

Municipality of Trent Lakes Facilities Master Plan

FINAL

October 2019



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1 Executive Summary

The Municipality of Trent Lakes (Trent Lakes or MTL) is responsible for municipal operations and service delivery within the township, located in the rural, mostly wooded north-west of Peterborough County, Ontario. The Municipality needed to assess the needs and suitability of current facilities for future activities, and to understand long-term needs before investing in existing facilities.

Cornerstone Planning Group was retained to develop the first long-term plan for Municipal facilities including municipal office, fire stations, community halls, public works depots, waste transfer stations and other municipally owned buildings. As part of the Facilities Master Plan, Cornerstone examined current and future facility space needs and required capital investment over a 20-year horizon to develop recommendations for the relocation, expansion, and/or amalgamation of facilities to best serve the municipality's delivery of services into the future.

The project process included a background review of all relevant and available information, asset tours, stakeholder consultation including public survey, and analysis of future state to refine tailored facility strategies which include renovation, renewal, maintenance, and consolidation as appropriate.

Summary of Recommendations:

The detailed rationale for each of the final projects is described within this document. A number of recommendations were made for each of the Municipality's asset categories. These recommendations are based on the current functional and physical state of the asset, the projected functional requirements and physical renewal required over the next 20 years, and the relative estimated cost of the projects. The recommended course of action in chronological order is shown in the chart and figure on the page that follows.

In summary, Trent Lakes Municipal facilities have reached a point of required renewal in many areas, due to both physical and functional deficiencies. The Municipality may expect to increase spending on facilities overall, in order to meet standards of practice (e.g. in Fire Services), renew aged resources (Community Halls), keep rolling stock in good repair and provide efficient services (Public Works), and support Municipal staff to complete their jobs in a safe and effective manner (e.g. Recreation & Facilities, Administration).

The budget that is provided at the end of this report stages projects in a manner that reduces risk by addressing priority projects first, while spreading out capital outlay over time.

Figure 1 Map of Trent Lakes location in Peterborough County

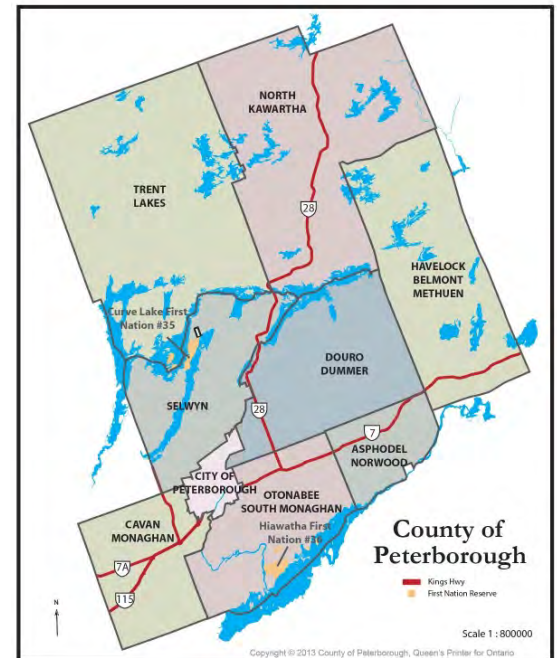
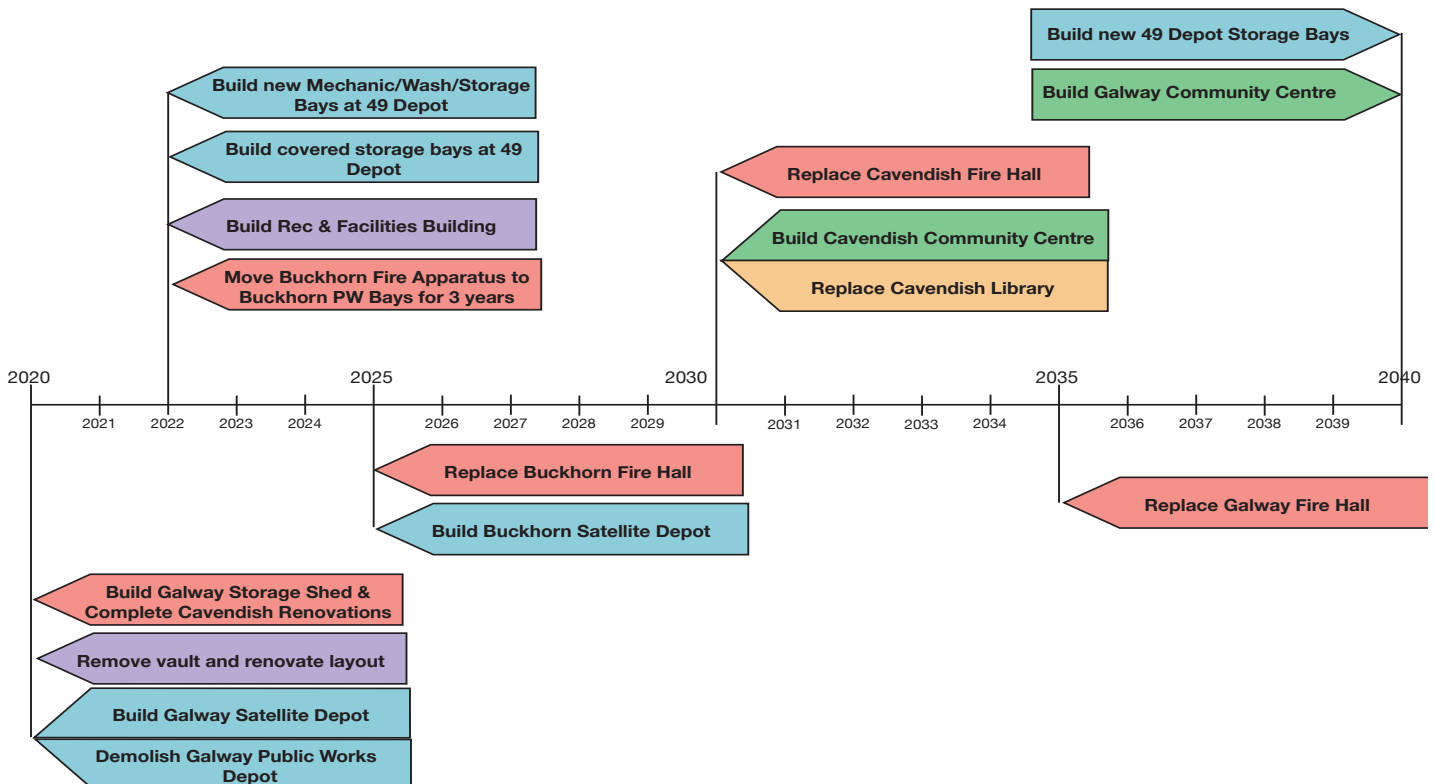


Table 1 Capital Project Timeline

Project	Timeline
<ul style="list-style-type: none"> ▪ Divest of Deer Bay Hall and relocate Outreach Centre to Lakehurst Hall. ▪ Cavendish Fire Hall: Complete renovations as drawn (Greenview, 2018). ▪ Galway Fire Hall: Provide a storage shed for the ATV trailer and Boat. ▪ Demolish existing Galway Public Works structure. ▪ Construct new Galway satellite garage for minor operations and equipment storage. ▪ Remove Administration vault, renovate for workstations (pending scanning project) 	2020
<ul style="list-style-type: none"> ▪ Build new Depot on 49 site to support mechanical, wash, and Buckhorn storage. ▪ Reallocate staff, equipment, and fleet to 49 to maximize efficiencies. ▪ Maintain old 49 Depot for warm storage. Maintain old Buckhorn Depot for temporary Fire Services and Satellite chain-up location. ▪ Move Recreation and Facilities to a new facility, co-located with new Depot. ▪ Move Buckhorn Fire Services into Buckhorn Depot bays (pending new Hall). 	2022
<ul style="list-style-type: none"> ▪ Renew Cavendish Play Structure. 	2024
<ul style="list-style-type: none"> ▪ Build new Buckhorn Fire Hall facility to serve the region’s fire service needs. ▪ Construct new Buckhorn Satellite garage attached to Fire Hall. 	2025
<ul style="list-style-type: none"> ▪ Build new Cavendish Fire Hall to serve the Cavendish region’s fire service needs. ▪ Replace Cavendish Community Hall (combine with Fire Hall) including Library branch 	2030
<ul style="list-style-type: none"> ▪ Provide new Galway Fire Hall to serve the Galway region’s fire service needs. 	2035
<ul style="list-style-type: none"> ▪ Replace existing 49 Depot with storage bay addition. ▪ Replace Galway Community Hall. ▪ Move Heritage Society at Galway Hall to Administration. 	2040

Figure 2 Project prioritization over 20 years



2 Introduction

The Municipality of Trent Lakes (“Trent Lakes” or “MTL”) is a township located in the north western section of Peterborough County in Ontario. In 1998, the Township of Galway-Cavendish and Township of Harvey were amalgamated to become Galway-Cavendish and Harvey. The Municipality of Trent Lakes adopted its new name on February 19, 2013 through By-law B2013-017. The many lakes, rivers and creeks in the Municipality contribute to the water levels that support the nationally historic Trent Severn Waterway System – now commemorated in the Municipality’s name.

Traditionally, Trent Lakes has been split into three districts based on the geographic boundaries for Harvey, Galway, and Cavendish (see image blow). Trent Lakes’ system of Municipal facilities has grown organically as a direct result of the amalgamation of the townships and supporting continued delivery of localized services. Resultingly, many facilities are older than the Municipality and are reaching the end of their lifecycle. Cornerstone Planning Group (Cornerstone) was contracted to undertake a Strategic Facilities Master Plan to make recommendations on how the system of facilities can best serve the Municipality into the future, over the coming 20 years. Detailed descriptions about the facilities, geography, governance, population and demographics, transportation and water services within the municipality can be found in Appendices A & B, available under separate cover.

Figure 3 Historical District Boundaries within the Municipality of Trent Lakes



2.1 Municipal Responsibility

The Municipality is responsible for providing Trent Lakes taxpayers with services. These are grouped by category and described in the table below.

Table 2: Service Descriptions

Category	Services
A. Recreation and Community	The Municipality provides space for the community to socially gather and to play sports. These are programmed and managed by volunteer Boards. Trent Lakes staff members maintain facilities, parks, beaches, and trails.
B. Water	The Municipality supports three subdivisions in maintaining a shared drinking water supply by owning two pump houses and managing an agreement with Ontario Clean Water Agency (OCWA) to operate them. The pump houses service Buckhorn Lake Estates, and Alpine Lake / Pirates Glen. There is no shared wastewater system in Trent Lakes; every property owner is responsible for his/her own septic system.
C. Administration	Trent Lakes staff members provide administrative services to manage the Municipality and its assets under four departments: <ul style="list-style-type: none"> • Administration, for corporate oversight, records, HR, and Waste Management. • Building/Planning, for permits, inspections, and bylaw enforcement • Finance, for taxes and Municipal budgeting • Recreation and Facilities, providing maintenance to buildings and outdoor assets such as parks.
D. Fire Services	As a Municipal organization under the Fire Protection and Prevention Act, Trent Lakes must provide fire protection services in some manner. The Council has established a Fire Department to provide these services, which is staffed by four FT members, and attended by volunteers in 4 Fire Halls.
E. Public Works	Trent Lakes is responsible for maintaining its Municipal roads as outlined in Ontario Regulation 239/01: Minimum Maintenance Standards for Municipal Highways, establishing activities such as grading, ploughing, paving, and sanding.
F. Waste Management	Council established a waste management system as authorized under the Municipal Act. This system works in partnership with Peterborough County to manage the disposal by residents and visitors of: waste, recyclable materials, organic waste, household hazardous waste, white goods/metal, furniture, brush and yard waste at four Transfer Stations. There is no roadside pickup service.
G. Other	The Municipality provides space for a variety of non-Municipal organizations to conduct their work. These organizations make Trent Lakes a better place to live and should continue to be accommodated in the future as possible. They are: <ul style="list-style-type: none"> • Trent Lakes Public Library (2 branches) • Ontario Provincial Police • Buckhorn Regional Tourism Association • Two private medical offices • Trent Lakes Community Policing • Trent Lakes Outreach Centre • Trent Lakes Heritage Society

2.2 Municipal Facilities

Municipal services are delivered using a variety of facilities within Trent Lakes. These facilities are in a range of physical and functional conditions; some meet the requirements of service delivery over 20 years, and others do not.

2.2.1 Category Introduction

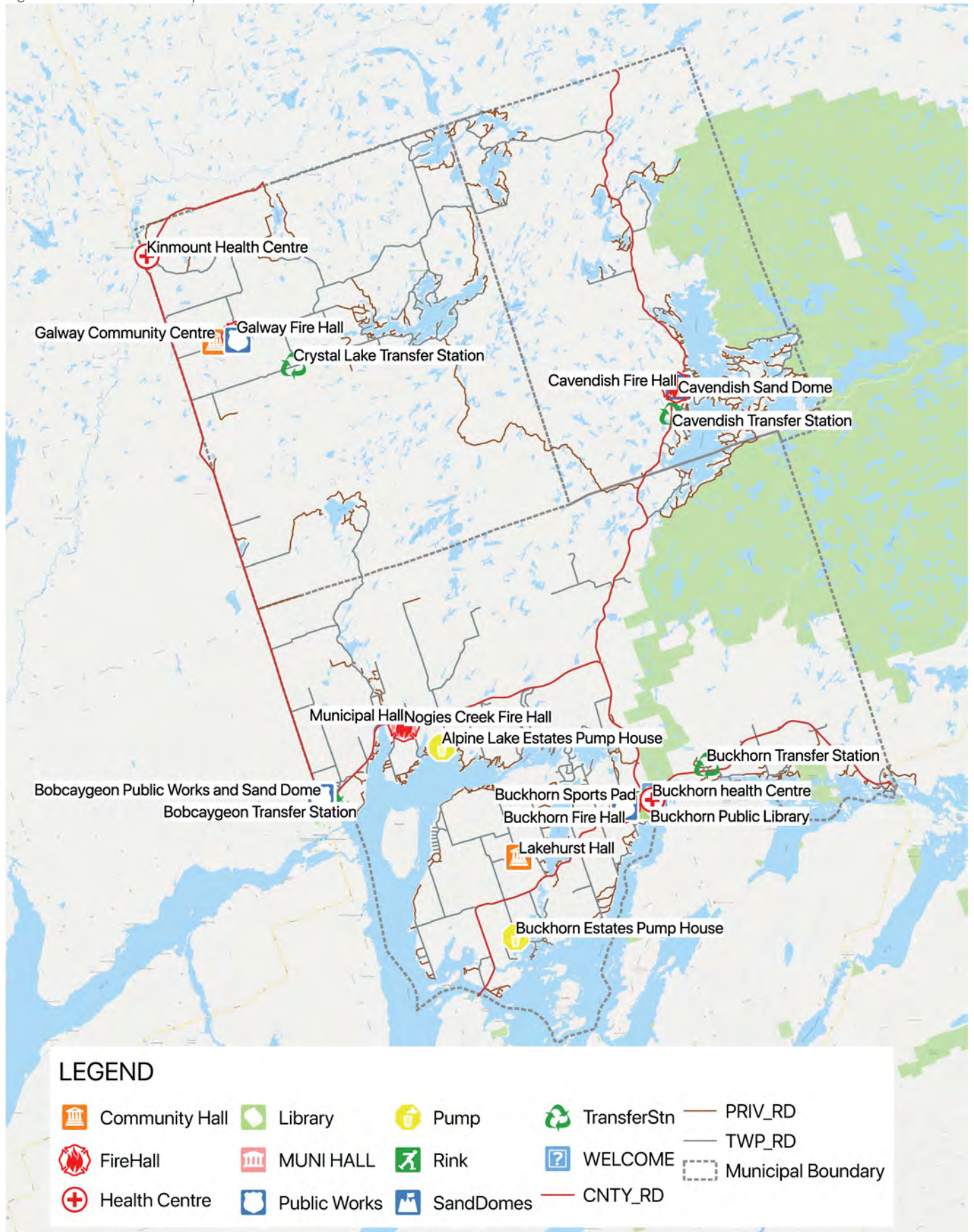
To structure the analysis approach, Cornerstone used departmental groupings for assets, related to function and allowing for a systems-based analysis of related facilities. These categories will be followed throughout the document and are listed in the table below along with current associated assets.

Table 3: Categorized Trent Lakes Assets

Category	Asset
A. Recreation and Community	Buckhorn Sports Pad Cavendish Community Centre Deer Bay Hall
B. Water	Lakehurst Hall Galway Community Centre
C. Administration	Alpine Village Pump House Buckhorn Lake Estates Pump House
D. Fire Services	Municipal Office
E. Public Works	Buckhorn Fire Hall (#1) Cavendish Fire Hall (#2)
F. Waste Management	Galway Fire Hall (#3) Nogies Creek Fire Hall (#4)
G. Other:	49 Public Works & Yard Buckhorn Public Works & Yard
Library	Galway Public Works & Yard Cavendish Sand Structure
Tourism	Bobcaygeon Transfer Station Buckhorn Transfer Station
Healthcare	Cavendish Transfer Station Crystal Lake Transfer Station
Policing	The following non-Municipal organizations are accommodated within Municipally owned spaces. Standalone buildings are in regular font; those within other facilities are shown in italics.
Heritage	Buckhorn Public Library <i>Branch in Cavendish Community Centre</i>
Community Outreach	Tourism Buckhorn Welcome Centre
	Healthcare Buckhorn District Health Centre Kinmount Region Health Centre
	Policing <i>OPP Station in Buckhorn Library</i> <i>Community Policing Station/OPP with Cavendish Fire Hall</i>
	Heritage <i>Heritage offices in Galway Community Hall</i>
	Community Outreach Trailer on Deer Bay Hall land

The following map shows the location of all Municipally owned facility assets (above) within the Municipality of Trent Lakes. As previously mentioned, these assets have evolved over time through amalgamation of various townships and to this point have not been analyzed at a systems level throughout the Municipality.

Figure 4 Trent Lakes Municipal Assets



2.2.2 Summary of Facility Conditions

Cornerstone has categorized the physical and functional condition of all Municipally owned facilities in Trent Lakes using a three-level rating: **GOOD**, **FAIR**, or **POOR**. The following table outlines the definition of rating conditions.

Table 4: Condition Rating Table

Rating	Physical (50%)	Functional (50%)	Accessibility (triggered)
GOOD (10)	No immediate remediation required	Meets operational requirements for next 20 years	Substantially meets modern accessibility standards
FAIR (5)	Typical age-related maintenance required; minor improvement needed in short term	Functioning for operations, not ideal	Standards not met, but workarounds available
POOR (0)	Short term action recommended (e.g. structurally unsafe)	Not functional, ineffective for activities, unsafe	Standards not met; accessibility compromised

As shown in the table, Cornerstone has assigned a number value (10/5/0) to each rating. This allows us to calculate and assess a weighted average of facility conditions, helping to prioritize asset action across the board. In our eyes, both the physical and functional condition account for 50% of the weighted average. An accessibility rating has been included for each facility but is considered a “triggered” standard. Standards are outlined for the Ontario Regulation 191/11, *Integrated Accessibility Standards*, under the Accessibility for Ontarians with Disabilities Act (AODA), 2005. AODA accessibility standards apply to new spaces and buildings, and also to existing spaces undergoing “major” renovations.

The following table outlines each asset and its relevant assigned condition. If a weighted overall rating was below 10, that cell is highlighted in yellow/bold. Each of these ratings is explained in the facility’s detailed review, shown in Appendix C under separate cover.

The majority of Municipal assets are reaching the end of their lifecycle, as indicated in the following table. The facilities requiring priority attention due to low physical and functional condition scores include: Fire Hall 1 (Buckhorn), Fire Hall 2 (Cavendish), Fire Hall 3 (Galway), Public Works’ Galway Depot, and Deer Bay Hall. Other facilities with low scores include Cavendish and Galway Community Halls and all other Public Works Depots. These ratings are to be used as a summary tool only; detailed approaches to each department’s assets appear in the proceeding sections.

Table 5: Facility Condition Summary

Category	Asset	Condition:			Score
		Physical	Functional	Accessibility	
A. Recreation and Community	Buckhorn Sports Pad and Outbuilding	GOOD	FAIR	POOR	15
	Cavendish Community Centre	FAIR	FAIR	FAIR	10
	Cavendish Pavilion	FAIR/POOR	GOOD	FAIR	12.5
	Cavendish Play Structure	GOOD	GOOD	FAIR	20
	Cavendish Rink	GOOD	GOOD	FAIR	15
	Galway Community Centre	FAIR	FAIR	FAIR	10
	Lakehurst Hall	GOOD	FAIR	FAIR	15
	Deer Bay Hall	POOR	POOR	POOR	0
B. Water	Alpine Village Pump House	GOOD	GOOD	N/A	20
	Buckhorn Lake Estates Pump House	GOOD	GOOD	N/A	20
C. Admin	Municipal Office	GOOD	FAIR	FAIR	15
D. Fire Services	Buckhorn Fire Hall	FAIR	POOR	POOR	5
	Cavendish Fire Hall	FAIR	POOR	FAIR/POOR	5
	Galway Fire Hall	FAIR	FAIR/POOR	FAIR/POOR	7.5
	Nogies Creek Fire Hall	GOOD	GOOD	GOOD	20
E. Public Works	49 Public Works	FAIR	FAIR	FAIR/POOR	10
	49 Sand Dome 1	FAIR	GOOD	N/A	15
	49 Sand Dome 2	FAIR	GOOD	N/A	15
	Buckhorn Public Works	FAIR	FAIR	POOR	10
	Buckhorn Sand Dome	FAIR	GOOD	N/A	15
	Buckhorn Salt Shed	FAIR	GOOD	N/A	15
	Cavendish Sand Shed	FAIR	GOOD	N/A	15
	Galway Public Works	POOR	POOR	POOR	0
	Galway Sand Dome	FAIR	GOOD	N/A	15
F. Waste Mgt	Bobcaygeon Transfer Station	GOOD	GOOD	FAIR	20
	Buckhorn Transfer Station	GOOD	GOOD	FAIR	20
	Cavendish Transfer Station	GOOD	GOOD	FAIR	20
	Crystal Lake Transfer Station	GOOD	GOOD	FAIR	20
G. Other:					
Library	Buckhorn Public Library	GOOD	FAIR/POOR	FAIR	12.5
	Branch in Cavendish Community Centre	FAIR	FAIR	FAIR	10
Tourism	Buckhorn Welcome Centre	GOOD	GOOD	FAIR	20
Healthcare	Buckhorn Health Centre	GOOD/FAIR	GOOD	GOOD	17.5
	Kinmount Health Centre	GOOD/FAIR	GOOD	GOOD	17.5
Policing	OPP Stn in Buckhorn Library	GOOD	FAIR	FAIR	15
	Community Policing /OPP off of Cavendish Fire Hall	FAIR	FAIR	FAIR	10
Heritage	Heritage offices in Galway Hall	FAIR	GOOD	FAIR	15
Community Outreach	Trailer on land at Deer Bay Hall	GOOD	FAIR	POOR	17.5

3 Future Demand Factors

3.1 Population and Demographics

Population is a major driver for all services, reflecting in the use of all facilities and their required services. Population changes cannot be accurately projected into the future as there are many factors that influence it, but various scenarios (low/medium/high) can be used to estimate likely futures and their impact on the Municipality.

3.1.1 Permanent resident forecasts

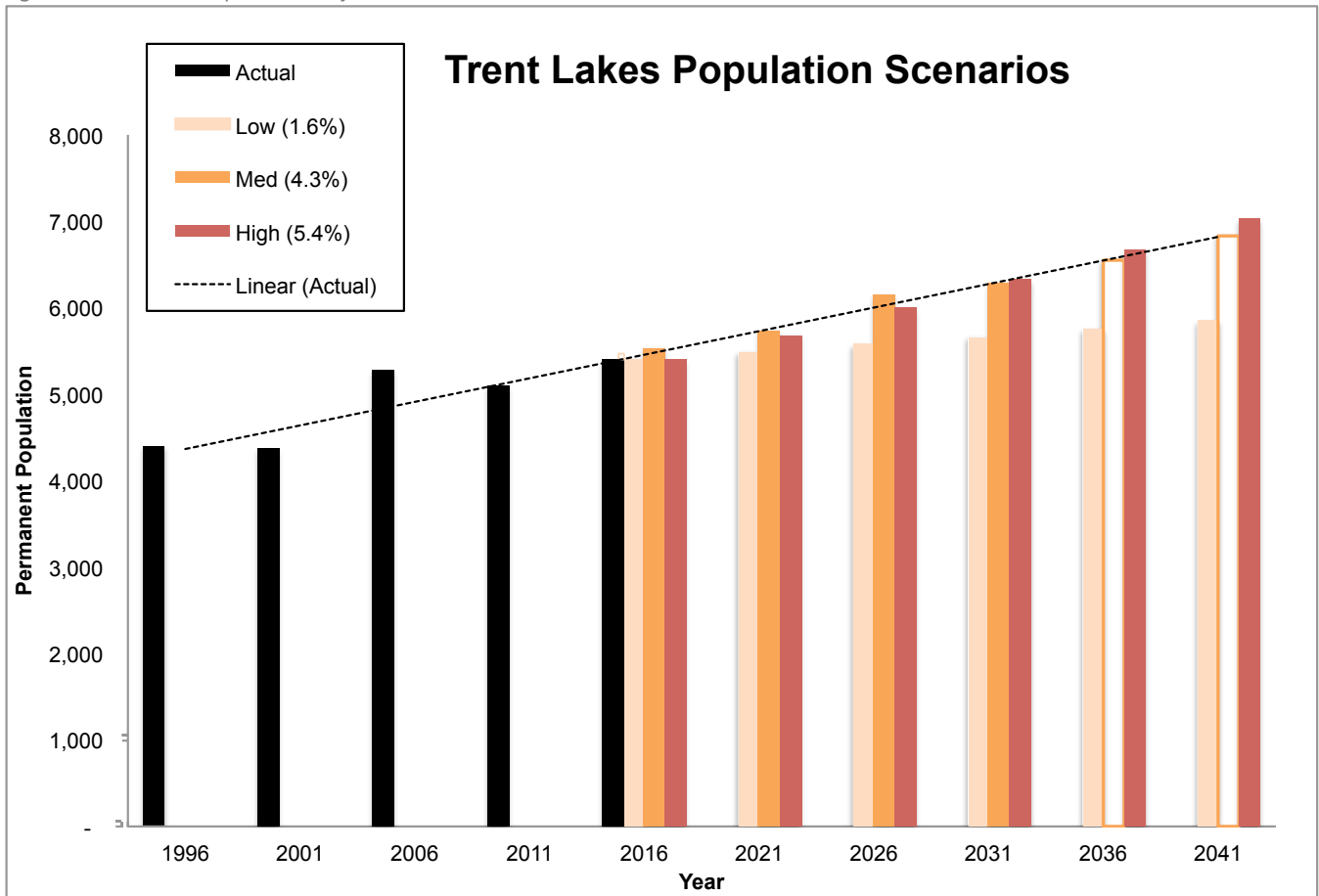
The number of permanent residents in Trent Lakes has been generally increasing, albeit unsteadily, over the past 20 years. A variety of sources anticipate a future increase in population:

- **Peterborough County’s Official Plan (2017)** anticipates an 8.3% new population growth from 2006-2031, equating to ~1.6% every 5 years. This is considered a “low” growth scenario.
- **Trent Lakes Development Charges Background Study and Bylaw (2019)**, by Watson & Associates Economists compiled a number of background documents to develop an estimate of anticipated growth, amounting to a 4.3% increase every 5 years. This is similar to the actual (Statistics Canada) over the last 10 years projected forward (4.4%). This is considered a “medium” growth scenario. Since a projection was only provided to 2031, the average was used to project forward another 10 years (shown in outline).
- **Ontario’s Ministry of Finance’s projections¹** for all of Ontario average to a 5-year growth rate of approximately 5.42% from 2017 – 2041. This will be heavily weighted towards the GTA; historically, Peterborough as a whole accounts for only 1.0% of the total Ontario population. In the future, this is expected to decrease to 0.9% as the population continues to urbanize. However, for the purposes of a “high” scenario, the whole-Ontario growth rate is used.
- **Trent Lakes’ Official Plan (2011)** anticipated a relatively moderate growth but did not provide a percentage.

For planning purposes and due to contextual accuracy, the medium scenario used in the Development Charges Bylaw is considered the most likely future scenario. It also closely matches the linear trend from the past 20 years. Overall, the residential population of Trent Lakes can be expected to grow over the next 20 years, growing by 2036 to about 6,500 residents, or 20% more than current.

¹ Ontario Ministry of Finance; Ontario Population Projections Update, 2017-2041
<https://www.fin.gov.on.ca/en/economy/demographics/projections/>

Figure 5 Trent Lakes Population Projections



3.1.2 Seasonal resident forecasts

Trent Lakes is unique in that its permanent population is a fraction of its seasonal population. In the summer months, the Municipality experiences a temporary population boom, near doubling its occupancy. According to the Watson report on Developmental Charges, the seasonal population has been in the 9,500 range in the past few years and may be expected to increase by approximately 2.5% every 5 years, reaching around 10,300 in 2036.

In the future, Trent Lakes will continue to experience large summer population swells. However, the overall ratio of Seasonal to Permanent residents in the summer will slightly decrease from 1.8:1 to 1.5:1. The following population numbers do not include the population living in the approximate 2,000 trailer sites in the Municipality.

Table 6: Population Forecasts: Residential and Seasonal

Year	Residential	Seasonal	Total	Ratio S:R	
Historic	2006	5,284	9,515	14,799	1.8
	2011	5,105	9,140	14,245	1.8
	2016	5,540	9,580	15,120	1.7
Projected	2021	5,740	9,699	15,439	1.7
	2026	6,160	9,819	15,979	1.6
	2031	6,280	9,891	16,171	1.6
	2036	6,550	9,945	16,495	1.5
	2041	6,831	10,270	17,100	1.5

3.1.3 Demographic Shifts

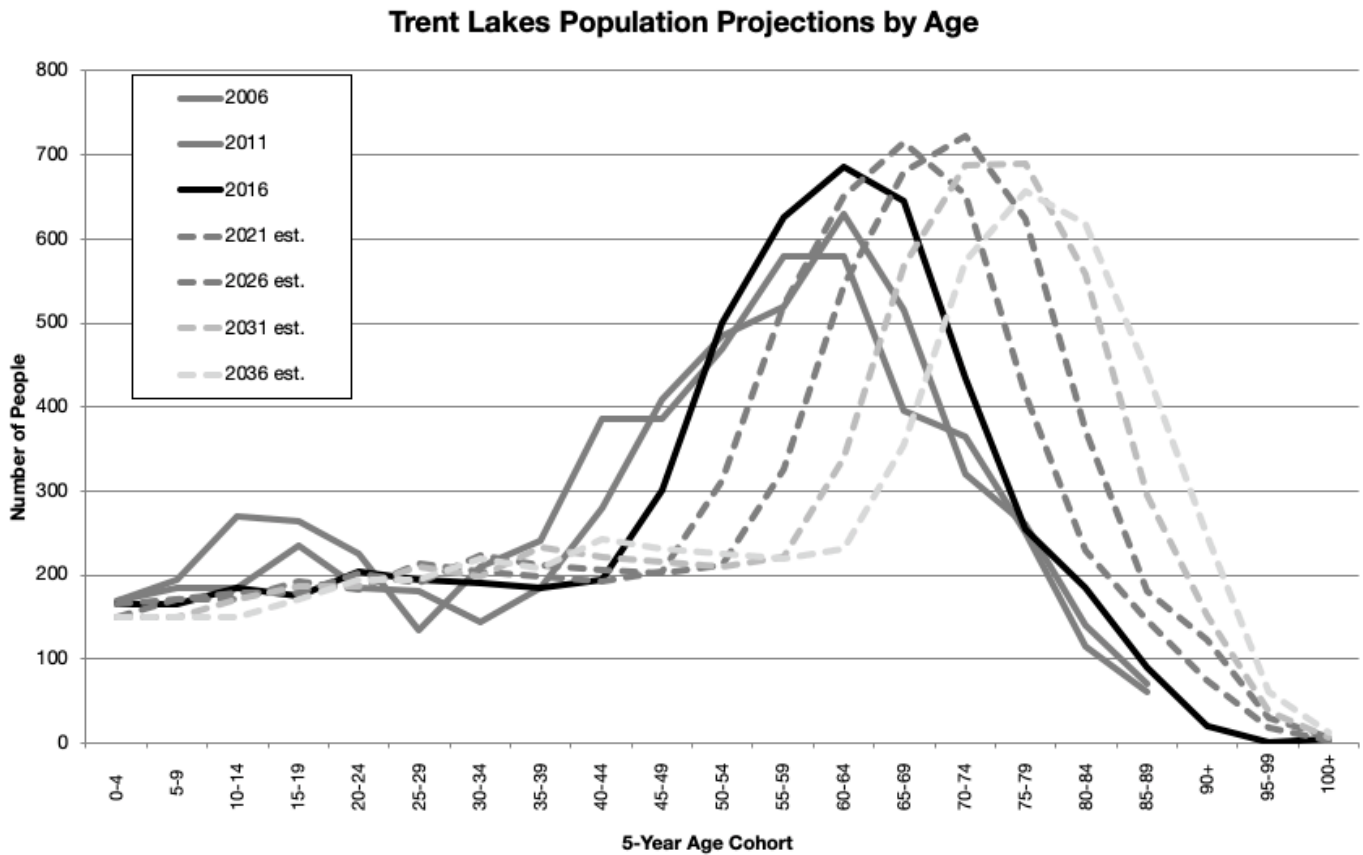
The population of Trent Lakes is older than the County and federal averages (per table below). As a percentage of overall population, the Municipality is underrepresented in the 0-14 cohort, overrepresented in the 65+ cohort, and approximately average in the 15-64 and 85+ cohorts.

Table 7: Comparative Demographics

Measure	Trent Lakes	Peterborough	Canada
Average Age	51.4	44.5	41.0
Median Age	56.9	46.9	41.2
0-14 years	9%	14%	16%
15-64 years	59%	61%	65%
65 years +	30%	22%	17%
85 years +	2%	3%	2%

Peterborough County on the whole (per the Ontario Ministry of Finance) including Trent Lakes is expected to shift in demographic to an older position, whilst generally maintaining its demographic shape. Projecting the existing Trent Lakes demographic forward 20 years is as shown in the next figure. This reflects a medium growth scenario applied to the existing demographic profile, with an attrition rate applied to ages 70+ (by 5-year cohort, as expected in projections for Peterborough).

Figure 6 Trent Lakes Cohort Population Projects



3.1.4 Distribution

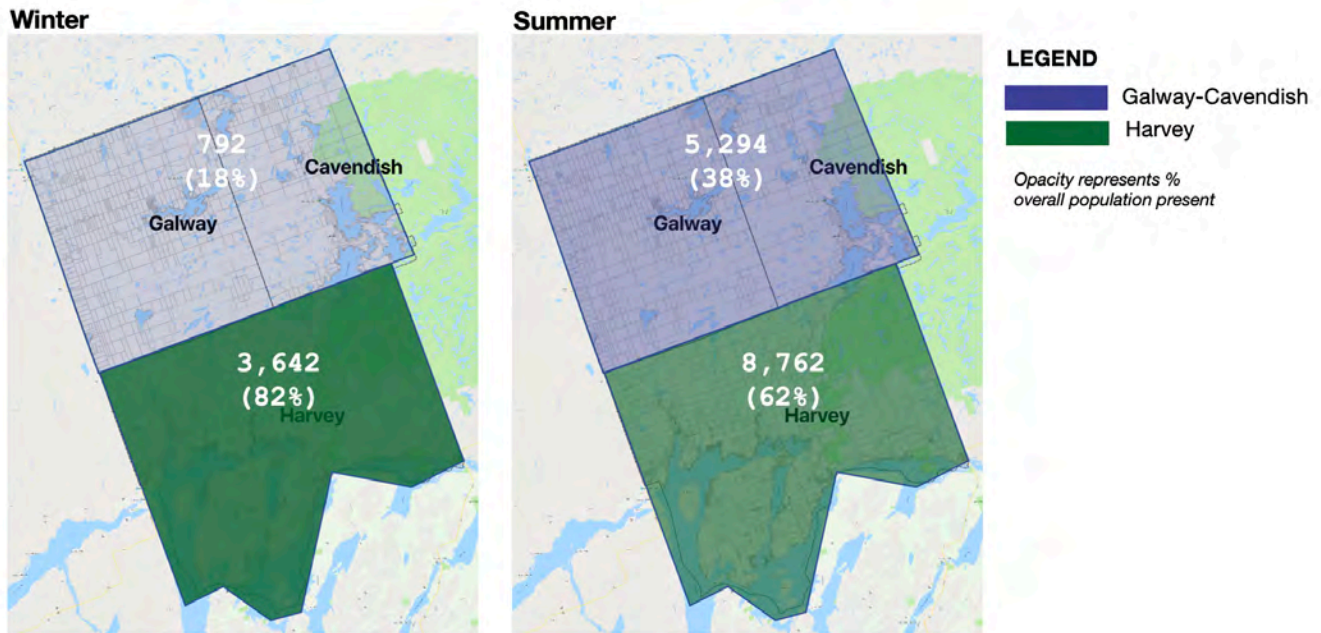
The distribution of population is not equal over the Municipality. According to an electoral report from Municipal Property Assessment Corporation (MPAC), over 80% of permanent residents live in the south, in the former Harvey ward, with the remainder in Galway-Cavendish. Non-residents (seasonal population) were more evenly split between the wards, with just over 50% in Harvey and just less than half in Galway-Cavendish. In the summer, when both groups are in the area, approximately 62% of the people can be expected to be found in Harvey, and 38% in Galway-Cavendish.

Average people-per-property in the winter is approximately 0.56 in Harvey and 0.23 in Galway-Cavendish. In the summer, these numbers increase to 1.35 and 1.56, accounting for the seasonal influx.

Table 8: Population Distribution in 2019

Ward	Property		People	
	Count	People	Residents	Non-Residents
Harvey	6,507	8,762	3,642	5,120
Galway-Cavendish	3,387	5,294	792	4,502
Total	9,894	14,056	4,434	9,622
% in Harvey	66%	62%	82%	53%
% in Galway-Cavendish	34%	38%	18%	47%

Figure 7 Population Distribution in Winter and Summer



3.2 Climate Change

The World Health Organization (WHO) has identified Climate Change as the **biggest global health threat of the 21st century**. Climate Change is expected to have an effect on economics, energy, facilities, health, transportation, and water (Appendix D shows a more detailed list).

Climate Change in Ontario has been observed and many communities have already experienced some effects. According to the Greater Peterborough Area (GPA) Climate Change Action Plan (2016):

Average temperatures around the world and in the GPA are increasing. Ontario's Ministry of the Environment and Climate Change (MOECC) reports that the average annual temperature in Ontario has increased by 1.4°C over the last 60 years, and models suggest that by 2050 the average annual temperature in Ontario could increase by another 2.5°C to 3.7°C. Along with this, comes the increase likelihood of extreme weather events such as prolonged heatwaves, wind storms, and flooding. The Greater Peterborough Area has been no exception in experiencing these weather events. More of these events are projected over the coming years, which could have major implications for our natural and built systems, human health, and our local economy.

Trent Lakes, as part of the Greater Peterborough Area Climate Change Action Plan (passed by Council in 2016) sets specific goals for reducing GHG emissions throughout the Municipality and Greater County. Of the goals set in this plan, the following strategies are most relevant to this facility planning exercise:

- Strategy W1: Improve energy and water efficiency of existing buildings and business operations.
- Strategy M4: Help transition vehicles to use cleaner and lower greenhouse gas emitting fuel sources (e.g. install electric vehicle charging stations for public usage and transitioning to low emission and alternative fuel vehicles).

In June of 2014, the Municipality of Trent Lakes adopted an Energy Conservation and Demand Management Plan, updating it in 2019². As well as outlining current conservation actions completed, the plan aims to reduce GHG emissions through the following 5 actions:

1. Institutionalize energy efficiency and low carbon thinking into the organization;
2. Enhance operational efficiency of existing buildings;
3. Build municipal facilities to ensure high environmental performance;
4. Improve environmental performance of existing municipal facilities; and,
5. Utilize renewable energy sources.

Looking forward, the Municipality should take measures to incorporate resiliency into their facilities by integrating physical, natural and social sustainability while reducing risks and exposure. As an organization proud of its setting in a natural environment, Trent Lakes can set a precedent that demonstrates a commitment to sustainability through facility management.

3.3 Development and Intensification

According to the 2011 Official Plan, new residential development will be encouraged to take place in existing hamlets and other concentrated areas of development. Consequently, no particular rural area or region has been identified for major development; intensification of existing housing patterns is the expected norm into the future. Most development will therefore be centered around existing hamlets of Bobcaygeon (edge), Buckhorn, Burleigh Falls, Lakehurst, Kinmount and Catchacoma. Less populated areas will experience more conversions of seasonal dwellings to permanent residences.

Across Trent Lakes, approximately 41 new housing units can be expected every year (per Development Charges Report). All are likely to be low-density, with most (~80%), being permanently occupied developments and the rest seasonally occupied.

3.4 Community Opinion

A community survey was distributed both electronically and physically throughout the community. Staff posted a link to the survey on the Municipal Facebook page and distributed hard copies of the survey at high traffic public locations, such as transfer stations and the Municipal Office. Approximately 145 respondents completed the survey, which accounts for 2.6% of the permanent population (~1% of total population). Most respondents were property owners and/or permanent residents. As such, results are not an accurate representation of the entire Municipality's wants or desires, but rather a sample of what participating residents feel is important. A summary of the results are provided below; a full analysis is provided in Appendix E.

² The 2014 plan was developed in compliance with Ontario Regulation 397/11 – Energy Conservation and Demand Management Plans (O. Reg. 397/11). Per the regulation, Trent Lakes is to report annually on energy use and greenhouse gas (GHG) emissions for its buildings and facilities. As of January 1, 2019, O. Reg. 397/11 was replaced with O. Reg. 507/18 (Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans), requiring the Municipality to develop a five-year update to its Energy plan. This process resulted in the Energy Conservation and Demand Management Plan 2019 update.

- The factor with the biggest impact on Trent Lakes over the next 10 years was considered to be an ageing population, with increased development and increased permanent population also seen as factors with heavy impact.
- Fiscal responsibility and localized access to services were tied as the top factors that the community thought should drive this project.
- Priority areas for action were weighed heavily towards roads and maintenance and healthcare. Waste management and fire services were clearly second in priority, followed by culture, sports infrastructure and community centres, and lastly, administration.
- There were many thoughtful answers to open ended questions. Major themes included:
 - Improved access to primary healthcare (n=17)
 - Attention on roads (n=15)
 - Themes on efficiency and accountability, including centralization (n=14)
 - Concerns about receiving appropriate funding support for infrastructure renewal (n=5)
 - Focus on tourism, waste, and water (each n=5)
 - Attracting youth and young families to the region (n=5)

An Open House event was held on the morning of Saturday, July 20, 2019 in the Training Room at Fire Hall #4 (Nogies Creek). There were a total of eight attendees from the community, who interacted with mapped materials showing the Municipality’s facility assets to indicate their preferences, priorities, and ideas. Discussion points from the open house event included concerns about bridge and road maintenance, positive feedback for Waste Transfer Stations, and adherence to provincial regulations for asset management planning.

3.4.1 Trent Lakes Level of Service Questionnaire

The Municipality conducted a Level of Service Questionnaire over the summer of 2018. Residents were asked to express their opinions on road infrastructure, facilities, and services to determine how well assets are meeting resident expectations and where improvements may be required. This information is still considered relevant to the 2019 Facilities Master Plan. The questions specifically relevant to this study were:

- Question 3, which reported respondent level of satisfaction with the condition, amenities, accessibility, customer service, availability and hours of operation for Municipal facilities.
- Question 4, which reported respondent level of satisfaction related to Municipal level of service.

Results are summarized in the tables that follow.

The Level of Service Questionnaire covered 5 topics including: identification of respondent, recent usage/visitation of facilities, level of satisfaction with municipality facilities and services, and fiscal priorities. A total of 605 residents responded, of which 49% identified as Full-Time/Permanent Residents and 51% as Part-Time/Seasonal Residents.

Table 9 Resident Satisfaction with Municipal Facilities

Municipal Facility	Permanent Resident Satisfaction (%)			Seasonal Resident Satisfaction (%)		
	Satisfied	Neutral	Dissatisfied	Satisfied	Neutral	Dissatisfied
Municipal Office or Council Chambers	68	28	5	76	22	2
Community Centres and halls	85	13	2	82	18	1
Outdoor Rinks and Sports Pads	82	13	4	83	18	0
Municipal Parks, Beaches and Boat Launches	72	21	7	71	22	7
Public Libraries	89	9	2	88	13	0
Waste Transfer Stations	72	13	15	65	12	24
Medical Centres	85	13	2	81	16	3

As identified in the table above, both permanent and seasonal residents are highly satisfied with Community Centres, Outdoor Rinks and Sports Pads, Public Libraries and Medical Centres. The remaining categories including Municipal Office or Council Chambers, Municipal Parks, Beaches, and Boat launches, and Waste Transfer stations show a majority of satisfied respondents. Waste Transfer Stations was the highest dissatisfaction category for permanent and seasonal residents with 15% of permanent respondents and 24% of seasonal respondents indicating dissatisfaction. This is most likely due to the quarterly restrictions on waste disposal, which has since been removed by Council via By-law No B.2019-090.

Table 10 Resident Satisfaction with Municipal Services

Municipal Service	Permanent Resident Satisfaction (%)			Seasonal Resident Satisfaction (%)		
	Satisfied	Neutral	Dissatisfied	Satisfied	Neutral	Dissatisfied
Overall Condition of Roads	49	30	21	70	18	12
Road Repairs	42	28	30	57	26	17
Snow and Ice Removal	75	16	9	62	32	6
Road Signage	69	2	9	73	24	3
Maintenance of Parks	56	37	7	54	40	7
By-law Enforcement	30	57	12	32	63	6
Building/Planning Services	38	48	14	42	50	9
Website/Social medial	51	43	6	47	49	4
Public Consultation/Inquires	42	41	17	39	45	17

Municipal service satisfaction tends to vary greatly between permanent and seasonal residents, with Neutral satisfaction reporting high values for permanent and seasonal residents. As identified in the table above, the only categories that are similar between permanent and seasonal residents is the satisfaction with snow and ice removal, and road signage. The greatest disparity between the two populations is the satisfaction rate of overall road conditions, with 49% of permanent and 70% of seasonal residents reporting satisfaction. Both permanent and seasonal residents report road repairs and overall condition of roads as their highest dissatisfaction.

3.5 Other Factors

Other factors that have an influence on facilities, detailed on a per-system basis, include:

- Anticipated changes to Level of Service
- Availability of accessible services in adjacent communities
- Distribution of current facilities
- Capacity of current facilities
- Physical and functional conditions of the facilities

Each of these is addressed in the analyses in the sections that follow.

4 Recreation and Community

Recreation and Community services are provided to residents of Trent Lakes through localized Community Centres and sports facilities. These facilities are operated by groups of local volunteers who make up Community Centre Boards. The Boards manage the day-to-day operations of their respective facilities, including programming, events, and access. The Municipality is responsible for the majority of grounds and facilities maintenance for Recreation and Community facilities and provides annual grants to the Boards to support their work. The Municipality does not currently hold agreements with the Boards to formalize responsibility; however, the following table outlines a general understanding of responsibilities.

Table 11 Community Centre Board and Municipality Responsibilities

Responsibility	Category	Examples
Community Centre Board	IT	Monitors, CPU, printers, telephone, photocopier, software.
	Equipment	Appliances, electrical and maintenance work related to appliances, bathroom fixtures and toilets.
	Furniture	Desks, tables/chairs, area carpet, cabinets, bookcases.
	Miscellaneous	Office supplies, cleaning and related supplies, painting that does not involve repair, light bulb replacement, kitchen equipment, garden and landscaping, liability insurance.
Municipality	Building Improvements	Exterior brick/masonry, steel/vinyl/wood, roofing, flooring replacement or any structural repair or upgrade, windows, electrical/lighting/plumbing repair/upgrade work, mechanical systems/piping/fixtures, HVAC systems and generators.
	Land Improvements	Sidewalks, parking lots, fencing, ramps, flagpole, streetlights.
	Miscellaneous	Water treatment systems and maintenance, building/property insurance, alarm systems, grass cutting

4.1 Current Facilities

There are five main sites that make up the Recreation and Community system:

Buckhorn Sports Pad Located at 1782 Lakehurst Road, the Municipality of Trent Lakes owns the sports pad and outbuilding on site, which are on land leased from the privately-owned Buckhorn Community Centre. The Buckhorn Sports Pad is a covered metal roofed facility with wind sheets, offering year-round access to a concrete sport pad, which is flooded in winter to create a natural ice surface. The Ice surface is experiencing a decline in opportunity due to climate change. Due its close proximity to the Buckhorn Community Centre and central location in the populous area of the Municipality, the Sports Pad receives many visitors.

The Outbuilding is located adjacent to the Sports Pad. It offers a change room, Zamboni garage and workshop, and storage facility for skates, pads, nets, and hockey sticks.

Cavendish Community Centre

Located on Community Complex Drive just off County Road 507, the site features a co-located community centre, outdoor arena, pavilion, play structure, ballpark, Fire Hall (#2), Community Policing Station, and Public Works Sand building. The centre has a library branch in the basement.

The Recreation and Community assets on this site are owned by the Municipality of Trent Lakes and operated by the Cavendish Community Centre Association, a board of local residents who volunteer their time to plan and manage the operation of the centre, arena, and pavilion. The Centre was constructed in 1990 to meet resident needs for meetings and functions.

- The outdoor pavilion, covered by a metal roof, includes a small service room with refrigerators and a BBQ, making it an ideal outdoor venue for events.
- The outdoor arena features boards and a concrete pad. During the winter, the pad is flooded to create a natural outdoor ice surface. The arena is experiencing a decline in opportunity due to climate change.
- The play structure is open to the public and is inspected regularly by Municipal staff.

Galway Community Centre

Located on Galway Road, just off County Road 121, the site features a co-located Community Centre, Fire Hall (#3) and Public Works facility.

Galway Community Centre is owned by the Municipality of Trent Lakes and operated by the Galway Community Centre Association (volunteer board). The centre has a large event room supported by a kitchen and bar. The Trent Lakes Heritage Society also operates from two offices in the centre.

Lakehurst Community Hall

Located on Lakehurst Circle Road, adjacent to Cemetery Road, the site features a community centre and small paved parking area. An adjacent gravel parking lot is used for overflow parking.

Lakehurst Hall is owned by the Municipality of Trent Lakes and operated by the Lakehurst Community Centre Association, a board of local volunteers. The Hall is the newest of the facilities, built in 2009.

Deer Bay Hall

Located on Deer Bay School Road, just off County Road 36, the site currently features Deer Bay Hall and a semi-permanent trailer, located alongside.

Deer Bay Hall is owned by the Municipality of Trent Lakes and currently has no programming. The facility was originally constructed as a schoolhouse, but has been used as a shelter for women, community centre for meetings, and other various functions since. The facility is in poor physical condition and is no longer adequate for use. A semi-permanent trailer was assembled on site to provide space for the Trent Lakes Outreach Centre, who was using the site.

Additional Area Resources	<p>There are four additional facilities that provide similar services in the region but are not owned by the Municipality. These are:</p> <ul style="list-style-type: none"> • Buckhorn Community Centre: privately owned and run by a dedicated volunteer group and 3 paid staff, providing multipurpose space and programming to the community. Funded by fundraising and grants. • Bobcaygeon/Verulam Community Centre: a community centre including an ice arena used for minor hockey. • Oak Shores: a private community centre offering volunteer-run programming and space rentals. • Kinmount Arena: a covered community arena open for public skating Friday evenings and Sunday afternoons. The Arena has rentals available for public skating.
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4.2 System Analysis

4.2.1 Level of Service

The level of service offered by Recreation and Community may shift in the future.

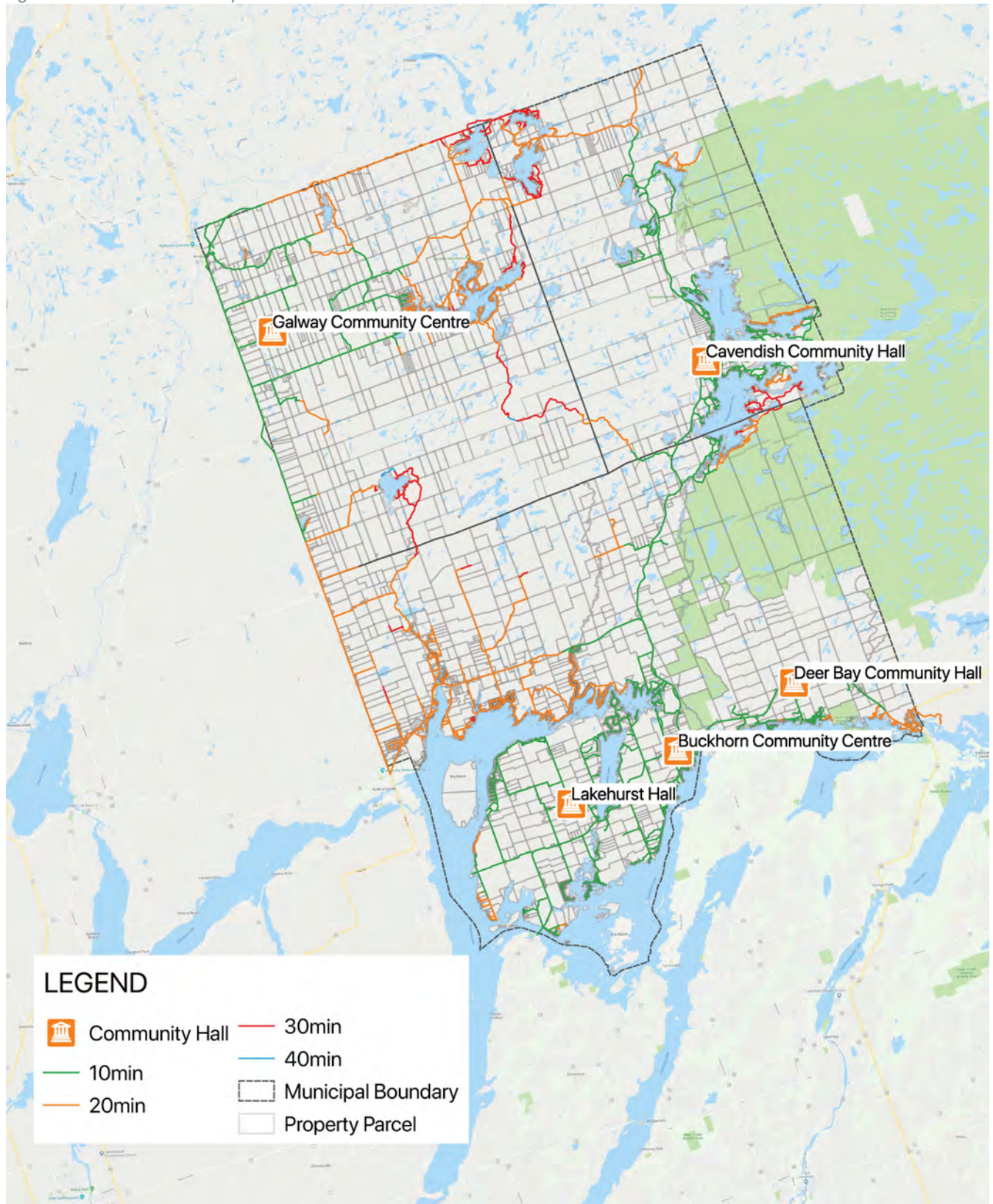
- Primarily, the Municipality may become responsible for the programming and access for the Community Halls, as volunteerism declines. The same may be true for the sports assets. The impact on the Municipality would be a moderate effect on Recreation facility administration demand.
- Additionally, trails and walking are likely to become more popular; the trail network is likely to experience higher demand for new trails to be created and maintained.
- Lastly, popular activities and sports may shift as the population ages and youth are targeted.

These factors are expected to have little effect on the existing assets in this category, which are flexible in activities supported. In general, recreational activities are tending to shift to outdoor-based.

4.2.2 Distribution of Assets

The Municipality of Trent Lakes does not yet have a formalized Park and Recreation Plan that would standardize level of service indicators. Given the rural nature of the region, a reasonable indicator can be considered the driving time from residences (lots) to areas of service. The maps below show asset locations and driving times to/from these locations across the Municipality. Two maps have been developed showing the location of Community Centres (within and around Trent Lakes) and another for Ice Arenas. An analysis follows each map. Assets shown in blue are not included in the analysis and are marked for context only.

Figure 8 Trent Lakes Community Centre Assets.



-
- Trent Lakes Municipal Assets
- Cavendish Community Centre
 - Galway Community Centre
 - Lakehurst Hall and
 - Deer Bay Hall (not considered; condemned)

- Additional Available Assets (not considered)
- Buckhorn Community Centre
 - Bobcaygeon/Verulam Community Centre
 - Oak Shores

Serviced Lots	Drive Time (1)	# of Lots	% of total (2)
	10min	2,968	41.5%
	20min	5,517	77.1%
	30min	7,148	99.9%
	40min	7,153	100.0%

Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)

Note 2: does not include 767 lots inaccessible by road (interior or island).

Analysis

The map shows that the majority of road-accessible lots can access a community centre within a 20-minute drive; nearly all are serviced within 30-minutes. Although areas of the Municipality appear to be under-served by Municipal Community Centres, many residents have access to other local Community Centres. A map showing drive times that includes these other resources is shown on the next page.

Conclusions

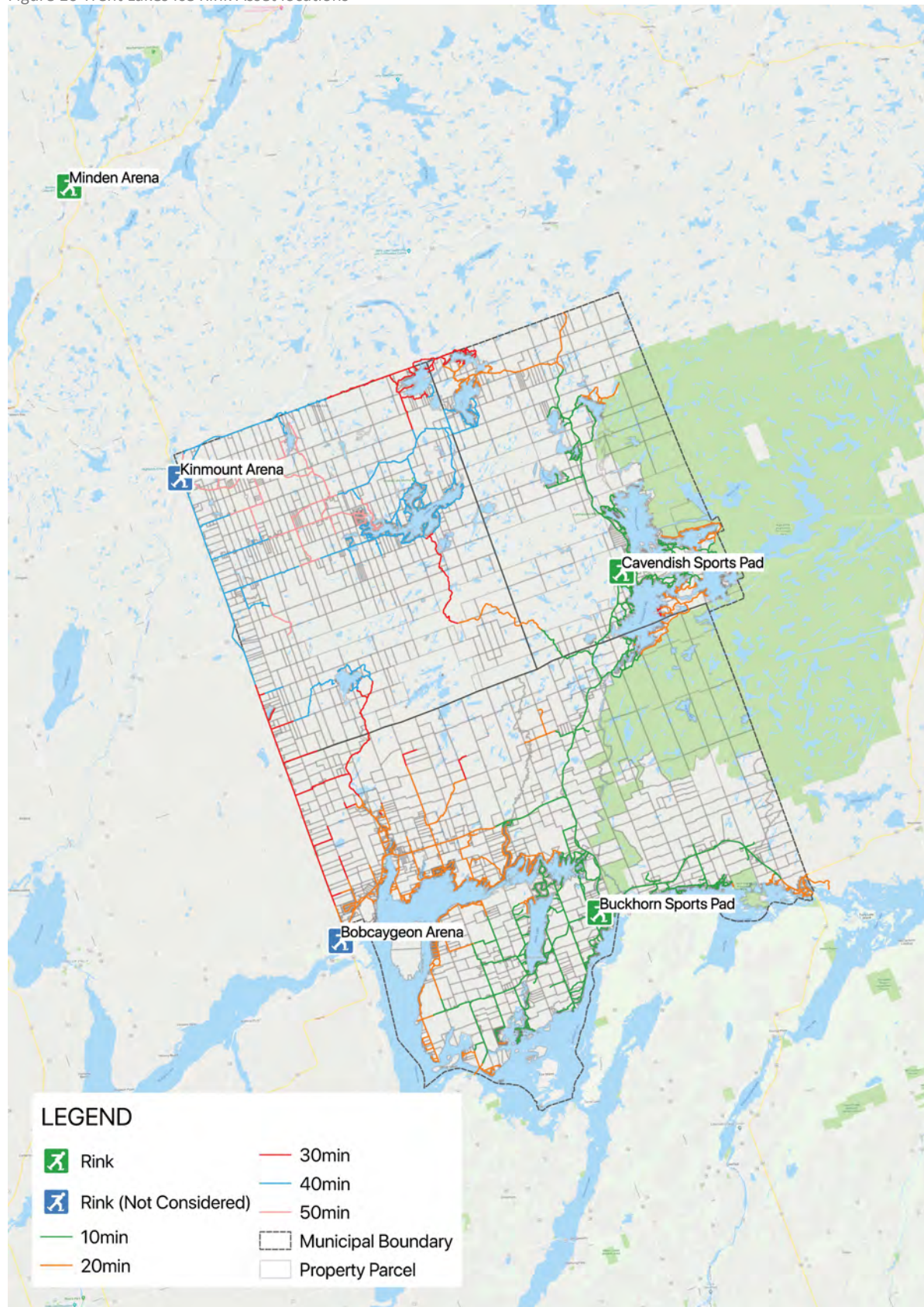
Overall, Community Centres are well situated to serve the population of Trent Lakes. Another Centre is not required to provide adequate coverage to current or future residents.

Figure 9 Drive time to Community Centres within and around Trent Lakes



The following map identifies the location of ice surfaces in/around Trent Lakes and driving distance to these facilities. Kinmount, Minden, and Bobcaygeon Arenas are not included in the drive-time analysis.

Figure 10 Trent Lakes Ice Rink Asset locations



Trent Lakes Municipal Assets

- Buckhorn Sports Pad
- Cavendish Arena

Additional Available Assets (not considered)

- Kinmount Arena
- Bobcaygeon Arena

Serviced Lots	Drive Time (1)	# of Lots	% of total (2)
	10min	2,928	40.9%
	20min	5,571	77.9%
	30min	6,024	84.2%
	40min	6,874	96.1%
	50 min	7,153	100.0%

Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)

Note 2: does not include 767 lots inaccessible by road (interior or island).

Analysis

The map shows that over 84% of the Municipality has access to an ice surface within a 30-minute drive. The under-served areas to the northwest are duly serviced by arenas in Kawartha Lakes (Kinmount Arena), which is located just outside the municipal boundaries and thus not managed or operated by the Municipality. The Bobcaygeon Arena provides an additional ice arena just outside the southwest border of the Municipality. Minden Arena is also available, although further away.

Conclusion

Taking into account the Ice Arenas just outside the municipal boundaries, Ice Arenas are well situated to serve the population of Trent Lakes. No net-new ice arena is required.

4.2.3 Capacity Analysis

Capacity for Community Centres was determined by the number of bookings observed and planned in 2019 (on a daily basis; hourly not feasible at this level of analysis). Future usage and remaining capacity were estimated using the current number of days booked, and assuming that the bookings would grow proportional to population growth (20% over 20 years). Based on our calculations and a possibility of daily programming at Community Centres, all centres have capacity for increased programming past the 20-year planning horizon as demonstrated below.

Table 12: Community Centre Capacity

	Cavendish	Galway	Lakehurst
Days booked per year	238	203	150
Remove overlaps*	-23.8	-20.3	-15
Increase for population growth	20%	20%	20%
New total	257	219	162
Capacity Remaining (days)	108	146	203
Capacity Remaining (%)	30%	40%	56%

* current programs that occur on the same day

Capacity for ice arenas would also be determined through available booking data; however, the Cavendish Arena is not scheduled, and the Buckhorn Arena is changing its approach to no longer be scheduled. Anecdotally, there is capacity at both arenas, although availability is always weather-dependent and therefore unpredictable. From a functional point of view, neither rink is suitable to support formal ice sports such as minor hockey, and ice seasons are likely to get shorter as the climate warms. Both facilities are family skate and practice facilities that can be used in the summer as sports pads.

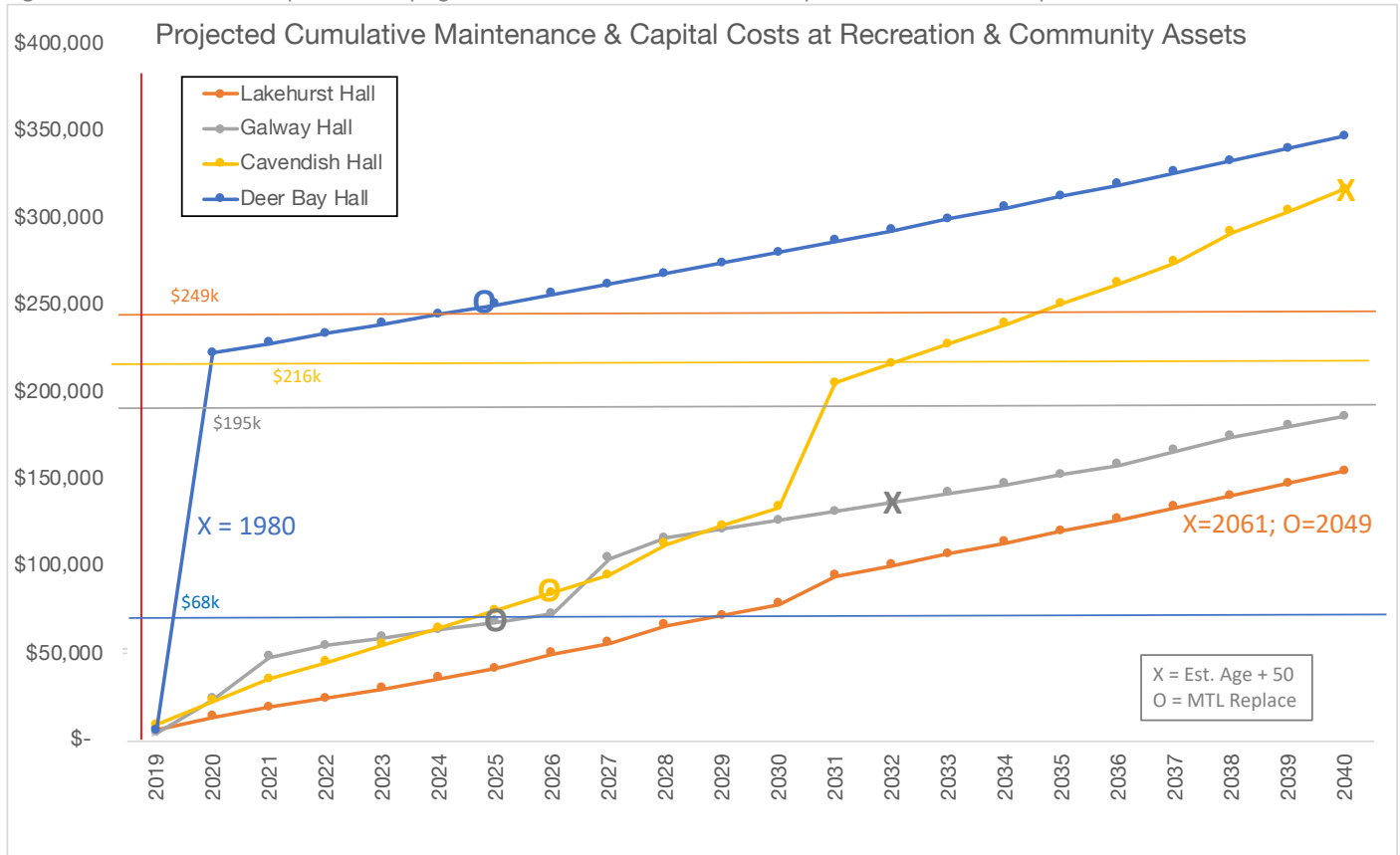
4.2.4 Physical Condition

The following chart shows projected cumulative maintenance and capital costs at all Community Centres. The graph starts at current year (2019) and projects until 2040 (~20 year timeline). Industry rule of thumb is that an asset should be considered for replacement when the investment to renew exceeds 30% of the replacement cost. This is shown with a horizontal line of matching colour. Replacement costs are for like-structures (from MTL Property Inventory) and do not guarantee functionality after investment, which is another consideration.

In the chart:

- O's denote MTL expected replacement dates (based on a 40-year span from the asset's acquired date in the MTL Property Inventory, which may not align with asset age).
- X's denote a 50-year lifespan from the asset's estimated build date, reflecting updated asset age estimates and an often-used facility lifecycle of 50 years.

Figure 11 Estimated Asset Replacement by Age and Cumulative Maintenance & Capital Costs of Community Centre Assets



Observations:

- Deer Bay Hall requires immediate major investment to retain; if functionally required, building new is more appropriate unless deemed a heritage structure.
- Cavendish Hall is likely to require replacement before Galway (which received recent investment in 2012) and Lakehurst (which is much newer).
- Galway reaches consideration for renewal at the end of the project timeline.
- Conclusions:
 - Deer Bay Hall should be invested in only if functionally required (which it is not).
 - Prioritize replacement of Cavendish Hall over Galway.
 - Lakehurst does not require replacement over the project timeline; maintain regular capital and maintenance investments.

From this analysis, we identify that, from a purely physical perspective, Deer Bay and Cavendish Halls will likely be suitable for replacement within the study horizon. Galway Community Hall may be suitable for replacement at the end of the study; Lakehurst is newer and will not reach the threshold for replacement. Both ice surfaces have lifespans beyond the project timeline based on their ages. The table below summarizes likely timeframes by estimate type.

Table 13: Recreation and Community Infrastructure Estimated Replacement

Community Hall	MTL Replacement (O's)	50 year Lifespan (X's)	30% of Asset Replacement
Cavendish Community Hall	2026	2040	~2034
Galway Community Hall	2025	2040	~2040+
Lakehurst Community Hall	2049	2061	~2040+
Deer Bay Hall	2025	1980	~2020
Buckhorn Sports Pad	2040	2060	~2040+
Cavendish Ice Surface	2069	2069	~2040+

4.2.5 Functional Condition

The above analyses support the following notes on functional condition (both now/existing and into the future):

1. Overall, no additions are required to existing infrastructure in order to sustain likely capacity for community events and time-to-access coverage.
2. Sports infrastructure appears to meet most community objectives, as it did not rank highly in priority for action (2019), and over 80% were satisfied with level of service (2018).
3. Lack of accessibility within facilities (is grandfathered unless major renovations occur).
4. Lack of storage for equipment: chairs and tables are stored around hall perimeters.
5. The Buckhorn Sports Pad arena is not regulation size (140x70ft); it could not support formal minor hockey leagues (standard NHL size 200x85ft). A half-surface fits within the pad but may be awkward to provide.
6. Deer Bay Hall is not required to provide adequate Community Hall coverage to the region. If it is not functionally required for another purpose, it can be divested.
7. Ice surfaces are suitable for driving time-to-access of <30 mins. Level of service and possible capacity are weather-dependent and cannot be accurately projected.
8. Ice surface condition is unreliable and variable and is likely to continue on this trend.

4.3 Recommendations

The following recommendations for infrastructure are based on addressing existing deficiencies in a cost-effective manner, and in meeting requirements for future capacity and services across the Municipality. For Recreation and Community infrastructure, recommended actions are listed below.

Although certainly possible, future large projects (such as a swimming pool and/or indoor ice arena) are an unlikely focus for municipal investment, given high construction and operating costs of such projects and their low priority compared to other required investments.

Table 14: Recreation and Community Action Recommendations

Actions	Capital Timeline	Notes
Divest of Deer Bay Hall and relocate Outreach Centre to suitable accommodations	2020	Rent of trailer is costly (see also section Other / Outreach Centre) The facility is not functionally or physically suitable for any required function.
Replace Cavendish Community Hall	Replace ~ 2034	Asset will have reached the end of its life and require replacement.
Replace Galway Community Hall	Replace ~2040	Asset will have reached the end of its life and require replacement.
Renew Cavendish Play Structure	~ 2024	Continue routine inspections; expect replacement at 15 years.
Maintain Lakehurst Hall	No Replacement	Continue preventative maintenance.
Maintain Cavendish Arena	No Replacement	Incl. board replacement as planned.
Maintain Cavendish Pavilion	No Replacement	Some upgrades as required (door/window, security, etc.).
Maintain Buckhorn Sports Pad	No Replacement	Continue preventative maintenance for rink; improve storage solutions at outbuildings.

Additional recommendations include:

- Develop an operating agreement for all Community Centre Boards, to ensure transparency in responsibilities and set expectations on both sides.
- Consider assuming responsibility of booking and programming for municipally owned Community Halls over a 5-10 year timeframe. Likely impact for staff and technology.
- Consider the future of ownership of the Buckhorn Sports Pad, and the possibility of transferring responsibility to the Buckhorn Community Centre (possibly dependent on the agreement above to maintain the ice surface during the winter).
- Adding refrigeration to ice arena surfaces is not a priority project given the anticipated expense and usage.
- Consult with the new Recreation and Culture Committee on the above.
- Prioritize the development of a Recreation Plan to assist with the above.
- Note: a new year-round ice arena is a possible project, should a Recreation Plan mandate it. Such a facility is likely to cost between \$5M-\$7M. It is not a priority within this Plan.

5 Water

There are two municipal drinking water supply systems (Pump Houses) in Trent Lakes. One provides shared well service to Alpine Lakes and Pirates Glen Subdivisions; the other, Buckhorn Lakes Estates Subdivision. Ontario Clean Water agency (OCWA) is contracted by the Municipality to operate the two Pump Houses. Their activities include water testing, identification and supervision of required repairs, and distribution of supplies. The Municipality is responsible for the upkeep of the property (e.g. grass cutting, fencing) and building envelope maintenance.

5.1 Current Facilities

Alpine Village Municipal Well	The Alpine Village/Pirates Glen Municipal well system services nearly 198 users in the Alpine Village/Pirates Glen subdivisions located off county road 36, near the Municipal Office and Nogies Creek Fire Hall (#4). There are two 300-ft wells servicing this location.
Buckhorn Lake Estates Municipal Well	The Buckhorn Lake Estates Municipal well system services approximately 118 users in the Buckhorn Lake Estates subdivision located off Sumcot Drive. The Pump House extracts, purifies, stores and distributes water from a groundwater source near Buckhorn Lake. There is one shallower well servicing this location.

5.2 System Analysis

5.2.1 Service Levels

No change to service level is expected; there are no plans to add another well system to support a new subdivision, nor to add additional lots to the existing systems. The existing infrastructure will continue to be managed by OCWA to provincial standards, which are not likely to change. Trent Lakes' OCWA representative mentioned that Buckhorn Lake Estates may require an additional well over the next 10 years, as the current well may run dry. That cost would be passed on to the well system's users (as other costs). Otherwise, there are no future changes expected for pump house infrastructure.

5.2.2 Distribution of Assets

As seen in the overview asset map (Figure 4), assets are generally in the southern region of Trent Lakes, in the more densely populated subdivisions.

Trent Lakes Municipal Assets	<ul style="list-style-type: none"> • Alpine Village Municipal Well • Buckhorn Lake Estates Municipal Well
Serviced Lots	Roughly 6% of lots utilize these two pump houses.
Analysis	The majority of residents do not have access to either of the municipal pump wells. Residents who use the services provided by pump houses have no reason to visit them.
Conclusions	The majority of the population (~94%) service their water and wastewater needs from private localized wells (ground water) and septic systems.

5.2.3 Capacity Analysis

Not applicable. OCWA reports that the pump houses are sufficient.

5.2.4 Physical Condition

The assets require minor physical repairs and maintenance; any capital investments or renewals would be charged back to the users.

5.2.5 Functional Condition

There are issues with the functional condition of the pump houses, nor are any expected over the planning timeline.

5.3 Recommendations & Prioritization

Water infrastructure is well suited to meet requirements. The recommendation is to maintain the existing infrastructure, managed by OCWA and delivered on a cost-recovery basis to the users of each system.

Table 15: Water Action Recommendations

Actions	Capital Timeline	Notes
Maintain Alpine Village Municipal Pump House	N/A	-
Maintain Buckhorn Lake Estates Pump House	N/A	-

Additional recommendations:

- None.

6 Administration

All administration for the Municipality is run out of the Municipal Office, which also serves as Council Chambers. Administration is responsible for coordinating the various municipal departments (Building & Planning, By-laws & Enforcement, Economic Development, Finance, Human Resources, Parks & Recreation, Public Works, Taxation, and Waste & Recycling) and day-to-day operations of the Municipality. The Chief Administrative Officer (CAO) runs administration for the Municipality.

6.1 Current Facilities

Municipal Office Municipal Office is a two-storey commercial building, constructed in 2002 and well maintained. The building is currently utilized as the primary administrative office for the Municipality and is the main hub for the various municipal departments. The building is open to the public for queries and services.

6.2 System Analysis

6.2.1 Service Levels

The service types are currently appropriate for the Municipality. However, Administration is currently experiencing a staffing shortage related to unfilled vacancies. Staffing needs are likely to increase into the future as population, and thus tax base and service demand, increase (expectation is ~20% to match population growth). It's possible for the Municipality to take over currently contracted services as well as new responsibilities, resulting in increased staffing to meet future service changes.

This study does not infer a commitment to add a particular number of staff members, of any position. However, it allows for possible flexibility and changes in staffing over the next 20 years. The following table reflects the current Administration positions (regardless of vacancies) and projected future FTE to meet service changes.

Table 16: Administration Staff Positions 2019

Department	Position	FTE Current		+20%	Future FTE
Administration	Chief Administrative Officer (CAO)	1	5.3	1.1	6.4
	Director of Corporate Services / Clerk	1			
	Records Management / Deputy Clerk	1			
	HR / Waste Management Coordinator	1			
	Administration Projects Coordinator	1			
	Customer Service and Office Assistant	0.3			
Building/Planning	Chief Building Official (CBO)	1	4.0	0.8	4.8
	Planning Administrator	1			
	Building Inspector	1			
	Building / Planning Assistant	1			
Finance	Director of Finance / Treasurer	1	3.3	0.7	4.0
	Deputy Treasurer	1			
	Tax Clerk / Accounts Payable	1			
	Customer Service Office Assistant	0.3			
Recreation/ Facilities	Director of Recreation & Facilities	1	6.3	1.3	7.6
	Maintenance Supervisor	1			
	Customer Service and Office Assistant	0.3			
	Seasonal Staff	4			
	Total	19	19.0	3.8	22.8
	Additional capacity to meet service changes			assume 2.0	
	Total new staff to be accommodated			+ 6	25

6.2.2 Distribution of Assets

Municipal Office is generally centralized within the Municipality, allowing staff to access various areas with roughly equal efficacy. Additionally, although the majority of administrative functions don't involve public interaction, there will always be a need for a public facing component of Municipal Office. A reasonable measure of accessibility both from administration to the community and vice-versa, is drive time.

Trent Lakes Municipal Assets	Municipal Office		
Serviced Lots	Drive Time (1)	# of Lots	% of total (2)
	10min	1,533	21.4%
	20min	3,420	47.8%
	30min	5,898	82.5%
	40min	6,677	93.3%
	50 min	7,153	100.0%

Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)

Note 2: does not include 767 lots inaccessible by road (interior or island).

Analysis The analysis shows that the majority of the Municipality can be accessed from Municipal Office within a 40-minute drive; this means most of the public can access services at the Hall within 40-minutes, as well. The Office is centrally located, with fairly equal driving time to reach Cavendish and Buckhorn lots, and a little longer for those in Galway.

Select Municipal services are offered at Waste Transfer Stations and libraries to increase access for Trent Lakes residents. Services include dog tag forms, fire permitting and cottage kits.

Conclusions The current location of the Municipal Office is appropriate. Localized access is not a reasonable option for this centralized service. Any distributed service would be provided online as internet and cellular coverage improves. Additional services such as purchase and pick-up of recycling and composting bins could be offered at satellite locations in the future, reducing the reason for residents to drive further to the Municipal Office.

6.2.3 Capacity Analysis

The Municipal Office currently accommodates the following workspaces:

Table 17: Administration Workspace Summary

Space Type	Capacity	Notes
Private Offices L2	8	All occupied, one currently shared
Workstations L2	6	1 spare
Private Offices L1	2	L1 currently features a shared office between the Director of Recreation and Facilities and the Maintenance Supervisor, and an office used by the mayor and Social Services.
Total Capacity L2	14	Because of staff responsibilities it is recommended all administration staff are located on L2.
Total Capacity L1	1	Current shared office on L1 is a former storage room and should be returned. The Mayor’s office can be retained for that position and visiting professionals.

The current staffing levels at Municipal Office are 15 staff members excluding seasonal staff. Looking forward, approximately 6 new staff may be expected over 20 years. Note that 3 of these are likely to be Recreation/Facilities staff (permanent and seasonal). That means that the Municipal Office will be short approximately 7 workstations unless renovations are made or staff moved offsite.

6.2.4 Physical Condition

The Municipal Office was built in 2002. The building has seen investment due to functional changes and renovations to meet the needs of AODA standards for a publicly accessible service building. Therefore, renewal costs to date are not directly representative of asset replacement requirements; the asset is not likely to need replacement until past the project planning horizon. It should be renovated to support function and maintained for the next 20-years.

Table 18: Administration Infrastructure Estimated Replacement

Community Hall	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Administration Building	2042	2052	~2035

6.2.5 Functional Condition

The above analyses support the following notes on functional ability of the facility to support activities (both now/existing and into the future):

1. Lack of accessibility between floors within facility (is grandfathered unless major renovations occur).
2. Lack of storage for office supplies (currently kept in accessible washroom on L2).
3. Lack of appropriate space for Recreation & Facilities activities (safe equipment and materials storage, workshop, meeting point/lockers).
4. Requirement to add ~ 6 new staff over 20 years, for a total of 25 staff members. Approximately 5 of the total staff members would be seasonal; therefore 20 would require workspaces. It is assumed that new staff positions will require workstations and not offices.
5. The current capacity of the Municipal Office is ~14 administration staff members, assuming no offices or workstations are shared. Current staffing levels are maintained by staff sharing space.

6.3 Recommendations & Prioritization

The following recommendations for infrastructure are based on addressing existing deficiencies in a cost-effective manner, and in meeting requirements for future capacity and services across the Municipality.

Table 19: Administration Action Recommendations

Actions	Capital Timeline	Notes
Move Recreation and Facilities to a separate location suitable to their needs (see note 1)	Within 5 years (by 2025)	Provides safe and functional workspace for Recreation and Facilities staff as demand for these functions grows. Frees space for administration within Municipal Office
Remove vault and renovate for workstation and accessible counter.	Within 5 years (by 2025)	Renovate L2 to accommodate new staff members and accessible counter. L1 changes include: <ul style="list-style-type: none"> • Transient office to remain for Mayor and Social Services (009) • Material storage in Recreation and Facilities office (005) • File storage in Lower Vault (011)
Install a lift to support interior accessibility	As needed; not a priority	Accessibility is grandfathered; this is primarily for staff access
Maintain Municipal Office	N/A	Continue preventative maintenance.

Additional recommendations:

- Adopt a planning standard for office and workstation sizing (consider Government Office Space Standards or Canadian Centre for Occupational Health and Safety Standards, and/or WorkPlace 2.0).
- Consider useful functional co-locations for Recreation and Facilities building.

Note 1: Recreation and Facilities will require the following spaces:

- Administration space for 3 FT staff members (Director, Supervisor, 1 FT coordinator) & ~6-8 seasonal staff members.
- Storage space for tools, equipment, fuel, and materials/supplies
- Workshop space for general carpentry and repair
- Secure parking space for fleet vehicles and wheeled equipment (covered, heated)
- Above is estimated at ~220 SM facility and 150sm covered/secure parking.
- The facility should be located centrally to high areas of service, including the facility assets (distributed but heavy in the south), parks, beaches, and boat launches. A co-location with services at 49 Depot would be a positive due to similar activity profile and space needs, and its central location and large site.

Table 20: Sample High Level Facility Requirements for Recreation & Facilities

Space	Quantity	m ²	Total m ²
Equipment	1	20	20
Admin - Office	2	10	20
Admin – Shared	1	13	13
Workroom/Muster/Lockers	1	20	20
Workshop	1	30	30
Gen. Storage	1	10	10
Lunchroom	1	15	15
Washroom	1	4.6	4.6
Heated Garage	2	16.8	33.6
Total Net m²			166.2
Component Gross m² (20%)			199
Building Gross m² (10%)			219
Covered/Secure Parking			150
Minimum Site Size			~738

7 Fire Services

Fire services are provided to residents of Trent Lakes through localized Fire Halls run on a volunteer model. The facilities are Buckhorn Fire Hall (# 1), Cavendish Fire Hall (#2), Galway Fire Hall (#3) and Nogies Creek Fire Hall (#4). Most were built in the 1970s except #4, which is new.

The Municipality of Trent Lakes Fire Services is a department of the Municipality, and manages the day-to-day operations of their facilities, as well as emergency calls. Trent Lakes Fire responds to fires, vehicle extrications, medical emergencies and rescue calls. The department currently operates with 4 full-time employees: the Director of Emergency Services/Fire Chief, Deputy Fire Chief, Fire Assistant, and Fire Training/Prevention Officer. The majority of the fire department's force is made up of volunteer firefighters.

Municipal fire services are highly regulated and monitored by Ontario's Ministry of Community Safety and Correctional Services and the Office of the Fire Marshal, which require that municipal responsibilities and level of service must meet or exceed the Fire Protection and Prevention Act (1997). There is a division of ownership when it comes to fires within the Municipality. A large portion of wildland in Trent Lakes is crown land, which falls under the Ministry of Natural Resources and Forestry's (MNR) jurisdiction, and the MNR is responsible for all fires that occur within this zone. Trent Lakes and MNR hold an agreement to assist one another to fight a fire if called upon.

7.1 Current Facilities

Buckhorn Fire Hall (#1)	Buckhorn Fire Hall is located on Lakehurst Road, and is co-located and attached to the Buckhorn Public Works Yard. The Fire Hall features 3 vehicle bays for 1 pumper, 1 pumper tanker, 1 emergency response truck, 1 heavy rescue truck, and ATV. A nearby garage stores a boat. Ranked by call volume, Buckhorn Fire Hall is the busiest station in Trent Lakes with 253 calls in 2018.
Cavendish Fire Hall (#2)	Cavendish Fire Hall is located on Community Complex Drive, just off County 507. The site is co-located with the community hall and other site resources. The Fire Hall has 3 vehicle bays for 1 pumper, 1 mini pumper, 1 emergency response truck, and an ATV. As well, this site is equipped with a Forestry Trailer for bush fires. Ranked by call volume, Cavendish Fire Hall is the third busiest station with 43 calls in 2018.
Galway Fire Hall (#3)	Galway Fire Hall is located on Galway Road, just west of County Road 121. The site is co-located with Galway Community Centre and Public Works Yard. The Fire Hall features 4 vehicle bays for 1 pumper, 1 pumper tanker, 1 emergency response truck, 1 heavy rescue truck, and an ATV and boat. Ranked by call volume, Galway Fire Hall is the least busy station with 41 calls in 2018.
Nogies Creek Fire Hall (#4)	Nogies Creek Fire Hall is located off County Road 36, near to Bobcaygeon. The site is co-located with the Municipal Office. The Fire Hall was purpose-built in 2016 and features 4 vehicle bays (1 drive through), for 1 pumper, 1 pumper tanker, 1 emergency response truck, and support trailers (boat, ATV, and forestry). Nogies Creek features a large training room and administrative offices. All full-time staff are stationed here. Ranked

by call volume Nogies Creek Fire Hall is the second busiest station with 124 calls in 2018.

7.2 System Analysis

7.2.1 Level of Service

Legislated level of service is not likely to change in the next 20 years. It is assumed that Fire will continue to assist when called to fires on MNR land and will not assume responsibility over this zone.

National Fire Protection Association standard 1720 (NFPA1720) provides response time standards (from call to site) for volunteer-run fire departments in Canada³. According to this standard, the response time to rural areas is 14 minutes; response times to remote areas (more than 12.87 km or 8 miles from a Fire Hall) are dependent on travel distances (see figure below). At its highest density, NFPA considers Trent Lakes “rural” (< 500 people/square mile); most of the Municipality is considered “remote”.

For the purposes of this study, we assume that:

- Fire Services must maintain “rural” level coverage in highest density areas (e.g. Buckhorn), meaning that a Fire Hall should be located within 8 miles or 12.87 km of most residential lots.
- Achieve a time-to-access (from call to Hall) of approximately 20mins for other Halls, reflecting a reasonable response time for remote coverage.

Figure 12 NFPA 1720 Zone classifications and minimum standards

Demand Zone ^a	Demographics	Minimum Staff ^b	Response Time ^c	Meets Objective
Urban area	>1000 people/mi ²	15	9	90%
Suburban area	500–1000 people/mi ²	10	10	80%
Rural area	<500 people/mi ²	6	14	80%
Remote area	Travel distance ≥ 8 m	4	Directly dependent on travel distance	90%
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90%

^a A jurisdiction can have more than one demand zone.

^b Minimum staffing includes members responding from the AHJ's department and automatic aid.

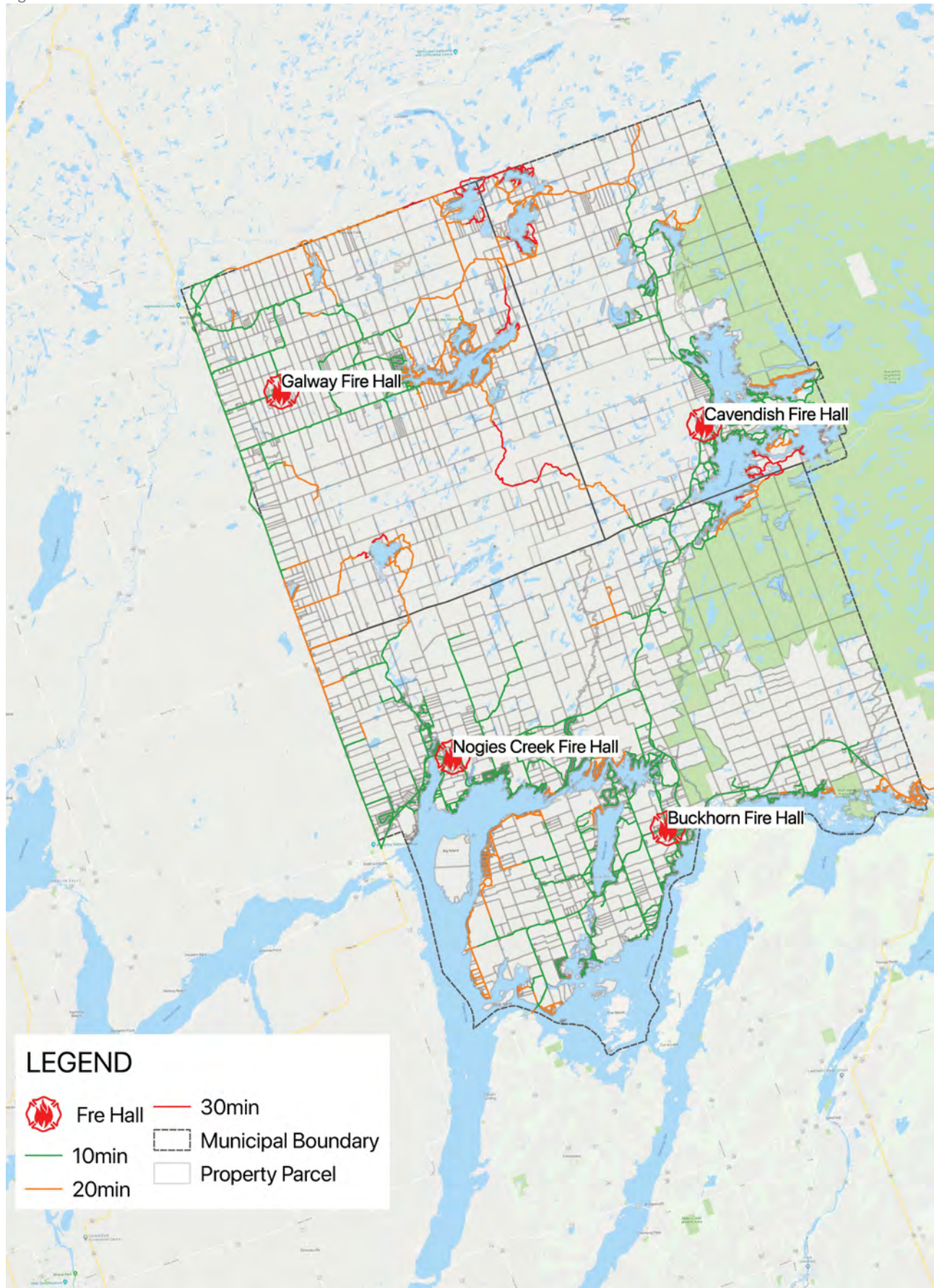
^c Response time begins upon completion of the dispatch

7.2.2 Distribution of Assets

As seen in the map below, Fire Hall assets are generally well distributed through the communities. A reasonable level of service indicator for Fire Halls is response time, determined via driving time to residence lots from Fire Halls. The analysis checks that there are minimal gaps over the community as a whole.

³ Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments

Figure 13 Trent Lakes Fire Hall asset locations



Trent Lakes Municipal Assets	<ul style="list-style-type: none"> • Buckhorn Fire Hall (#1) • Cavendish Fire Hall (#2) • Galway Fire Hall (#3) • Nogies Creek Fire Hall (#4) 												
Serviced Lots	<table border="1"> <thead> <tr> <th>Drive Time (1)</th> <th># of Lots</th> <th>% of total (2)</th> </tr> </thead> <tbody> <tr> <td>10min</td> <td>4,793</td> <td>67.0%</td> </tr> <tr> <td>20min</td> <td>6,536</td> <td>91.4%</td> </tr> <tr> <td>30min</td> <td>7,153</td> <td>100.0%</td> </tr> </tbody> </table>	Drive Time (1)	# of Lots	% of total (2)	10min	4,793	67.0%	20min	6,536	91.4%	30min	7,153	100.0%
Drive Time (1)	# of Lots	% of total (2)											
10min	4,793	67.0%											
20min	6,536	91.4%											
30min	7,153	100.0%											
	<p><i>Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)</i></p> <p><i>Note 2: does not include 767 lots inaccessible by road (interior or island).</i></p>												
Analysis	While the map shows response time within 20 mins for the majority of the Municipality, there is still a small portion of roads are over a 20-minute response time. Given the remote nature and low density of the area, and lack of plans to add additional roads in the Municipality, this is considered satisfactory.												
Conclusion	Fire Halls are well-dispersed throughout the Municipality. Adding an additional Fire Hall is not a suitable approach to increase coverage for any areas. Removing a Fire Hall is also not a reasonable option, as it would increase call-to-Hall times significantly.												

7.2.3 Capacity Analysis

Two projected call volume models were developed to quantify capacity of Fire Halls:

- Model 1 based on the total number of calls received in 2018, population increase (20%) and a contingency (10%) for increased medical calls of an aging community, determined the Municipality would receive 599 calls for all 4 fire halls by 2038.
- Model 2 based on number of calls per 1,000 population by ward and population increase (20%) determined the Municipality would receive 558 calls annually by 2038.

Regardless of the model, call volumes remain below 1/day per Fire Hall, which is a best-practice threshold for a staffed service.

Table 21: Projected Call Volumes for Fire Halls

Fire Hall	Total Calls (2018)	Projected Calls (2038) Model 1*	Projected Calls (2038) Model 2**
Buckhorn (#1)	253	329	306
Cavendish (#2)	43	56	52
Galway (#3)	41	53	50
Nogies Creek (#4)	124	161	150

* Flat 30% increase due to population and aging

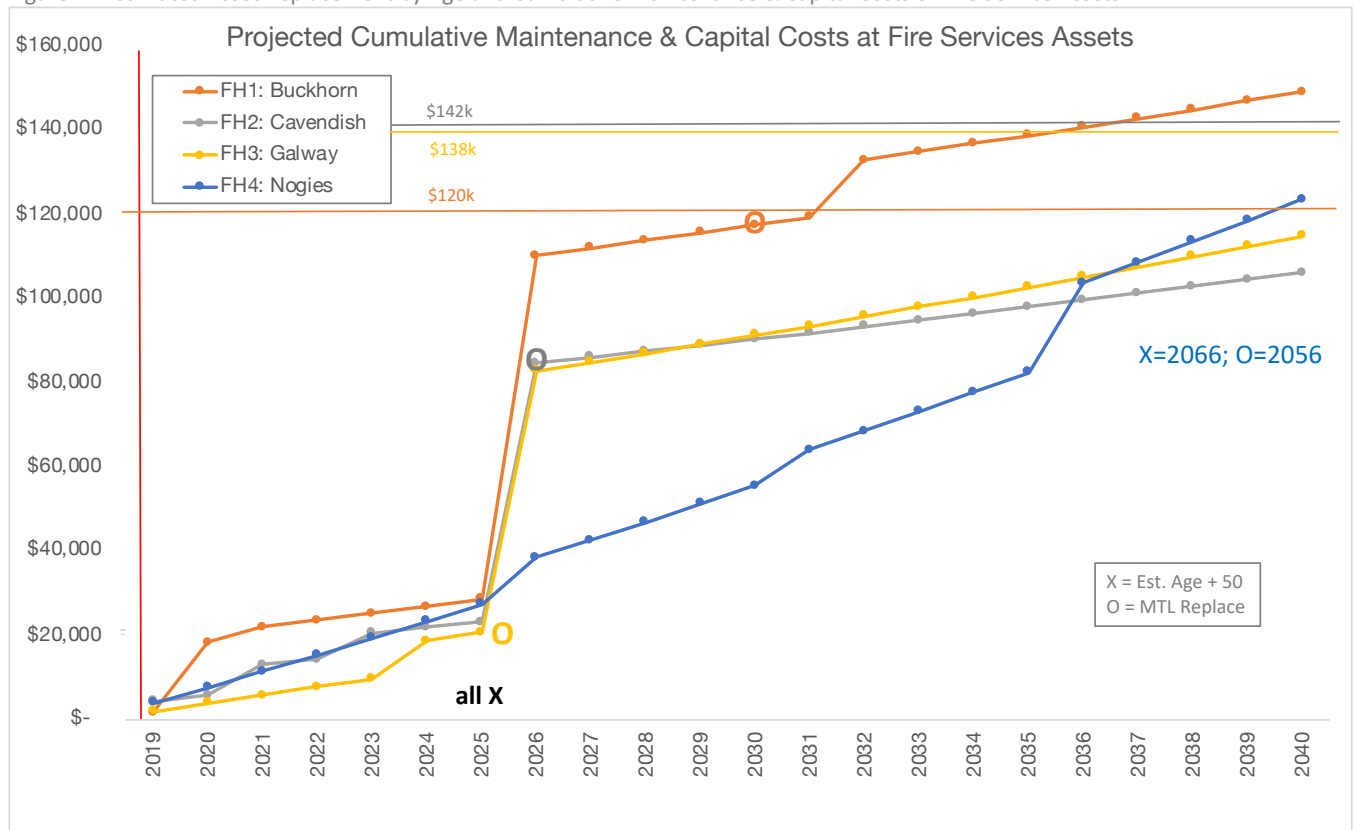
** Using approximate population distributions into the future, and assuming current “calls per population” trend by Ward continues.

7.2.4 Physical Condition

With the exception of Nogies Creek (FH#4), all Fire Halls in the Municipality were built prior to their listed acquisition date, likely circa 1970s. Their construction is solid; the functional implications of not replacing the asset are larger than the physical implications. For example, apparatus and equipment must be custom ordered to fit within the current buildings, which are all ~45 years old or older. None of Halls #1, 2, or 3 are post-disaster rated, which is now a requirement of fire and/or rescue stations, and any facilities that store vehicles or boats used for fire and rescue purposes.

The following chart shows projected cumulative maintenance and capital costs at all Fire Halls. The graph starts at current year (2019) and projects until 2040 (~20 year timeline). Industry rule of thumb is that an asset should be considered for replacement when the investment to renew exceeds 30% of the replacement cost. This is shown with a horizontal line of matching colour. Replacement costs are for like-structures (from MTL Property Inventory) and do not guarantee functionality after investment, which is another analysis.

Figure 14 Estimated Asset Replacement by Age and Cumulative Maintenance & Capital Costs of Fire Service Assets



The next table summarizes likely replacement timeframes by estimate type.

Table 22: Recreation and Community Infrastructure Estimated Replacement

Fire Hall	MTL Replacement (O's)	50 year Lifespan (X's)	30% of Asset Replacement
Buckhorn Fire Hall (#1)	2030	2025	~2031
Cavendish Fire Hall (#2)	2026	2025	~2040+
Galway Fire Hall (#3)	2025	2025	~2040+
Nogies Creek (#4)	2056	2066	~2040+

Observations:

- All older Fire Halls reach ~50 years of age at 2025 and are likely to need major systems renewal unless alternative strategies (e.g. replacement) are forthcoming
- Hall #1 is a candidate for replacement due to age and physical condition within the project timeline; #2 and #3 are nearing the threshold.
- Conclusions:
 - Fire Halls #1, #2, and #3 are built solidly but are old structures.
 - None of the older Fire Halls are compliant with current code requiring post-disaster construction for all structures storing emergency response apparatus.
 - Renewal should be prioritized on a functional basis for all Halls with the exception of #4.
 - Short-term solutions supporting function may be suitable to extend project timelines.

7.2.5 Functional Condition

The above analyses support the following notes on functional condition (both now/existing and into the future):

- Buckhorn, Cavendish, and Galway are old facilities (all built circa 1970s, acquired in the late 1980s), and were built to the standards of the time, which have since changed in terms of functional requirement for a Fire Hall and maintaining standards of good practice.
- Anticipated call volumes will not require additional apparatus; apparatus tank capacity may be expected to increase upon replacement.
- By 2027, Fire is planning to replace a series of vehicles with similar models (e.g. trucks). Any apparatus (pumpers and pumper tankers) slated to be replaced in Buckhorn, Cavendish and Galway will have to be custom modified to fit within current facilities. This is estimated to add a ~50% premium on the cost of a new apparatus.
- New equipment such as boats of a functional size for Fire Services rescue (e.g. 24' +) would not fit within current structures at Buckhorn or Galway.
- At Buckhorn, specifically:
 - Functionality is compromised due to particularly restrictive spaces, requiring careful manoeuvring of vehicles.
 - All new vehicles must be modified to fit within this Fire Hall due to facility size.
 - Two bays share the only tall garage door to enter/exit the facility, increasing likelihood of equipment and facility damage and slowing access and exit.
 - Buckhorn is expecting a new Pumper/Tanker in 2020, which must be modified to be the same size of current apparatus as the facility cannot accommodate larger desired equipment.
 - A bigger boat is required (24', currently 17') to fit modern first response equipment. This would not fit in the current shed.

- The facility is not built to post-disaster standards, which is now code for structures storing fire apparatus.
- The site is shared with the Buckhorn Public Works Depot; the shared well sometimes runs dry as both functions have high water use needs. The current septic system is in disrepair and is beyond the end of its lifespan.
- At Cavendish, specifically:
 - Functionality is compromised due to particularly restrictive spaces requiring careful manoeuvring of vehicles.
 - All new vehicles must be modified to fit within this Fire Hall due to facility size (height and length). Garage doors are standard height, restricting the size of apparatus that can be stationed here.
 - Cavendish is expecting a new mini-pumper (slated for 2018), which has been delayed due to space restrictions in bay 2. To accommodate the new mini-pumper the facility must be renovated. Currently the facility is utilizing a 1970's mini-pumper with an updated 2004 Cab and Chassis which is in need of replacement.
 - ATV and forestry trailer are in a very narrow addition with little clearance. The trailer is stored between Pumpers, blocking circulation.
 - The well on site is restrictive and often runs dry when Fire Service is using a large volume of water.
 - The facility is not built to post-disaster standards, which is now code for structures storing fire apparatus.
 - A 2018 report (Greenview Environmental Management) recommended to renovate the east end of the building to relocate the training room, washroom, and equipment storage to the east wall. This would create two equally long bays to accommodate pumpers, in a satisfactory manner for the next 10 years. While a solution to the apparatus issues, this band-aid solution does not address the serious functional and declining physical condition of the facility.
- At Galway, specifically:
 - Functionality is compromised due to particularly restrictive spaces, requiring careful manoeuvring of vehicles when parking.
 - All new vehicles must be modified to fit within this Fire Hall.
 - Storage arrangement of Boat and ATV trailers is not conducive to prompt access.
 - The facility is not built to post-disaster standards, which is now code for structures storing fire apparatus.
- Nogies Creek is a new facility and is purpose built and well-suited to its functions.

7.3 Recommendations & Prioritization

The following recommendations for infrastructure are based on addressing existing deficiencies in a cost-effective manner, and in meeting requirements for future capacity and services for Fire Services across the Municipality for the next 20 years.

Table 23: Fire Services Action Recommendations

Actions	Capital Timeline	Notes
Buckhorn: Build new functional facility to serve the Buckhorn region’s fire service needs.	Replace in 5 years (2025)	This is the busiest station and is in poor functional state.
Cavendish: Complete renovations as drawn (Greenview Environmental Management, 2018).	Short-Term Solution: Complete in 2020	Intended to extend the functional life of Cavendish Fire Hall: allows for easier circulation, reduces risk of vehicle collisions, allows space for a new pumper.
Cavendish: Build new functional facility to serve the Cavendish region’s fire service needs.	Replace in 10 years (2030)	As the second busiest station, Cavendish will be next priority.
Galway: Provide a storage shed for the ATV trailer and Boat.	Short-Term Solution: Complete in 2020	Intended to extend the functional life of Galway Fire Hall - Allows for easier access and provide additional circulation space inside the Hall.
Galway: Provide new functional facility to serve the Galway region’s fire service needs.	Replace in 15 years (2035)	As the third busiest station, and with more circulation than other stations, Galway will be the last priority.
Nogies Creek: No action; maintain.	N/A	Continue preventative maintenance

8 Public Works

Public Works services are provided within the boundaries of Trent Lakes through localized Depots. These include the 49 Public Works Yard (Bobcaygeon Depot), Buckhorn Public Works Yard (Harvey Depot), and Galway Public Works Yard, plus sand domes and salt buildings at these sites and at the site of Cavendish Hall. Public Works is responsible for maintenance of approximately 292 kilometres of municipally owned hard-surface, gravel roads and municipal assets. Public Works staff routinely undertake the following tasks:

- Maintenance patrolling & associated repairs (e.g. potholes, cracks, etc.)
- Roadside mowing and weeding
- Roadside & brush removal/trimming
- Debris & litter cleanup
- Coldmix patching
- Sweeping
- Recycling and waste disposal services for all 4 Transfer Stations
- Shoulder treatment
- Calcium chloride application
- Snow plowing
- Sanding/salting
- Traffic sign maintenance
- Guideposts/rails maintenance
- Line painting, and
- Pit maintenance for Bobcaygeon, Allen's Road, and Cavendish

The majority of these tasks are undertaken throughout the year during ~250 working days/year (not including holidays). Beyond routine work, Public Works staff undertake major projects each year including road reconstruction and rehabilitation as well as capital rehabilitation projects such as bridge and culvert work, ditching work, surface treatment, asphalt paving, and gravel crushing/ grading/ resurfacing. Seasonal tasks such as snow plowing and sanding/salting occur during about 5 months of the year.

8.1 Current Facilities

49 Public Works Yard The 49 Public Works Yard site is located on County Road 49, a short drive north of Bobcaygeon. The depot was historically known as the Bobcaygeon Depot. The site and facility used to belong the Ministry of Transportation Ontario, who was responsible for delivering services to the area. This was later bestowed upon the Municipality of Trent Lakes, which took ownership of the facility.

The facility is one floor including an office with 2 workstations, a lunchroom / meeting room, mechanical room, washroom, storage room, and 5 vehicle bays. As well, the site includes 2 sand domes (~100 ft. diameter each) and a small bulk material pile for asphalt. Staff stationed here are currently operating vehicles in Galway, utilizing sand domes at 49 and Galway. Staff fuel vehicles on site at the 49 Public Works Yard.

Buckhorn Public Works Yard The Buckhorn Public Works Yard site is located on Melody Bay Road, just west of Buckhorn. It was historically known as the Harvey Depot. The facility is co-located and attached to the Buckhorn Fire Hall (#1). The facility described below is the Public Works facility, only.

The facility is two floors including 2 offices (Mechanic and Director of Public Works), washrooms, chemical storage room, parts storage room, and 5 vehicle bays. The second-floor mezzanine includes staff area with microwave and coffee maker, locker room and storage room (no water). The facility also has a storage room accessed from the outside, for various materials and small gas-powered equipment.

The site includes 5 repurposed bear-proof garbage bins (with added roofs) for storage, a sand dome (~91 ft. diameter), and salt shed. There are several bulk material piles on site, for sand, gravel and asphalt. Buckhorn Public Works staff supports the Cavendish area, utilizing the sand/salt facilities located at Buckhorn and at Cavendish Community Centre Recreation Site. All mechanic activities occur at this site. Staff fuel vehicles on site at the Buckhorn Public Works Yard.

Galway Public Works Yard The Galway Public Works Yard site is located on Galway Road, just west of County Road 121. The facility is co-located with the Galway Community Centre and Galway Fire Hall (#3). The facility is currently decommissioned due to physical condition and only used as storage for plow attachments, sweeper attachments, and other equipment. The facility has a small office / lunchroom, washroom, 3 vehicle bays and an addition for 1 more vehicle bay. There is a small basement underneath the addition used as storage for signs. Galway features a sand dome, utilized as a re-supply station for staff stationed at 49 Depot when operating vehicles in the north.

Cavendish Sand Building There is one sand building located near the Cavendish Community Hall. It is used as a re-supply station for staff operating vehicles in the area.

8.1.1 Discussion History

Galway Depot is in poor condition and is currently not in use. Prior to its decommissioning, Trent Lakes investigated the cost to construct a new Public Works depot versus the repair and ongoing maintenance of the existing Galway depot. In late 2015, the Municipality engaged Cambium Inc. to carry out a Feasibility Study for a new Public Works Depot. Based on a financial and location analysis, as well as other considerations, the consultant team recommended that Trent Lakes build a new consolidated depot to replace all existing depots.

Two years later, Greenview Environmental Management presented detailed design & engineering plans to council for a new 21,500SF (2,000m²) facility including 4 maintenance bays, 10 vehicle storage bays, 2 vehicle/equipment bays and supporting spaces (December 2017). The project was suspended in 2018 due to community grievances and pending investigation of other possible ways forward. Further exploration was requested, including: a study of health and safety aspects and the structure of Galway depot; identification and approval of a third-party plowing company; temporary winter shelter for displaced Trent Lakes vehicles, and; demolition and clean-up cost estimate for Galway Depot.

As identified by current Council, the idea of a centralized Public Works Yard is an unpopular opinion with the community, as level of service is assumed to drop with the removal of two depots (likely Buckhorn and Galway). A consensus has not yet been reached.

8.2 System Analysis

8.2.1 Level of Service

Level of service for Public Works is regulated by the Province of Ontario Regulation 239/02 as amended to the Municipal Act, which established the minimum maintenance standards for municipal highways. According to O.Reg 239/02 the classification of all municipal roads within the Municipality of Trent Lakes is either class 5 or 6. As the regulation does not specify a minimum service standard for class 6 roads, Trent Lakes resolved to meet the minimum municipal standard⁴ for Class 5 roads, through council resolution R2015-385, Level of Service – Municipal Roads (July 14, 2015).

The following table outlines minimum maintenance standards for municipal highways under 239/02, for select service measurements under three different highway classes. Public Works staff at Trent Lakes currently patrol once per week and clear snow events within 6-8 hours on average, meaning that the department is operating at a Class 3 level or better. However, the regulation would classify MTL roads as either 5 or 6. Even if increased traffic were to reclassify Trent Lakes' highways as class 4 (not anticipated given population projections), the Public Works department would still be providing a higher level of service than mandated.

Table 24: Public Works Minimum Service Level Requirements per O.Reg 239/02 (depth in cm; time in days or hours)

Service Level Measurements	Class 5 (Service Standard)	Class 4	Class 3 (Current Operations)
Patrol Frequency	30 days	14 days	7 days
Snow Clearing Accumulation	10cm / 24 hrs	8cm / 16 hrs	8cm / 12 hrs
Icy Roadways	16 hrs	12 hrs	8 hrs
Potholes (paved)	30 days	14 days	7 days
Potholes (non-paved)	12cm / 30 days	10cm / 14 days	8cm / 7 days
Potholes (non-paved shoulders)	12cm / 30 days	10cm / 14 days	8cm / 14 days
Shoulder drop-off	30 days	14 days	7 days
Cracks	180 days	180 days	60 days
Luminaires	14 days	14 days	14 days
Signs	30 days	30 days	21 days

The provincially mandated level of service requirement is not likely to change over the project horizon. Internal changes to service include:

- Public Works may assume maintenance of sidewalks in the future (low impact to operations).
- Sweeping will be outsourced.

⁴ R2015-385 outlines the minimum standards of maintenance and repair for road service of potholes, cracks, roadway surface discontinuities, shoulder drop-off, flooding, road debris, dust, routine patrolling, weather monitoring, roadsides, clearances, illumination, traffic sign and signal service standards, other signage, traffic control signal systems, other safety devices, trees, bridges, bridge deck spalls, and winter response & patrol.

8.2.2 Service Impact of Centralization

This Facilities Master Plan aims to provide a responsible path forward for enhancing facilities to support mandated level of service for the Municipality. Given the discussions to date and varying positions on a centralized depot, the service impacts of centralization bear analysis.

Mandated level of services as shown in the table above are primarily measured in days. The longest travel route from the proposed centralized or “hub” location at 49 Depot is less than 1 hour (see Figure 15); therefore, it is reasonable to infer that services measured in days will not be impacted by a centralized location. These services are:

- Patrol frequency
- Potholes (non-paved)
- Shoulder drop-off
- Luminaires
- Potholes (paved)
- Potholes (non-paved shoulders)
- Cracks
- Signs

...and all other PW responsibilities with the exception of snow clearing accumulation and icy roadways.

Responsibilities for snow clearing accumulation and icy roadways are measured in hours and therefore have a higher potential to be impacted. Considerations include:

- **Standard Timeframes:** The Class 5 standard is 24hrs for snow and 16hrs for ice; the Class 3 standard is half of that (12 and 8 hours for snow/ice). The municipality currently responds to snow events by mobilizing staff earlier than scheduled and finishes plow routes within 6-8 hours, exceeding mandated requirements.
- **Time to Start:** The time to arrive at the start of a snow plow route (as they are currently organized) from 49 Depot is maximum 30 minutes. Start times can be shifted to accommodate the same arrival time to start of plow routes, maintaining service at current levels across the municipality. The table below shows approximate distance and drive time to the start of all plow routes from 49 Depot⁵. Clear Bay Road is the furthest plow route start point from 49 Depot; at 27 minutes, it will take ~16 minutes longer to start this route if staff leave from 49 Depot than if they left at the same time from Galway Depot. Seeing as staff begin work at 5:00 am when cleaning up a snow event, the staff member who will have the longest drive to Clear Bay Road, will leave the Depot at ~4:44 am instead.

⁵ As identified in a report to Council on December 5, 2017 by the Director of Public Works

Table 25: Time to arrive at snow plow route start locations from 49 Depot

Plow Route	Distance from 49 Depot	Time to Arrive at Start from 49 Depot
Buckhorn	24 kms	18 minutes
Crystal Lake Road	20 kms	15 minutes
Galway Road	21.5 kms	17 minutes
Kings Road	29 kms	22 minutes
Beaver Lake Road	32 kms	25 minutes
Lakehurst Circle Road	32 kms	25 minutes
Clear Bay Road	33 kms	27 minutes

- Magnitude of Duty:** As a percent of total task hours throughout the year, plowing accounts for up ~10%. This activity accounts for a minority of staff time, and therefore other factors should weigh more heavily when considering a consolidated service model.

Table 26: Public Works snow plow duties vs. other duties as % of overall hours

Duties	Days Per Year	Staff Involved	Hours Per Week	Hours Per Year	% total hours
Regular Duties	220*	21	40	36,960	90%
Plow	45	11	40	3,960	10%

**Working days for regular duties, assuming 250 days/year standard and that snow events are equally likely to occur on weekdays as weekends*

- Current Operations:** The Galway Depot is currently closed; one winter season has been trialed without it, with no effect on service delivery (self-reported).
- Public Opinion for Snow and Ice Removal:** General public opinion is currently not in support of a consolidated Depot. A Level of Service Questionnaire completed by Trent Lakes in 2018 showed that snow plowing was one of the top satisfaction categories among permanent and seasonal residents; the concern is that plow service will suffer. Given the low percent of overall service volumes (10%), required levels of service given the road type (greatly exceeded), and ability to shift service model in order to accommodate the same start times as current (providing the same plow service as current), the decision for a centralized Depot should not be driven by plow service concerns.
- Public Opinion for Road Condition and Repairs:** The Level of Service Questionnaire (2018) identified overall road condition and road repairs as one of the least satisfied (and most dissatisfied) areas of service among permanent residents. A single Hub Depot has the opportunity to increase satisfaction in this area through better fleet maintenance and staff dispatch efficiencies.

To summarize, operational efficiencies gained from using a single “hub” Public Works Depot are likely to include:

- co-located staff, leading to more efficient communication, planning, and deployment;
- co-located equipment and fleet, meaning more effective fleet monitoring and use of specialized services (e.g. mechanic), and less truck travel between depot locations;
- consolidated support spaces such as lockers, washrooms, showers, and lunchrooms;
- reduced overhead costs for heating, capital renewal, and fueling;
- elimination of duplicated tools and activities typical of a fragmented department.

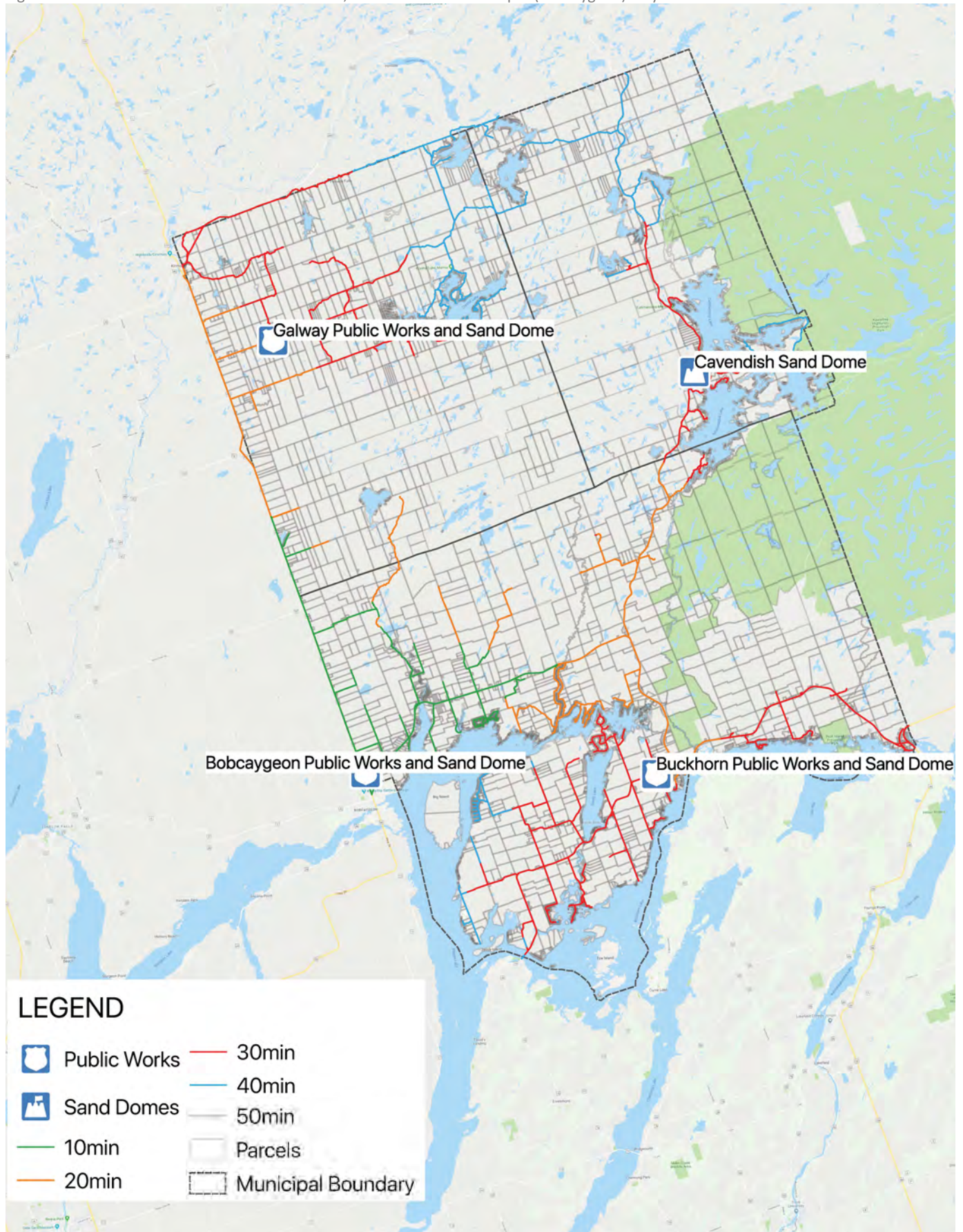
8.2.3 Distribution of Assets

Four distribution scenarios were investigated for drive-times (municipal & county roads only). They are:

- A. All 3 Depots: 49, Buckhorn, and Galway
- B. E/W: two yards in service, 49 and Buckhorn
- C. N/S two yards in service, 49 and Galway-area
- D. Hub Depot: Assumes 49 is the hub location for mechanical, wash, and overnight storage activities.

The following map shows the distribution of Public Works assets within the Municipality, and a driving-time analysis for option D (Hub Depot). An analysis of drive times for all four scenarios follows. Three other map variations (representing the other options) can be found in the Appendix.

Figure 15 Trent Lakes Public Works asset locations; drive-times from 49 Depot (Bobcaygeon) only

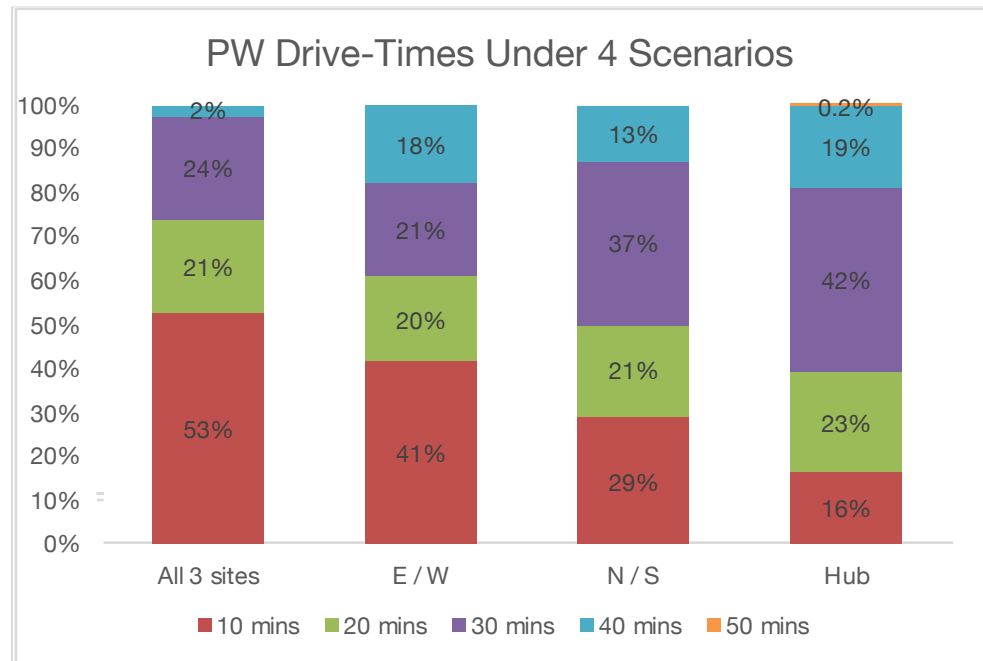


Trent Lakes
Municipal Assets

- 49 (Bobcaygeon) Public Works Yard
- Buckhorn Public Works Yard
- Galway Public Works Yard

Service Roads
(% serviced)

The following graph shows the percent of roads (county and municipal only) that are accessible within a particular timeframe. For example, the percent of roads in green are those kilometers accessible within the 10-20 minute bracket.



Analysis

As expected, the scenario maintaining all three sites provides the drive-time scenario with the lowest access times. All county roads are accessible within 40 mins; the vast majority (98%) within 30 mins.

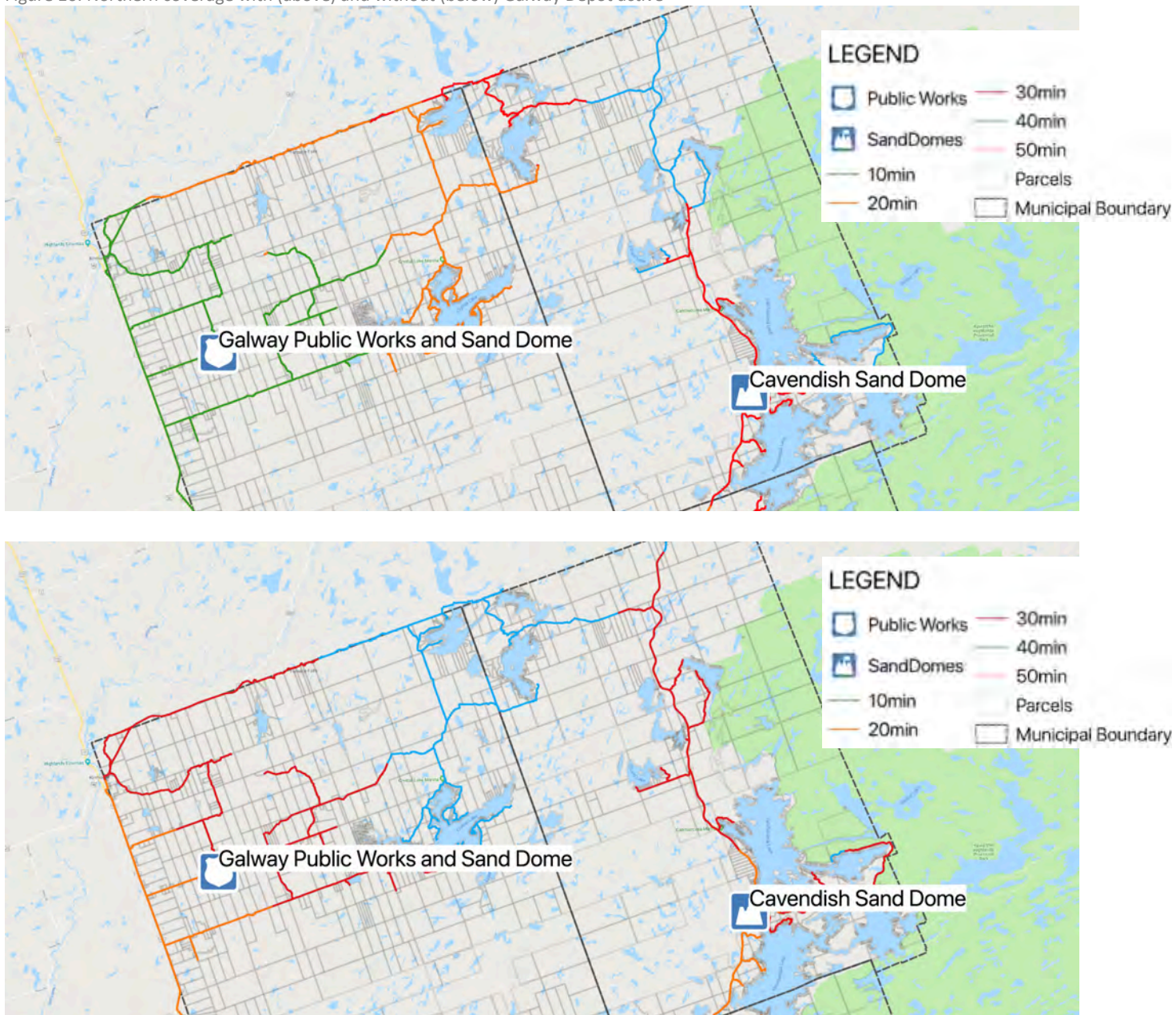
Under the Hub scenario (assuming 49 Depot only, building on the previous analysis), 99.8% of roads are still accessible within 40 mins; ~80% within 30 minutes. It will take approximately 20-minutes more to access northern and peninsula (Galway and Buckhorn) roads that would have been accessible within 10 minutes in the 3-site scenario. As response times to repairs and events are measured in hours or days, an extra 20-minute drive is considered inconsequential to level of service.

The **E/W** scenario results in an additional 20 minutes to reach areas in the north. Northern Cavendish areas are accessible slightly faster from the Buckhorn Depot, but not substantially. There is notable overlap between the areas serviced by Buckhorn and 49. This is the current operating scenario as Galway is not operational. 82% of roads are accessible within 30 mins; all are accessible within 40 mins.

The **N/S** scenario quickens drive-time access to the north but has the same time-to-access to Buckhorn as the Hub scenario. Drive times to Cavendish are higher than the E/W option, owing to the lack of access across the middle of the Municipality. 87% of roads are accessible within 30 mins; all are accessible within 40 mins.

The below figure shows the northern third of the Municipality, in two scenarios: with Galway active (above), and inactive (below). The figures show approximate driving times. Although coverage is quicker with Galway active, there is little if any effect on NE areas of upper Cavendish. The difference is approximately 20 minutes between scenarios (the change from green to red represents an increase from 10 to 30 mins, orange to blue represents 20 to 40 mins). Buckhorn Depot has no effect on Galway service levels.

Figure 16: Northern coverage with (above) and without (below) Galway Depot active



Conclusions

Taking into account the location and staff’s ability to shift their schedules to meet demand, it is likely feasible to remove 1 or 2 depots from operation and continue to exceed the regulatory level of service. This has also been determined by previous studies (Cambium, 2016). The community’s experience of Public Works services is unlikely to change; however, public opinion must also be considered.

8.2.4 Capacity Analysis

Most Public Works employees work offsite, on roadways in the area. Addition of employees will not have a large effect on required office space. Thus, the limiting factor is vehicle capacity. Current facilities do not meet vehicle capacity requirements for indoor storage and many vehicles are kept outdoors, which is not ideal for long-term care. The Public Works capital replacement forecast for rolling stock indicates a replacement approach to all stock, with no net-new vehicles anticipated to 2028. This is likely to continue over this project’s planning horizon, as no net-new roads are anticipated.

The following table lists the equipment kept at each site, assuming that Galway was active. When Galway was removed from service, the equipment was moved to 49.

Table 27: Public Works Equipment Capacity

	Equipment	Galway	Buckhorn	49	Total
Heated	Plow Trucks	3	4	3	10
	Loaders	1	1	2	4
	Graders		1	1	2
	Subtotal	4	6	6	16
	Vehicle bays	4→0	5	5	10
	Equipment Unheated	4	1	1	6
Unheated	Excavators		1	1	2
	Bulldozer			1	1
	Chipper			1	1
	Sweeper		1→0		1→0
	Tractor-Mower		1		1
	Float Trailer		1		1
	Subtotal	0	4→3	3	7→6

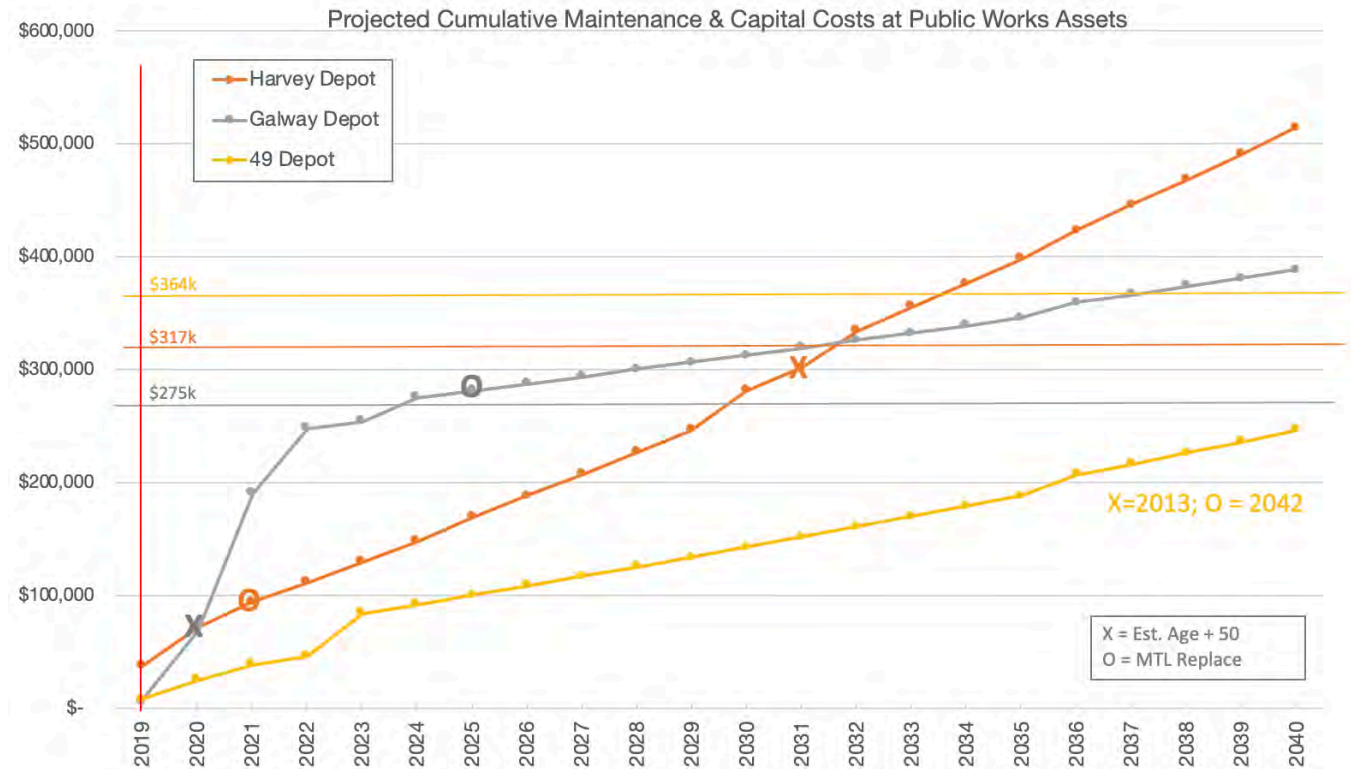
With the removal of the sweeper (see “Future Demand” below) and assuming no net-new vehicles, six heavy equipment that would ideally be stored heated indoors are missing garage space. All vehicles identified as requiring unheated covered space are currently stored uncovered in the yard.

The 49 Public Works facility proposed by Greenview anticipated the use of the Buckhorn Public Works Yard for storage purposes and so would not accommodate all vehicles within the proposed building footprint alone.

8.2.5 Physical Analysis

The following chart shows projected cumulative maintenance and capital costs at all Public Works Depots. The graph starts at current year (2019) and projects until 2040 (~20 year timeline). As with Fire Halls, the Municipality’s Public Works buildings were built prior to their listed acquisition date, from 1963 - 1981. Industry rule of thumb is that an asset should be considered for replacement when the investment to renew exceeds 30% of the replacement cost. This is shown with a horizontal line of matching colour. Replacement costs are for like-structures (from MTL Property Inventory) and do not guarantee functionality after investment, which is another consideration.

Figure 17 Estimated Asset Replacement by Age and Cumulative Maintenance & Capital Costs of Public Works Assets



Observations:

- Galway Depot requires significant investment to retain and is at end of life.
- Harvey Depot has historically seen the most investment of the Public Works assets yet is still comparably expensive to maintain. It will likely pass its end of useful life within the project timeframe.
- 49 Depot has seen investment and is less expensive to maintain than Harvey Depot. This structure may be useful across the project timeline.
- Conclusions:
 - Galway Depot and Harvey Depot will require renewal within 0-10 years; 49 Depot may be useful as warm storage into the future.

The next table summarizes likely replacement timeframes by estimate type.

Table 28: Public Works Infrastructure Estimated Replacement

Public Works Facility	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Harvey/Buckhorn Depot	2021	2031	~2032
49 Depot	2042	2013	~2040+
Galway Depot	2042	2013	2026
Sand/Salt Structures	Those at 49, Buckhorn, and Galway were renewed in 2016 and will require minor repairs/maintenance during the planning horizon. The sand structure at Cavendish was built in 1992 and is not likely to require replacement over the horizon.		

8.2.6 Functional Condition

The above analyses support the following notes on functional condition (both now/existing and into the future):

1. Even with physical renewal, key functions are still missing such as dedicated mechanic or wash bays, and lack of enough of warm storage for the required equipment.
2. There is minimal storage for supplies and accessories at 49 and Buckhorn; many are stored in bear-proof garbage cans equipped with make-shift covers (Buckhorn), outside in the yard, or in empty bays during the summer when vehicles are safely kept outside.
3. There is no dedicated space for welding.
4. There is no hoist crane available.
5. Staff spaces are in need of renewal.
6. Distributed locations require duplication of support spaces and specialized tools.
7. There is no anticipated increase in number of required vehicles. The sweeper will be removed, and the service outsourced.
8. Maintaining sidewalks is not expected to increase workload, equipment, or staffing.

8.3 Recommendations & Prioritization

The following recommendations for infrastructure are based on addressing existing deficiencies in a cost-effective manner, and in meeting requirements for future capacity and services across the Municipality for the next 20 years.

An options matrix is presented below:

Option	49 Depot	Buckhorn	Galway
A: 3 Depots	Maintain for SW coverage	Maintain for SE, NE coverage	New, for NW coverage
B: East/West coverage	New, supporting Eastern coverage	Maintain, supporting Western coverage	Decommission
C: North/South coverage	New, supporting Southern coverage	Decommission	New, supporting Northern coverage
D: Satellite Depots	New, supporting entire Municipality	Decommission Depot Build a Satellite Depot	Decommission Depot Build a Satellite Depot

Based on staff feedback, public engagement, drive-time mapping exercises, budgeting, gained efficiencies and effectiveness, **our recommendation is to pursue option D**, by constructing a new purpose built ‘Hub’ facility at the 49 Public Works Yard site and utilizing additional satellite garages at Galway and Buckhorn for localized service and cold storage of minor equipment (attachments, vehicles, etc.). The following actions advance this recommendation.

Table 29: Public Works Action Recommendations

Actions	Capital Timeline	Notes
Demolish existing Galway Public Works structure	Complete in 2020	Safety hazard
Construct new Galway satellite garage (covered, insulated but unheated) for support activities and minor equipment storage. Est. 1.5 bays.	Complete in 2020	Local indoor storage, also providing staff a dry chain-up location.
Construct new Buckhorn Satellite garage (covered, insulated but unheated) for support activities and minor equipment storage. Est. 1.5 bays.	Replace in 5 years (2025)	Local indoor storage, also providing staff a dry chain-up location.
Replace 49 Depot to support all services. Reallocate staff, equipment, and fleet to 49 to maximize efficiencies.	Replace within 5 years (complete by 2025)	Site allows for future expansion of services while unifying Public Works staff.
Maintain sand structures.	N/A	Providing multiple restocking locations reduces haulage costs and driving times, increasing staff efficiency.

Additional recommendations:

- Staff working at satellite garages would access other Municipal facilities for washroom and kitchen breaks (e.g. Galway satellite staff would use Galway Fire Hall)

9 Waste Management

Waste Management services are provided to the residents of Trent Lakes through localized Transfer stations. These include the Bobcaygeon, Buckhorn, Cavendish, and Crystal Lake Transfer Stations. All stations were converted from landfills between 2003 and 2008.

The Municipality of Trent Lakes bylaw B2016-142 establishes guidelines for waste acceptance within the Municipality. The following table outlines what programs offered by the Municipality of Trent Lakes and County of Peterborough as outlined in Bylaw 2016-142. Detailed descriptions of which materials are permitted and prohibited at Transfer Stations can be found in the preceding Bylaw in Schedule A – J (page 8 – 17). The following programs are offered year-round; however, the Municipality also offers special collection programs (e.g. bulky plastic or Styrofoam collection) dependent on market needs.

Table 30 Management of Waste Programs Offered at Waste Transfer Stations

Proprietor	Program
Municipality of Trent Lakes	Household Waste Yard waste Construction / Demolition Material Shingles & Drywall Furniture Boats/RV Mixed Loads Non-specific item Organic Composting Brush Tires Appliances Scrap Metal Waste Electronics and Electrical Equipment (WEEE) Reuse Centre
County of Peterborough	Household Hazardous Waste (HHW) Blue Box Fibres Blue Box Containers

Transfer station hours shift seasonally, with longer hours in the summer to accommodate the influx of cottage goers, and shorter hours in the winter. To aid residents, waste Transfer Station Staff work on-site monitoring incoming waste, and assisting the public to organize waste and use the facilities properly. As well, should residents choose, the Municipality provides blue box recycling bins, kitchen catcher organic bins, composters and digesters for sale (provided from the Municipal Office).

9.1 Current Facilities

The municipality of Trent Lakes owns and operates all activities on all sites (with only 1 exception at Buckhorn for hazardous waste).

Bobcaygeon Waste Transfer Station	The Bobcaygeon Transfer Station is located at 42 Peterborough Country Road 36, 5-minutes northeast of Bobcaygeon. It is the second busiest station in Trent Lakes, with a total of 30,998 vehicle visits in 2018.
Buckhorn Waste Transfer Station	The Buckhorn Transfer Station is located at 37 Dump Road, just northeast of Buckhorn. The Municipality of Trent Lakes owns and operates activities on site, except the Household Hazardous Waste area which is separately run and fenced. The station mainly services the community of Buckhorn; it is the busiest station in Trent Lakes, with a total of 31,570 vehicle visits in 2018. Buckhorn is the only Transfer Station currently offering organics collection.
Cavendish Waste Transfer Station	The Cavendish Transfer Station is located at 3020 County Road 507, close to Cavendish Community Centre. The station mainly services the surrounding community of private cabins. Cavendish is the third busiest station in Trent Lakes, with a total of 10,396 vehicle visits in 2018.
Crystal Lake Waste Transfer Station	Crystal Lake Transfer Station is located at 665 Crystal Lake Road, 10-minutes southeast of the village of Kinmount (by car). The transfer station services the surrounding community of seasonal and permanent residences. Crystal Lake is the least busy station in Trent Lakes, with a total of 10,150 vehicle visits in 2018.

9.2 System Analysis

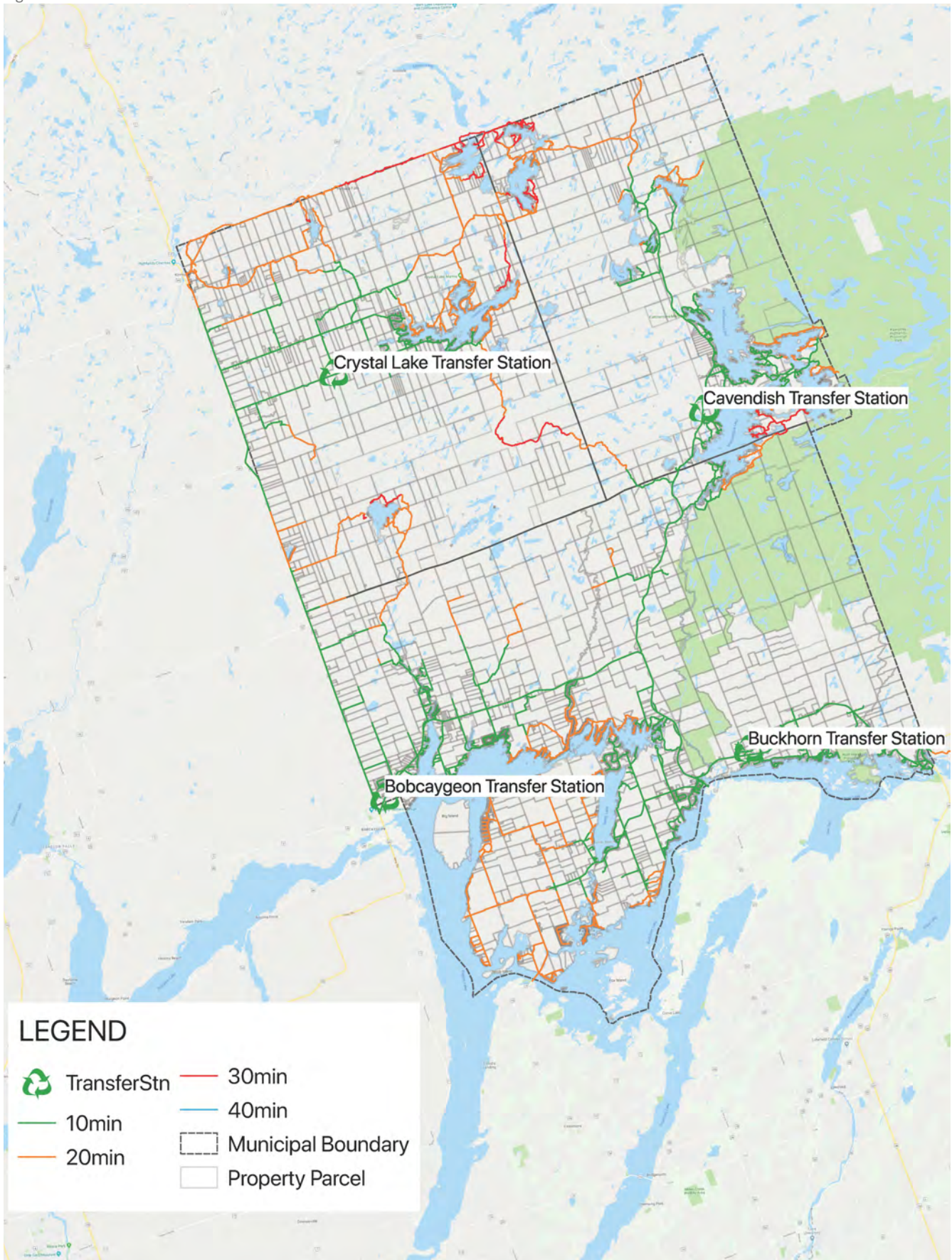
9.2.1 Level of Service

While no major change to offered services is anticipated, there is demand for composting at all sites as identified through the public survey and consultation with staff. As well, as permanent population increases, it is likely demand for household hazardous services will increase. Roadside pickup is not anticipated within the Municipality; the majority (69%) of residents surveyed in indicated they did not want roadside pickup during the 2015 Trent Lakes Waste Management Plan engagement. Should future Council wish to implement roadside pickup, transfer stations will still be required to accept all material not collected through roadside collection (e.g. construction / demolition material, furniture, appliances, etc.)

9.2.2 Distribution of Assets

As seen in the map below, assets are generally well distributed through the communities. A reasonable level of service indicator for Waste services is the driving time to sites for residences. The analysis checks that there are minimal gaps in the community as a whole.

Figure 18: Transfer Station asset distribution



Trent Lakes Municipal Assets	<ul style="list-style-type: none"> • Bobcaygeon Transfer Station • Buckhorn Transfer Station • Cavendish Transfer Station • Crystal Lake Transfer Station
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Serviced Lots	Drive Time (1)	# of Lots	% of total (2)
	10min	3,863	54.0%
	20min	6,855	95.8%
	30min	7,153	100.0%

Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)

Note 2: does not include 767 lots inaccessible by road (interior or island).

Analysis	The map shows that the vast majority of lots can access a transfer station within a 20-minute drive. Only a small portion (4.2%) must drive up to 30 minutes to access a station.
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Conclusion	Transfer Stations are well situated to serve the population.
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9.2.3 Capacity Analysis

The facilities on the Transfer Station sites are small, functional structures and do not restrict future functional capacity. Even if staffing increases, facilities will not be affected due to the nature of attendant work, requiring staff to perform the majority of their duties in the yard. Physical limiting factors for waste services could be mitigated by extending hours of operation, expanding sites or increasing frequency of bin collection. Currently, Waste Transfer stations exceed the mandated Environmental Compliance Approval (ECA) granted by the Ministry of Environment, Conservation and Parks in Ontario.

To determine possible capacity, site size was estimated from aerial photographs, and number of vehicles serviced (indicating overall level of activity supported) per m² of site was calculated. The busiest site per m² is Bobcaygeon, which is currently functional for its purposes. Therefore, the other sites would be able to accommodate the level of activity (vehicles/m²) accommodated at Bobcaygeon. The table below shows this analysis.

Table 31: Transfer Station site size and capacity

Transfer Station	Est. Site Size (m ²)	2018 Vehicle Visits	Vehicles Served per m ²	Increase in service (20%)	Est. Capacity
Bobcaygeon	6150	30,998	5.0	38,207	Considerable*
Buckhorn	9830	31,570	3.2	44,736	49,546
Cavendish	4750	10,396	2.2	16,817	23,942
Crystal Lakes	8480	10,150	1.2	13,129	42,742

*The capacity of transfer stations was estimated based on the busiest Waste Transfer station (Bobcaygeon), which operates at 5.0 vehicles serviced per square metre of site. As such, Bobcaygeon could not be calculated forward as it is the baseline metric. This is not to say Bobcaygeon is at capacity, nor will it reach capacity in 20 years. The site size is not limiting (due to the bulk materials holding ground that it backs onto, which was not counted in the site area), and other techniques for increasing capacity could include increasing hours of operation or collection frequency to meet future demand. Estimated capacity for Buckhorn, Cavendish and Crystal Lakes Transfer Stations was calculated using Bobcaygeon’s current vehicles served per square metre.

9.2.4 Physical Condition

The Waste Transfer huts are the only facility infrastructure related to Waste Management. They were all built around the same time, with Crystal Lakes being replaced recently. The table below shows:

- MTL expected replacement dates (based on a 40 year span from the asset’s acquired date)
- A 50-year lifespan from the asset’s estimated build date.
- Expected replacement date based on maintenance/capital renewal exceeding 30% of the asset’s anticipated replacement cost (per MTL).
- In the case of the Waste Transfer stations, maintenance and capital renewal also included cost associated with the yard, which is not reflective of the condition of the huts. Hut-specific renewal/maintenance does not meet the threshold for renewal over the plan’s horizon.

From this analysis, we identify that none of the Waste Transfer Huts will require renewal during the planning horizon. The table below summarizes likely replacement timeframes by estimate type.

Table 32: Waste Management Infrastructure Estimated Replacement

Waste Management	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Bobcaygeon WT Hut	none	2033	~2040+
Buckhorn WT Hut	none	2042	~2040+
Cavendish WT Hut	2038	2048	~2040+
Crystal Lake WT Hut	2041	2066	~2040+

9.2.5 Functional Condition

The above analyses support the following notes on functional condition (both now/existing and into the future):

1. The Waste Transfer Stations are generally in very good condition, are clean and well-maintained. There are no major infrastructure gaps.
2. While not currently feasible due to haulage costs and current market/facility congestion, organics may eventually be added to all Transfer Stations depending on feasibility and necessity.
3. The stations may require capacity for an increased number of events or seasonal programs depending on regional demand.

9.3 Recommendations & Prioritization

The Transfer Stations currently serve the Municipality well and are suited to their functions. No major actions are recommended.

Table 33: Waste Management Action Recommendations

Actions	Capital Timeline	Notes
Maintain all Transfer Stations	N/A	

Additional recommendations:

- None.

10 Other / Library

The Buckhorn Library was established in 1978 by a local group of volunteers. A Cavendish Library (Helen Bowen Branch) was later founded in 1986. The two libraries were amalgamated in the 1990s to share resources and memberships. Trent Lakes Library is a fully accredited library in accordance with the Ontario Public Library Guidelines Monitoring and Accreditation Council.

The Library is run and managed by the Trent Lakes Library Board, a non-profit, municipally established organization with 7 employees (total headcount). An ancillary service called the Good Buy Room is located in the basement of the main Library. The Room sells second-hand goods to fundraise for the Library; it currently has 20 regular volunteers.

The Municipality owns both facilities housing Library activities, and manages the building envelope and building systems maintenance, both preventative and reactionary. Large capital projects are led by the Library Board and would be funded through the Board.

10.1 Current Facilities

Buckhorn Public Library	The Buckhorn Public Library and moved to its current location in an old schoolhouse in 1985, which was enlarged in 1994. This is the main Library branch, centrally located in Buckhorn, running daily programs.
Cavendish Public Library	The Cavendish Library (aka Helen Bowen Branch) was originally established in 1986 in the Cavendish Fire Hall kitchen. The Library is currently located in the Cavendish Community Centre, co-located on site with a number of recreation spaces and a fire hall and community police centre. This branch is heavily used as a wi-fi access point for people in Cavendish.
Area Services	The area is also served by Kawartha Lakes and Bobcaygeon Public Library.

10.2 System Analysis

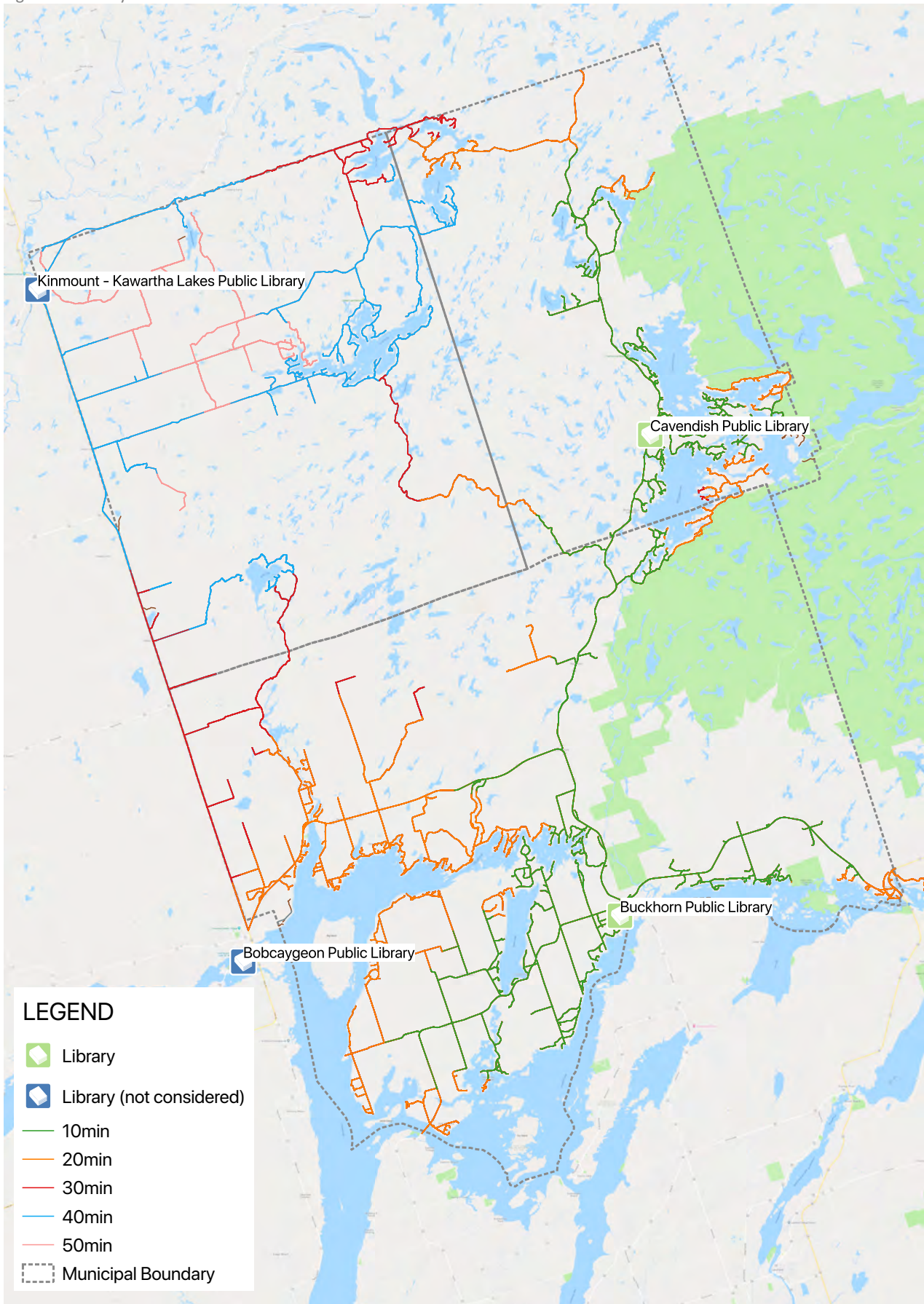
10.2.1 Level of Service

The Municipality is not directly responsible for providing this service, as the branches are run by a Board that is supported by grants and fundraising activities. The service provided by the Board is suitable for the community; there are no plans to open a new library branch or change any related services (such as the Good Buy Room). Otherwise, libraries continue to expand into general learning and the social sphere, using more flexible spaces. Accessing WIFI, sign-outs of technology and supporting hands-on learning are likely to expand as services, requiring secure storage and flexible space.

10.2.2 Distribution of Assets

The main Library branch in Buckhorn is close to the heaviest population centre, and the Library CEO acknowledges that is it in a perfect location for its service base. The map below shows the libraries with driving times for particular lots. Additional area assets are also shown for context (but not included in the drive-time analysis).

Figure 19: Library distribution



Trent Lakes Municipal Assets

- Buckhorn Public Library
- Cavendish Public Library

Additional Available Assets (not considered)

- Bobcaygeon Public Library
- Kinmount – Kawartha Lakes Public Library
- Curve Lake Public Library
- North Kawartha Public Library

Serviced Lots	Drive Time (1)	# of Lots	% of total (2)
	10min	2,856	39.9%
	20min	5,573	77.9%
	30min	5,878	82.2%
	40min	6,880	96.2%
	50min	7,153	100.0%

Note 1: Drive speeds vary by road type: provincial (80km/hr), county (80 km/hr), municipal (50 km/hr,) and fire route (25 km/hr)

Note 2: does not include 767 lots inaccessible by road (interior or island).

Analysis

The majority of residential lots are under a 20-minute drive from a Trent Lakes library. However, the underserved areas (20+ minute drive) are most likely serviced by a library in a neighbouring Municipality.

Conclusion

The network of Libraries across Trent Lakes and neighbouring communities appears sufficient for resident needs.

10.2.3 Capacity Analysis

Monthly book loan statistics for the Trent Lakes Libraries were provided. The summary statistics showed a predictable increase in circulation in the summer months, and generally level activity over a 5-year span. Average circulation is 1,400 books/month across locations. This may increase as the population grows and ages; however, there is also an increased interest in digital formats.

General library planning rules accommodate between 16-17 books per square foot of stack area. Both library branches are currently experiencing stack capacity issues.

10.2.4 Physical Condition

The Library is an old building that was solidly constructed and has been added to and upgraded over time. The table below shows:

- MTL expected replacement dates (based on a 40-year span from the asset's acquired date, which for the Library structure does not align with asset age)
- A 50-year lifespan from the asset's estimated build date (in this case, the last addition in 1983).
- Expected replacement date based on maintenance/capital renewal exceeding 30% of the asset's anticipated replacement cost (per MTL).

Table 34: Library Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Library	2038	2033	~2040+

Based off a typical facility lifespan, Buckhorn Public Library would require replacement during the study horizon. However, the physical and functional condition of the Library is satisfactory for services beyond the planning horizon. The Library is a solid structure that has been well maintained over time. It should be continually monitored, and assessed every 5 years.

10.2.5 Functional Condition

The above analyses support the following notes on functional condition (both now/existing and into the future):

1. Buckhorn: Lack of storage space; there is a single storage closet.
2. Buckhorn: Lack of administrative space; there is only one shared office and very little privacy.
3. Both branches: No room for growth – stack space is at maximum capacity. However, the library’s collection may remain a similar size, as it is consistently curated and digitized. As a community library, a modern and immediately relevant collection is more important than archival materials. Collection composition may vary over time (e.g. games, eBooks, and technology lending).
4. Cavendish: Lack of visibility into secondary space, making it difficult for programming.
5. In the future, additional demand for senior’s and children’s programming may be anticipated, requiring flexible space to accommodate them.

10.3 Recommendations & Prioritization

Library facilities are generally well-suited for their purposes and as the Municipality is not mandated to provide these services. Therefore, future priorities should be determined by the Library Board. Any future expansions or renewals will be led by the Board and supported by the Municipality however Council sees fit.

Table 35: Library Action Recommendations

Actions	Capital Timeline	Notes
Provide space for Helen Bowen Library Branch in any renewed Cavendish Community Centre	Replace in 10 years.	Although not mandated to provide library services, current locations should remain.
Maintain Buckhorn Library	n/a	Current facilities are satisfactory.

Additional recommendations:

- Develop a lease agreement with the Library Board.

11 Other / Tourism

The Welcome Centre is located in Buckhorn, on a main road. It is the only formal tourism service in Trent Lakes. There is no formal level of service requirement; however, the service is well-used and financially viable within the current funding structure. It is recognized as a valuable community asset.

11.1 Current Facilities

Buckhorn Welcome Centre Built in 2011, the centre is owned by the Municipality and operated by the Buckhorn District Tourism Association (BDTA), which welcomes tourists to the region and provides various information including maps, activities and event calendars. As well, a variety of Buckhorn and Trent Lakes themed merchandise are available for purchase, from t-shirts to deck chairs. The BDTA also assembles and publishes an annual pamphlet on the varied offerings of Trent Lakes as a tourist region.

11.2 System Analysis

11.2.1 Level of Service

There may be decreased in-person services as apps and smartphones dominate information services. Additional resources may be required to run social media/website/apps.

11.2.2 Distribution of Assets

The Welcome centre is located in the southern section of the Municipality in Buckhorn (see Figure 3). It is located off County Road 36 and visible from the highway. The asset is located on leased land owned by Liquor Control Board of Ontario (LCBO). Taking into account the central location and visibility of the Welcome Centre, the asset is very well located to serve visitors to the Municipality. A second location would not be sensible; extended services can be offered online and via circulated materials.

11.2.3 Capacity Analysis

A site visit uncovered no capacity issues. The Welcome Centre is less than 10-years old and supports a pass-through clientele with 1-2 volunteer staff members at a time.

11.2.4 Physical Condition

The Welcome Centre is a relatively new facility with few maintenance requirements. The table below shows:

- MTL expected replacement dates (based on a 40 year span from the asset's acquired date)
- A 50-year lifespan from the asset's known build date.
- Expected replacement date based on maintenance/capital renewal exceeding 30% of the asset's anticipated replacement cost (per MTL).

Table 36: Tourism Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Welcome Centre	2051	2061	~2040+

The Welcome Centre will not require replacement over the planning horizon. While the facility is in suitable shape, the land lease may become a complication in the future.

11.2.5 Functional Condition

The Welcome Centre is a good asset, relatively new and built to accessible standards. The following concerns were noted:

1. Parking is sometimes difficult for tourists as the lot is shared with the LCBO.
2. As the facility requires more maintenance and major repair (past the 20 year horizon), it will be sensible to continue the lease agreement as long as possible to protect Municipal investments. The current lease agreement is active until March 31, 2030.

11.3 Recommendations & Prioritization

There are no actions required over the next 20 years regarding the Tourism Centre.

Table 37: Welcome Centre Action Recommendations

Actions	Capital Timeline	Notes
Maintain Tourism Centre	n/a	Due to the recent capital investment in the facility, recommend maintaining land lease.

12 Other / Healthcare

Primary health care services are provided to residents of Trent Lakes through two private practices: Buckhorn Regional Health Centre, and Kinmount District Health Centre. The Municipality owns both facilities and has varying agreements with each tenant organization to provide maintenance and/or materials. Level and distribution of required services is determined provincially, and the Local Health Integration Network (LHIN) should define the need in the area and support physicians to meet that need. The arrangement of the Municipality being landlord of private health practices is perhaps unexpected but not uncommon. It is a proactive way to support the recruitment and retaining of health professionals in the region.

12.1 Current Facilities

Buckhorn Regional Health Centre (BRHC)	The facility is wholly owned by the Municipality and leased to a private practice on a month-to-month lease; original construction was funded by a grant. The terms of the lease are such that the BRHC is net-negative to the municipal budget, but it provides valued medical services to the residential population.
Kinmount District Health Centre (KDHC)	Kinmount Health Centre was built in 1994, and a major addition was built in 2009 (via grant funding). The Municipality owns the building and leases it to a private practice. An 18-year lease was signed in 2007 and amended in 2012, expiring in 2025. The terms of the lease are also net-negative, but less so than at BRHC.

12.2 System Analysis

12.2.1 Level of Service

Provision of health services to the population of Trent Lakes is technically a provincial responsibility under the Ontario Ministry of Health and Long-Term Care, through their network of LHINs. Trent Lakes is served under the Central-East LHIN. Finding that the area was in need of physicians, the Municipality has been taking a proactive approach to supporting physicians to practice in the region.

Panel size in Canada greatly varies, from ~1,200 to nearly 4,000 per primary care physician depending on panel complexity and practice location. At the smaller end, Trent Lakes would require 4.6 physicians to cover the current population, increasing to 5.7 over a 20-year horizon. At the larger end (which is unlikely preferable in the region due to an ageing population), ~ 1.4 physicians are required. Trent Lakes currently has 4 active primary care physicians. Two of these doctors work full-time and two are part time.

Table 38: Health Centre Service Levels

Population (2041 Residential)	6,831	
Panel Size (Small)	1200	
Required Physicians	5.7	
Current active Physicians	4	
Assumed FTE	3	Note: 2 are PT
Required additional	2.7	

The level of service could be considered low, given the part-time physicians and the demographic and waitlists in the community. Healthcare was the second highest priority for action in the community survey after public works. Generally, increasing co-morbidities and overall increasing age add to the complexity of care required in rural areas (e.g. lab/physio/minor procedure).

12.2.2 Distribution of Assets

Buckhorn Regional primarily services patients of Buckhorn and southern Trent Lakes, whereas Kinmount’s patient population comes from the northern part of the Municipality and the western neighbour (Kawartha Lakes). These are resident-primary practices and neither operate as a walk-in clinic or are open on Fridays or weekends. The nearest walk-in clinic is located in Fenelon Falls (15 minute drive from Bobcaygeon) or Ennismore (20 minute drive from Buckhorn).

All health centres are within a 40 min drive from all road-accessible residences within Trent Lakes, with the majority of residents driving over 20 minutes to reach a healthcare facility. The distribution of assets is primarily due to opportunity, and the patient density required to uphold a practice of 2 physicians or more. Due to the nature and desirability of Health Care, longer drives are typical. However, this may become an issue as the population in Trent Lakes continues to age and service demand increases. As before, this is the responsibility of the LIHN but the Municipality could consider supporting physicians.

12.2.3 Capacity Analysis

Using standard planning parameters of 2 exam rooms per physician onsite, the current Health Centres could feasibly accommodate 7 physicians: 4 at Buckhorn, and 3 at Kinmount (if physiotherapy were to be removed). Given the brief level of service analysis above, there is room for enough physicians within the current infrastructure, should it be used more intensively.

12.2.4 Physical Condition

Health Centres have been built in relatively recent history. The table below summarizes likely replacement timeframes by estimate type.

Table 39: Health Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
BRHC (built 2009)	2049	2059	~2040+
KDHC (1994; addition 2009)	2034	2059	~2040+

Kinmount District Health Centre may be considered for replacement during the study horizon, according to its original build date and a 40-year age. However, this facility was recently renewed with an addition and will most likely be physically appropriate past the estimated 2034 renewal year. As the Buckhorn Regional Health Centre is new, it will not reach renewal age during this study horizon.

12.2.5 Functional Condition

The health care assets are in good condition and have long-term tenants. Over the planning horizon, the demand for physicians will continue to rise in Trent Lakes. Recruitment of physicians is difficult and the provision of turnkey and financially viable clinic space is helpful.

12.3 Recommendations

Health spaces are generally in good condition and well run. Buckhorn could be used more intensively to support additional practitioners.

Table 40: Health Centre Action Recommendations

Actions	Capital Timeline	Notes
Maintain facilities for both practices.	n/a	This is a priority area as an organization, but not from a facility point of view.

Additional Recommendations:

- Petition the LIHN to consider payments for materials and supplies at Buckhorn Health Centre.
- Investigate how to increase physician (or nurse practitioner) hours at Buckhorn Health Centre (ideally supporting FT physician positions or equivalent PT positions).
- Aim to standardize lease contributions for private practices in Trent Lakes, ideally to the Kinmount standard.

13 Other / Policing

Police services for the Municipality are provided by the Ontario Provincial Police (OPP) through a contract between the Municipality and the Province. The OPP is regulated by the Police Services Act (PSA), which sets out the roles and responsibilities of municipalities with respect to the provision of policing services in Ontario. As well, the PSA outlines the adequate and effective services that every police service must meet including:

- Crime prevention
- Law enforcement
- Assistance to victims of crime
- Public order maintenance
- Emergency response

Beyond Provincial Policing, each of the three wards within Trent Lakes hosts a Community Policing Committee consisting of civilian volunteers who live in the Municipality. Community Policing Committees have no mandated authority; however, they work with the OPP to assist in identifying and addressing unique community concerns and provide suggestions to improve local police services and positive contributions to community safety and well-being. There is no municipal requirement to provide space for OPP or Community Policing.

13.1 Current Facilities

Buckhorn Library OPP Office	The basement of the Buckhorn Public Library features a small OPP office. The touchdown location, featuring two officer workstations, is used by visiting OPP dispatched from the Peterborough County Detachment. It is well used and highly visible to the community.
Cavendish Community Policing / OPP Office	The Cavendish Community Policing Committee operates out of a facility attached to the Cavendish Fire Hall. The facility is owned by the Municipality of Trent Lakes and operated by a volunteer group. OPP also uses this space as touchdown.

13.2 System Analysis

13.2.1 Level of Service

The current level of service for OPP is not likely to change due to provincial legislation and service delivery models. There is no plan to add a permanent detachment in Trent Lakes. Community Policing is likely to continue on a volunteer model.

There is no requirement to provide workstation space for OPP within the community; all work can be done remotely from patrol cars. Current spaces are intended to make patrol easier and more effective for officers, engaging them to frequent the Municipality and interact with the public. The presence of permanent and labeled OPP space in the community provides a presence of law enforcement.

13.2.2 Distribution of Assets

Current assets are based in Cavendish and Buckhorn. A touchdown space was previously in Galway but was underutilized given a sub-office for OPP in Minden.

13.2.3 Capacity Analysis

Not applicable; this is a service provided by the OPP, with staffing determined by total number of households in the community. Staff are dispatched from Peterborough.

13.2.4 Physical Condition

OPP sub-offices are located in previously-assessed facilities (Buckhorn Library and Cavendish Fire Station). Their physical conditions are reiterated below. The provision of OPP sub-offices is advantageous to police visibility in the communities, but also opportunistic in the sense that they are not legally required. OPP infrastructure should be replaced with the host buildings.

Table 41: OPP Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Library	2038	2033	~2040+
Cavendish Fire Hall (#2)	2026	2025	~2040+

13.2.5 Functional Condition

Spaces are generally functional for their purposes. In the future, OPP will continue to use the workstation offices provided by the Municipality.

1. Cavendish Community Policing is exploring options for leadership succession and appears viable as a continued volunteer group. Other Community Policing organizations do not have Municipally-provided space.
2. The OPP does not see a security issue with sharing space with community groups; officers do need access 24/7.

13.3 Recommendations

There is little motivation for action in this category.

Table 42: Policing Action Recommendations

Actions	Capital Timeline	Notes
Provide space for OPP in a renewed Cavendish facility (Fire Hall/Community Centre)	Est. 10 years	Although not mandated to provide OPP sub-offices, current locations are useful and should remain.
Maintain Buckhorn Library OPP	n/a	Current facilities are satisfactory.

Other recommendations:

- Ensure security of data and equipment at outstations.
- Consider opening Buckhorn OPP outstation for Community Policing group as well.

14 Other / Heritage

The Trent Lakes Heritage Society (formerly the Greater Harvey Historical Society) is a 30-year old volunteer run organization that provides archival services to residents. The Society collects documents, photographs, maps, books and other archival items to preserve the history of the area and its residents. The Society also provides ancestral (family tree) research and publishes books on the history of the region. It is fully funded by municipal grants.

14.1 Current Facilities

Galway Community Hall	The Society operates from two offices in the Galway Community Hall. One office holds a computer workstation and is used for administration. The other provides storage space for the variety of archives.
Nogies Creek Fire Hall	The Society keeps a number of sensitive archival records at the new Fire Hall, in file boxes in the second level storage space.

14.2 System Analysis

14.2.1 Level of Service

The Society has begun to collect items as well as records. At some point, the Society may transition into an Archive, managed by the Municipality. There is no plan to do this in the next 20 years. A level of service definition would be helpful to ensure management and proper ownership of collections into the future.

14.2.2 Distribution of Assets

There is currently one office in Galway, and a satellite office in Kinmount (located in the District of Kawartha Lakes). The best location for the office and archives would be near the highest population, ideally in Buckhorn.

14.2.3 Capacity Analysis

The Society is running out of storage space, and its collections are now distributed amongst the Municipality. As collections continue to grow with the history of the region, space needs will increase.

14.2.4 Physical Condition

Heritage offices are located in previously-assessed facilities (Galway Community Hall and Nogies Creek Fire Station). Their physical conditions are reiterated below. As with OPP, the provision of Heritage offices is opportunistic in the sense that it is not a mandated service.

Table 43: Heritage Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Galway Community Hall	2025	2040	~2040+
Nogies Creek (#4)	2056	2066	~2040+

14.2.5 Functional Condition

The following functional gaps were observed:

1. Storage is lacking and separated across locations, decreasing efficiency. This problem will exacerbate in the future as collections increase.
2. Location at Galway is not ideal.
3. Archives may eventually be taken over by the Municipality.

14.3 Recommendations

The Heritage Society is functional from its current location but would benefit from a relocation if the opportunity were to arise. The recommendation is to maintain their location in Galway Community Hall, as it is functional and surplus to the Municipality’s needs. In the future, if Galway Hall were to be replaced, the Heritage Society should be relocated to the Administration Building L1, close to their records stored at Nogies Creek Fire Hall #4. Access would be by appointment only. It is not uncommon for a Municipality to “own” its archives; this could be a possibility in the future.

Additional recommendations:

- Support the Society to develop a level of service definition to ensure management and proper ownership of collections into the future.

15 Other / Outreach Centre

The main function of the Trent Lakes Outreach Centre is to offer an emergency food bank for residents in need. Other services include increasing public awareness in rural communities of Peterborough County and the area about the impact of violence on victims, encouraging public participation in anti-violence work, providing information and referral services, and offering a free compassionate listening and supportive environment. The organization is a community led volunteer group, running a food bank on the last Friday of every month, and an annual Meet Your Needs event.

The group has 10-12 dedicated volunteers and established partnerships with other community services and organizations including:

- Kawartha Food Share
- Municipality of Trent Lakes Community Care – Buckhorn
- Buckhorn Community Centre
- Social Services - Peterborough County/City

15.1 Current Facilities

Deer Bay Hall Trent Lakes Outreach used to utilize Deer Bay Hall, which has since become condemned due to physical condition. The site now features a trailer next to the facility, which the Outreach group uses for operations and storage. The Food bank is run from this location, providing some privacy for users. The annual Meet Your Needs event is held at the Buckhorn Community Centre.

15.2 System Analysis

15.2.1 Level of Service

This service is not legally required but is socially justified. The type of service is not likely to change.

15.2.2 Distribution of Assets

The Outreach Centre operates from one location. The current location is seen as a positive, because it is quiet and discreet for clients to access. However, the location is semi-distant from areas of dense population and is difficult to reach without a car.

15.2.3 Capacity Analysis

The monthly food bank is regularly attended by approximately 18-23 families, comprising approximately 25 adults and 10 accompanying children. This may increase as the residential population also increases. The annual event is attended by ~40-100 people.

The facility is required to accommodate storage of non-perishable and sometimes frozen food items, and clothing/household items. Some items are kept and stored throughout the month or year. However, the Food Bank is mostly supported from the Kawartha Food Share as a central storage location; food is brought in on the day-of. The Meet Your Needs event is one of a circuit of similar regional events; items are circulated between the organizations to support events within each region.

The Outreach Centre does not need much space and is willing to share with other community groups. The Centre requires storage area including some cold storage, an area to provide service to the public, private access to members of the public, and an easy-to-access location with parking.

15.2.4 Physical Condition

The Outreach Centre is located in Deer Bay Hall, which was previously assessed under “Recreation and Community”. Its physical condition is reiterated below. Outreach is currently residing in a temporary trailer on the Deer Bay Hall site, as the building is not suitable for occupancy.

Table 44: Outreach Centre Infrastructure Estimated Replacement

Asset	MTL Replacement	50 year Lifespan	30% of Asset Replacement
Deer Bay Hall	2025	1980	~2020

15.2.5 Functional Condition

The Outreach Centre’s main functional issue is the lack of a permanent location. Deer Bay Hall is not functional nor safe for regular occupancy, and the trailer is a recurring monthly cost and is not an ideal environment for those accessing the service.

15.3 Recommendations

The Outreach Centre is occupying a trailer on a monthly lease and will ideally be moved to another location to better service volunteers and clients. Their needs are minimal and finding shared space would be beneficial. This may not need to be within a municipally-owned facility; however, Lakehurst Hall L1 is currently underutilized, located close to large populations in Buckhorn area, and could be improved to suit TLROC well.

Table 45: Outreach Centre Action Recommendation

Actions	Capital Timeline	Notes
Relocate Outreach Centre to Lakehurst Hall	Complete in 2020 (ASAP)	Location is near Buckhorn population base and only minor improvements would be required.

Additional recommendations:

- Support the Outreach Centre to investigate other options for storage and event space. A co-location with the Good Buy Room might be interesting for Food Bank activities.

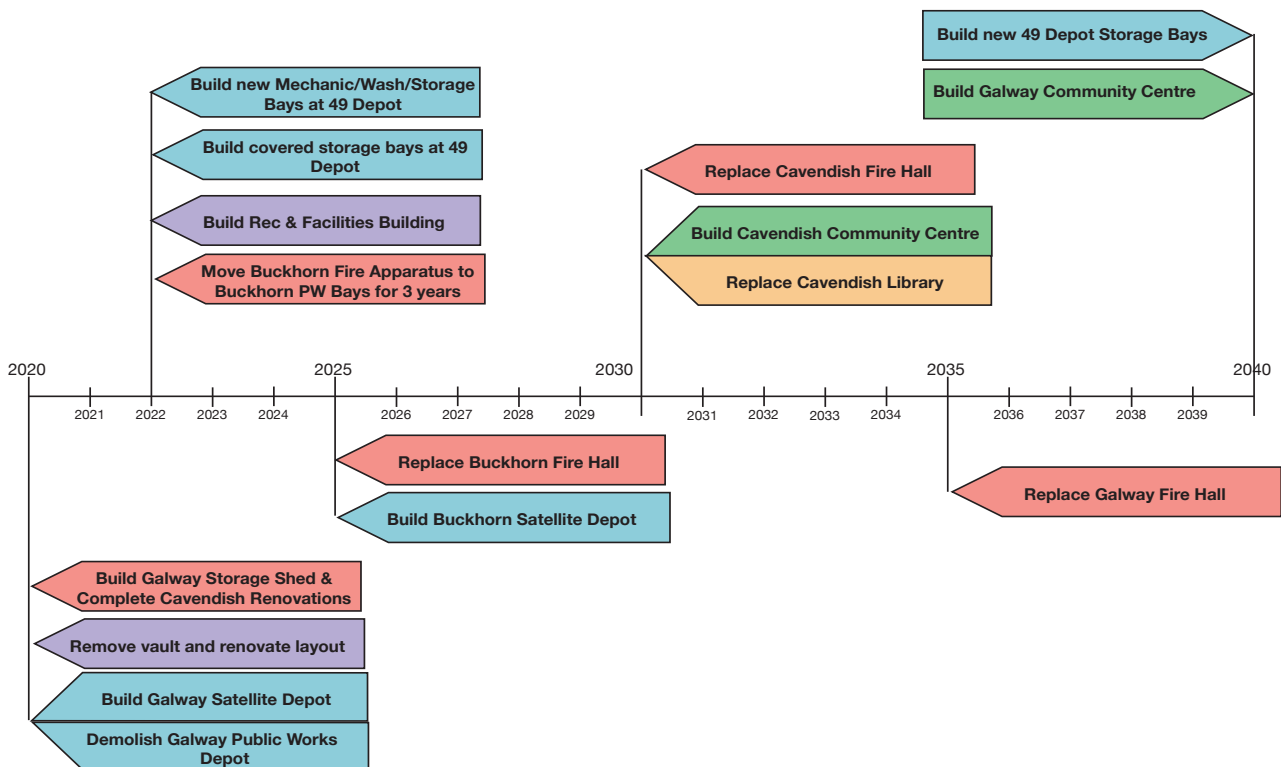
16 Capital Strategy

The following proposed recommendations are based from physical and functional conditions of facilities (outlined in preceding sections), both of which are important when determining accommodation of facility renewal, renovation or consolidation. As such, some assets may be recommended for capital investment before their physical life has expired based on functional deficiencies, which can be a liability for users at the risk of the Municipality.

The majority of Municipal assets are co-located and share a site, namely at Buckhorn, Cavendish and Galway. Facilities located on these sites could examine the possibility of facility co-location and resource sharing. For example, when Cavendish Fire Hall and Community Centre are up for renewal, it is logical to build one facility and co-locate these services for increased efficiencies. The capital strategy has been developed with such project efficiencies in mind.

The following Figure shows the timing of all proposed projects requiring capital investment over a 20-year timeframe.

Figure 20: Capital Strategy



Note: the capital cost for the vault project has already been allocated. This money was put aside in 2016 pending the results of a Facilities Master Plan.

17 Maintenance and Capital Plan

17.1 Operating and Capital Expense Summary

As identified by the Municipality of Trent Lakes staff, many facilities were constructed prior to the township amalgamating and have effectively either reached or reaching the end of their lifespans both physically and functionally. This is further evident in the maintenance, energy (hydro and propane), and capital costs to maintain these facilities. The table below shows the costs associated with keeping municipal assets operational.

Table 46: Operating and Capital Expense Summary

Category	Asset Name	MAINTENANCE		ENERGY		CAPITAL	
		3 year average	3 year avg/m2	3 year average	3 year avg/m2	Contributions to Date	Replacement \$ per MTL
Public Works	Harvey Depot	\$ 16,714	\$ 26.90	\$ 16,741	\$ 26.94	\$ 43,418	\$ 1,057,320
	Galway Depot	\$ 5,363	\$ 13.27	\$ 12,117	\$ 29.99	\$ 24,359	\$ 917,400
	49 Depot	\$ 7,318	\$ 16.67	\$ 18,082	\$ 41.18	\$ 35,854	\$ 1,215,400
PW/Sand	Galway Sand	\$ -	\$ -	\$ -	\$ -	\$ 43,547	\$ -
	Cavendish Sand	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 226,500
	49 Sand	\$ -	\$ -	\$ -	\$ -	\$ 75,174	\$ -
	Buckhorn Sand/Salt	\$ -	\$ -	\$ -	\$ -	\$ 16,000	\$ -
Admin	Administration	\$ 11,419	\$ 18.06	\$ 16,519	\$ 26.12	\$ 67,691	\$ 818,500
Health	BRHC	\$ 7,777	\$ 20.15	\$ 13,216	\$ 34.25	\$ 15,889	\$ 1,101,600
	KDHC	\$ 5,150	\$ 6.71	\$ 2,945	\$ 3.84	\$ 9,938	\$ 1,068,142
Fire Services	FH1: Buckhorn	\$ 1,527	\$ 7.10	\$ 5,861	\$ 27.24	\$ 14,286	\$ 401,930
	FH2: Cavendish	\$ 1,221	\$ 4.41	\$ 4,364	\$ 15.76	\$ 67,915	\$ 474,140
	FH3: Galway	\$ 1,819	\$ 6.14	\$ 5,111	\$ 17.26	\$ 32,827	\$ 461,500
	FH4: Nogies	\$ 3,658	\$ 3.41	\$ 11,183	\$ 10.44	\$ 1,000	\$ 2,204,962
Waste	Buckhorn TS	\$ 1,803	\$ 138.70	<i>data not available</i>		\$ 34,473	\$ -
	Bobcaygeon TS	\$ 1,412	\$ 108.59	<i>data not available</i>		\$ 34,473	\$ -
	Cavendish TS	\$ 1,671	\$ 98.31	<i>data not available</i>		\$ 34,473	\$ -
	Crystal Lake TS	\$ 1,386	\$ 46.93	<i>data not available</i>		\$ 6,633	\$ -
Library	Buckhorn Library	\$ 3,501	\$ 13.49	\$ -	\$ -	\$ 74,302	\$ -
Tourism	Welcome Centre	\$ 669	\$ 7.04	\$ -	\$ -	\$ -	\$ 360,000
Recreation & Community	Lakehurst Hall	\$ 5,141	\$ 7.52	\$ 7,578	\$ 11.08	\$ 5,535	\$ 831,300
	Galway Hall	\$ 4,178	\$ 8.36	\$ 8,265	\$ 16.53	\$ 373,653	\$ 652,700
	Deer Bay Hall	\$ 5,142	\$ 37.08	\$ 1,097	\$ 7.91	\$ 710	\$ 228,000
	Cavendish Hall	\$ 9,040	\$ 18.97	\$ 12,825	\$ 26.92	\$ 160,934	\$ 720,700
	Cavendish Arena	\$ -	\$ -	\$ -	\$ -	\$ 148,458	\$ -
	Cavendish Pavilion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Cavendish Play Structure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Buckhorn Rink	\$ -	\$ -	\$ -	\$ -	\$ 247,497	\$ 678,453

The following table outlines observations based on the above metrics.

Table 47: Observations from Operating and Capital Expenses

Category	Observations
Public Works	<ul style="list-style-type: none"> Harvey Depot is particularly expensive to maintain per m², despite significant capital contributions to date. 49 Depot is most expensive to heat, given its size.
PW/Sand	<ul style="list-style-type: none"> Maintenance and energy for sand structures are included in depot figures.
Admin	<ul style="list-style-type: none"> At the Administration building, maintenance and energy costs are approximately average.
Health	<ul style="list-style-type: none"> KDHC is inexpensive both in maintenance and energy. Energy costs at BRHC are a higher than average, which may be expected for the complexity of the assets.
Fire Services	<ul style="list-style-type: none"> Maintenance costs at Fire Halls are comparatively low; energy costs are highest at FH#4 but on a sm basis it is very efficient.
Waste	<ul style="list-style-type: none"> Transfer station maintenance costs apply to the entire site; /m2 costs are not comparable.
Library	<ul style="list-style-type: none"> At Buckhorn Library, maintenance costs are excellent for the size and age of the asset. Energy is paid for by the Library Board.
Tourism	<ul style="list-style-type: none"> The Welcome Centre is new and requires little maintenance; energy is paid for by the Association.
Recreation & Community	<ul style="list-style-type: none"> Deer Bay Hall is expensive to maintain on a /m2 basis. Galway Hall has had the most capital work completed on record. Cavendish Hall is most expensive to maintain and heat. Maintenance and energy for Community Hall auxiliary structures are included in hall figures.

17.2 Project & Maintenance Timeline

The following capital plan lays out recommendations for the next 20 years for Trent Lakes Municipal facility resources, by year. Capital projects are broken out from likely maintenance projects. This list assumes that facilities that are about to receive a replacement do not receive capital investments (but continue to receive maintenance) for five years prior to the project.

Table 48: Capital Plan by Year

Year	Capital Projects	Likely Maintenance Projects
2020	<ul style="list-style-type: none"> ▪ Demolish Galway Depot & build Galway PW Satellite ▪ Administration building vault renovation ▪ Fire Hall #2 internal renovations ▪ Fire Hall #3 storage shed addition 	<ul style="list-style-type: none"> ▪ Harvey Depot: determine capacity of joist system ▪ 49 Depot: repairs per BCA report ▪ BRHC: Shingle repairs ▪ KDHC: Furnace ▪ Lakehurst: Eavestroughs/ downspouts ▪ Cavendish Hall: flooring repairs ▪ Administration: siding ▪ B. Library: brickwork allowance ▪ Cavendish Pavilion: windows/doors ▪ Galway Hall: Allowance for flooding remediations ▪ Buckhorn site: septic and well renewals
2021	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ 49 Depot: repairs to roof & related ▪ FH#2: accessibility ramp for OPP ▪ Welcome Centre: furnace ▪ Galway Hall: siding ▪ Cavendish Library: doors/windows ▪ DEFER: Harvey Depot: windows, FH#1: eavestroughs
2022	<ul style="list-style-type: none"> ▪ Build new Mechanic, Wash, Storage bays at 49 Site ▪ Build 8 covered storage bays (outdoor) at 49 Site ▪ Move Buckhorn Depot operations to 49 Site ▪ Build Recreation/Facilities office, attached to new Depot ▪ FH#1 to move operations to Buckhorn Depot for 3 years 	<ul style="list-style-type: none"> ▪ Administration: furnace ▪ Galway Hall: repairs to roof & related ▪ All transfer stations: allowance for internal lighting ▪ B. Library: roof/electrical may need renewal
2023	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ 49 Depot: roof repairs ▪ FH#2: Furnace
2024	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ BRHC: internal lighting ▪ FH#3: furnace ▪ B. Library: furnace ▪ Cavendish play structure: renew
2025	<ul style="list-style-type: none"> ▪ Build new Fire Hall #1 on current site, with Buckhorn PW Satellite ▪ Demolish FH#1 	<ul style="list-style-type: none"> ▪ B. Library: brickwork allowance
2026	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ BRHC: furnace

Year	Capital Projects	Likely Maintenance Projects
		<ul style="list-style-type: none"> ▪ KDHC: AC renewal ▪ FH#3: 50 years old, systems renewal likely required ▪ FH#4: furnace ▪ Welcome Centre: interior lights ▪ Lakehurst Hall: lighting ▪ DEFER: FH#2: 50 years old, systems renewal
2027	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Administration: AC renewal ▪ Galway Hall: furnace & water heater
2028	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Transfer Stations: doors and windows ▪ Lakehurst Hall: water heater ▪ Galway Hall: HVAC ▪ Buckhorn Rink: curtain renewal ▪ DEFER: Cavendish Hall: furnace
2029	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ BRHC: doors/windows, exterior lighting ▪ KDHC: doors/windows
2030	<ul style="list-style-type: none"> ▪ Build new Fire Hall #2 on current site; move up Cavendish Community Hall renewal to coincide and co-locate 	<ul style="list-style-type: none"> ▪ B. Library: brickwork allowance ▪ Cavendish arena: boards/lighting allowance ▪ Cavendish pavilion: siding, eaves, roof
2031	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Sand domes: lighting (in & out) ▪ KDHC: lighting (in & out) ▪ FH#4: interior lighting ▪ Welcome Centre: exterior lighting, doors/windows ▪ Lakehurst Hall: windows
2032	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Replace Cavendish Sand (end of life) ▪ Administration: lighting allowance ▪ Transfer Stations: fencing renewal ▪ B. Library: lights
2033	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Buckhorn Rink: lighting renewal
2034	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ None
2035	<ul style="list-style-type: none"> ▪ Build new Fire Hall #3 	<ul style="list-style-type: none"> ▪ B. Library: brickwork allowance
2036	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ FH#4: windows, doors, exterior lighting ▪ Transit Stations: lights allowance ▪ B. Library: doors
2037	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Administration: windows, exterior lights ▪ Buckhorn Rink: glass, boards ▪ DEFER: Galway Hall: lights renewal
2038	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Transfer Stations: replace structures ▪ B. Library: windows (conduct BCA to determine renewal) ▪ DEFER: Galway Hall: windows
2039	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ None
2040	<ul style="list-style-type: none"> ▪ Build new Galway Community Hall ▪ Build an addition of 6 heated storage bays at 49 Depot 	<ul style="list-style-type: none"> ▪ B. Library: brickwork allowance (consider renewal)

17.3 10-Year Budget and Timelines

The budget presented below was developed based on the following planning rules:

- Maintenance budgets on existing buildings escalate by 1.5% annually.
- Capital renewal and maintenance on new facilities is estimated at 1.5% of the total building cost every year, on average. When not needed, these funds should be set aside to fund future renewals on that facility. Exceptions are:
 - Public Works Buildings uses 1% given their garage nature.
 - Cold Storage, which has no heating systems, uses 0.5%.
 - The Fire Halls use 1.5% of their build cost based on non-post disaster construction, as the premium is in the construction and not the maintenance.
- Maintenance continues but capital renewal stops five years prior to a replacement project.
- Capital costs (order of magnitude only) are as presented below. Project costs depend on procurement method; however, they may be another 30% on top of construction.
- Major projects are shown in bold, with orange background; deferred capital renewal is shown in highlighted italics for the five years prior to a related project.

Trent Lakes Municipal facilities have reached a point of required renewal in many areas, due to both physical and functional deficiencies. The Municipality may expect to increase spending on facilities overall, in order to meet standards of practice (e.g. in Fire Services), renew aged resources (Community Halls), keep rolling stock in good repair and provide efficient services (Public Works), and support Municipal staff to complete their jobs in a safe and effective manner (e.g. Recreation & Facilities, Administration).

The budget that follows stages projects in a manner that reduces risk by addressing priority projects first, while spreading out capital outlay over time.

Table 49: Estimated Costs of New Projects

Building	Est. Size (m2)	\$/m2	Est. Capital Cost (Construction)	Annual Capital Renewal Forward
New Fire Hall	454	\$ 2,932	\$ 1,329,740	\$ 12,247
New Public Works Depot Building (14 bays)	1,878	\$ 2,140	\$ 4,018,711	\$ 40,187
Public Works Cold Storage (8 bays)	756	\$ 375	\$ 283,500	\$ 2,835
New Public Works Satellite (insulated pre-build)	149	\$ 375	\$ 55,814	\$ 558
New Public Works Warm Storage (6 bays)	595	\$ 2,140	\$ 1,274,064	\$ 6,370
New Recreation/Facilities Building	219	\$ 1,800	\$ 394,891	\$ 5,923
→ Same, if combined with Depot	187	\$ 1,800	\$ 336,442	\$ 5,047
New Community Hall with Library & OPP	554	\$ 2,000	\$ 1,108,692	\$ 16,630
New Community Hall	410	\$ 2,000	\$ 819,840	\$ 12,298
New Transfer Station Hut (hut only)	-	\$ -	\$ 13,500	\$ 202.50

Table 50: Capital Plan Costs by Year over 10 years

		PROJECTED											
		deferred capital renewal											
Category	Nickname	Asset#	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Public Works	Buckhorn (Harvey) Depot	5697	\$ 34,220										
	Buckhorn Satellite	NEW											
	Buckhorn Sand/Salt												
	Galway Depot	5598	\$ 75,000										
	Galway Satellite	NEW		\$ 558	\$ 558	\$ 558	\$ 558	\$ 558	\$ 558	\$ 558	\$ 558	\$ 558	\$ 558
	Galway Sand												
	Cavendish Sand												
	49 Depot	5599	\$ 17,540	\$ 13,153	\$ 7,767	\$ 37,884	\$ 8,002	\$ 8,122	\$ 8,244	\$ 8,368	\$ 8,493	\$ 8,621	\$ 8,750
	49 Sand												
	Admin	New Covered Storage (8)	NEW										
New Storage Bays (6)		NEW											
Administration		5632		\$ 11,940	\$ 18,119	\$ 12,301	\$ 12,486	\$ 12,673	\$ 12,863	\$ 18,056	\$ 13,252	\$ 13,450	\$ 13,652
Health	BRHC	5637	\$ 13,012	\$ 8,132	\$ 8,254	\$ 8,378	\$ 11,503	\$ 8,631	\$ 16,760	\$ 8,892	\$ 9,025	\$ 21,160	\$ 9,298
	KDHC	5639	\$ 11,805	\$ 5,385	\$ 5,466	\$ 5,548	\$ 5,631	\$ 5,715	\$ 10,801	\$ 5,888	\$ 5,976	\$ 16,066	\$ 6,157
	FH1: Buckhorn	5665	\$ 16,573										
Fire Services	FH2: Cavendish	5670		\$ 7,276	\$ 1,295	\$ 6,315	\$ 1,335	\$ 1,355					
	FH3: Galway	5675		\$ 1,903	\$ 1,931	\$ 1,960	\$ 8,989	\$ 2,019	\$ 62,050	\$ 2,080	\$ 2,112	\$ 2,143	\$ 2,175
	FH4: Nogies	5685	\$ 3,769	\$ 3,826	\$ 3,883	\$ 3,941	\$ 4,000	\$ 4,060	\$ 11,121	\$ 4,183	\$ 4,246	\$ 4,309	\$ 4,374
	Buckhorn TS	5832	\$ 1,858	\$ 1,885	\$ 1,914	\$ 3,442	\$ 1,972	\$ 2,001	\$ 2,031	\$ 2,062	\$ 2,093	\$ 2,124	\$ 2,156
Waste	Bobcaygeon TS	5836	\$ 1,454	\$ 1,476	\$ 1,498	\$ 3,021	\$ 1,544	\$ 1,567	\$ 1,590	\$ 1,614	\$ 3,638	\$ 1,663	\$ 1,688
	Cavendish TS	5840	\$ 1,722	\$ 1,748	\$ 1,774	\$ 3,300	\$ 1,827	\$ 1,855	\$ 1,883	\$ 1,911	\$ 3,940	\$ 1,969	\$ 1,998
	Crystal Lake TS	5844	\$ 1,428	\$ 1,449	\$ 1,471	\$ 2,993	\$ 1,515	\$ 1,538	\$ 1,561	\$ 1,584	\$ 3,608	\$ 1,632	\$ 1,657
	Buckhorn Library	5868	\$ 8,607	\$ 3,661	\$ 3,716	\$ 43,772	\$ 13,828	\$ 8,886	\$ 3,944	\$ 4,003	\$ 4,063	\$ 4,124	\$ 9,186
	Welcome Centre	5884	\$ 689	\$ 6,700	\$ 710	\$ 721	\$ 732	\$ 743	\$ 2,254	\$ 765	\$ 777	\$ 788	\$ 800
Tourism	Lakehurst Hall	5873	\$ 7,296	\$ 5,376	\$ 5,457	\$ 5,538	\$ 5,622	\$ 5,706	\$ 8,791	\$ 5,878	\$ 9,966	\$ 6,056	\$ 6,147
	Galway Hall	5874	\$ 19,304	\$ 24,369	\$ 6,434	\$ 4,501	\$ 4,568	\$ 4,637	\$ 4,706	\$ 31,777	\$ 11,848	\$ 4,921	\$ 4,995
	Cavendish Hall	5876	\$ 13,314	\$ 12,953	\$ 9,595	\$ 9,739	\$ 9,885	\$ 10,033					
Rec/Community	Cavendish Arena (maint incl in h												
	Cavendish Pavilion (maint incl li		\$ 5,000										\$ 10,000
	Cavendish Play Structure (main							\$ 68,000					\$ 20,000
	Deer Bay Hall	5877											
Regular Maintenance and Expected Capital Renewal			\$ 413,300	\$ 130,864	\$ 4,737,856	\$ 221,632	\$ 230,012	\$ 1,533,966	\$ 221,591	\$ 170,226	\$ 164,377	\$ 162,547	\$ 2,615,165
	Difference		\$ 488,358	\$ 263,790	\$ 161,794	\$ 184,321	\$ 140,871	\$ 114,444	\$ 332,541	\$ 156,661	\$ 143,306	\$ 134,976	\$ 164,671
			\$ (75,058)	\$ (132,926)	\$ 4,576,061	\$ 37,310	\$ 89,141	\$ 1,419,522	\$ (110,950)	\$ 13,564	\$ 21,071	\$ 27,571	\$ 2,450,494