenant files, building condition elements and of course the financial practices of the organization. Under the new Housing Services Act greater emphasis has been given to the service manager to question the asset management plan of each provider. To date
we are looking at increased accountability through the new service agreement that will be introduced to council later this year, new financial policy, and the implementation of Asset planner to all our housing providers to ensure they have the software necessary to help them achieve long term capital plans.

We continue to work closely with the Facilities department on the 10 year capital repairs and ongoing maintenance program and to identify and work with stakeholders to determine best approach for use of Funding Allocation for Municipal Infrastructure Investment Initiative – Social Housing Asset Management. This money was allocated toward our 10 non-profit housing providers, signed agreement with Housing Services Corporation for 3 year purchase of Asset Planner Software.

COMMUNICATION WITH NON-PROFITS, STAKEHOLDERS AND CONSUMERS

- We continue to develop, review and update current policy and procedure manuals to ensure the delivery of a fair and consistent program and to share these policies and procedures with local nonprofit providers as a source of best practices.
- To educate and bring community resources to the various tenant groups we plan and co-ordinate annual tenant meetings.
- We plan and co-ordinate ongoing Technical Advisory Group non-profit provider meetings and information sessions to share best practices and educate on the ongoing legislative changes and funding.
- We build on our current Alternate Dispute Resolution program that focuses on bringing together those services that can assist in a successful tenancy and reduce the need to file for eviction with the Landlord Tenant Board.

LIFECYCLE PLANNING - STRATEGIES

We prepare a preventative capital repair plan (referred to as the ten year plan. The County identifies the capital needs of the building. We may also work with finance to monitor budgets, Provincial and Federal government for possible funding and Housing Services Corporation, in addition to utility companies and even tenants to help maintain the buildings and be champions in energy conservation and awareness.

The Ten Year Housing Capital Plan is developed by regular building inspections. The strategies may change from time to time but we follow the Capital Plan which is developed by reviewing all building components in each building and adding a lifespan to each component.
DEMAND MANAGEMENT

Economic factors across Ontario reflect the following:

- Average rents increased by three times the rate of inflation across the province.
- In 2012, there were more than 146,000 households on municipal waiting lists for assisted housing across Ontario; this number is continuing to grow.
- One in five Ontario renter households is still spending more than half their income on housing.
- There is a growing gap between the incomes of tenants and those of homeowners. There is a movement of middle income tenants out of the rental market.
- Those using food banks spend on average 65% of their income on housing.
- 72% of families on the social housing wait list have annual incomes of less than $20,000.
- No additional RGI units have been built since 1995.
- Demand for new purpose-built rental housing is conservatively estimated at 10,000 homes a year for the next decade. Over the last ten years we have averaged about a third of this need.

PROCUREMENT

We adhere to Procurement By-Law 37.11.

For work costing less than $5,000 (award of work does not require Council approval) we use a pre-approved list of contractors. This list is developed and maintained by the Facilities Manager with the support of the Purchasing Manager. We obtain a minimum of three (3) quotes for every area of service. For pre-approved contractors we require WSIB, insurance, and trade certificates. The process for hiring a contractor where project values are above $5,000 is dependent on the value of the contract. Our procedure is as follows:

- For work costing up to $10,000 we obtain at least 3 written quotes typically solicited by phone
- For work costing less than $10-30,000 a formal request for a quote is posted on our web site, and in the local newspapers
- For work costing more than $30,000 (award of work requires Council approval) - a formal tender is posted on our web site, construction sites and in the local newspaper.

Both the formal quote and tender process are overseen by the Purchasing / Risk Manager.
FINANCE STRATEGY

BACKGROUND

Mandatory programs - operating subsidies, rent supplement funding

- In the 1990's the provincial and federal governments decided to withdraw from the administration of social housing. Under the Local Services Realignment in January 1998 the provincial government transferred its financial responsibility for social housing to the municipalities. Northumberland County has been responsible for funding the costs of social housing since then.
- In November of 1999 upon signing the Social Housing Agreement, the federal government transferred the administration of formerly federal housing programs to the provincial governments and provided flexibility to further devolve programs to the municipal level. The federal government established a level of financial support. The Agreement assisted the MMAH transfer of social housing to municipalities.
- In January 2001 the transfer of the public housing stock to the municipal service manager (the County of Northumberland) occurred.
- In April 2002 the Ministry of Municipal Affairs and Housing (MMHA) transferred the administration of the non-profit, co-operative and federal housing programs to the municipal service manager.
- In April 2002, the Housing Services Division of Community and Social Services within Northumberland County became directly responsible for the issuance of monthly subsidy payments to housing providers. In addition, as Service Manager the County administers any housing program initiatives by the Federal or Provincial government.

Community homelessness prevention initiative

A commitment to housing and homelessness program consolidation was one of the outcomes from the Provincial-Municipal Fiscal and Service Delivery Review. Consolidating housing and homelessness related programs is a key part of Ontario’s Long Term Affordable Housing Strategy (LTAHS) to transform the housing system and put people first.

Discretionary Programs - initiatives funded by the federal/provincial or municipal government

- Canada Ontario Affordable Housing Renovation and Retrofit Program (SHRRP)
  - The Social Housing Renovation and Retrofit Program (SHRRP) was a capital grant program by the federal and provincial governments. This funding was for the repair and regeneration of eligible social housing projects and was part of senior government’s economic stimulus plan.
- Canada Ontario Affordable Housing Program (AHP) 2009 Extension Homeownership
The Homeownership Component of the Canada-Ontario Affordable Housing Program 2009 Extension was designed to assist low to moderate income rental households to purchase affordable homes by providing a down payment in the form of a forgivable loan.

- Canada Ontario Affordable Housing Program (AHP) 2009 Extension New Rental Housing Component
  - The new Rental Housing Component of the AHP Extension (2009) lead to the development of new affordable rental housing units, with a focus on low income seniors and persons with disabilities.

**Investment in affordable housing (IAH) for Ontario program**

This program will provide $480.6 million in federal and provincial funding for the creation and repair of affordable housing over four years. (2011-2015).

**Short term rent support program**

The STRSP is time-limited, beginning in the fiscal year 2010-11 and ending in fiscal year 2012-13. It was designed to assist low income families across the province pay their rent during the recent economic downturn.

**Northumberland transportation initiative (NTI)**

Operated by Community Care Northumberland; County Transportation Vision implementation of an integrated and coordinated rural transportation service that is affordable, reliable, accessible and sustainable throughout Northumberland County.

**Salvation Army furniture warehouse program**

Northumberland County supports and provides block funding for the operations of the Salvation Army’s Furniture warehouse program. This program assists low income families and singles who require items to furnish their home. They will recycle donated items and deliver them to needy families and singles within Northumberland County.

**Annual capital reserves – local Housing Corporation 5 to 10 year plan**

The Facilities Department has developed a 5 to 10 year capital plan specific to the Local Housing Corporation.
Funding allocation for the municipal infrastructure investment initiative – social housing asset management

As part of the Provinces of Ontario’s long-term infrastructure plan, Building Together, MMAH has made funds available for strategic asset management of social housing for eligible service managers.

EXPENDITURE FORECAST

2013 BUDGET

The Community & Social Services 2013 budget is $28.6M. This includes income services, employment and support services, children’s services, housing services, the Food 4 All warehouse and administrative services. The draft budget allocates $11.2M in levy to the Community & Social Services department. The levy allocation has increased 3.6% in 2013 after the benefit of the phased in upload of the County’s share of the Ontario Works costs. Other sources of revenue are primarily Provincial subsidies and social housing rent.

The Community & Social Services department continues to see the demand for services increase in these tough economic times. At the same time as need is increasing, the Province announced cuts to the funding for several programs in late 2012. The increased levy and re-allocation of upload savings offsets some of the lost funding. However, the County funding of some programs was reduced in an effort to balance the size of municipal tax increase while still ensuring the maximum amount of resources are directed to the Social Services clients most in need.

ACTUAL EXPENDITURES

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and Maintenance</td>
<td>$515,773</td>
<td>$381,055</td>
<td>$658,146</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>$226,219</td>
<td>$34,598</td>
<td>N/A</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:
- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
• Capital items have an individual value greater than 5K

REVENUES

Mandatory programs - operating subsidies, rent supplement funding

Funding adheres to prescribed benchmarks for all housing providers as stipulated by MMAH under The Housing Services Act. The benchmarked funding includes cost indices as prescribed by MMAH which result in increased funding pressures to the County.

As the residual funding agent for social housing, the County is exposed to potential increased costs in insurance, utilities and maintenance, for our own housing buildings and other social housing providers in Northumberland County.

Community homelessness prevention initiative

The Community Homelessness Prevention Initiative is 100% provincially funded investment that includes the consolidation of five existing programs and the scheduled upload of the Emergency Hostel Service portion of Ontario Works along with 50% of the provincial expenditures from the former Community Start up and Maintenance Benefit (CSUMB) and the scheduled upload related to CSUMB. The goal of consolidation is to allow service managers greater flexibility to meet local need to prevent homelessness or those at risk of homelessness.

Discretionary Programs - initiatives funded by the federal/provincial or municipal government

• Canada Ontario Affordable Housing Renovation and Retrofit Program (SHRRP)
  o The Ontario and federal governments agreed to jointly invest $704 million into social housing renovation and retrofit projects.
  o Northumberland County was awarded a notional allocation of $2,181,517 to improve the health, safety, accessibility along with reduced operating costs of the aging social housing stock.
  o Northumberland County submitted a Take-up Plan to the Ministry of Municipal Affairs and Housing and distributed the allocation amongst all 10 non-profit housing providers and the Local Housing Corporation (LHC) on a per unit basis. These funds are 100% Provincial and Federal dollars.

• Canada Ontario Affordable Housing Program (AHP) 2009 Extension Homeownership
  o Northumberland County as the Service Manager entered into a service agreement with Habitat for Humanity Northumberland to administer this component of delivery.
    • In 2008-2009, Northumberland County was awarded 22 unit allocations with a total funding value of $226,925.
In 2009-2010 the program moved away from specific number of allocations. Three homes were purchased with a loan value of $50,000 each for a total value of $150,000.

In 2010-2011 in Northumberland County two homes were purchased with a loan value of $50,000 each for a total value of $100,000.

Northumberland County maintains a revolving fund when homes are sold to reinvest in the program.

- Canada Ontario Affordable Housing Program (AHP) 2009 Extension New Rental Housing Component
  - TVM- 64 Ward St formerly the Doctor Powers school project received funding commitment of $2,422,660 for 24 units for seniors and persons with disabilities.
    - New Rentals built original Canada Ontario Affordable Housing Program:
      - Victoria Square, Colborne; 3 units – funding approved $210,000
      - 1 King St, Cobourg; 10 units – funding approved $700,000
      - 256 Division St, Cobourg; 12 units – funding approval $840,000
      - 37-39 King St, Cobourg; 8 units – funding approval $560,000
    - This initiative has resulted in an increase of 57 affordable housing units to Northumberland County. The funding was 100% Federal/Provincial dollars totaling $4,732,660 since 2008.
**Investment in affordable housing (IAH) for Ontario program**

Northumberland County’s notional allocation is $2,168,661 and is to be used for new rentals. The successful proponent of an RFP process was Bloor Park Village. This will result in 24 new accessible and affordable single and two bedroom units being built in Campbellford.

**Short term rent support program**

The notional funding allocation for County of Northumberland is $158,470 and is divided up into year one, two and three. These dollars were targeted within Northumberland County to victims of domestic violence and those living in shelters.

**Northumberland transportation initiative (NTI)**

NTI is a not-for-profit organization that provides a valuable service that no other organization or agency is offering. It is, however, supported by over 70 organizations/agencies that have clients who can utilize their service. It is a service that is affordable and accessible and is offered to rural areas in Northumberland County. NTI service is open to anyone that lives in the current service area and registers as a client including low income families or individuals, seniors, youth and families.

**Salvation Army furniture warehouse program**

The Housing Division, Facilities and Finance Departments have been committed to ensuring annual contributions are made to the Capital Reserve fund to be used towards long term planning for future housing needs and requirements within Northumberland County.

**Annual capital reserves – local Housing Corporation 5 to 10 year plan**

Over the next ten years, the County will need to increase the annual Capital Repair budget to meet the $650,000 to $700,000 dollars needed annually to ensure the Local Housing Corporation (344 units) buildings are maintained in addition to being fitted with energy efficient appliances and accessibility features.

**Funding allocation for the municipal infrastructure investment initiative – social housing asset management**

Northumberland County will be receiving a total funding allocation of $14,648.00 over three years.
The housing revenue is provided from the following sources:

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Levy</td>
<td>$1,075,027</td>
</tr>
<tr>
<td>Rent</td>
<td>$1,300,000</td>
</tr>
<tr>
<td>Laundry</td>
<td>$33,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,408,027</strong></td>
</tr>
</tbody>
</table>

In addition, the County has received funding for various projects in recent years but any such funds are one-time and related to a specific government initiative. Such funds are to be used for specific projects such as: energy efficient upgrades or accessibility.

**LIFE CYCLE COSTING**

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using industry standard lifecycle activities the projected condition as well as funds required is shown below. The graph shows projected condition to 2060 assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our assets.

![Cost For Social Housing](chart.png)

**Average annual cost**

$1,100,509
Comments on the cash flow graph

Long term funding for these assets present a significant challenge. This is due to their relatively long life expectancy and the resulting need for replacement of the building itself as opposed to the components. This can be seen in the graphs above where there are spikes in the funding need and is reflects replacement costs for those assets. A long term view is critical to ensure funds are allocated on an annual basis so that the financial requirements are manageable.

ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

The Housing and Homelessness Plans identify certain key trends and needs that will need to be considered. Things such as aging housing stock, increased costs related to energy costs, increasing cost of various legislative requirements such as fire code, accessibility, human rights, aging population, lack of quality affordable housing being built, inability of taxpayers to afford rents, and lack of investment from other levels of government. All of these factors are evaluated with each update to the ten (10) year plan.

The 10 year financial plan considers major capital repair needs as well as routine repairs and maintenance. The R&M budget has been increased $100k each of the past 3 years to reach a sustainable level of funding for asset maintenance. The 10 year plan does not address the eventual need to replace these assets nor does it provide for the expansion of social housing assets despite the need within the community.
Data confidence

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>

Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>B+</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B-</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

FUNDING SHORTFALLS

When the first Housing Ten Year Plan was completed the plan identified a need for more capital funds to insure the County Housing units didn’t fall into total disrepair at the time of the plans inception the capital funds were set at $240,000 annually the plan identified a need for over $600,000 annually so council agreed that the Housing capital funds should be reviewed each year and if there was a need to increase the funds they would be increased by $100,000 annually until the funds reached $600,00 the Facilities Manager would write an issue paper yearly identifying the need for the funds to be increased and once capital work had peaked and the funds were no longer needed to keep up with capital repairs the remainder of the funds would be put in the County Housing Reserve.
APPENDIX 6 – LONG TERM CARE – GOLDEN PLOUGH LODGE

STATE OF THE INFRASTRUCTURE

DATA SOURCES – COLLECTION - CONDITION ASSESSMENT POLICY & PRACTICES

The Environmental Services Division measures renewal of the Golden Plough Lodge facility, assets and equipment in two distinct fashions;

- **Repair & Maintenance**: Staff utilize weekly and annual check lists to review various facility components and equipment i.e. mechanical and electrical fixtures, supply fans, boilers and lift equipment.
- **Refurbishment Program**: Scheduled interior and exterior painting, furniture renewal, tile work and carpet renewal are undertaken annually within the annual approved operating budget.

Capital needs for the Golden Plough Lodge are evaluated annually and placed on a 10 year capital plan based upon projected needs and remaining asset life. Operational expenses related to equipment repair, cleaning and small replacement costs are planned within the current year maintenance budget.

This section of the appendix outlines the following:

- The asset types/profiles included in the first plan and their respective quantities
- The historical and replacement cost valuations
- The age distribution relative to useful life
- Consumption profile
- An assessment of the asset condition
- Short and long term financial data
- Update mechanisms for the data

The information in this section of the plan is supported by the Facilities database and the GIS asset register/inventory database. It also addresses:

- Assumptions regarding the content of the section and how it was derived
- A policy outlining how the data will be validated (to be completed) and a condition assessment policy (practice is long standing but no formal policy exists)
The Corporation is legislatively required to establish and maintain a long term care home. As such, the Golden Plough Lodge is governed by the provincial Long Term Care Homes Act, 2007 (LTCHA) and licensed by the Ministry of Health and Long Term Care (MOHLTC) to provide care for 151 residents. Resident care is comprised of three broad components: accommodation, hospitality services and health services.

We currently have one long term care facility – the Golden Plough Lodge. It is located at 983 Burnham Street in Cobourg. The GPL serves persons whose needs can no longer be met within the community, whose medical conditions are relatively stable, and who do not require intense, ongoing intervention by physicians and other health care professionals. Residents may however, still have a serious condition, requiring very intensive personal care or complex medical needs requiring nursing expertise.

### ASSET PORTFOLIO VALUE

The GPL consists of the following asset types:

<table>
<thead>
<tr>
<th>Asset Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
</tr>
<tr>
<td>Electrical</td>
</tr>
<tr>
<td>Exterior</td>
</tr>
<tr>
<td>Interior</td>
</tr>
<tr>
<td>Life/Safety</td>
</tr>
<tr>
<td>Mechanical</td>
</tr>
</tbody>
</table>

These asset types were used to develop the replacements valuations shown in the table below using industry standard costs.

- The acquisition/historical cost is the cost of originally acquiring the asset. The total acquisition value was estimated from the County’s Tangible Capital Asset (TCA) data (a combined valuation of all buildings) using 29.45% of the total: $30,481,933. Twenty-nine point four-five is the respective portion of the total combined replacement value.
• The depreciated cost is the remaining value of the asset based on its useful life and assumed depreciation. If the value is zero then the asset is past its defined useful life. These valuations use the NRBCP24 index to estimate depreciated costs based on the current replacement cost. It has assumed straight line depreciation of the assets.

• The replacement cost is the estimated cost of replacing the asset in current dollars

### Table 34 Financial valuation - GPL

<table>
<thead>
<tr>
<th>Asset type</th>
<th>Acquisition cost</th>
<th>Depreciated cost</th>
<th>Replacement cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>0</td>
<td>25,563,011</td>
<td>50%</td>
</tr>
<tr>
<td>Electrical</td>
<td>296,014</td>
<td>580,500</td>
<td>1%</td>
</tr>
<tr>
<td>Exterior</td>
<td>1,727,631</td>
<td>21,910,011</td>
<td>43%</td>
</tr>
<tr>
<td>Interior</td>
<td>838,543</td>
<td>1,059,500</td>
<td>2.1%</td>
</tr>
<tr>
<td>Life/Safety</td>
<td>606,866</td>
<td>828,000</td>
<td>1.6%</td>
</tr>
<tr>
<td>Mechanical</td>
<td>491,226</td>
<td>1,185,000</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,617,336</strong></td>
<td><strong>3,960,280</strong></td>
<td><strong>51,126,022</strong></td>
</tr>
</tbody>
</table>

In the following graphs the y-axis (“Count”) reflects the number of components within each asset sub group.

---

24 Non-residential Building Construction Price Index
INSTALLATION PROFILES

Age Profile

Count

Age

0 1 2 6 8 11 18 30 55

A000003 - Golden Plough Lodge

CONDITION PROFILES

Health Profile

Count

Excellent  Good  Poor

Condition

Long Term Care (GPL)
The Corporation is legislatively required to establish and maintain a long term care home. As such, the Golden Plough Lodge is governed by the provincial Long Term Care Homes Act, 2007 (LTCHA) and licensed by the Ministry of Health and Long Term Care (MOHLTC) to provide care for 151 residents.

On July 01, 2010 the Ontario provincial government proclaimed the new Long Term Care Home Act (LTCHA), 2007. Under the act, there are significantly increased expectations for protocols, policies, procedures, quality, statistical data and compliance reporting relating to administrative management of a long term care home.

Current provincial long term care change initiatives include

- Long Term Care Home Act, 2007 (LTCHA) - proclaimed July 01, 2010, the LTCHA, 2007 is the cornerstone of the government’s strategy in improving and strengthening resident care in Ontario’s long term care homes and replaces all previous legislation, serving as the single legislative governing authority. The act emphasizes a resident focused model of care, significant
involvement of Resident & Family Councils and greater public reporting and transparency. The MOHLTC continues to develop, refine and modify regulations contained within the LTCHA.

- **Long-Term Care Service Accountability Agreement (L-SAA)**- Local Health Integration Networks (LHINs) are an important component in the MOHLTC agenda of regionally coordinated and integrated health care services. As the LHINs continue to evolve, they have assumed responsibility for long term care accountability and funding through Long Term Care Service Accountability Agreements. The Golden Plough Lodge 2010-2012 L-SAA is administered by the Central East LHIN. Officially signed and executed July 01, 2010, the current L-SAA expires March 31, 2013.

- **Long Term Care Home Compliance Transformation Project**- the MOHLTC Compliance Management Program monitors all long term care homes in Ontario on an ongoing basis, inspecting performance at least once a year to ensure compliance with provincial legislation, regulations, standards and policies. Strongly influenced by the LTCHA, 2007; the ministry has made major enhancements to this program including new regulations to replace the existing Program Standards Manual (over 400 standards and criteria), its framework and inspection program as a means to enhance public reporting and transparency.

- **Resident Assessment Index – Multiple Data Set (RAI-MDS) Documentation**– all long term care homes in Ontario are in the process of transitioning from the Case Mix Index (CMI) resident assessment methodology to that of RAI-MDS; a comprehensive resident assessment tool which captures information for improving care planning capabilities and enables continuous quality improvement. Standardized data collection and reporting through MDS also serves to enhance data utilized by LHINs and the MOHLTC for system planning, management and determination of Long Term Care funding allocations.

- **Long Term Care Capital Redevelopment**– under the MOHLTC’s Renewal Strategy, long term care beds built prior to 1998 must undergo renovation or renewal. All long term care homes with beds classified as B & C, such as the Golden Plough Lodge, must be redeveloped by 2025 in cooperation and coordination with the LHIN and MOHLTC. While some funding is available through the MOHLTC, the enormity of this project will take significant financial planning and resource management.

Additional changes in the long term care (LTC) sector include

- MOHLTC review of the LTC funding framework and new funding allocation model
- MOHLTC implementation of a new LTC staffing model
- Residents First implementation, a LTC quality and capacity and building initiative
- Behavioural Supports Ontario, a LHIN provincial initiative to improve care for seniors exhibiting complex and challenging mental health conditions
- Ontario Healthcare Reporting Standards/Management Information System (OHRS/MIS) reporting; standardized collection of LTC financial data
- Ontario Health Quality Council public reporting of LTC indicators and results as a means to further system transparency
As the Long Term Health Care Sector undergoes system transformation, the Golden Plough Lodge continues to experience challenges in meeting and adapting to a rapidly changing health care environment. During implementation and further development of the transformation process, it will be crucial to continue to ensure resources are appropriate to the continuance of a stable, caring and quality focused environment.

Situational summary – long term care system transformation

As an integral component in the MOHLTC’s transformation of Health Care Services in Ontario, the Long Term Care sector is continuing to experience significant and concurrent changes.

Contained within a three year roadmap spanning 2010 to 2013, MOHLTC objectives are to:

- Improve the resident experience to promote a high-quality of life for all residents
- Improve the safety and effectiveness of care provided in Long Term Care Homes
- Build capacity and strengthen accountability in the Long Term Care Sector
INTRODUCTION

The Golden Plough Lodge Environmental Services Department manages and provides asset related services utilizing internal expertise, Northumberland County Facilities department staff and contracted services. Through identification in the annual Golden Plough Lodge Capital Asset Plan, major projects are undertaken within an annual approved capital operating budget.

NON-INFRASTRUCTURE SOLUTIONS

a. OPERATIONAL

In 2008 an Operational Review was commissioned and conducted by Bessant Pelech Associates to examine operating and staffing efficiencies. Completed in August 2009; the report strongly recommended transition from current delivery of a task orientated, medical model of resident care to that of a client-centered psychosocial model as a means to improve workload efficiencies, quality of life and quality of resident care. This recommendation reflects Ministry of Health and Long Term Care legislative changes to the Long Term Care Home Act, 2007, the development of new regulations replacing the existing Long Term Care Program Standards Manual and a province wide transition to the Resident Assessment Instrument-Minimum Data Set, all of which focus on holistic and restorative care practices.

To implement this transition, it is necessary to provide education and training to all Golden Plough Lodge staff members regarding the culture, philosophy and daily practices of resident focused care provided within the framework of the Eden Alternative Philosophy of Care. Although implementation of this philosophy of care commenced in 2010, it has been recognized that home wide transition will require ongoing staff training to ensure in-depth understanding and home wide adoption.

An operational review is planned for 2013.

b. TRAINING

In 2009 the Government of Ontario passed Bill 168, amending the Occupational Health & Safety Act through inclusion of employers’ responsibilities regarding workplace harassment and violence. In 2010 the County of Northumberland conducted an internal risk assessment and amended policies and procedures reflecting legislative requirements. Subsequently, enhanced training related to Workplace Violence was provided to all County employees in 2011 and 2012, with the exception of the Golden Plough Lodge and EMS operational divisions. Training is scheduled to take place in 2013 for Golden Plough Lodge employees.
c. DOCUMENTATION MANAGEMENT

In 2013, the Golden Plough Lodge will be implementing the PointClickCare Point of Care (POC) nursing documentation software module. This technology will enable clinical staff access to existing information and capture new information at/near the place of care on wall mounted-touch screens or laptop computers. Information accuracy will improve and documentation time decrease, allowing for increased time is devoted to direct resident care.

LIFECYCLE PLANNING - STRATEGIES

As detailed within the 10 year capital plan, Golden Plough Lodge capital asset expenditure requirements are analyzed, evaluated and prioritized by the Administrator and Environmental Services Manager to ensure operational safety and functionality within established budget perimeters. The 10 year plan does take into consideration that he GPL will be rebuilt within the next 10 years and repairs and infrastructure investment is determined accordingly. A small reserve is being built for the rebuild project although it will not be sufficient at the time of the rebuild and a debenture will be required.

DEMAND MANAGEMENT

As per the trend across Canada, birth and death rates in Northumberland County have declined. In the latest released census data of 2011, Northumberland County residents aged 65 years and over made up 22% of the population and 2,220 of those residents were 85 years and over. Northumberland County women aged 65 years and over outnumbered their male counterparts by 1,250, clearly reflected in the current resident population of the Golden Plough Lodge of which the majority present diagnosed chronic complex physical and mental health conditions.

Table 35 GPL Resident population statistics as of October 2012

<table>
<thead>
<tr>
<th>Years</th>
<th>0-50 Years</th>
<th>51-60 Years</th>
<th>61-70 Years</th>
<th>71-80 Years</th>
<th>81-90 Years</th>
<th>91-100 Years</th>
<th>Over 100 Years</th>
<th>Total Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>16</td>
<td>22</td>
<td>3</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>2</td>
<td>10</td>
<td>22</td>
<td>37</td>
<td>29</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>4</td>
<td>16</td>
<td>38</td>
<td>59</td>
<td>32</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>% Population</td>
<td>1</td>
<td>3</td>
<td>11</td>
<td>25</td>
<td>39</td>
<td>21</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

PROCUREMENT

The Golden Plough Lodge adheres to and utilizes the County of Northumberland’s Purchasing By-Law 37-11 to guide and facilitate capital asset replacement, procurement and repair.
FINANCE STRATEGY

EXPENDITURES FORECAST

2013 BUDGET

The Golden Plough Lodge (GPL) 2013 budget is $13.0M. The GPL provides nursing, dietary, housekeeping, maintenance, activation programs and accommodations to the residents. The draft budget allocates $3.7M in levy to the GPL. The GPL primarily receives funding through the Provincial subsidy and resident accommodation revenue. The GPL is required by the Province to rebuild the facility and annual levy contributions to a reserve account are being made to partially reduce the amount to be debentured at the time of the rebuild.

ACTUAL EXPENDITURES

A summary of expenditures for 2010, 2011 and 2012 is shown on the following table. Where “N/A” is shown the type of expenditure is not relevant at this time.

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and Maintenance</td>
<td>354,107</td>
<td>$251,397</td>
<td>$332,468</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Replacement Activities</td>
<td>$151,437</td>
<td>$33,991</td>
<td>$171,870</td>
</tr>
<tr>
<td>Expansion Activities</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Notes:
- Excludes rolling stock
- Values do NOT include disposals
- Repairs and Maintenance is NOT capitalized
- Road Rehab is NOT capitalized
- Capital items have an individual value greater than 5K
REVENUE

The Golden Plough Lodge is funded through three distinct revenue sources; the Ministry of Health and Long Term Care (MOHLTC), Resident Accommodation Revenue and the Levy Contribution. The summary is provided below.

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial Subsidies</td>
<td>6,324,500</td>
</tr>
<tr>
<td>Resident Revenue for Accommodation</td>
<td>2,931,900</td>
</tr>
<tr>
<td>County Levy</td>
<td>3,563,414</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,819,814</strong></td>
</tr>
</tbody>
</table>

There are also some miscellaneous revenues and expense recovery but these amounts are not guaranteed and can vary from year to year. The amount of the subsidy and resident payments can change from year to year. The amount paid by a resident varies depending on ability to pay so therefore, the amount paid by the Province will change depending on the resident population at any given time. The fees charged are set by the Province. The subsidy is driven by the Case Mix Index (CMI). In the past year our CMI has increased substantially resulting in an increase to our actual funding vs. budget.

**Table 36 Ministry of Health & Long Term Care funding**

<table>
<thead>
<tr>
<th>Funding Envelopes</th>
<th>Resident per diem funding as at July 01, 2012</th>
<th>Service Envelope Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing &amp; Personal Care</td>
<td>86.91</td>
<td>Resident nursing and care requirements based upon assessed individual needs and adjusted to reflect Case Mix.</td>
</tr>
<tr>
<td>Program &amp; Support Services</td>
<td>8.43</td>
<td>Resident restorative and social programs inclusive of registered dietician services.</td>
</tr>
<tr>
<td>Raw Food</td>
<td>7.68</td>
<td>Resident meals and snacks inclusive of specialized dietary requirements.</td>
</tr>
<tr>
<td>Other Accommodation</td>
<td>52.17</td>
<td>Resident indirect needs: administration, housekeeping, laundry, dietary services and facility maintenance.</td>
</tr>
<tr>
<td><strong>Total Resident per diem funding</strong></td>
<td><strong>$155.19</strong></td>
<td></td>
</tr>
</tbody>
</table>
RESIDENT ACCOMODATION REVENUE

The MOHLTC directs and sets fees for Resident accommodation; accommodation costs are recovered through Resident payments remitted to the Golden Plough Lodge.

<table>
<thead>
<tr>
<th>Resident Room Accommodations</th>
<th>Resident per diem fees as at July 01, 2012</th>
<th>Accommodation Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic (85 beds)</td>
<td>$55.04</td>
<td>Two residents; shared sleeping space and shared bathroom</td>
</tr>
<tr>
<td>Semi Private (41 beds)</td>
<td>$63.04</td>
<td>Two residents: separate sleeping space and shared bathroom</td>
</tr>
<tr>
<td>Preferred (25 beds)</td>
<td>$73.04</td>
<td>One resident; private sleeping space and bathroom</td>
</tr>
</tbody>
</table>

COUNTY OF NORTHUMBERLAND LEVY CONTRIBUTION

As a municipally owned and operated Long Term Care Home, operating costs over and above MOHLTC Funding and Resident Accommodation Revenue are met through a municipal levy contribution. Increased operating costs, lower occupancy rates and decreased acute care needs have in the past, resulted in increased levy contributions. As a result of ongoing operational efficiencies implemented in 2010, budgeted levy contributions have stabilized. The 2013 Levy Contribution is budgeted at $3,738,732 and includes seven issue papers with a net impact of $190,000 to levy contributions. The levy increase in 2013 reflects a $400,000 reserve contribution to be directed to the GPL rebuild project. It is important to begin the financial planning for this initiative.
ECONOMIC FACTORS

From 2005 to 2009, the Golden Plough Lodge experienced a significant drop in revenue attributable to extended periods of decreased resident occupancy and insufficient resident care documentation, both of which are significant determinants in annual MOHLTC funding calculations.

In addition, operating costs continued to climb primarily in nursing salary costs and facility maintenance expenditures associated with an aging physical infrastructure. These factors resulted in increased municipal levy contributions to offset experienced financial shortfalls.

In 2010 a series of financial strategies were put into place to optimize revenue sources while stabilizing operational costs. Heavily reliant upon MOHLTC funding and resident accommodation fees, the Golden Plough Lodge will continue to experience ongoing financial challenges directly attributable to limited MOHTLC funding, enhanced LTCHA operational requirements and costs associated with negotiated collective agreements and maintenance of an aging infrastructure.

LIFE CYCLE COSTING

The condition of the assets is forecasted to change over time based on deterioration of the assets as well as planned replacements and rehabilitation. Using industry standard lifecycle activities the projected condition as well as funds required is shown below. The graph shows projected condition to 2060 assuming the planned/required replacements and rehabilitations are carried out. The RIVA online Modeling tool was used to develop the long term needs of our assets.
Note: 75 year life for building

Comments on the cash flow graph

Long term funding for these assets present a significant challenge. This is due to their relatively long life expectancy and the resulting need for replacement of the building itself as opposed to the components. This can be seen in the graphs above where there is a huge spike in the funding need and reflects replacement costs for the building. The County is in the middle of an assessment that would provide the data to decide whether it would be more economical to maintain/replace the existing building or move to a new facility. A long term view is therefore critical to ensure funds are allocated on an annual basis so that the financial requirements are manageable.

ASSUMPTIONS & CONFIDENCE LEVEL

Short term plans

Under the MOHLTC’s Renewal Strategy, long term care beds built prior to 1998 must undergo renovation or renewal. All long term care homes with beds classified as B & C, such as the Golden Plough Lodge, must be redeveloped by 2025 in cooperation and coordination with the LHIN and
MOHLTC. While some funding is available through the MOHLTC, the enormity of this project will take significant financial planning and resource management.

**Data confidence**

To provide a benchmark as to confidence we have ranked our data. We have used a simple A through C where:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>High level of confidence</td>
</tr>
<tr>
<td>B</td>
<td>Needs improvement</td>
</tr>
<tr>
<td>C</td>
<td>Low level of confidence</td>
</tr>
</tbody>
</table>

Using this scale we have ranked three components: inventory, life cycle assumptions and financial data.

**Table 37 Data confidence - GPL**

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>B+</td>
</tr>
<tr>
<td>Life Cycle</td>
<td>B-</td>
</tr>
<tr>
<td>Financial</td>
<td>B</td>
</tr>
</tbody>
</table>

**FUNDING SHORTFALLS**

The GPL is subsidized by the County levy and significant levy contributions will be required for the rebuild project and debt repayment. The Provincial funding for long term care is not adequate for a project of this magnitude.