
Memorandum

The City of Traverse City
Department of Public Services



TO: Martin Colburn, City Manager

FROM: Dave Green, DPS Director *DSG*

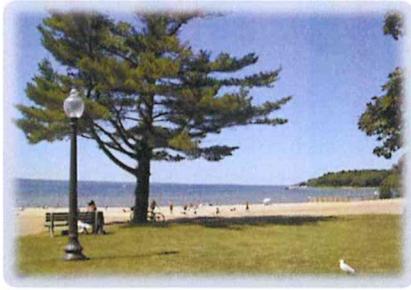
DATE: February 16, 2017

SUBJECT: 2016 Department of Public Services Annual Report

You have requested I put together an annual report summarizing the major accomplishments and activities the Departments and Divisions that fall under the Department of Public Services umbrella completed during the 2016 calendar year.

Attached to this memorandum is the report. I formatted the order of the individual Departments/Divisions listed in the report so they follow the order shown on the attached DPS Organizational Chart. The Asset Management/GIS component of what we are trying to accomplish in a big picture concept runs through and is included in every other Department/Division as we continue to move in a more automated, efficient manner using new technology whenever and wherever we can to streamline operations.

Overall, 2016 was a very busy year with many challenges overcome and goals reached by all the different teams. In lieu of highlighting certain achievements or goals attained in my summary I will let the overall report speak for itself. I will say that none of these would have been possible had it not been for the dedication, focus and commitment shown by every DPS team member each and every day they showed up for work! I am proud of their work ethic and professionalism and humbled to be part of the team.



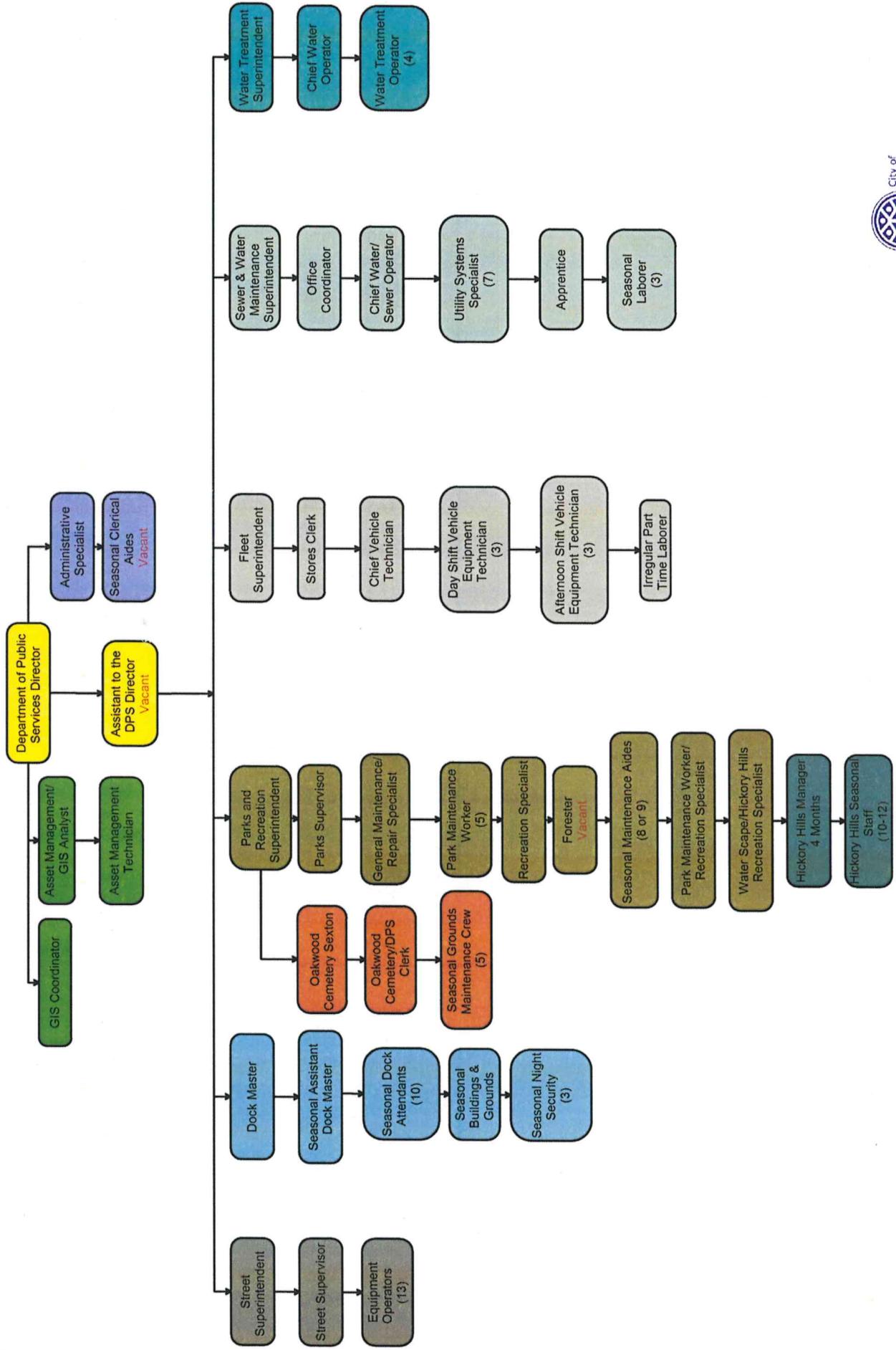
CITY OF TRAVERSE CITY
DEPARTMENT OF PUBLIC SERVICES
2016
ANNUAL REPORT



TABLE OF CONTENTS

Organizational Chart	Page 2
DPS Mission Statement	Page 3
Asset Management/GIS Department	Page 4 - 5
Streets Division	Page 6 - 7
Duncan L. Clinch Marina	Page 8 - 9
Parks and Recreation Division	Page 10 - 12
Fleet/Garage Division	Page 13 - 14
Sewer/Water Maintenance Division	Page 15 - 16
Water Treatment Plant	Page 17 - 18

Department of Public Services Organizational Chart



**CITY OF TRAVERSE CITY
DEPARTMENT
OF
PUBLIC SERVICES**

MISSION STATEMENT

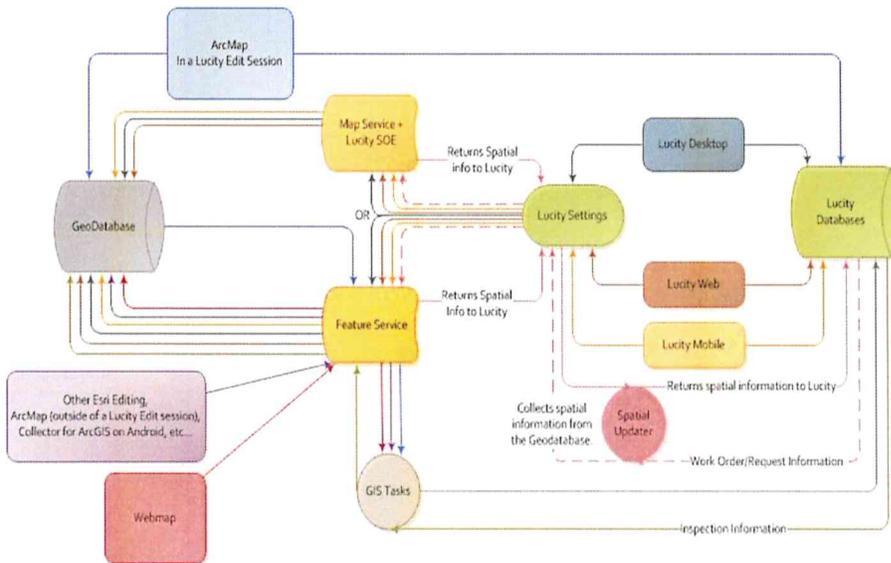
The Departments mission is to continue to provide excellent services and opportunities for the residents of Traverse City that will guarantee a clean, safe, healthy and fun environment and maintains a quality of life that increases in value over time.

The GIS Integration

The Lucy GIS integration is designed to pass information back and forth between the Lucy System/Databases and a GIS system/geodatabase. The integration is made up of multiple parts. Different parts of the integration are used depending on how users have configured the system and what is being done.

The diagram below displays all of the components and how data is passed through each part of the integration.

Note: It is important to understand that everything within the integration is governed by the Geodatabase configuration. The geodatabase configuration is what tells the integration which feature classes are linked to which modules and which fields are linked.



ASSET MANAGEMENT/GIS DEPARTMENT

Staffing:

GIS Coordinator

Asset Management/GIS Analyst

Asset Management Technician

GIS Performance:

The DPS has worked with OHM Advisors managing the 3 year SAW Grant for the creation of an Asset Management Plan for Storm Water and an Asset Management Plan for Waste Water and will be finished with the grant in May of 2017. An asset management plan will inventory our assets, define the level of service for our assets, determine critical assets, define a revenue structure for our assets, and create a capital improvement project plan for our assets.

Through the SAW Grant, we were also able to implement a new GIS enterprise that is the foundation for the asset management plan. We also implemented Lucity, an asset management and work order management software that will increase efficiencies in workflow for the Sewer and Water Maintenance Division. Lucity is web-based software that enables crews to use tablets for mapping and locating assets in the field. The combination of GIS, tablets and Lucity has given the crew the ability to inspect assets and create work orders, which in turn documents work that the crews perform in the field.

GIS is the foundation for the Sewer Water Maintenance Division's Closed Circuit Televising (CCTV) inspection truck. This year GraniteNet software was implemented that puts the GIS maps in the truck for the inspectors to use while inspecting for our Storm or Waste Water networks. This is a critical tool to visually inspect the condition of our underground utilities. GIS acts as the centralized database that can be queried and mapped to better understand the health of all assets.

Parks and Recreation Division has started to use the same tablets and are mapping and locating such assets as street trees that have trimmed, cut down, replaced, etc.

Streets Division has also started mapping signs, pavement markings, passer ratings, etc. as we continue inventory collection on all City assets.

Software We Support :

CUES "GranitNET" Camera Truck Inspections (CCTV)
ArcGIS Server (Web Applications)
ArcGIS
FASTER Fleet Maintenance Software
Roadsoft
WaterGEMS Water Model
Vitals (Valve Exercising Software)

SAW Grant Actual Software:

Precision Laser and Instrument, Inc. "Trimble GeoXH 6000 (Standard Edition)"
Lucity GIS-Based Asset and Work Order Management System
Infogoographics GeoConnector
RexRoth\Webtech for Snow Plows (GPS Reports and Web Interface)



STREETS DIVISION

Staffing:

Superintendent

Supervisor

9 day shift Equipment Operators

2 afternoon shift Equipment Operators

2 night shift Equipment Operators

9 street plow routes

5 sidewalk/trail routes

Maintenance/Operation Responsibilities:

80 miles of City/MDOT Streets

25 miles of alleys

75 miles of sidewalks

10 miles of trails/multi use paths

12 creek culverts

7 bridges

1750 catch basins

157 outfalls

25 storm treatment systems

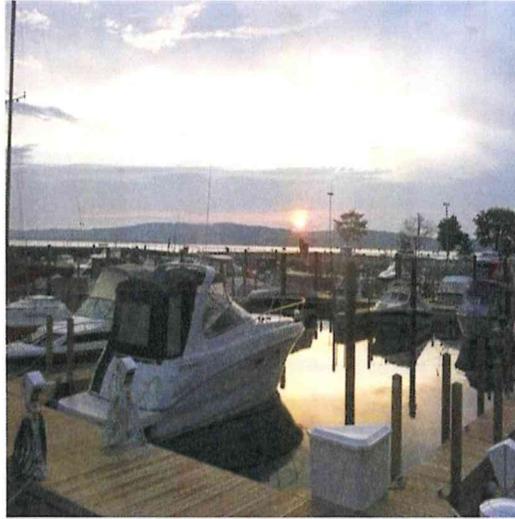
6000 signs
413962 feet of pavement markings
695 pavement marking symbols

Materials Used:

1190 tons of salt used for winter maintenance
1197 tons of sand used for winter maintenance
691 tons of gravel used for gravel street and alley maintenance
510 tons of HMA used for pot-hole patching, grind and pave operations and infrared repair operations
850 signs/sign posts replaced
43 storm catch basin castings replaced

Materials/Debris Collected:

26000 cubic yards of leaves (volume would fill cube on Front Street from Union Street to Cass Street full width of road and 23 feet high!)
1000 tons of sediment/grit from catch basins
1000 tons of sediment/grit from street sweepers
10000 cubic yards of snow from downtown



DUNCAN L. CLINCH MARINA

Staffing:

Dock Master

Assistant Dock Master

10 Dock Attendants

1 Grounds/Building Maintenance Tech

3 Night Security Staff

Maintenance/Operation Responsibilities:

19 slips, 59 seasonal, 59 transient, 1 MDNR/GT County Sheriff

The 59 transient slips are split 75% MDNR Reservation System, 25% Non-Reservation

1200 feet of broadside dockage

16 seasonal slips along the Boardman River

Full service clubhouse with showers, laundry facilities, outdoor patio/grill

Boat ramp facilities

838 different boats utilizing the transient slips throughout the season while the 59 seasonal slips were at capacity.

Materials Used:

66,352 gallons of no lead gasoline sold
25,303 gallons of diesel fuel sold
821 sewage system pump outs
5,252 bags of ice sold

Revenue Generated by Boat Wells and Sales: \$511,750.00



PARKS AND RECREATION DIVISION

Staffing:

Superintendent

Supervisor

5 Parks Maintenance Workers

1 Waterscape/Hickory Hills Rec. Spec.

2 Rec. Specs.

1 General Maintenance/Repair Specialist

9 Seasonal Maintenance Aides

6 Day Camp Counselors

4 Life Guards

Maintenance/Operational Responsibilities:

34 parks; mowing, raking, plowing, etc. (close to 70 acres of grass)

14,000 trees; planting, removing, trimming/pruning, etc.

4500 shrubs/bushes; planting, removing, trimming/pruning, etc.

100 annual flower beds; planting, weeding, watering, etc.

50 perennial flower beds; pruning, weeding, watering, etc.

10 landscaped street islands; pruning, planting, weeding, etc.
40 irrigation systems; start up, winterize, repair
Playground equipment in 12 parks
7 tennis courts
Spring brush cleanup (4- 5 weeks)
Christmas tree chipping
7 beaches; groom, buoy placement and care, testing result activities, etc.
5 downtown boardwalk sections; monitor, repair, etc.
3 skating rinks; building, maintain, snow removal, etc.
Plow snow for the Water Treatment Plant,
Carnegie Building, Fire Station # 1 and # 2, Senior Center, some downtown parking lots
150 garbage cans emptied daily during summer, twice a week rest of year

Materials Used:

Planted 189 trees
Removed 145 dead trees
Ground 222 stumps
Pruned 646 trees
Planted 10,000 annual flowers
Approx. 30,000 plastic garbage bags
Approx. 1000 plastic "doggie" bags

Event Planning, Set Up/Take Down:

Cherry Festival, Film Festival, Ragnar Relay, Earth Day, Bike Swap, Bark in the Park,
Winter Micro Brew
160 Low Impact Events using 30 different parks or venues

Recreational Activities:

Adult Volleyball Leagues; 10 weeks, 10 teams
Day Camp; 10 weeks, 50 kids per week

Hickory Hills:

8 runs, 7 with lights

5 rope tows

3 K cross country/snowshoe trails

125 acre property

Lodge with food concessions

Ski equipment rentals

12 seasonal rope tow operators, ticket and rental personnel

Cemetery:

Full time Sexton

½ time office clerk

5 seasonal maintenance workers (1400 hours total per 12 month period)

65 acres; mowing, raking, plowing, etc.

115 burials this year



FLEET/GARAGE DIVISION

Staffing:

Superintendent

Stores Clerk

Chief Vehicle Technician

6 Vehicular Equipment Technicians (3 day shift, 3 night shift)

Irregular Part Time Laborer

Maintenance/Operational Responsibilities:

120 cars, vans and light duty trucks

26 heavy duty trucks

150 pieces of various equipment including loaders, snow blowers, beach groomers, snow groomers, lawn mowers, garbage trucks, etc.

Completed 2190 general fleet repairs

Completed 1164 preventative maintenance procedures on the general fleet

Handled, installed or inventoried over 20,000 parts

Maintained a fleet availability average of 95.32% for the year
Auctioned off 25 pieces of surplus equipment and/or vehicles recovering \$170,022.00

Materials Used:

66,352 gallons of no lead gasoline sold
25,303 gallons of diesel fuel sold
821 gallons of oil
5,252 brake shoes
450 tires



SEWER/WATER MAINTENANCE DIVISION

Staffing:

Superintendent

Office Coordinator

Chief Water/Sewer Operator

7 Utility Systems Specialists

Apprentice

3 Seasonal Laborers

Maintenance/Operational Responsibilities:

120 miles of pressurized water mains

80 miles of sanitary sewer mains

3000 water system valves, 6" to 30" in diameter

1000 fire hydrants

6700 water meters

2000 manholes

Customer Service Activities:

500+ water service turn on/off requests

200 hydrant flow tests

998 fire hydrants winterized

53 sewer calls, 12 City main issue, 41 property owner lead issue

22 miles of sanitary sewer cleaned

116 water taps installed

365 service calls (sampling, leaks, inspections, meter reads/re-reads, low pressure complaints, etc.

3200 Miss Dig responses

8 water main break repairs

8 sewer main break repairs

350 valves turned

15500 feet of sanitary sewer televised and inspected

Eliminated 53 lead gooseneck water service connections (63 left, we expect to eliminate those from the system during the summer of 2017!)

Strengthened residential cross connection program increasing system safety



WATER TREATMENT PLANT

Staffing:

Superintendent

Chief Water Operator

4 Water Treatment Operators

Maintenance/Operation Responsibilities:

20 MGD Water Treatment Plant (6 high service pumps, numerous valves/meters, etc.)

Low service pump building with intake system (4 pumps, 2 traveling screens, crib, etc.)

2 flocculation basins

5 filter stations or pools

3 chemical feed systems (alum, chlorine and fluoride)

Plant compressed air system (operates valves, bubbler systems, etc.)

2 lagoons for settling out collected solids

750 KW diesel generator in plant

275 KW diesel generator in the Wayne Hill Booster Station

3 water reservoirs (4 MG, 1.5MG and 1.3MG)

2 booster pump stations

7 pressure reducing valve vaults

Customer Service Activities:

Produced over 2 billion gallons of safe, great tasting water for City, Garfield Township, Elmwood Township and Peninsula Township Residents.

Completed between 50 and 75 water quality tests per day in MDEQ certified microbiology lab to ensure water that is produced is safe (lab is inside water plant)

Began a monthly, two year raw water testing program for the enhanced LT2 Enhanced Surface Water Treatment Rule to measure the presence of Cryptosporidium, Giardia and E. coli in the untreated water source (East Bay)

Plant Related Improvements:

Replaced one of the two flocc tank mixer units

Replaced one of the two sump pumps

Invested \$1.1 million in the Water Treatment Plant to increase reliability by upgrading monitoring and controls including a state of the art SCADA system, radio communication system to monitor remote booster stations and reservoirs, new filter flow control valves, new water meters for raw water intake and treated water output to our customers.