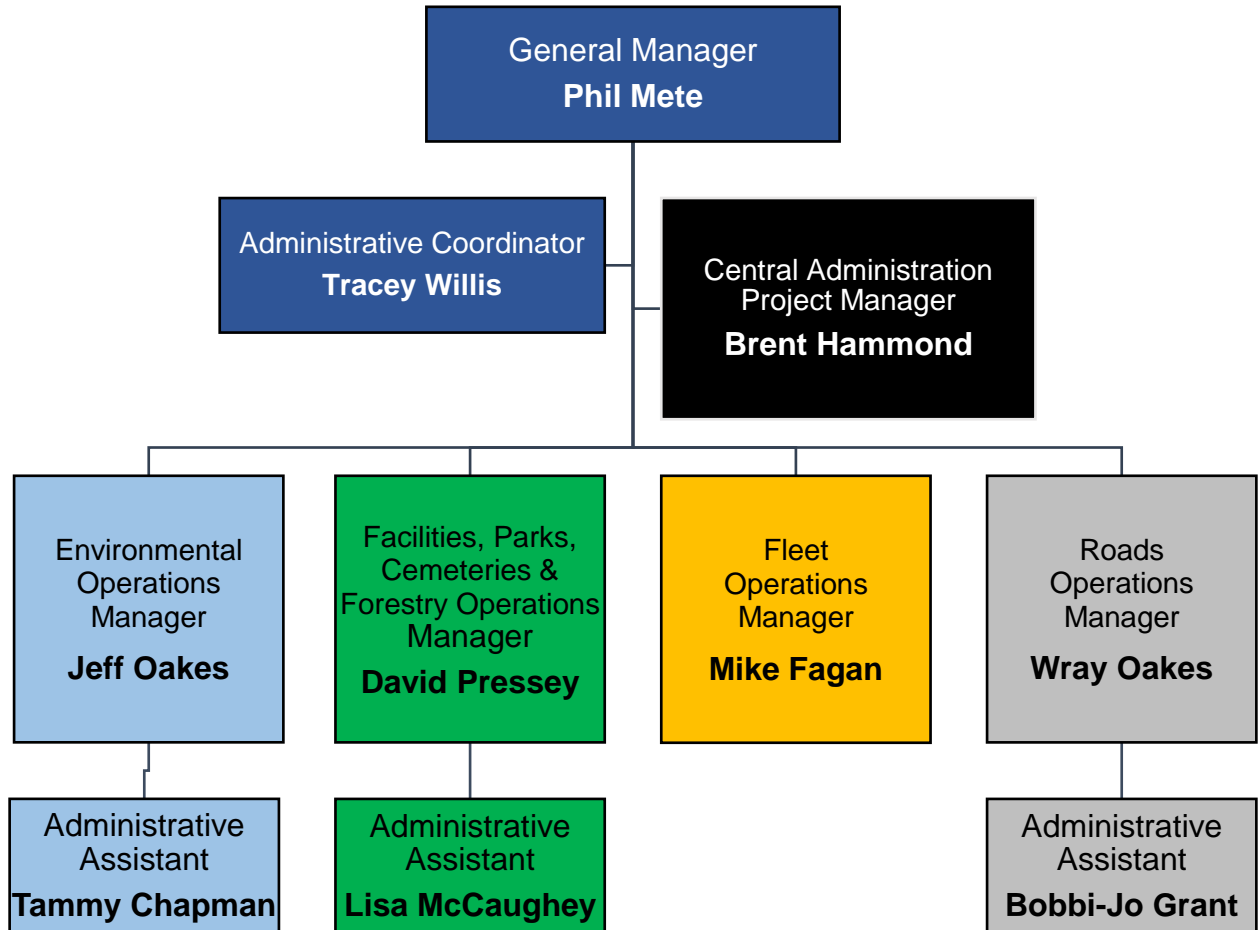




PUBLIC WORKS OPERATIONS

2018 Annual Report

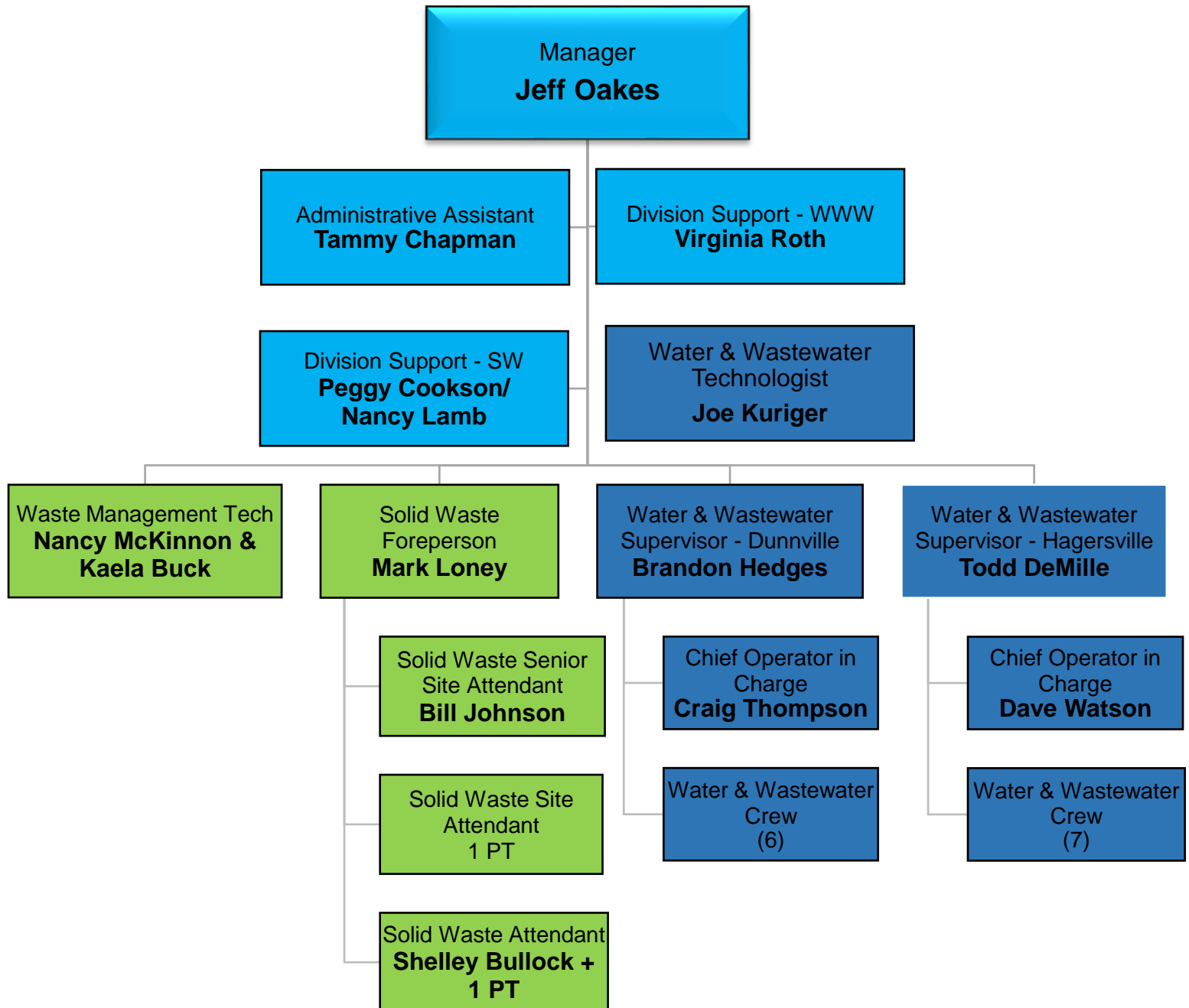
PUBLIC WORKS OPERATIONS- MANAGEMENT



The Public Works Operations management team is responsible for the overall co-ordination, supervision and administration of the affairs of the Public Works Operations Department which includes:

- Environmental Operations
 - Water distribution
 - Wastewater collection
 - Urban stormwater collection
 - Water treatment, transmission mains and storage facilities
 - Wastewater treatment plants, lagoon facilities and forcemains
 - Collection and disposal of waste and recyclable materials
 - Perpetual care operations and maintenance of closed landfill sites
- Facilities, Parks, Cemeteries and Forestry Operations
 - Administration facility operation and maintenance
 - Arenas, Pools and splash pads
 - Parks (playground equipment, courts, sports fields, piers, boat launches)
 - Cemeteries
 - Trails and park pathways
 - Forestry (Urban and Rural)
 - Assist community hall user groups
- Fleet Operations
 - Vehicle and equipment service, training and support
 - Vehicle procurement, licensing and disposal
 - Fuel procurement and depot maintenance
 - Commercial motor vehicle licensing and program management
- Roads Operations
 - Maintain and preserve roads, roadside drainage, gravel road dust control
 - Sidewalks, parking lot and street light maintenance
 - Snow removal and ice clearing on roads and sidewalks

ENVIRONMENTAL OPERATIONS



Water & Wastewater Responsibilities

Operations and maintenance of the Water Treatment and Distribution Infrastructure which includes:

- Three Drinking Water Systems:
 - Nanticoke - includes the Nanticoke Potable Water Treatment Plant (WTP) and Industrial Pump Station (IPS) (supplies raw water to Stelco and Imperial Oil), Lake Erie Industrial Park, Townsend, Jarvis and Hagersville water distribution systems and transmission mains, one Booster Station, one elevated tank (Townsend) and one standpipe (Hagersville), two Water Depot Stations (Jarvis and Hagersville)
 - Caledonia/Cayuga – Supplied by City of Hamilton water, includes two reservoir/booster stations, two standpipes and two distribution systems
 - Dunnville – includes Pt Maitland intake/low lift and transmission mains which supply raw water to Pt Maitland Industry (Mosaic and Innophos) and the Dunnville potable WTP, one distribution system, one standpipe and one Water Depot Station.
- The distribution systems referenced include approximately:
 - 149 km of potable water distribution mains
 - 52 km of potable transmission mains
 - 23 km of raw water transmission mains
 - 898 fire hydrants
 - 1,684 isolation valves
 - 9,061 water meters.
- Administration and management of the Veolia WTP/IPS Operations contract – approx. \$2.2M annual value

Operations and maintenance of the wastewater treatment and collection infrastructure which includes:

- Four mechanical wastewater treatment facilities (Caledonia, Cayuga, Hagersville and Dunnville)
- Four sewage lagoons (Oswego Park, Townsend, Jarvis and LEIP)
- Twenty pump stations and associated forcemains
- Eight wastewater collection systems
 - 147 km wastewater collection mains
 - 1,880 manholes
- Administration and management of the Veolia Wastewater Treatment Plant (WWTP) contract for the operation and maintenance of the WWTP's, lagoons, pump stations and forcemains – approx. \$2.6M annual value

Operation and maintenance of the urban roadway stormwater systems which includes:

- The towns of Caledonia, Cayuga, Dunnville, Hagersville, Jarvis, Townsend and LEIP
- 114 km storm mains

- A combination of 4,651 manholes and catch basins.

Associated Maintenance Programs:

- Annual water distribution main flushing, utilizing fire hydrants and valve isolation, to provide scouring velocities to clean the mains and turn water over in the system
- Annual leak detection on all distribution system mains to detect watermain leaks through a correlation sounding procedure, minimizing lost water in the systems through service and main breaks that would otherwise go undetected
- Annual dead end watermain flushing to maintain CL2 residuals and good water quality in these areas
- Water accountability through property meters, plant meters and district metering
- Annual sanitary flushing programs to minimize potential for blockages in the systems
- Annual AquaData zoom camera inspections in the sanitary and storm systems to provide snapshots of the systems identifying areas with structural deficiencies, potential for blockages and areas in need of more detailed televising and future maintenance or Capital project work.
- Annual water distribution valve operation program
- Repairs to damaged water, sanitary and storm mains and services
- Weekly Bacteriological and CL2 residual testing in Distribution systems to ensure water quality.

2018 Accomplishments:

- Tuscarora Street Water and Wastewater Building roof replacement
- Hagersville Booster Station roof replacement
- Commenced defective water meter head replacements in Hagersville, Jarvis and Townsend
- Two pump replacements at the Caledonia Reservoir
- Cayuga Reservoir inlet meter replacement
- Initiated water distribution optimization program
- McClung/Avalon development watermain commissioning, subdivision deficiency inspections, water and sewer service inspections and water meter installations
- Completion of maintenance activities referenced above.

2019 Priorities:

- Continue to build the distribution optimization program
- Continued replacement of defective water meter registers in Hagersville, Jarvis, Townsend and commenced in Cayuga
- Completion of maintenance activities referenced above

- Cayuga Standpipe isolation from distribution system for cleaning and mixing system installation
- Trouble shooting issues identified at the Caledonia Reservoir due to McClung/Avalon development's impact on system and identify viable solutions
- Continuous improvement to water accountability in all systems
- Work with Engineering Services with respect to water and sanitary main replacement projects
- Development of WTP Request for Proposal for expiring Veolia contract July 2020.

Solid Waste / Recycling Operations Responsibilities

Operation and maintenance of the Canborough Waste Management Facility includes:

- Weigh scales
- Diversion Station for metals, construction and demolition waste, shingles, bulk cardboard, bulky rigid plastics, textiles, used tires, leaf and yard material and waste electronics
- Site maintenance activities
- Administration and management of Transfer Station Building and hauling contract with Barnes where the waste and recycling from curbside collection is dropped off in separate receiving areas. Garbage is then loaded hauled to Landfill and recycling to Niagara for processing – approx. \$1.5M annual value.

Curbside collection and recycling includes:

- Collection and management of garbage, recycling and leaf and yard waste materials
- Administration and management of the curbside collection contract with Modern Landfilling Inc. approx. \$2.0M annual value
- BIA, Chambers of Commerce and Board of Trades waste bin collection
- Curbside collection By-law

Closed landfill operation and perpetual care maintenance includes:

- 16 closed landfills across the County which range in age and size
- Inspected annually for various site conditions as required by MECP.
- Enhanced monitoring required at five of the closed sites – Seneca, Sherbrooke, Oneida, Canborough and Tom Howe
- Tom Howe – Leachate management, landfill gas management (includes gas collection and flaring), site maintenance
- Canborough – Leachate management and site maintenance
- Administration and management of Leachate hauling contract at Tom Howe and Canborough – approx. \$450k annual value

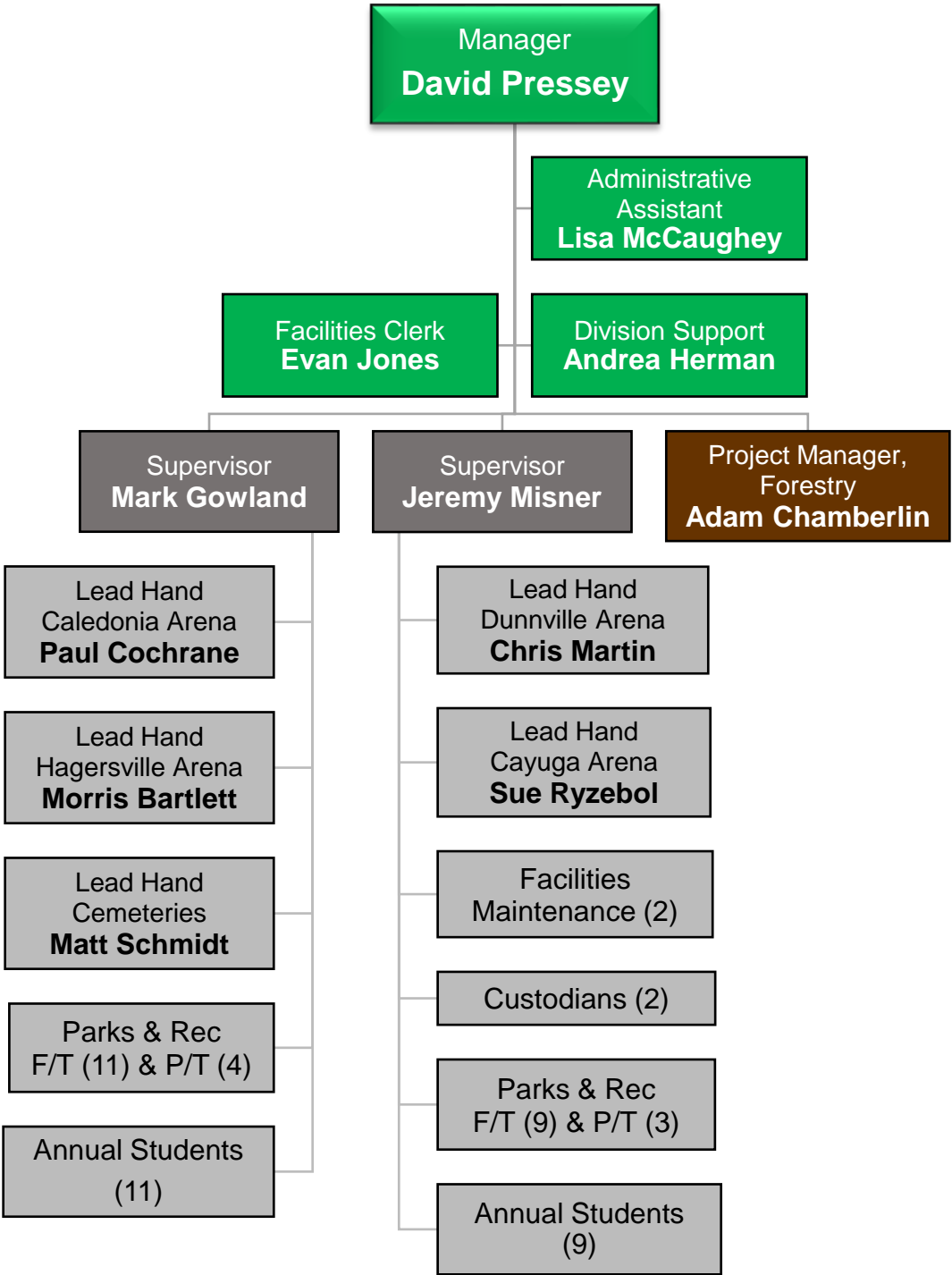
Programs and promotion:

- Curbside waste and recycling audits
- Downtown core waste collection
- Municipal Hazardous and Special Waste – four collection centres and dates established each year for residents to dispose of household hazardous waste materials
- Battery collection program
- Waste and Recycling promotion through school boards and public events
- Promotion of waste and recycling best practices to the public

2018 / 2019 Priorities:

- Preparation and monitoring for the transitioning of the Blue Box Program (ever changing requirements)
- Contingency/emergency planning
- Enhancements to the contract management database
- Review waste diversion efforts at Haldimand County facilities
- Explore additional waste diversion initiatives
- Development of a long-term leachate management plan for Tom Howe and Canborough
- Develop a Closed Landfill Remediation Business Case.

FACILITIES, PARKS, CEMETERIES and FORESTRY OPERATIONS



Areas of Responsibility

Staff responsibilities shift with the seasons. During the winter season staff focus mainly on the arenas while supporting outdoor parks and recreational facilities. During the summer season staff focus mainly on the outdoor parks and recreational facilities while supporting the indoor operations of the arenas. In addition to the operation and maintenance of the parks and recreational facilities, staff are responsible for the operation and maintenance of various administrative buildings.

Administration Facility Maintenance

- The Facilities Maintenance staff undertake general care and maintenance of the administration buildings, community halls, libraries, museums, fire halls, and ambulance stations.

Arenas

- Facilities Parks, Cemeteries & Forestry (FPCF) staff operate and maintain the Haldimand County Community Center Arena (double pad), Hagersville, Dunnville, and Cayuga Arenas.

Pools and Splash Pads

- FPCF staff operate and maintain the Caledonia Lions Pool and Splash Pad, Dunnville Lions Pool and Kinsmen Wading Pool, and the Hagersville Lions Pool and Splash Pad.

Parks

- FPCF staff operate and maintain 64 parks through out the County (182 Ha). The parks are a mixture of parkland and open space. Parkland classifications consist of Community Common; Neighbourhood Parks; Community Parks; Activity Parks; Waterfront Parks; Cultural Parks; and Streetscapes. Open space parks are classified either as a Nature Park or Greenway.
 - Grounds maintenance
 - Furnishing and amenity maintenance
 - Turf maintenance for sports parks
 - Playground maintenance and repair
 - Lighting maintenance (parks and pathways)
 - Waste removal
 - Courts/sports fields
 - Piers and boat launches

Trail Network

- Trails and pathways have been organized based on use and location: multi-use off-road, park pathways, urban trail routes, on-road cycling routes, ATV trails and other. FPCF staff provides inspection and maintenance services to varying degrees for this trail network.

- FPCF staff are working in conjunction with Community Development and Partnership staff to develop a trails maintenance service plan. This plan will identify and standardize the maintenance requirements for the whole of the trail network. In the event a specific user group assumes responsibility of a trail section, the user group will be required to meet the same maintenance standards.

Forestry (Urban and Rural)

- The Forestry Project Manager, is responsible to develop, coordinate and implement a sustainable forest and urban forest conservation program. In 2016 staff developed a forest strategy and management plan to address the need for strategic management of the County's green assets.
- Inventory of the rural and urban forests is an ongoing task that identifies potential removals and plantings to ensure the County mitigates risk and provides for a sustainable green asset.
- Administration of the forest strategy and management plan is ongoing, Staff intend to establish a Forest Working Group in 2019 that will include internal and external stakeholders with interests in tree/forest management.

Cemeteries

- FPCF staff are responsible for to care maintenance and operation of 40 cemeteries across the County. Of the total inventory, 19 sites are active with available plots for interments.
- FPCF staff are responsible for the sales and administration of burial rights and interments, management of community enquiries, opening and closing of interments, layout of plot markers, and overall care and maintenance of all 40 cemeteries.
- FPCF staff undertake the grass cutting for six of the 40 sites, while contracting out the grounds maintenance for the remaining 34 sites.

Grass cutting and snow removal

- FPCF staff are responsible for the overall grounds maintenance of all of the Counties parks and recreational facilities.
- Parks and recreational facilities are maintained through the combined use of county staff and contracted services.
- In addition to parks a recreational facilities, FPCF is responsible for grass cutting at various County facilities (e.g. fire stations, water plants, roads yards, administration buildings, etc.)

Waste Collection (Parks and Trails)

- Year round waste removal services is provided by FPCF staff at numerous parks and recreational facilities
- FPCF staff utilize a specialized waste collection truck to complete the services

Contracted Services

- FPCF manages a number of legislated contracted inspections/ services including: asbestos; cisterns; CO monitors; cooling tower chillers; diesel generators; elevators; emergency and exit lighting; exhaust hoods; fire extinguishers; fire panels; fire suppression & sprinkler systems; playground equipment and structural evaluations of communication towers
- In addition to managing legislated work, FPCF manages a number of other contracted services including: architectural/ engineering services; custodial; grass cutting; heating ventilation & cooling; internment/ burials; leases; overhead doors; portable washrooms; refrigeration; security alarms & security cameras; snow removal.

2018 Accomplishments

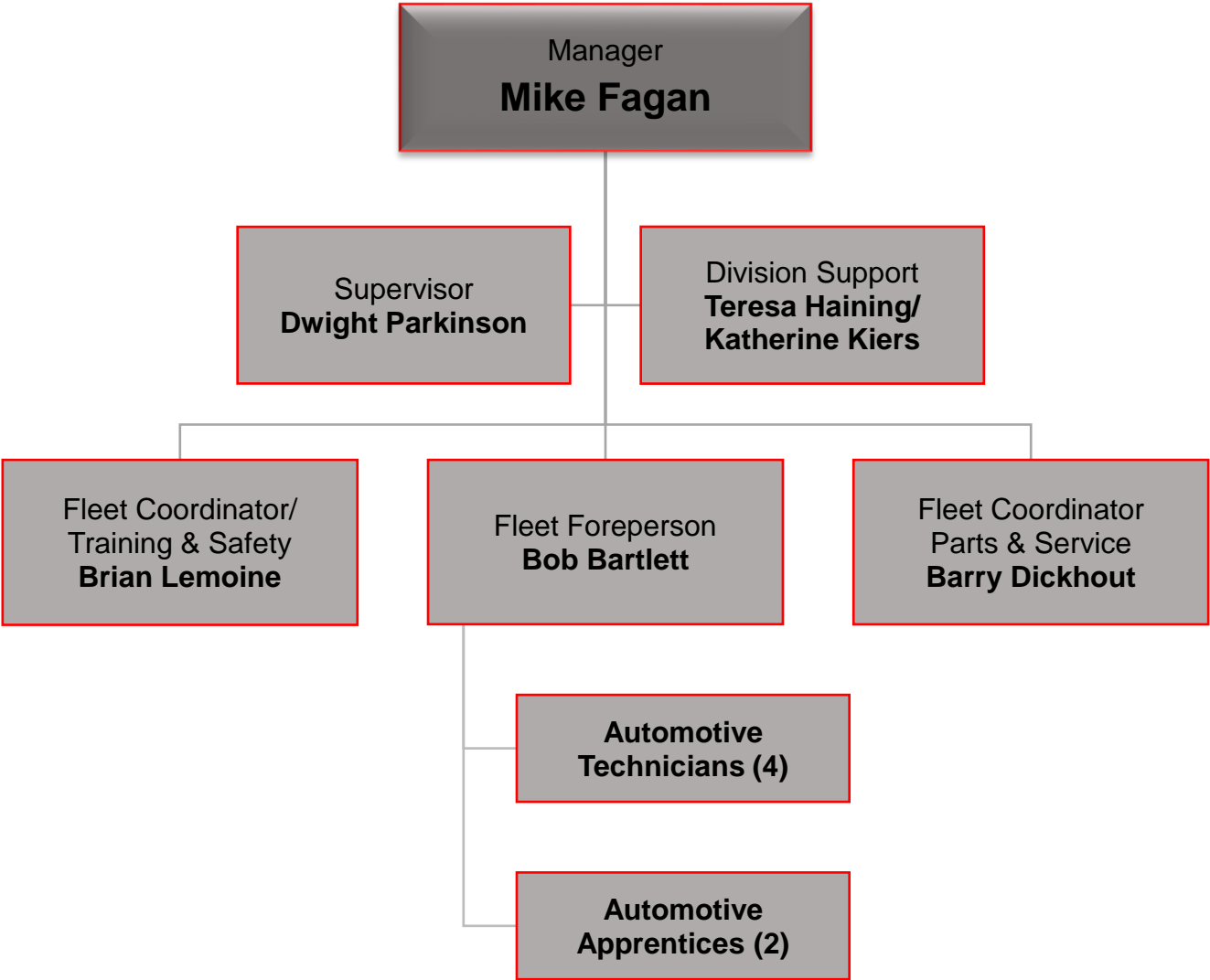
- Expanded portable washroom services
- Staffing initiatives, Forestry and FPCF Student
- Caledonia Avalon Park appurtenances
- Lafortune Park access improvements
- HCCC Arena, Caledonia Library interior lighting retrofits
- Dunnville Farmer's Market project
- Dunnville Lions Park storm water management and reforestation project
- HCCC entrance slab repairs
- Caledonia splash pad controller replacement

2019 Priorities

- Staffing restructure
- Staff work planning process development (workload management)
- Staff professional development planning (succession planning)
- Trail Maintenance Program
- Park and Recreational Facility Maintenance Program

- Continued implementation of the Forest Strategy and Management Plan, focusing on administration, tree inventory, tree removal, tree pruning, forest health, tree planting, community engagement and enforcement of the Forest Conservation By-law
- Ongoing improvements/advancement of the Stone Orchard cemetery database
- Continue to enhance programs and service delivery efficiencies through improved processes and advanced software technologies
- Additional staff as per New Staffing Initiative to enhance coverage/care of parks, arenas and cemeteries
- Increased accessibility to bleachers at Hagersville arena
- Repairs to the entrance pillars at the Hagersville Park
- Fisherville Ball Park fence replacement
- Enhanced staff core technical training (CIT, pool training)
- Grand opening of new trails – Grand Vista in Cayuga, Gypsum Mine Tract in Caledonia and the Thompson Creek Eco Centre in Dunnville
- Energy Management Lighting Program in Hagersville arena
- Enhanced cemetery lead hand position and crew
- Urban canopy coverage goals (GIS)

FLEET OPERATIONS



Areas of Responsibility

Vehicle and Equipment Asset Management

Responsible to establish life cycles of over 460 County owned V&E including 53 Commercial Motor Vehicles, 56 fire related V&E, seven ambulances, two first responder vehicles and one support vehicle.

V&E Maintenance

Establish preventative maintenance criteria to meet County requirements, adhere to the Corporate Fleet Policy and all legislated requirements such as:

- Commercial Operators Vehicle Registration (CVOR) – annual and semi-annual safety inspection standards
- Ministry of Health (MOH) – ambulance maintenance standards confirmed by yearly on-site audits by MOH
- National Fire Protection Association (NFPA) – fire apparatus standards, annual pump tests, annual ladder and aerial non destructive testing
- Ontario Highway Traffic Act (HTA)

County Fuel Supply and Depot Maintenance

Responsible for fuel procurement, inventory and operation/maintenance of 5 County fuel depots. Adhere to Technical Standards and Safety Authority (TSSA) standards.

Training

Provide staff initial/refresher training through internal/external resources such as fork lifts, working at heights, fuel dispensing, MTO Book 7, loader operation, chainsaw, load securement and CVOR legislated requirements.

The County is an authorized participant in the Ministry of Transportation (MTO) Drivers Certification Program (DCP) which grants the County the ability to provide training to upgrade and renew drivers' licences, air brake endorsement and on-line monitoring of staff drivers' licences.

Provide V&E training and ongoing monitoring as required by:

- Ontario Occupational Health and Safety Act;
- HTA - CVOR legislation – driver vehicle inspection reports, hours of service, load securement;
- Ministry of Transportation; and
- TSSA.

Vehicle and Equipment Procurement

Fleet Operations division is responsible for preparing annual Capital V&E replacements and ten year Capital replacement forecasts. In consultation with the user groups, Fleet is responsible for specification writing, procurement of all County owned V&E, ensure vehicles are 'right sized' for efficiencies and meet the requirements of the end users. Also responsible to ensure Capital budget allocations are adhered too and all procurement processes follow County policy.

Vehicle and Equipment Disposal

As per Corporate Fleet policy.

Maintenance and Repair of Kohler Facility and Grounds

Ongoing maintenance/repair and capital improvements.

2018 Accomplishments:

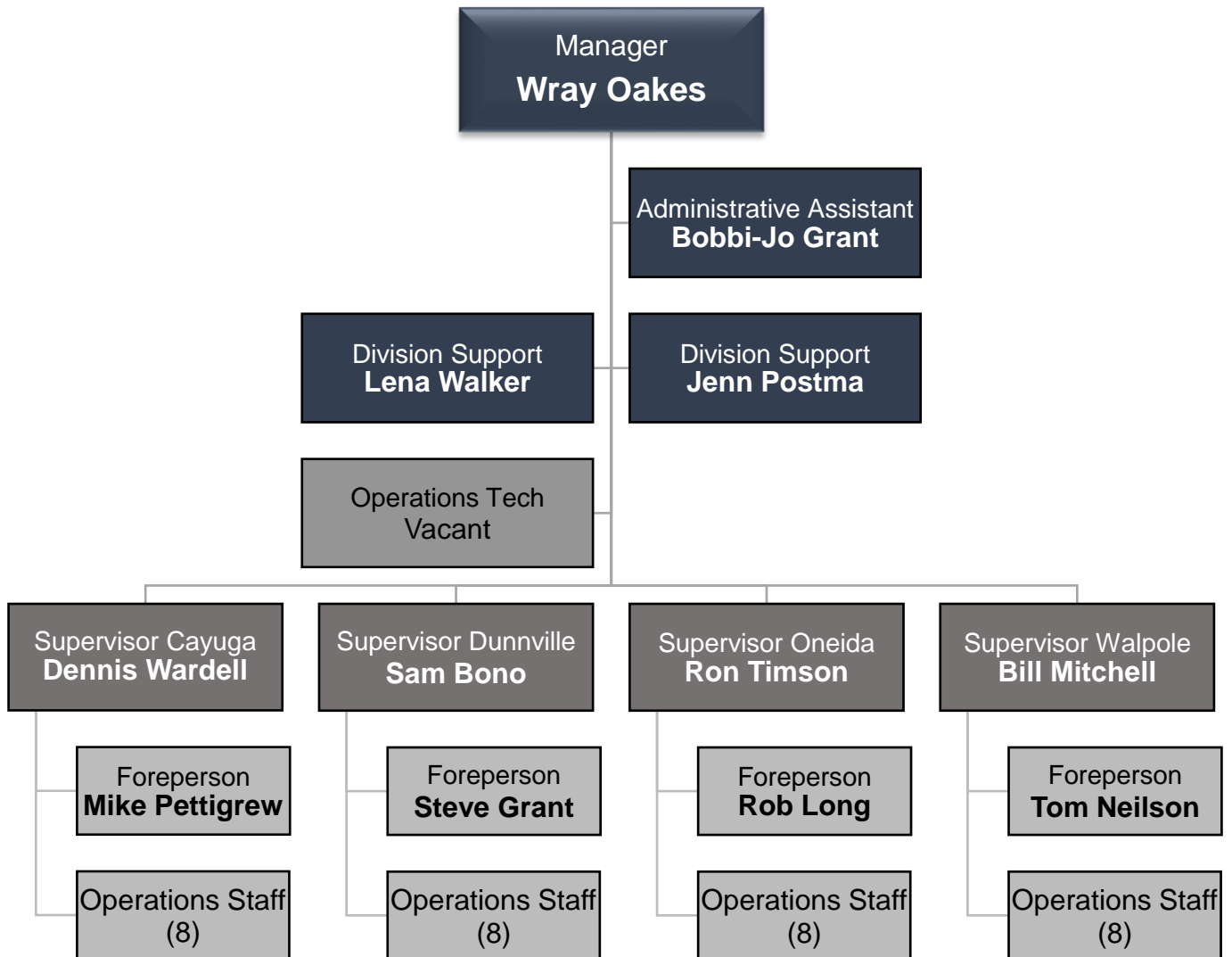
- Procurement and in-servicing of new Fire Pumper apparatus (Dunnville)
- Conversion of plow truck to Fire Tanker unit and in-servicing (Hagersville)
- Procurement and in-servicing of five (5) plow trucks
- Upgrades to fuel depots –new kiosks, installation of tank monitoring system
- Specification writing, procurement and in-servicing of all Council approved V&E in 2018 budget
- In conjunction with BAS Team, implement new maintenance management system and fleet inventory (ongoing into 2019)
- Review/revise/re-rate Fleek Clerk position (completed in 2019) to assist in shop efficiencies

2019 Priorities:

- Conversion of two plow trucks to Fire tankers for South Cayuga – Canborough Station (ongoing).
- Procurement and in-servicing of three (two replacements and one NI) tandem axle plow trucks (complete).
- Preparation and successful completion of external audit for Ministry of Transportation Driver Certification Program.
- Procurement and in-service of new Type 111 ambulance.
- Power load conversion of two (2017) ambulances.

- Work with FPCF division to spec/procure and in-service of multi-function utility work machine to assist in the grounds maintenance at Cayuga arena, library and new administration facility.
- Procurement and in-service of one asphalt hot box for Roads Operations division.
- Procurement, training and in-service of a full-size vacuum/flusher/hydro-excavation tandem axle truck for Environmental Services division (complete).
- Assist Asset Management division in the design of the Kohler garage addition and improvements to training room and office upgrades (design in 2019 and build in 2020).
- Work with divisions to ensure 2020 capital vehicle and equipment replacements are properly identified and 'right sized' for efficiencies and meet the requirements of the division (on going).
- Continue to assist BAS Team with the implementation of new maintenance management system (Pearl) and parts inventory system (ongoing).
- All approved Capital vehicle and equipment purchases have been completed for 2019 other than one FPCF division unit (waste collection unit) – anticipated completion end of 2019.

ROADS OPERATIONS



Areas of Responsibility

General

To maintain and preserve approximately 1,500 km of public right of ways/road allowances (roads), 123 km of sidewalks and eight municipal parking lots consisting of approximately 20,000 m² in asphalt surface area. The focus of the Roads Operations Division and its employees is safety, preventative maintenance and the protection of the public's investment in the transportation network system of Haldimand County. This division is responsible for road surface maintenance, roadside maintenance, drainage maintenance and gravel road maintenance. Additional responsibilities include, but are not limited to, traffic signals, street lighting, entrance culverts, cross road culverts, ditching, road grading and dust control.

Sidewalk Maintenance

The County's sidewalk maintenance program consists of sidewalk inspection and sidewalk and curb restoration on an annual basis. The sidewalk inspection program is scheduled on an annual basis with a rating criteria listing all surface deficiencies and/or trip hazards in a priority fashion. Each year a sidewalk restoration contract is planned and implemented based on inspection reports that identify all known deficiencies on a priority basis. The sidewalk restoration program is generally scheduled mid to late summer for seasonal and weather related advantages.

Roadway Maintenance Programs

- **Rural Roadside Mowing** - The Rural Roadside Mowing Program is scheduled on an annual basis and consists of cutting roadside grass with the intent to improve roadside visibility for the travelling public. Rural intersections are also cut back an additional standard again with the intent to improve site lines. The County's Rural Roadside Mowing Program schedule consists of 2 cuts per year. The first cut is generally scheduled in early to mid-June and the second cut is scheduled in August. The Rural Roadside Mowing Program also includes manual trimming of all safety barrier systems and traffic signs twice per season.
- **Road Surface Maintenance** - All roads in the County are inspected on a regular basis for surface deficiencies including potholes. All roads in Ontario are classed into 6 different road classes which is based on the daily traffic counts and speed limit on any given road. The frequency of road surface inspections and road surface repairs is based on the class of road. All roads within Haldimand County are inspected a minimum of once every 30 days. Street sweeping is scheduled throughout our urban areas where curbs and gutters exist. All urban roadways are swept at a minimum of once in the spring, once mid-summer and twice in the fall. Main streets and downtown cores have increased schedules.
- **Roadside Drainage** - The Roadside Drainage Program consists of multiple drainage activities designed to improve the overall drainage of the County's roadway network. Positive drainage of roadways improves and extends the life of

the road. Roadside drainage activities consist of entrance and cross road culvert maintenance, including replacement when necessary. Other drainage activities include, reconstructive roadside ditching and ditching maintenance or ditching clean out. Roadside drainage activities are generally scheduled during the summer and fall seasons.

Streetlight Maintenance

Roads Operations Division is responsible for inspecting and correcting streetlights on County Roadways in accordance with the standards set out. The standard for the frequency of inspecting roadway streetlights to check that they are functioning, is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.

Gravel Road Maintenance

Haldimand County's gravel roads are regularly inspected throughout the year. In the spring, once the frost is out of the ground and the weather permits, all gravel roads are graded and new stone applied, if needed. The frequency of the grading is determined by the condition of the road and when grading is warranted.

Dust Control Program

The County's Dust Control Program on the gravel road network consists of calcium chloride liquid applications to control and limit airborne dust on gravel roads on an annual basis. The dust control program schedule is generally performed once in the spring and on an as need basis throughout the summer. Several factors can influence the frequency of dust control applications, including but not limited to, the amount of rainfall during a summer season, the number of vehicles travelling the road and the amount and type of winter precipitation from the previous winter season.

Winter Control – Snow Removal

The Roads Operations division is responsible for clearing snow from County-owned roadways, municipal parking lots and sidewalks in front of County property. Roads Operations are also responsible for monitoring weather forecasts and patrolling of roads. Road patrolling, weather monitoring and road operations/snow clearing services are scheduled on a 24 hours a day, 7 days a week basis during the winter season. The Winter Control Program is typically scheduled from November 15 to April 15 of the following year. Snow and ice clearing services shall be deployed as soon as practicable after staff become aware of the fact.

Snowplowing

Each roadway in Haldimand County is classed in accordance with the Ontario Maintenance Standards, a provincial regulation that sets out standards to class each road in a class of 1 through 6, based on the number of vehicles per day and the posted speed

limit. Haldimand County's approved winter control service levels are planned and scheduled in accordance with this regulation on a County wide basis. For snow clearing operations, each road class has specific limits of snow accumulation and response times for snow clearing. As a result, major arterial roads are the number one priority and with higher traffic volumes, these roadways are maintained 24-hours per day during the winter control season. Typically, residential and/or rural non-priority streets and roads are cleared on a secondary deployment schedule.

Sidewalk Snow and Ice Clearing

The Roads Operation division is responsible for monitoring and completing visual observations of sidewalks throughout the County for snow accumulation of equal to or greater than 5 cm, or if ice is present on sidewalks. Snow and ice clearing services shall be deployed as soon as practicable after staff become aware of the fact. They will track and monitor snow and ice clearing operations throughout the County and forward any issues to the County By-Law Division for further follow up.

2018 Highlights

- Finalized the I.E.S.O. (Independent Electricity System Operator) rebates related to the L.E.D. Conversion project.
- In addition to the regular scheduled programs and responsibilities, the Roads Operations Division also received and generated 2,350 work order service requests. All work orders/service requests are investigated and completed in accordance with regular program schedules.

2019 Priorities

- Initiate a service delivery review to identify the possible impacts of accommodating the increased development and urban expansion in Caledonia.
- Winter control program review and possible anti-icing program expansion.
- Continue to look for program improvements and service delivery efficiencies through improved technologies and potential software applications.
- Complete the Oneida building-roof replacement.
- Complete the Dunnville overhead door retrofit project.
- Continued implementation of replacement and new roadside safety barrier devices in accordance with priorities identified in the Roadside Safety Audit.
- Continue to look for opportunities to improve the County's sidewalk infrastructure to meet AODA requirements.