City of Grand Island

Tuesday, February 7, 2017
Study Session Packet

City Council:

Linna Dee Donaldson
Michelle Fitzke
Chuck Haase
Julie Hehnke
Jeremy Jones
Vaughn Minton
Mitchell Nickerson
Mike Paulick
Roger Steele
Mark Stelk

Mayor:

Jeremy L. Jensen

City Administrator:

Marlan Ferguson

City Clerk:

RaNae Edwards

7:00 PM
Council Chambers - City Hall
100 East 1st Street

Call to Order

This is an open meeting of the Grand Island City Council. The City of Grand Island abides by the Open Meetings Act in conducting business. A copy of the Open Meetings Act is displayed in the back of this room as required by state law.

The City Council may vote to go into Closed Session on any agenda item as allowed by state law.

Invocation

Pledge of Allegiance

Roll Call

A - SUBMITTAL OF REQUESTS FOR FUTURE ITEMS

Individuals who have appropriate items for City Council consideration should complete the Request for Future Agenda Items form located at the Information Booth. If the issue can be handled administratively without Council action, notification will be provided. If the item is scheduled for a meeting or study session, notification of the date will be given.

B - RESERVE TIME TO SPEAK ON AGENDA ITEMS

This is an opportunity for individuals wishing to provide input on any of tonight's agenda items to reserve time to speak. Please come forward, state your name and address, and the Agenda topic on which you will be speaking.

City of Grand Island

Tuesday, February 7, 2017
Study Session

Item -1

Presentation and Discussion Concerning the Public Works Department

Staff Contact: John Collins, P.E. - Public Works Director

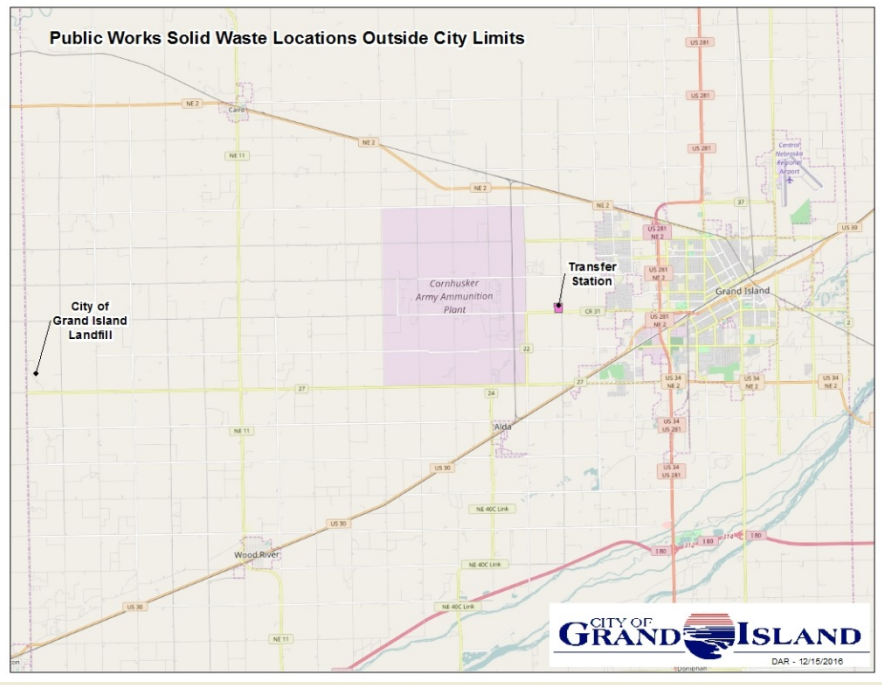
Public Works Department Overview

John Collins, P.E.

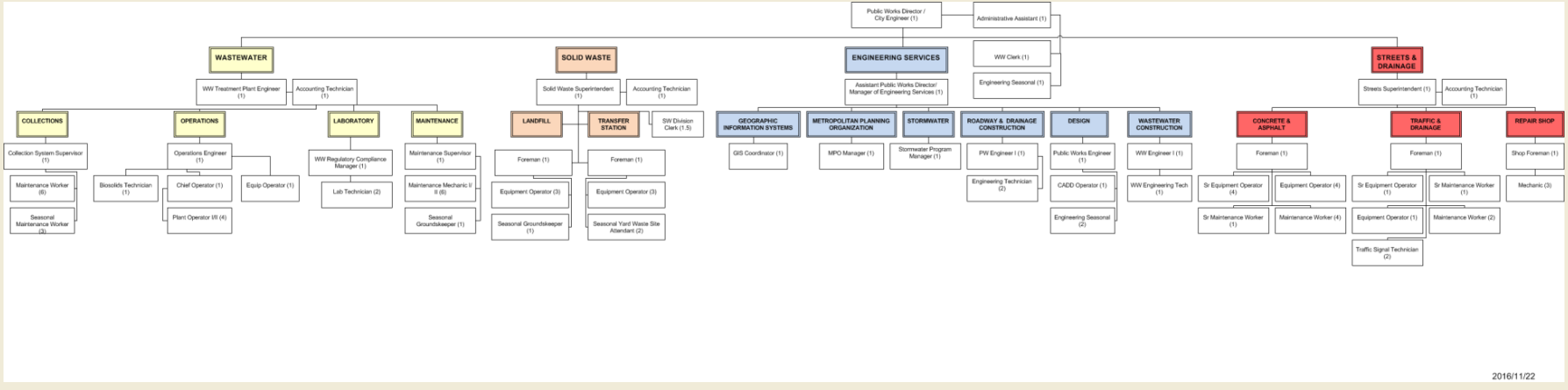
City Engineer/Public Works Director

February 7, 2017

Public Works is responsible for constructing and maintaining the City's Infrastructure



Public Works



- 24 x 7 x 365 operation
- Numerous Federal and State Mandates
- 85 positions with widely varied skill sets

8 Divisions:

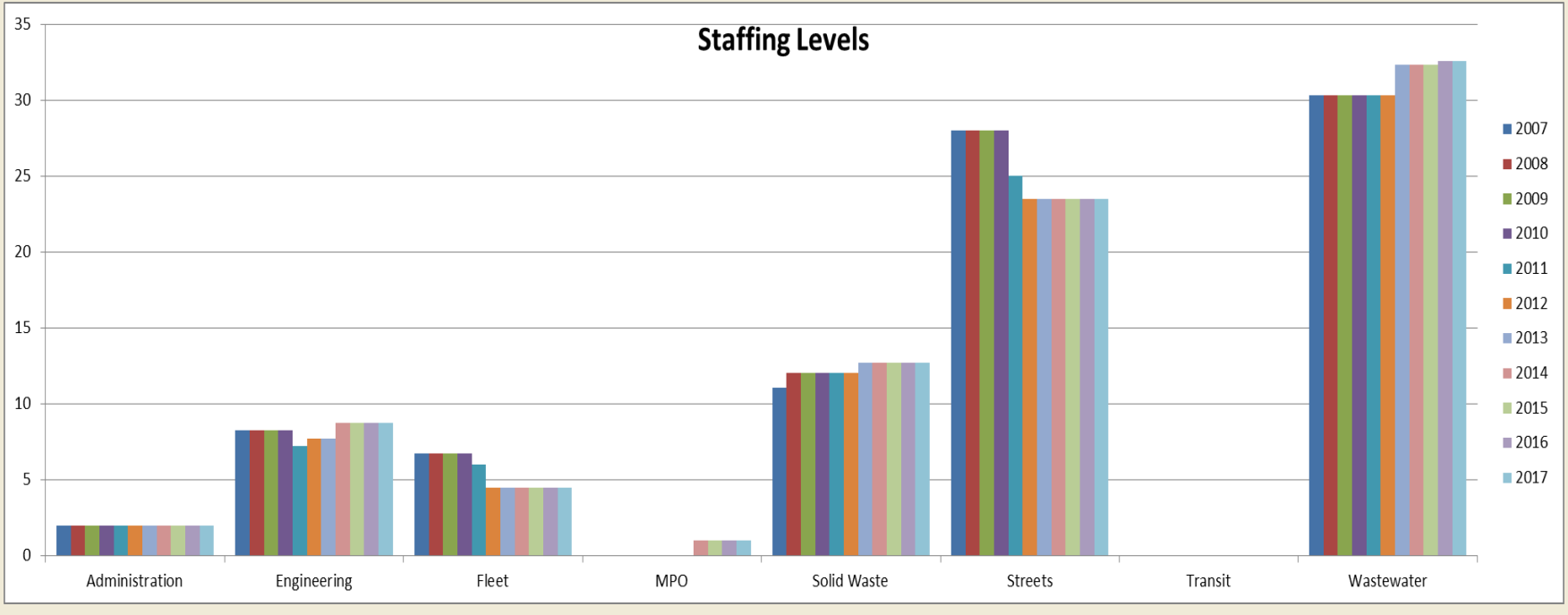
- Administration
- Engineering Services
- Fleet Services
- Transit
- MPO
- Solid Waste
- Streets
- Wastewater

2017 Budget Summary

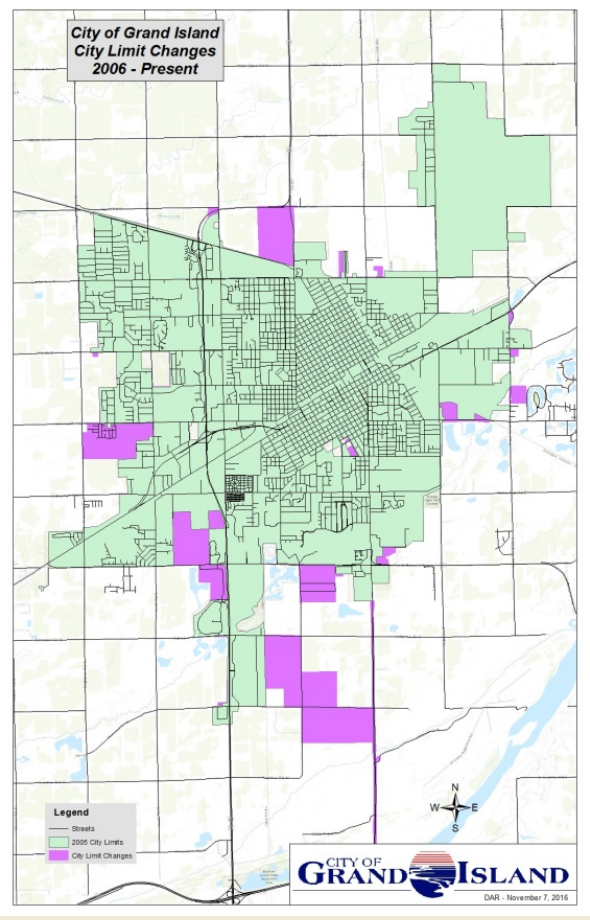
Admin	$	432,417
Solid Waste	$	3,239,975
Wastewater	$	22,840,677
Fleet	$	1,372,101
MPO	$	361,425
Streets	$	6,136,612
Engineering	$	1,037,174
CIP	$	5,618,102
Parking District No. 1	$	68,280
Parking District No. 2	$	21,000
Transit	$	791,622
	$	**41,919,385**

Just under 20% of City's $214M Budget

Excludes expenses paid directly by others such as NDOR - not tracked in the City's budget



- MPO and Transit functions were added with divisions created; Transit is not staffed
- Administration and Engineering Divisions were separated during this period



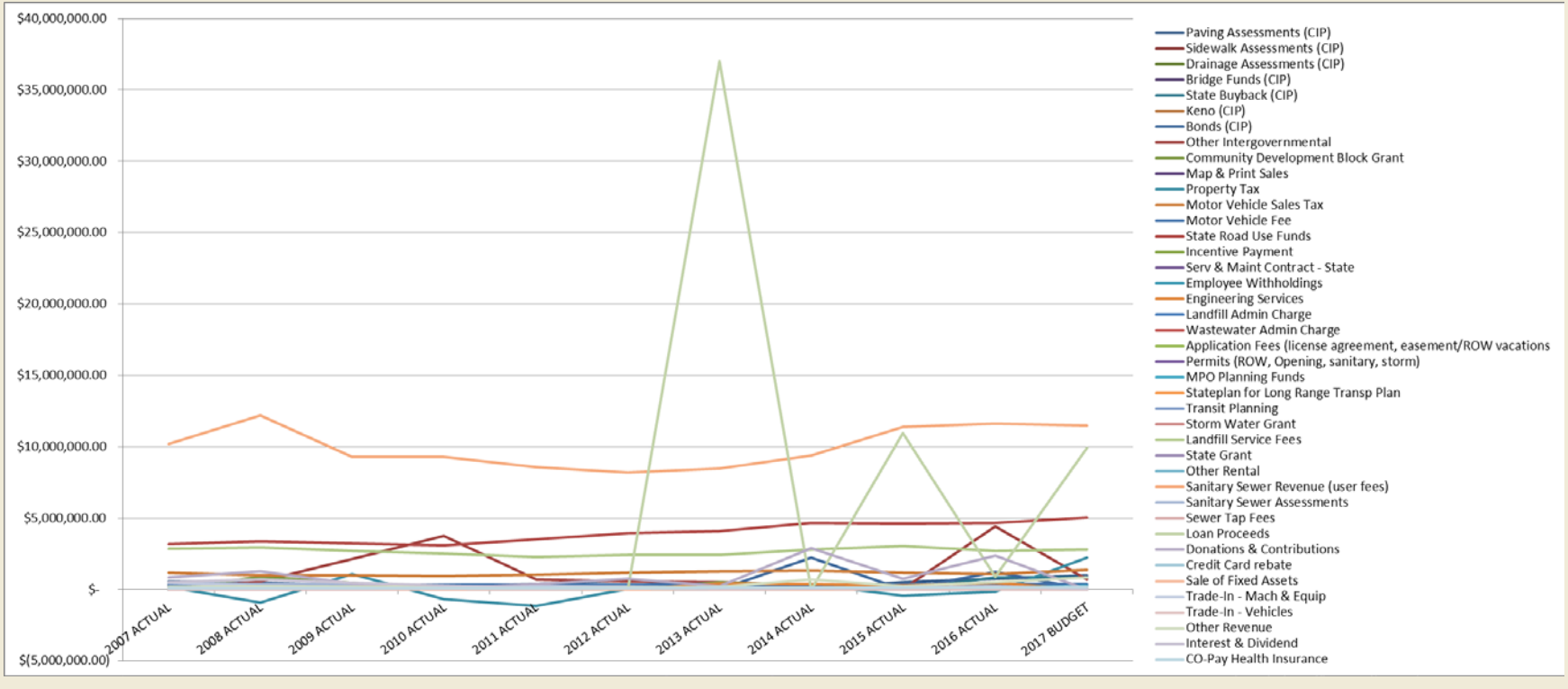
The City is Growing

12% - 3.3 SqMi increase in size;
26 SqMi in 2006 to almost 30 SqMi in 2016

10% - 83.61 Lane Miles from 2006-2016

Asset Value is in development; example: street pavement value is $462,124,000 (2016 IMS Pavement Evaluation Report)

Revenue



*Note some sources may have been combined

Solid Waste Division

Landfill on Husker Highway @ Hall / Buffalo County Line

Transfer Station on Old Potash Hwy

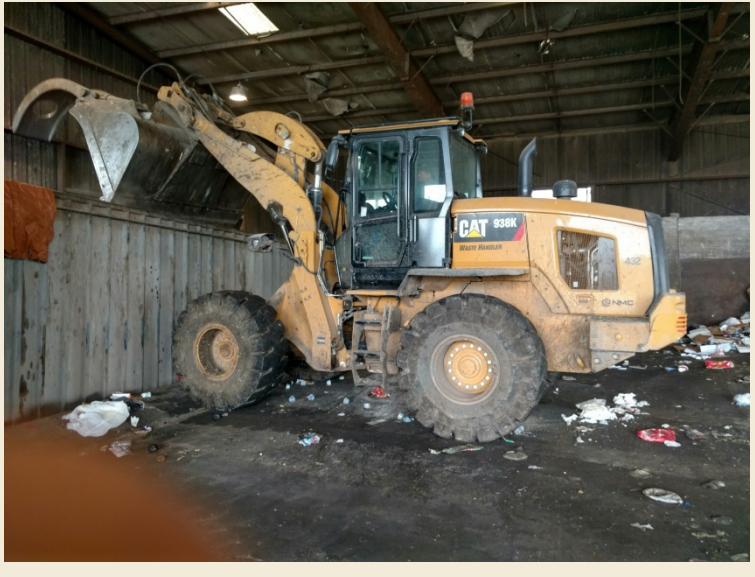
Yard Waste Site North of Transfer Station

Enterprise Fund

- Receives no funding from General Fund
- All Revenues are generated from tipping fees
- One of the few Divisions with competition
- Serves residents and non-residents

Transfer Station

- Commercial haulers and general public utilize this site
- Waste is hauled from the transfer station to the landfill for disposal
- Located at 5050 West Old Potash (one mile west of City limits)



Yard Waste Site

- Accept grass, leaves, & trees from residents for free year-round
- Screened compost sold for $5 per cubic yard
- Wood chips sold for $1.50 per cubic yard
- Located adjacent to transfer station property

Landfill

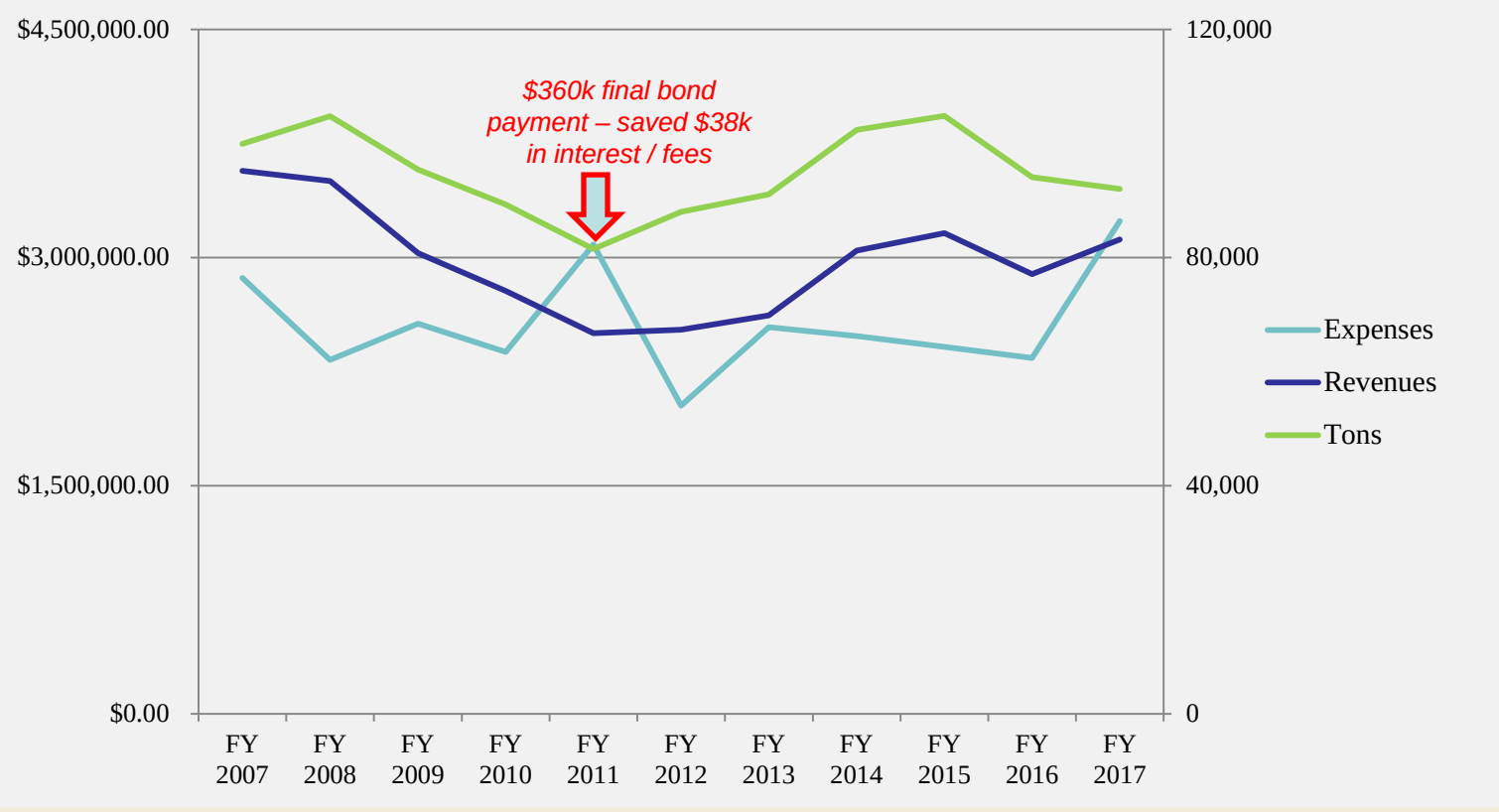
- Mainly utilized by commercial haulers
- Hand unloading of materials not allowed
- Located at Hall County/Buffalo County line (approx. 18 miles west of Grand Island)

Array City Comparison

	Landfill	*Transfer Station*	*Yard Waste Site*	*Collection*
Ames, IA	***$52.75***/Ton ***$126.12***/Ton (out of county) (Waste to Energy Facility)	X	X	Private
Iowa City, IA	Yes ***$42.50***/Ton ***$47.50***/Ton (Non -residents)	X	X Collected at curb for a fee	Public ***$47.70***/qtr
Jefferson City, MO	X	X	Yes	Franchised with Republic Services ***$50***/qtr
Lawrence, KS	X	X	X Collected at curb for a fee	Public ***$59.25***/qtr
Rapid City, SD	Yes ***$59***/Ton	Yes only for recyclables	Yes	Public ***$56.04***/qtr
Manhanttan, KS	X	X	X	Private
Sioux City, IA	X	Yes ***$44***/Ton	Yes-Not Free ***$30***/Ton	Private ***$48.90***/qtr
St. Joseph, MO	Yes ***$44***/Ton	X	Yes ***$44***/Ton	Private ***$48.90***/qtr
Cheyenne, WY	Yes ***$57.65***/Ton	Yes ***$63.85***/Ton	X- YW Curbside collection ***$21.90***/qtr	Public ***$66.15***/qtr
Grand Island, NE	Yes ***$32.14***/Ton	Yes ***$38.21***/Ton	Yes Free disposal for residents year round	Private ***$46.50***/qtr

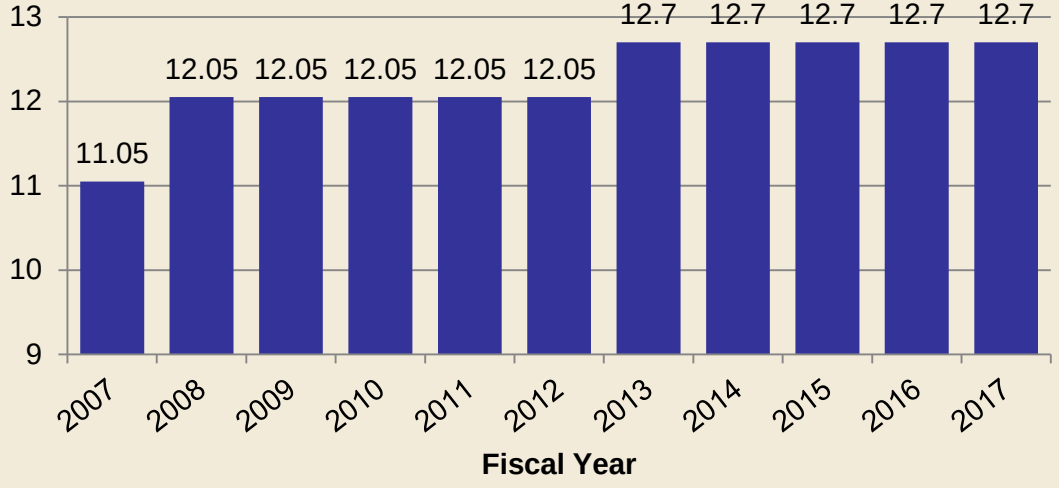
Regulatory Permits/Compliance

- Transfer Station
  - -NDEQ Title 132 Operating Permit
  - -NDEQ Storm Water Management Plan
- Landfill
  - -NDEQ Title 132 Operating Permit
  - -NDEQ NPDES Permit
  - -EPA/NDEQ Title V Air Quality Operating Permit
  - -EPA/NDEQ Greenhouse Gas Operating Permit


$4,500,000.00
$3,000,000.00
$1,500,000.00
$0.00
120,000
80,000
40,000
0
$360k final bond payment – saved $38k in interest / fees
Expenses
Revenues
Tons
FY 2007
FY 2008
FY 2009
FY 2010
FY 2011
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
FY 2017

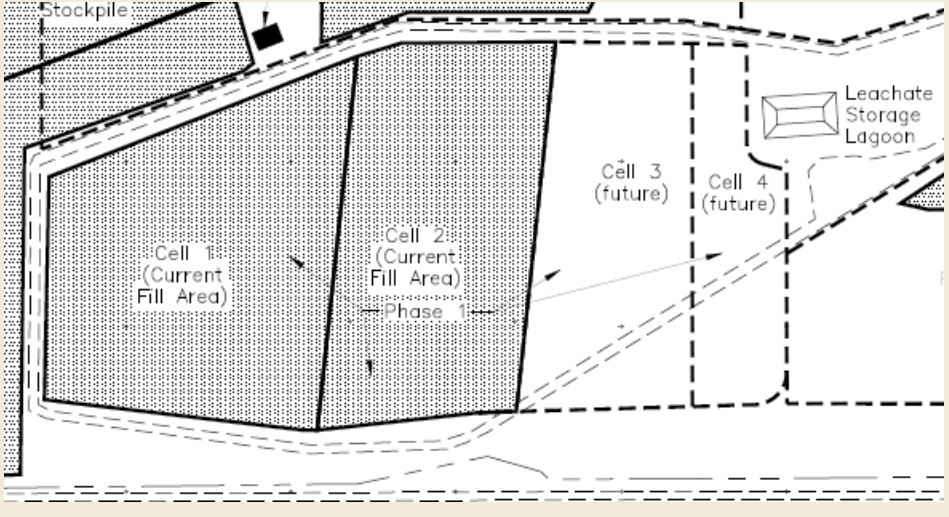
STAFFING

Solid Waste Superintendent (1)
Accounting Technician (1)
Solid Waste Division Clerk (1.5)
Foreman (2)
Equipment Operator (6)
Seasonal Workers (1.2)
TOTAL (12.7)

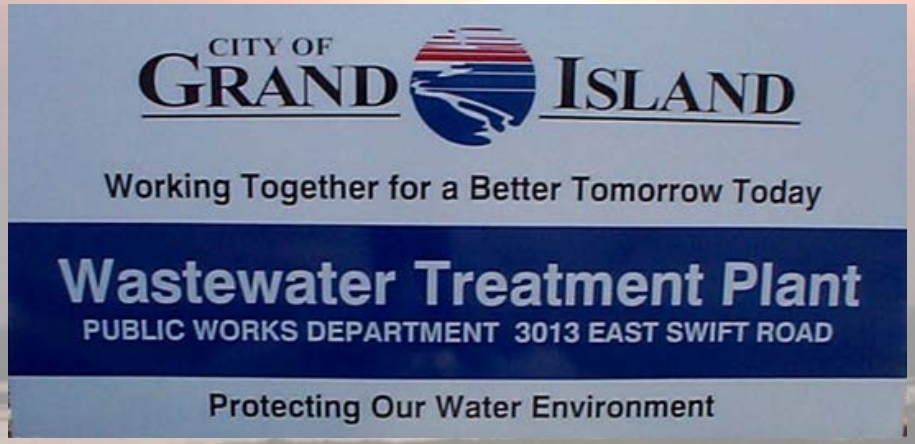


Landfill Cell 3 Expansion Project

- Restricted fund expected to cover entire cost of this project
- Engineering/design this current fiscal year
- Cell 3 will provide disposal for the next 15-20 years



Wastewater Division



FACILITIES

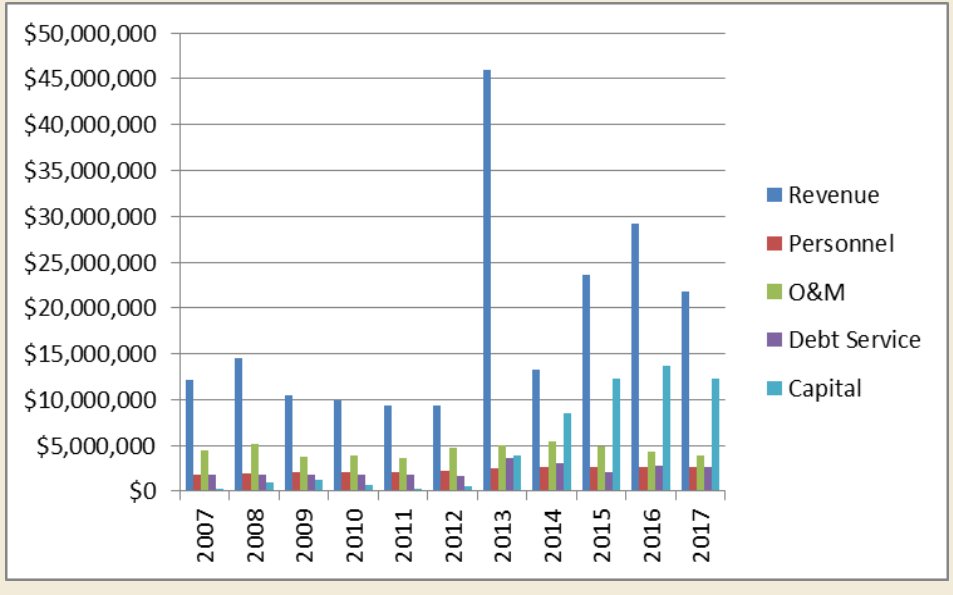
- Plant-3013 E. Swift Road
- 14 lift stations
- 225 miles pipe
- 4,300 manholes

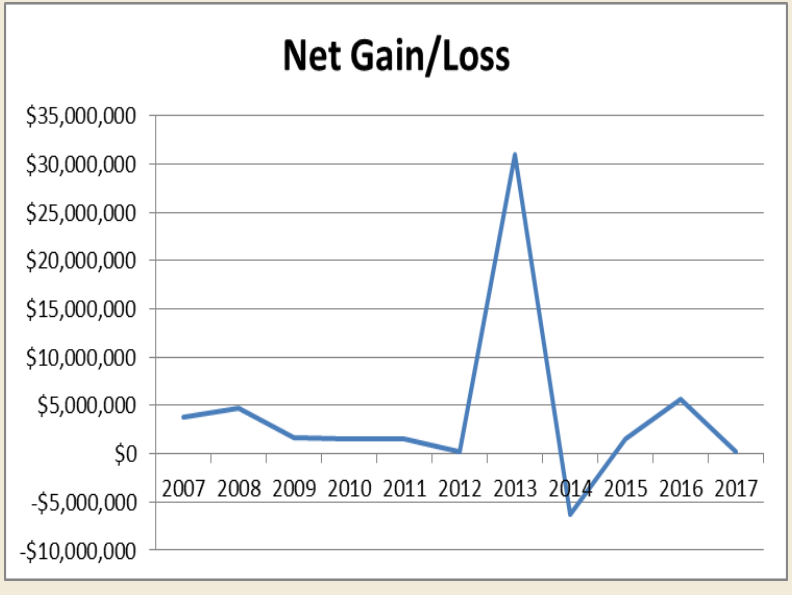
Wastewater Enterprise Fund

Receives no funding from General Fund
Revenues include:

- User Fees
- Televising Pipes
- Bonds
- Septage, Grease
- Credit Card Rebate
- Permit Fees
- Assessment Fees (Assessment, Tap and Interest)
- Clean Water State Revolving Fund (CWSRF)
- Laboratory (Commercial Testing, Extra-Strength Surcharge and Fines)

BUDGET





Revenue includes bonds/loans

Array Cities Rates

	Base Rate per month cubic feet (cf)	Rate per 100 cubic feet (cf)	Monthly Average Residential Bill
St. Joseph, MO	**$33.40** /mos. (city limits) **$78.38** / mos. (outside city limits)	**$4.98** / 100 cf (city limits) **$11.38** / 100 cf (outside city limits)	$ 70.95
Lawrence, KS	**$12.10** / mos. (city limits) **$12.91** / mos. (outside city limits)	**$5.17** / 100 cf (city limits) **$6.20** / 100 cf (outside city limits)	$ 51.08
Manhattan, KS	**$20.60** for first 200 cf	**$3.10** / 100 cf	$ 43.97
Iowa City, IA	**$8.15** / mos. (includes the first 100 cf)	**$3.99** / 100 cf	$ 38.23
Jefferson City, MO	**$10.72** / mos. (city limits) **$32.16** / mos. (outside city limits)	**$3.22** / 100 cf	$ 35.00
Grand Island, NE	**$8.24** / mos.	**$3.28** / 100 cf (city limits) 20% surcharge outside city limits	$ 32.97
Sioux City, IA	**$3.96** / mos.	**$3.73** / 100 cf	$ 32.08
Ames, IA	**$10.71** / mos.	**$2.74** / 100 cf	$ 31.37
Cheyenne, WY	**$4.61** for 5/8" water meter 50% surcharge outside city limits	**$3.31** / 100 cf (city limits) 50% surcharge outside city limits	$ 29.57
Rapid City, SD	**$3.48** for 5/8 total meter charge	**$3.25** / 100 cf	$ 27.99

STAFFING – FTE

(includes all wastewater staff)

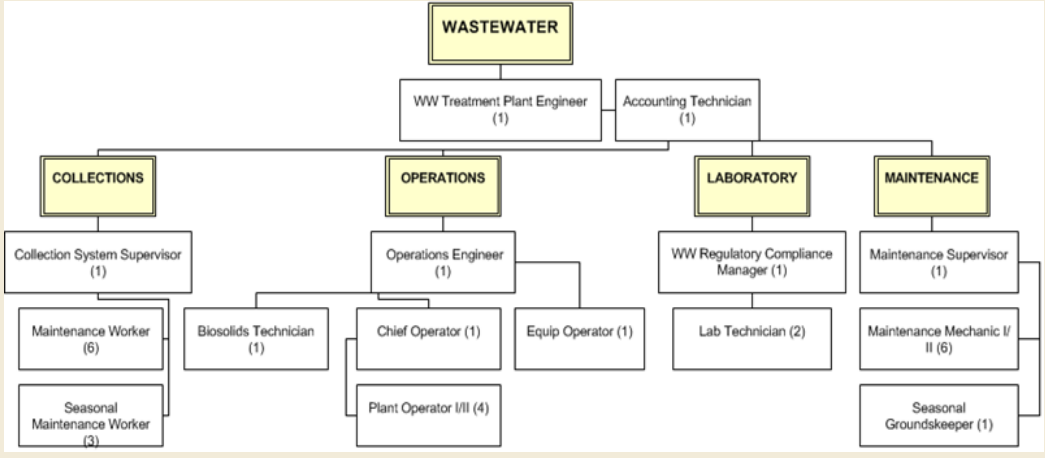
Comparable with Array and NEIWWPCC Guidelines for GI sized facilities

2011 Council Directed Reorganization nearing completion

Array Cities – Staffing

Plant Staffing Comparison

City	Population	Average MGD	FTE
Ames, IA	61792	6	17
Iowa City, IA	73415	9.66	20
Jefferson City, MO	43330	8	17
Lawrence, KS	90811	8.5	41
Rapid City, SD	72638	8.5	17
Manhattan, KS	55000	5	17
Sioux City, IA	82684	12.92	24
St. Joseph, MO	76967	24	50
Cheyenne, WY	62448	8.3	24
Grand Island, NE	50000	9	19.5



Regulatory Permits/Compliance

- NPDES Permit
  - Discharge Monitoring Reports
  - 40 CFR 135 Lab Tests
  - Pre-Treatment Permits
  - Sludge Testing & DMR
  - Effluent Metals and Toxicity Testing
- NPDES Dewatering Wells
- Storm Water Pollution Prevention Plan (SWPPP)
- Air Pollution Permit
- OSHA

FLEET SERVICES DIVISION

Internal Service

FLEET SERVICES DIVISION

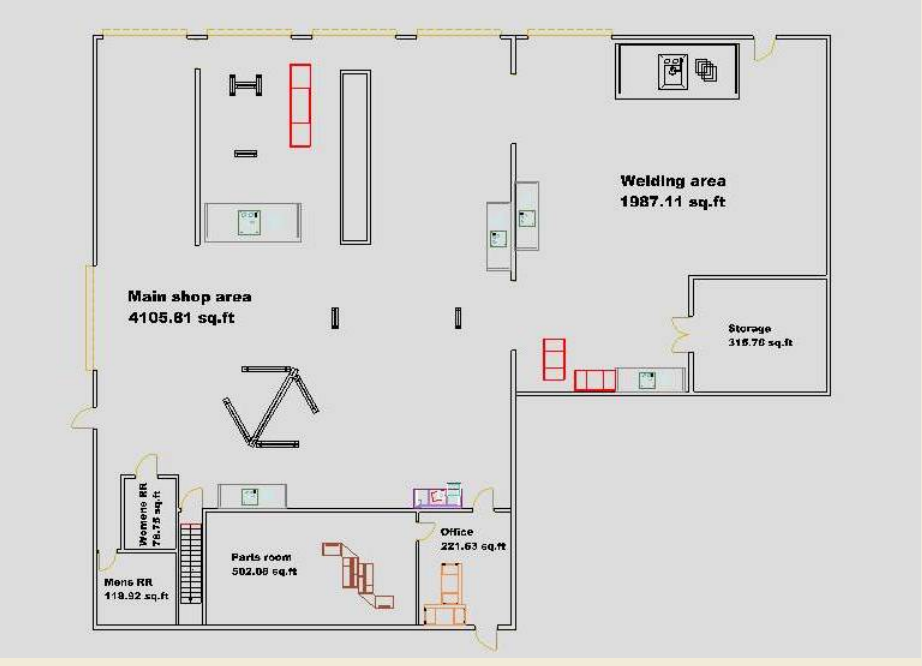
- Emergency Operation Repairs (24/7)
- Specialized/Production Equipment
- Security

Warranty repair on "LADDER 1"

FACILITIES

Fleet Services Office & Shop Garage – 1111 W. North Front

- 6,000+ SF shop area
- 7 Bays
- 2 Hoists
- Service Pit
- Welding Area
- Fuel Island

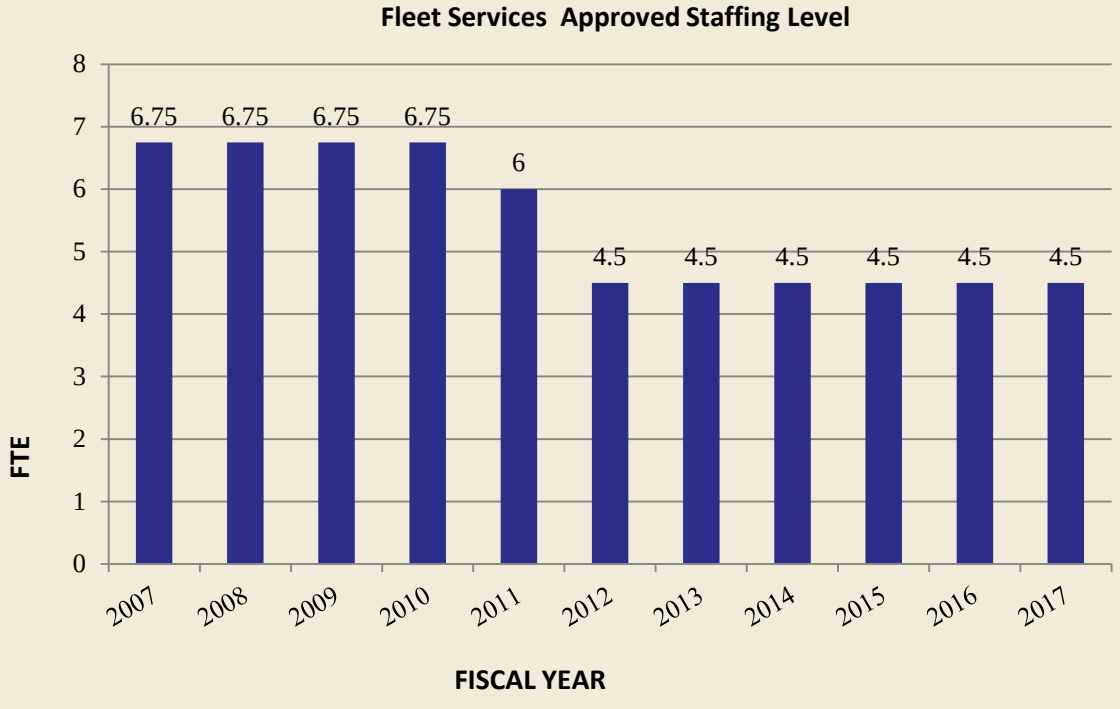


FACILITY IMPROVEMENTS

- Shop LED Lights, FY 2013
- Welding Area Vent Hood, FY 2013
- Tire Machine, FY 2013
- Fuel Dispenser Replacement, FY 2014
- New Server, FY 2014
- CFA (Fleet Management Software) Upgrade, FY 2015
- Scan Tool, FY 2016
- Ceiling Dry Wall, FY 2017
- Fuel System Software Upgrade, Planned FY 2017
- Shop Area Painting, Planned FY 2017

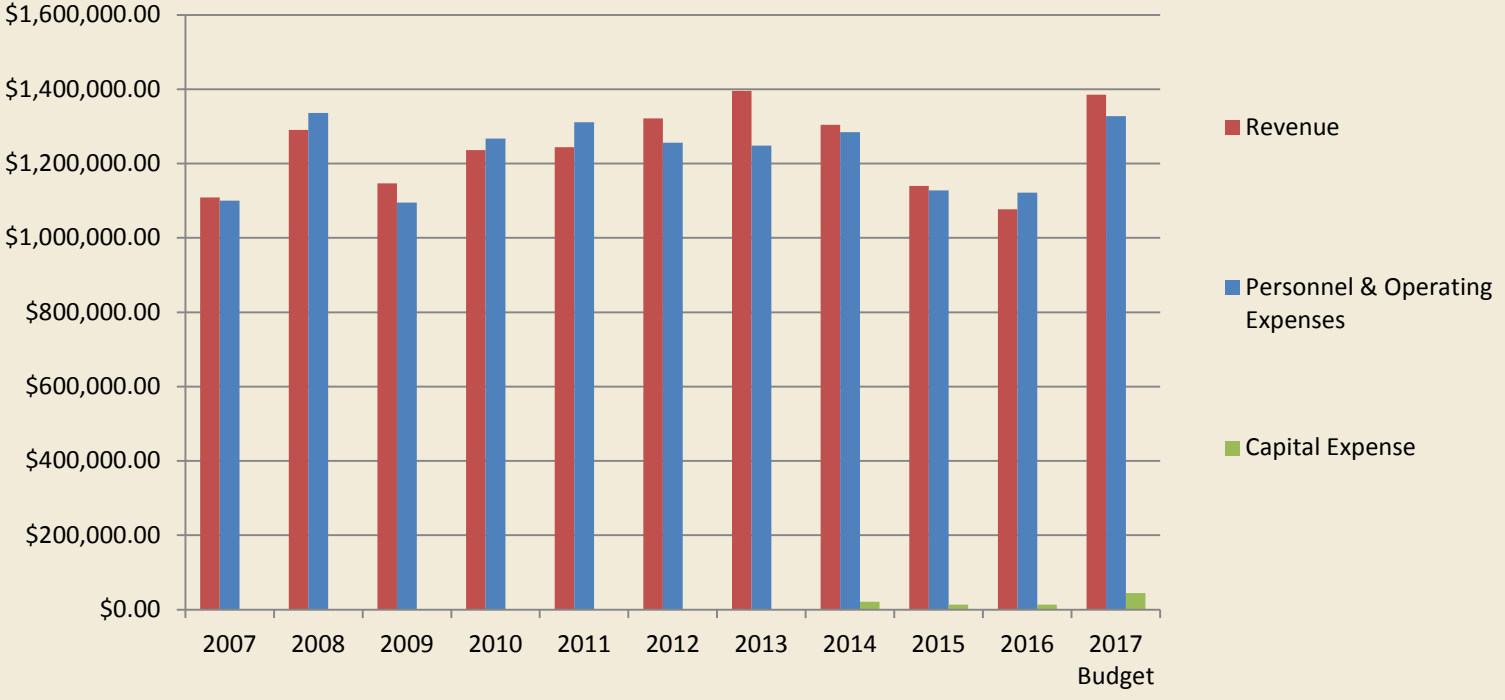
STAFFING

Foreman (1)
Mechanic (3)*
Accounting Tech (0.5)**
TOTAL (4.5)



*AFSCME Union
**IBEW Union

BUDGET


$1,600,000.00
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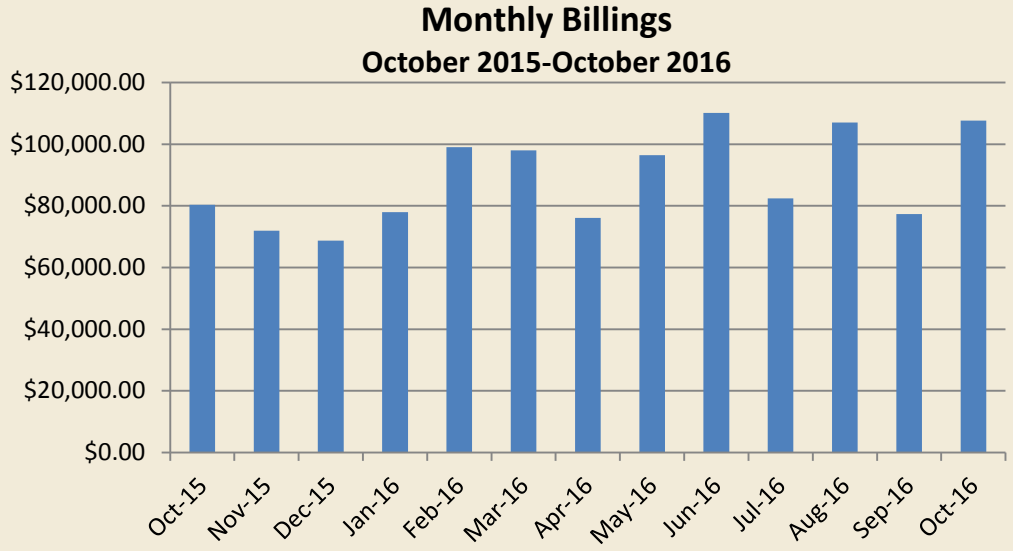
$1,200,000.00
$1,000,000.00
$800,000.00
$600,000.00
$400,000.00
$200,000.00
$0.00
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017 Budget
Revenue
Personnel & Operating Expenses
Capital Expense

REVENUE

Goals

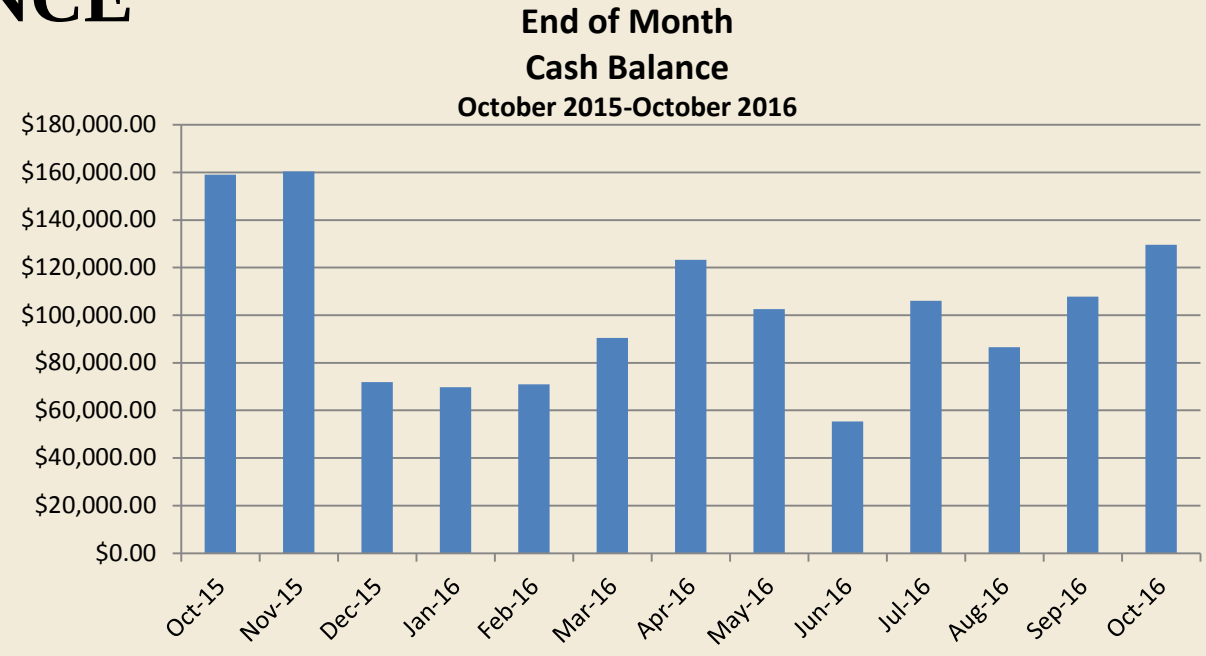
- Billable Hour Efficiency at or above 80%
- Parts Mark-Up at or below commercial repair shops
- Fuel Mark-Up at or below commercial pumps
- 1% of Operating Budget



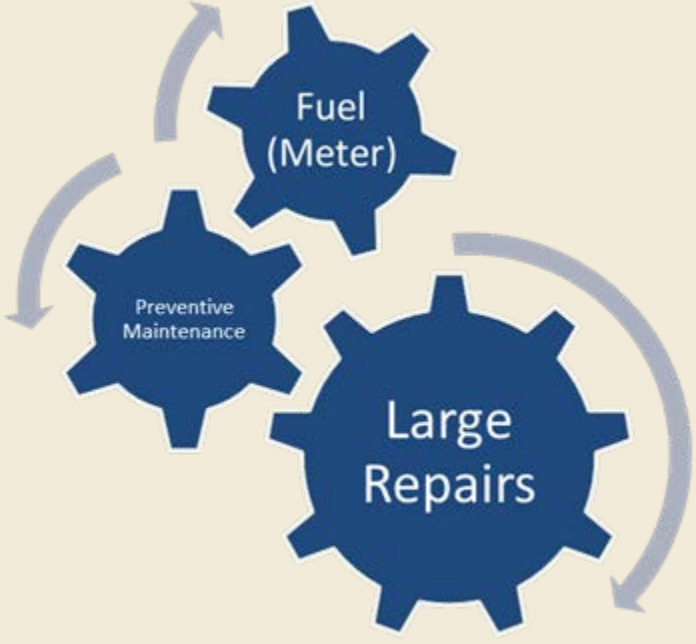
CASH BALANCE

Cash Needs

- Monthly Billing
- Cost of Business
- Capital Purchases

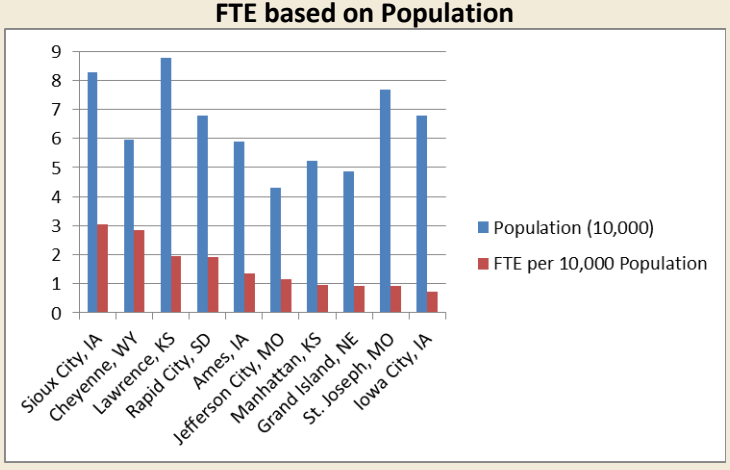


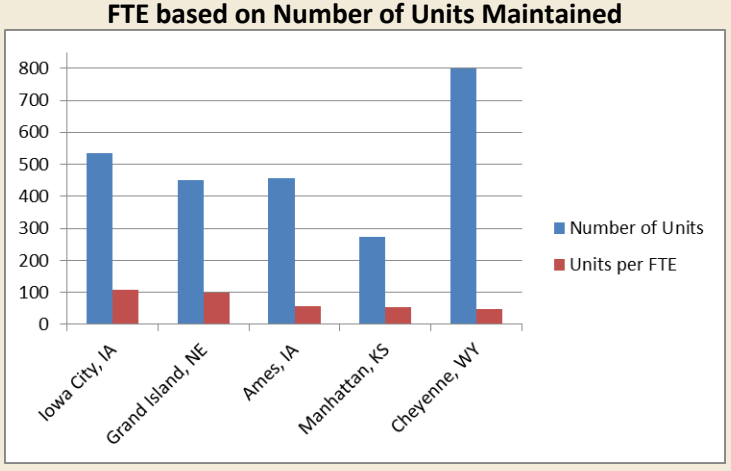
PROGRAMS



- Fuel
- Preventive Maintenance
- Large Repairs
- Parts Inventory
- Towing

ARRAY COMMUNITY COMPARISON





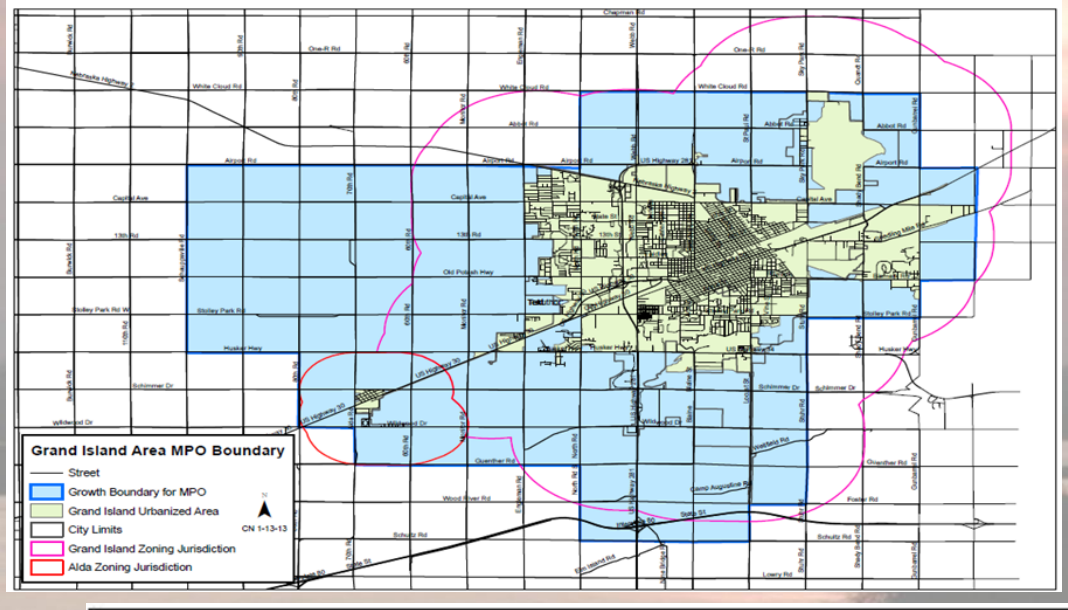
Responsibilities Vary

- Equipment Replacement Fund
- Equipment Procurement

Customers Vary

- Municipal Airport
- Public Transit
- Schools
- Surrounding Communities
- Outside, Government Agencies

Metropolitan Planning Organization (MPO) Division



Grand Island Area Metropolitan Planning Organization (GIAMPO)

Metropolitan Planning Organization (MPO)

- Required in Urbanized Areas (UZA) over 50,000
- Regulated by Federal Law
- Federally Funded by USDOT (FHWA/FTA) 80%
- Transportation Policy-making and Planning
- Responsible for Regional Transportation Planning and Coordination

GIAMPO Policy Board

Required to have a decision-making “policy body”

- Comprised of elected and appointed officials representing local, state, and federal government and agencies
- Sets regional long-term transportation policy and approves work products

GIAMPO Technical Advisory Committee

- An advisory body to the Policy Board which provides technical support and recommendations
- Comprised of staff-level officials of local, state, and government and agencies

GIAMPO Staff

- Provide information and support to the Policy Board and Technical Advisory Committee
- Prepare required state and federal documents
- Manage the planning process
- Coordinate transportation studies and projects

MPO Products

	Time Horizon	Contents	Update Requirements
UPWP	1 Year	Planning Studies, Tasks, Budget	Annual
LRTP	20 Years (minimum)	Future Goals, Strategies & Projects	Every 5 Years
TIP	4 Years (minimum)	FHWA, FTA, and Regional Significant Projects	Every Year

Funding

- Federal government (FHWA, FTA) – 80%
- Local government (Grand Island) – 20%
- Total Expenditures
  - State FY2014 – $115,775
  - State FY2015 – $90,543
  - State FY2016 – $306,823

STREETS DIVISION

STREETS DIVISION

- Streets & Alleys
- Drainage
- Right-of-Way
- Snow and Ice Removal
- Traffic Control
- Bridges

FACILITIES

Streets Division Office and Main Yard – 1111 W. North Front

- Leased from the Union Pacific Railroad.
- 20-year lease approved by City Council in December 2003 for $75,822
- Due for renegotiation (if desired) in 2023 and budgeted in FY 2024.

“West Yard” - 2124 Old Lincoln Hwy

- Owned by the City
- Salt storage dome (800 ton capacity), traffic signal shop, sign shop, equipment storage buildings, laydown yard.
- New five bay building (2013), install gutters, roof repair, separation of welding and wood working areas, wash bay improvements, and “soft” remodel of a dedicated traffic signal shop.

STAFFING

Street Superintendent (1)

Foreman (2)

Sr. Maintenance Worker (2)*

Sr. Operator (5)*

Operator (5)*

Maintenance Worker (5)*

Traffic Signal Tech (2)*

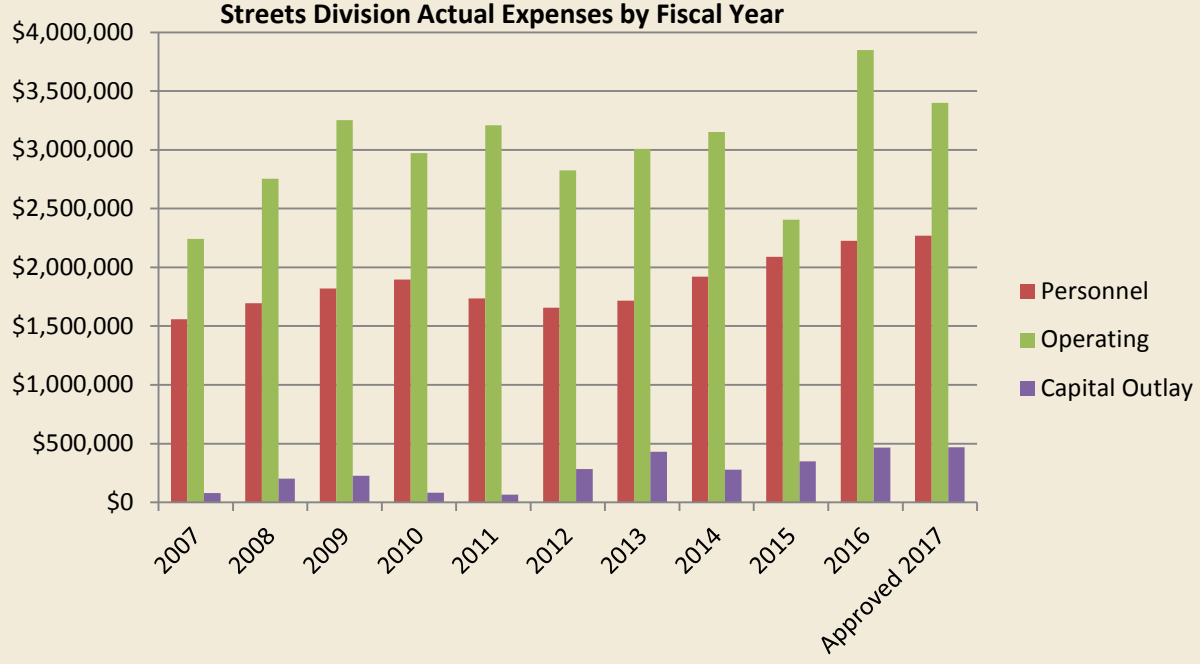
Accounting Tech (0.5)**

TOTAL (23.5)

*AFSCME Union

**IBEW Union

BUDGET



FY 2016-2017 reporting transitioned from General Fund to Special Revenue Fund (Gas Tax); but no actual change in revenue.

OPERATING BUDGET

- General Operating
- Snow and Ice Removal
- Street Maintenance
- Drainage Maintenance
- Traffic Controls and Safety
- Non-Capital Projects

Expenses include range of items from Street Repair Materials to Contractor Services to Landscaped Median Water Fees. Three largest line item expenses (10-year average):

- Resurfacing Project - $664,817
- Contracted Concrete Repair - $607,710
- Street Light Utilities - $328,640

"STREETS" REVENUE

Funding Sources obligated for roadway maintenance and/or construction

- Highway Allocation (Gas Tax Fund, requires 25% local match)
- Motor Vehicle Fees (Gas Tax Fund)
- Motor Vehicle Property Tax
- Motor Vehicle Local Sales Tax
- NDOR Urban Maintenance Agreement
- Road Incentive Payment
- Federal Fund Purchase Program, Bridge (New in FY 2015)
- Federal Fund Purchase Program, Surface Transportation Program (New in FY 2016)

LANE MILES

Calculation to apportion Highway Allocation Funds (gas tax) to municipalities

- Total Population (50%)
- Total Motor Vehicle Registrations (30%)
- Miles of Traffic Lanes of Streets (20%)

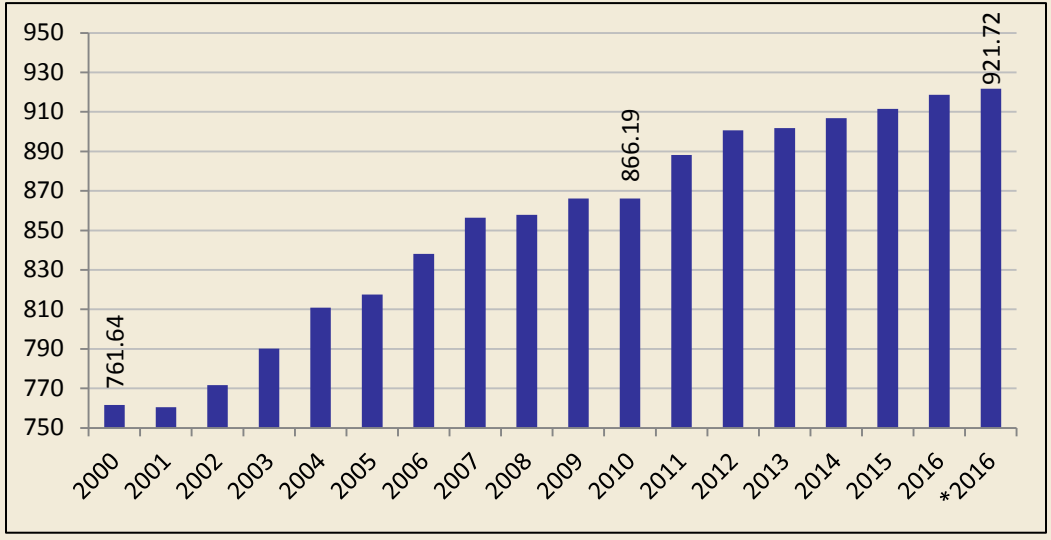
Determined using the below guidelines

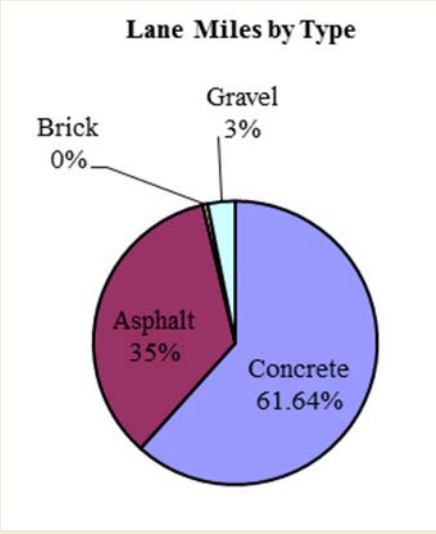
- Miles of lanes based on the width of the travel way only

10’-20’ wide = 1 lane	40’-49’ wide = 4 lanes	70’-79’ wide = 7 lanes
20’-29’ wide = 2 lanes	50’-59’ wide = 5 lanes	80’-89’ wide = 8 lanes
30’-39’ wide = 3 lanes	60’-69’ wide = 6 lanes	90’-99’ wide = 9 lanes

- Public Streets (no alleys) that are Existing and Open to Traffic
- Gravel Streets receive 2-Lane credit

LANE MILES





*Increase is fairly consistent from 2006 to 2016 at a little over 1% or 10 miles/year
Somewhat faster during the preceding 10 years

EQUIPMENT

$6 Million estimated value for fleet of equipment and vehicles.

- Backhoe (1)
- Skid Steer (2)
- Front End Loader (3)
- Tractor, Large (2)
- Tractor, Small (1)
- Motor Grader (4)
- Street Sweeper (4)
- Dump Truck 10 YD (8)
- Dump Truck 5 YD (3, 2 in winter)
- Salt Truck (3, 4 in winter)
- Pickup ½ Ton (8)
- Pickup ¾ Ton (2)
- Pickup 1 Ton + (2)
- Aerial Lift Truck, Insulated (1)
- Aerial Lift Truck, Non-Insulated (1)
- Platform Lift Truck (1)
- Sewer Flush/Vac Truck (1)
- Milling Machine (1)
- Grade All (1)

EQUIPMENT

$1 Million estimated value for Attachments and Small Equipment.

- Asphalt Zipper (1)
- Air Compressor (3)
- Crack Sealing Kettle
- Sign Making Equipment
- Mower Deck (skid steer)
- Mower Deck (tractor, 4)
- Conflict Monitor Tester
- Vactor Nozzles and Camera
- Weed Spraying Tank and Spray Bar (2)
- Thermoplastic Applicators and Pre-Melters (2)
- Sand Blaster
- Paint Shaker
- Concrete Saws
- Mastic Kettle
- Snow Heaver (2)
- Utility Locator
- Groover/Grinder
- Paint Machine (2)
- Broom
- Routers
- Rock Saw
- Trailers
- Forklift
- Drop Hammer
- Vee Plow (2)
- Snow Plow (13)

PROGRAMS

Pavement Maintenance & Repair

- Concrete Pavement Repairs
- Asphalt Pavement Hot-Mix Patching
- Crack & Joint Sealing
- Mastic Sealing
- Pothole Patching
- Resurfacing Project

Bridge Maintenance

- Guardrail Repair/Delineation
- Deck Repairs
- Inspections

Right-Of-Way Maintenance

- Grading Gravel Streets & Alleys
- Street Sweeping
- Mowing
- Weed Spraying
- Adopt-A-Road/Litter Pick-up
- Curb Milling
- Driveway & Sidewalk Inspections

PROGRAMS

Traffic Control

- Traffic Signal Maintenance
- Street Lighting…Utilities Overhead Division
- Sign/Barricade/Delineator Maintenance
- Tree Trimming & Removal
- Work Zone Traffic Control
- Pavement Markings

Snow & Ice Removal

- Salting
- Plowing

Drainage

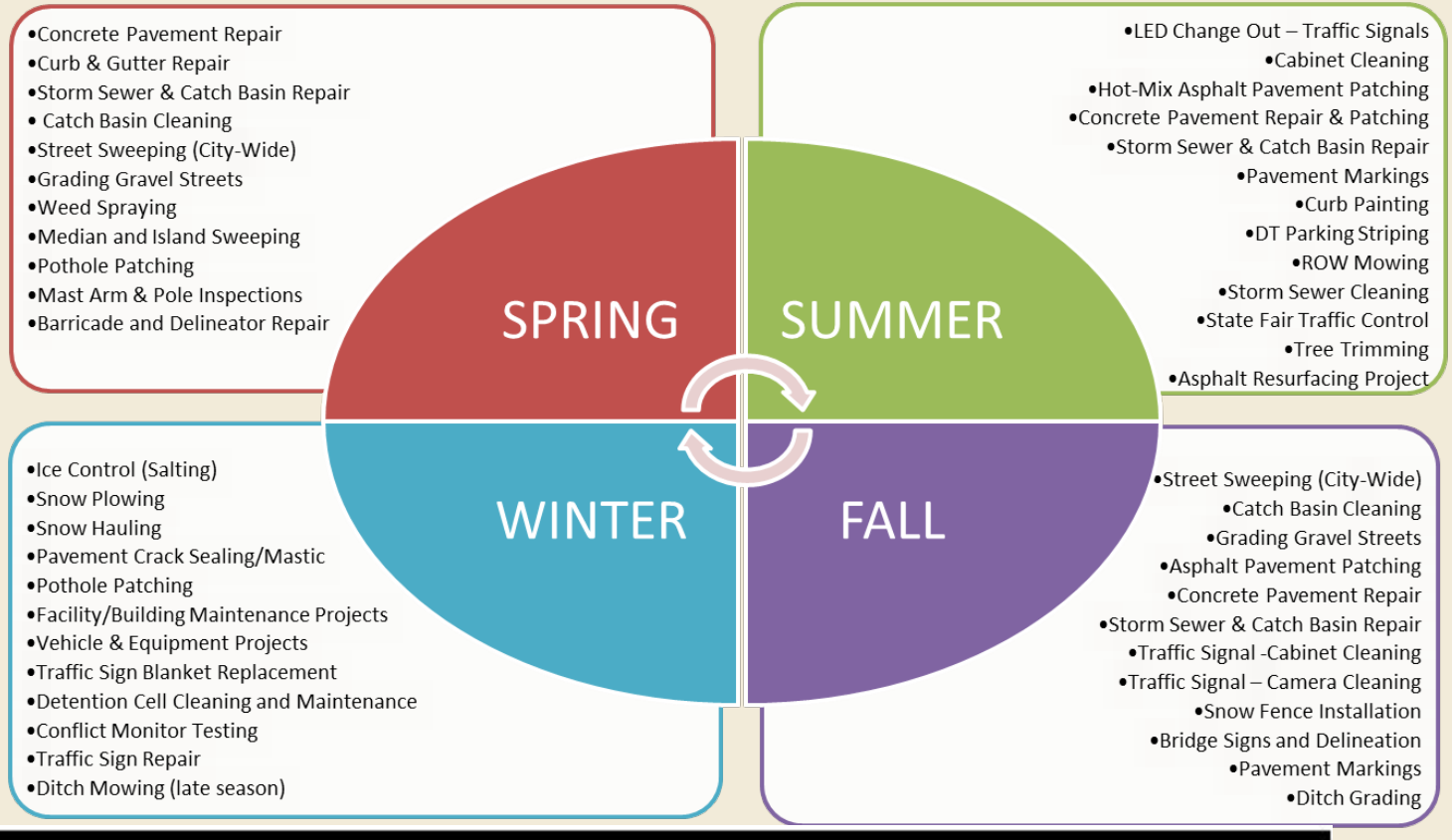
- Storm Sewer Cleaning
- Catch Basin Cleaning
- Detention Cell Cleaning
- Ditch Grading

Locates

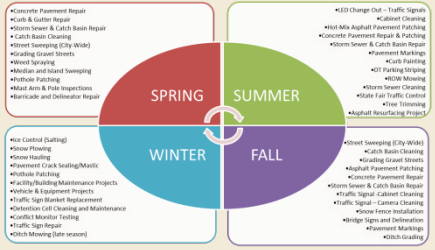
Specials

- Flags & Banners
- Special Event Traffic Control

FUNCTIONS BY SEASON



FUNCTIONS BY SEASON



NON-SEASONAL FUNCTIONS

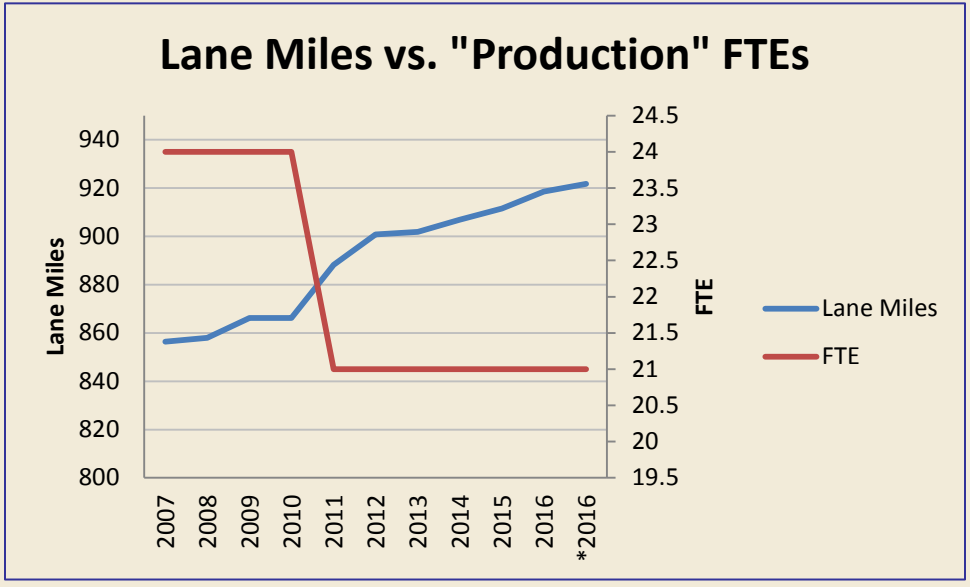
- Traffic Regulation Changes (parking, speed limits)
- Sweeping Call-Outs (spills and accidents)
- Downtown & Special Event Area Sweeping
- Special Event & Block Party Traffic Control
- Locates
- Sign Repairs
- Curb Milling
- Banners & Flags
- Bridge Inspections
- New Street name signs
- Traffic Control Plans
- Traffic Signal Call-Outs
- Alley and Gravel Street Grading
- Driveway & Sidewalk Inspections
- Adopt-A-Road bag collection
- Underpass Walkway Clean-Up

CONTRACTED WORK

- Concrete Pavement & Storm Sewer Repair, annual contract
- Asphalt Resurfacing, annual contract
- Snow Removal, annual contract (residential areas)
- Pavement Markings, annual contract
- Specialty Items, as-needed
  - Guardrail Repair
  - Fine mowing
  - Boring
  - Pump Repair
  - Tree Removal
  - Excavator

WORK LOAD

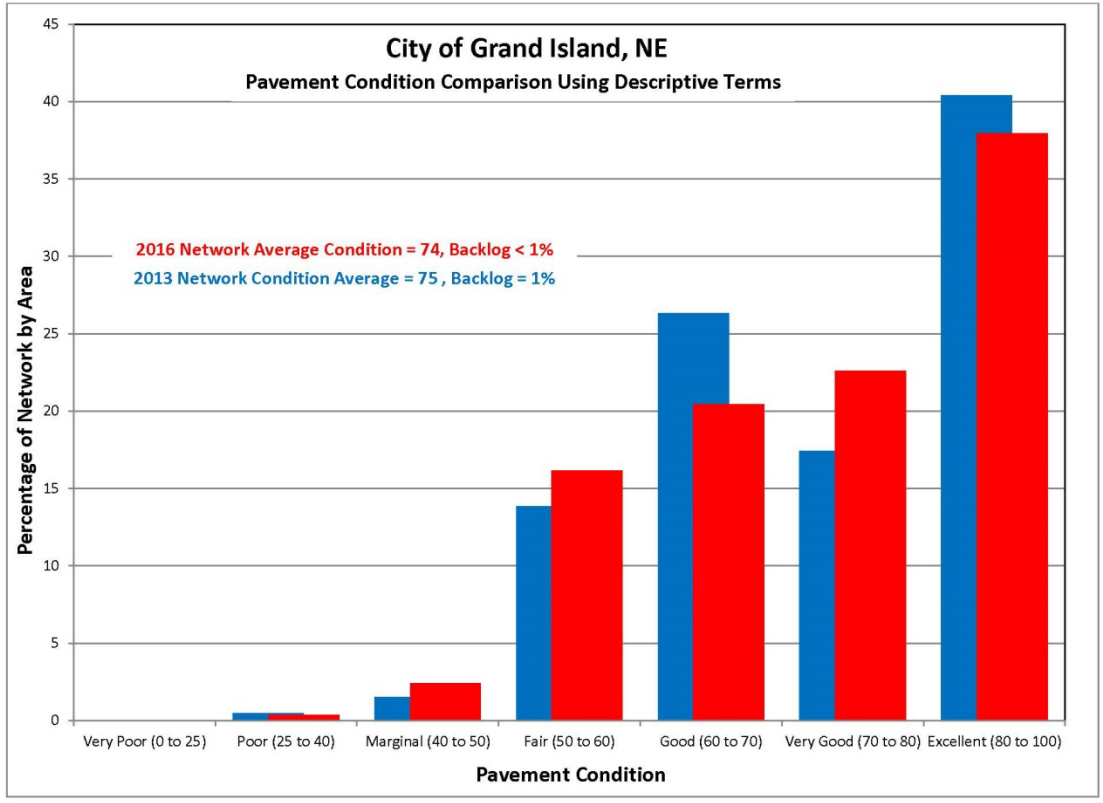
- Pavement Markings contracted beginning in 2014 (freed 3 workers for 4 months or 1 FTE).
- Added Storm Sewer Cleaning program (-2/3 FTE).
- Net gain 1/3 FTE



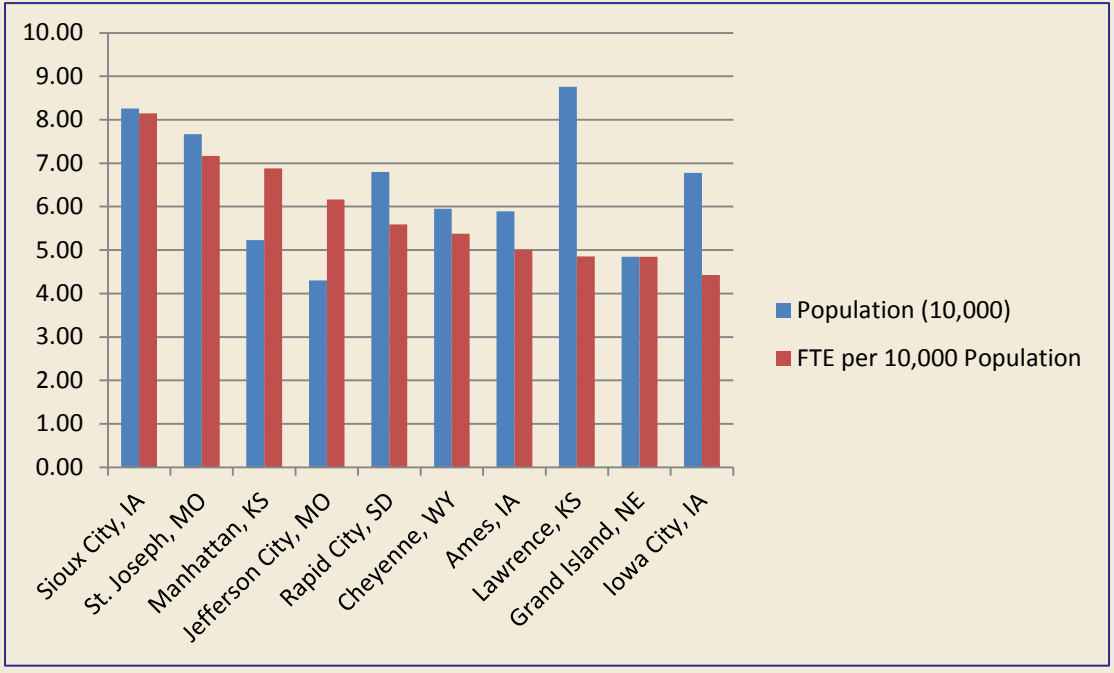
PAVEMENT NETWORK EVALUATION

GASB 34 Requirement

- 3-Year cycle
- Pre-2013, Crack Count
- 2013,2016 Complete Objective Evaluation
- 2016 State Highways added
- Results used for Planning



ARRAY COMMUNITY COMPARISON



- Responsibilities Vary
  - Traffic Division
  - Storm Sewer Maintenance
  - Urban Forestry
- Budgets Vary
  - Funding, Revenue Sources
  - Capital vs. Non-Capital Expenses
  - Equipment Replacement Fund
  - Storm Water Utility
- Programs Vary
  - Staffing Levels
  - Equipment
  - Goals (Level of Service)

Engineering Services Division

Activities

- Provide technical services and assistance for public improvement projects
  - Design, project management, and limited field inspection as staffing allows
  - Internal design
  - Manage consultants
- Plan review of improvements for developer proposed projects
- Technical support to Streets Division for planned maintenance projects
- Provide engineering and project management support to Wastewater Division
- (GIS) data collection for inventory and asset management

- Data collection
  - Traffic volume counts on streets and intersection
  - GPS survey information to evaluate solutions for problems
  - Manage program for data collection of city-wide street conditions
- Develop project concepts and budgets
- Develop projects to maintain or repair existing infrastructure
- Manage paving and sewer districts from request to implementation
- Respond to public requests

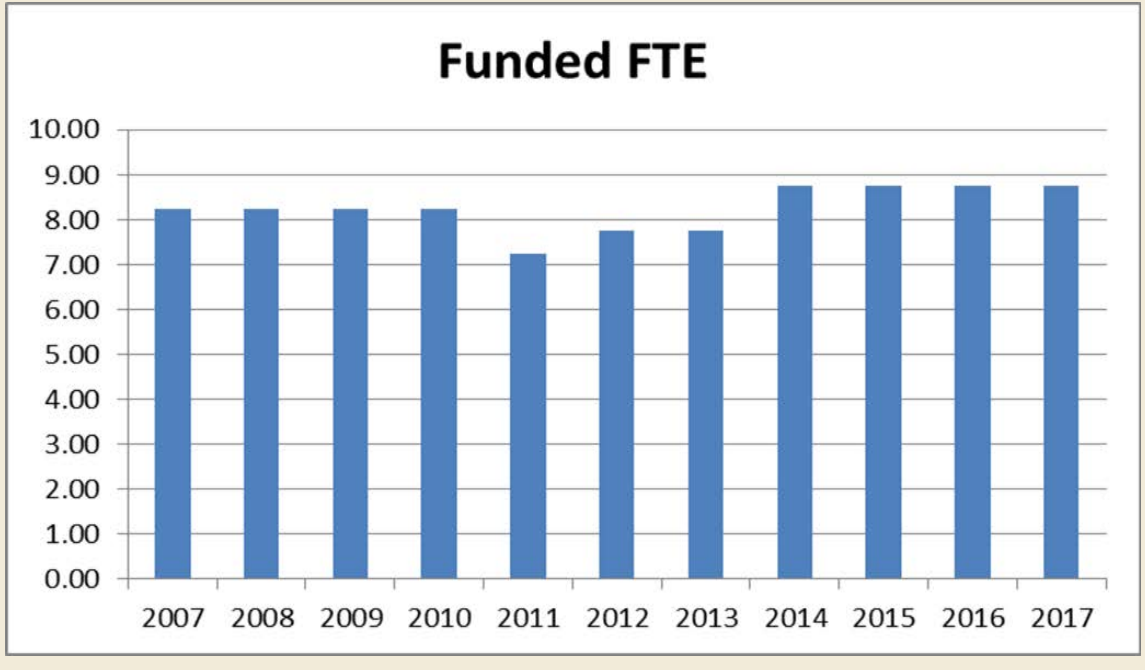
- Standards
- Accounts Payable/ Receivable
- Traffic
- Drainage
- Design
- Construction Management
- Conditional Use Review
- Development/Subdivision Review
- Oversize/weight Permits
- Sanitary Sewer Connect/Disconnect
- License agreement
- Street Opening Permit
- Right of Way Permit
- Responsible Charge
- Environment
- Public Notification/Hearing
- Site Obstruction
- Street Closure
- RFP/RFQ
- Consultant Management
- Pavement Management
- Asset Management
- GIS
- Bridge Program
- Sidewalks
- Pedestrian Crossing
- Site Review
- Geometric analysis
- Parking
- Capital Improvement Program (CIP)
- Surveys
- Property acquisition
- Right-of-Way/Easement Vacations
- Storm Water Regulations
- Public Event Applications
- Block Party Requests

Stormwater Management Program (SWMP)

- Requirements
  - Apply for National Pollutant Discharge and Elimination System Permit (permit is valid for 5 years)
  - Develop and Implement a Stormwater Management Plan (SWMP)
    - 7 required Minimum Control Measures (MCMs)
  - Develop goals and evaluate effectiveness of the SWMP
  - Submit Reports to Nebraska Department of Environmental Quality (NDEQ)

Minimum Control Measures

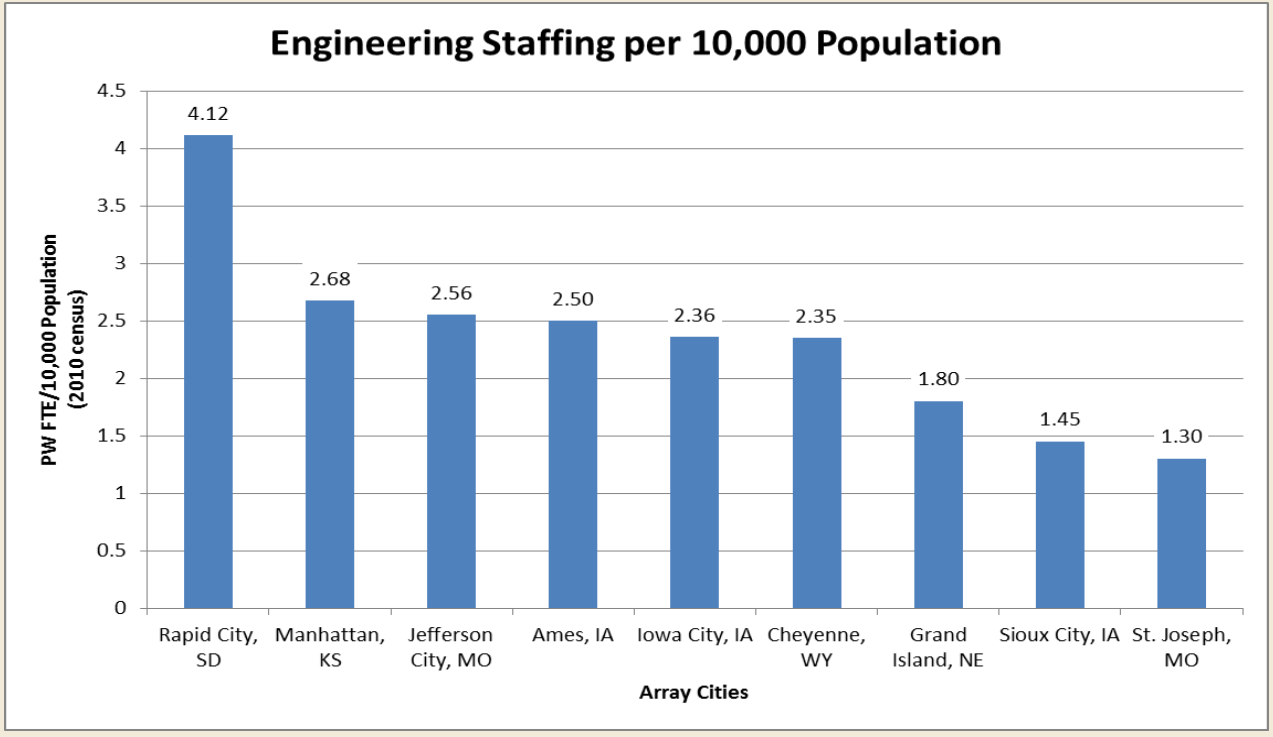
- Seven Current Control Measures
  - MCM 1 - Public Education and Outreach
  - MCM 2 - Public Involvement/Participation
  - MCM 3 – Illicit Discharge Detection and Elimination
  - MCM 4 – Construction Site Stormwater Runoff Control
  - MCM 5 – Post-Construction Stormwater Management
  - MCM 6 – Pollution Prevention/Good Housekeeping
  - MCM 7 – Wet Weather Monitoring



Some efficiencies from reorganization

Typically 2 or 3 vacant positions and difficulty recruiting

Administration excluded (2 FTE) from all years



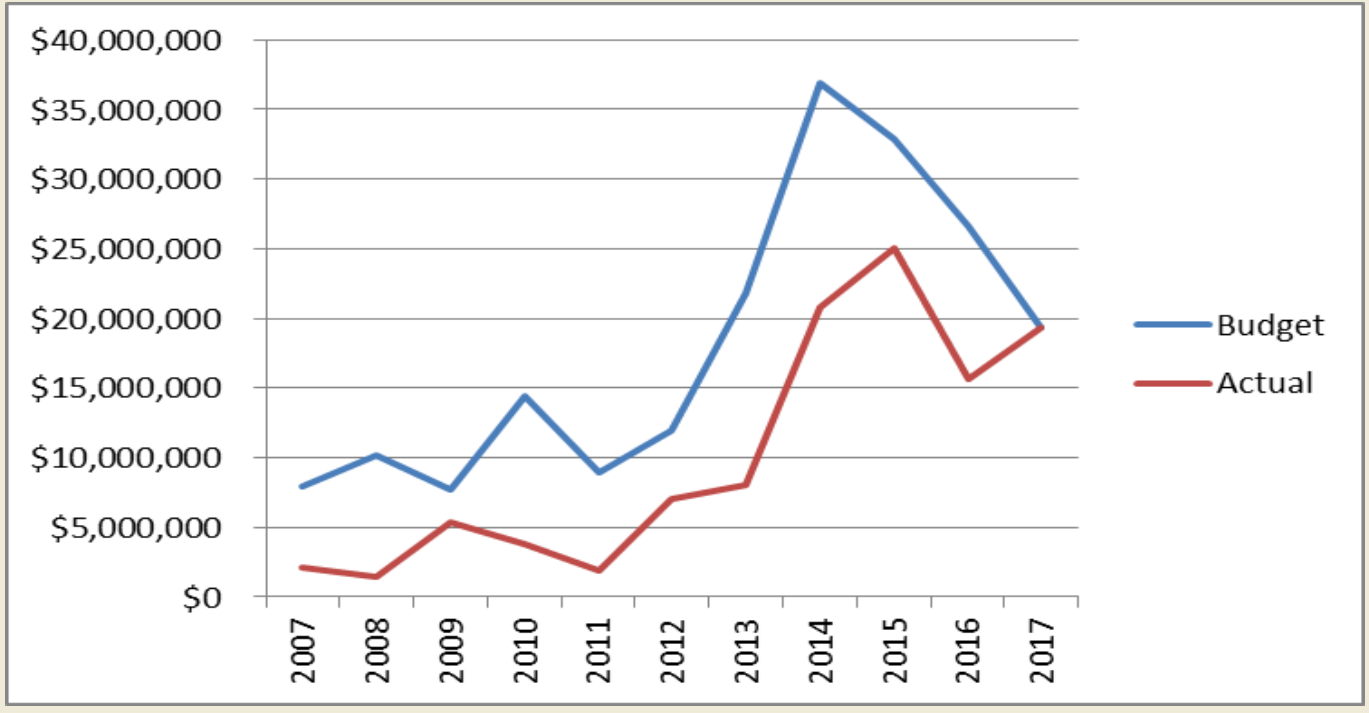
Similar Services

Other Cities observe private construction of street, drainage, or sanitary facilities

Other Cities have a Traffic Engineer

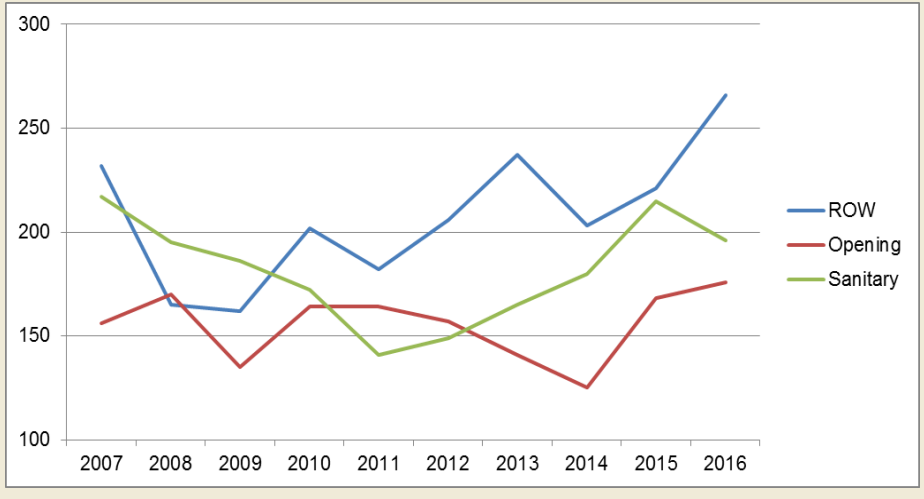
GI 3 FTE below average

CIP for Street, Drainage and Wastewater

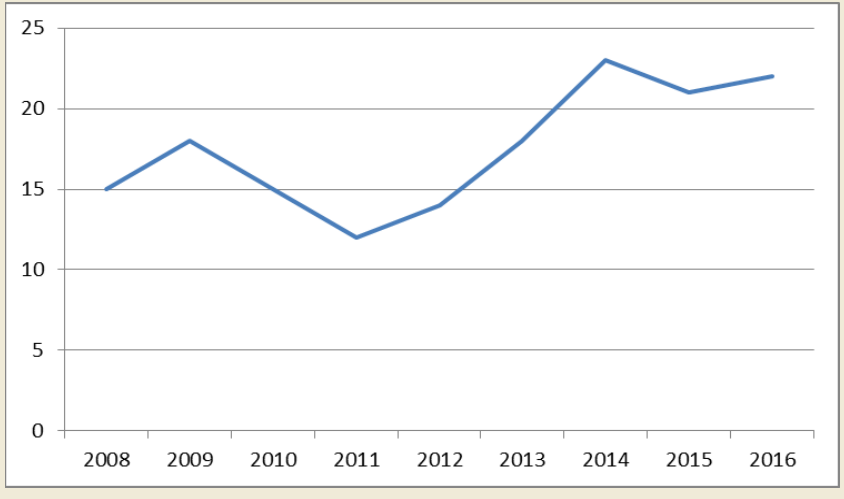


*2017 Actual is estimated

Permits



Subdivision Plats



Parking District No. 1 – Downtown Parking Lots

- Snow Removal
- Landscaping/Sprinkler Repairs
- Utility Services
- Vandalism
- Litter Cleanup
- Garbage disposal
- Tree trimming/replacement
- Pothole patching
- Pest Control

Parking District No. 2 – Downtown Parking Ramp

- Snow removal
- Landscaping/Sprinkler Repairs
- Utility Services
- Vandalism
- Litter Cleanup
- Garbage disposal
- Tree trimming/replacement
- Backflow
- 5 Year Maintenance Assessment

Transit Division

History

- 2012 - Designated recipient for FTA 5307 (Urban) transit funds.
- 2013 – Interlocal agreement for Hall County Transportation to provide services using unexpended FTA 5311 (Rural) transit funds during a transitional period.
- June 2016 – Contract with Senior Citizens Industries, Inc. $638,430 for Portal to Portal Demand Response service from 6:00am to 5:00pm
- November 2017 - Transit Needs Analysis Report Completion

Activities

- Prepare and manage state and federal grant applications
- Submit required federal reports
- Oversee transit related programs
- Ensure compliance with FTA Annual Certifications and Assurances and the FTA Triennial Review
- Manage transit operations contract

FTA Reimbursement

- Administration/Planning 80% Federal
- Capital Projects 80% Federal
- Operating 50% Federal

Each year there is the potential of a state grant up to 25% of Operating costs; this is competitive and subject to the availability of state funds

Small Urbanized Area Comparisons

	Lawrence, KS	*Cape Girardeau, MO*	*Jefferson City, MO*
Urbanized Area Population	88,053 people	52,900 people	58,533 people
Service Area	City of Lawrence	City of Cape Girardeau Cape Girardeau County	City of Jefferson City
Governance	Lawrence City Commission	Cape Girardeau County Transit Authority (CGCTA)	City Council
Service Type	Fixed Routes (6 am to 8 pm Mon to Sat) Night Line (8 pm to 6 am Mon to Sat)	Deviated Fixed Routes (6 am to 6 pm Mon to Fri and 9 am to 5 pm Sat) Demand Response Vehicles (24 hours a day, 6 ½ days a week)	Fix Routes (6 am to 6 pm Mon to Fri) Handi-Wheels (6 a.m. to 5:30 p.m. Mon to Fri)
Operations	Service Contractor	CGCTA	City of Jefferson City
Vehicle Ownership	City of Lawrence	CGCTA	City of Jefferson City
Vehicle Maintenance	Service Contractor	CGCTA	City of Jefferson City
Staffing	City – 2 Full-time Administration Positions Service Contractor – 1 General Manager, 75 Drivers and 4 Reservationists	CGCTA – 2 Full-time Administration Positions, 50 Drivers, 6 Dispatchers, and 3 Maintenance Workers	City – 2 Full-time Administration Positions, 20 Drivers, 2 Dispatchers, and 3 Maintenance Workers

FTE Array Comparisons

	City or Agency FTE	Provider FTE	Comments
Ames, IA	157	City System	partnership between Iowa State University, ISU Student Government & Ames, IA
Iowa City, IA	50	City System	
Manhattan, KS	unknown	44	A nonprofit is the contracted service provider
Sioux City, IA	unknown	12.3	City provides fixed route - para transit is contracted
Rapid City, SD	29.75	City System	
Jefferson City, MO	27.5	City System	
Cheyenne, WY	17	City System	
Lawrence, KS	3	91	similar to GI
St. Joseph, MO	1.5	53	similar to GI
Grand Island, NE	0	10.78	

*Transit is not yet staffed

Constructing and maintaining Grand Island's Infrastructure…

Public Works Department Overview

The Public Works Department is a 24 hour a day, 7 day a week operation handling almost 20% of the City's budget and maintaining the majority of the City's assets. The 8 divisions include:

- Administration
- Engineering Services
- Fleet Services
- Transit
- MPO
- Solid Waste
- Streets and Drainage
- Wastewater

The Transit Division is new, created because of a federal requirement that the City be the agency receiving FTA funds for MSA designated areas. This was formally handled by Hall County

The MPO is new, created because of a federal mandate that urban areas with a population greater than 50,000 have an MPO.

The 2017 budget can be summarized as follows:

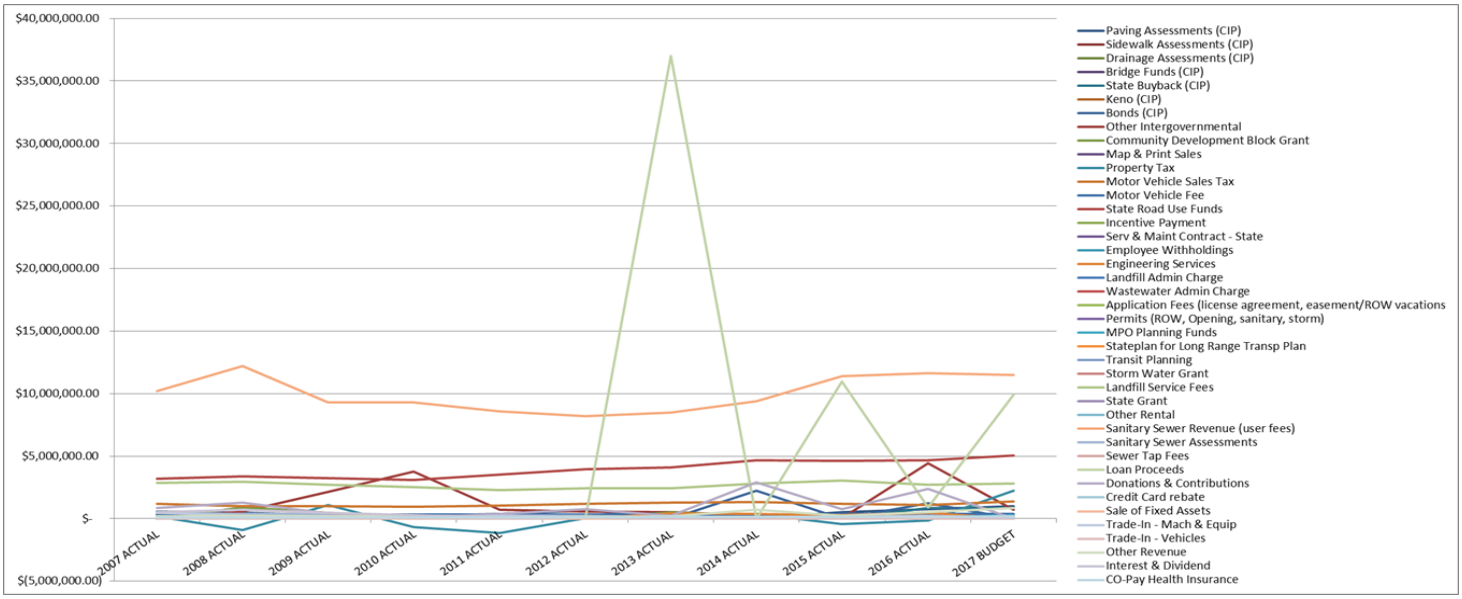
Admin	$	432,417
Solid Waste	$	3,239,975
Wastewater	$	22,840,677
Fleet	$	1,372,101
MPO	$	361,425
Streets	$	6,136,612
Engineering	$	1,037,174
CIP	$	5,618,102
Parking District No. 1	$	68,280
Parking District No. 2	$	21,000
Transit	$	791,622
	$	**41,919,385**

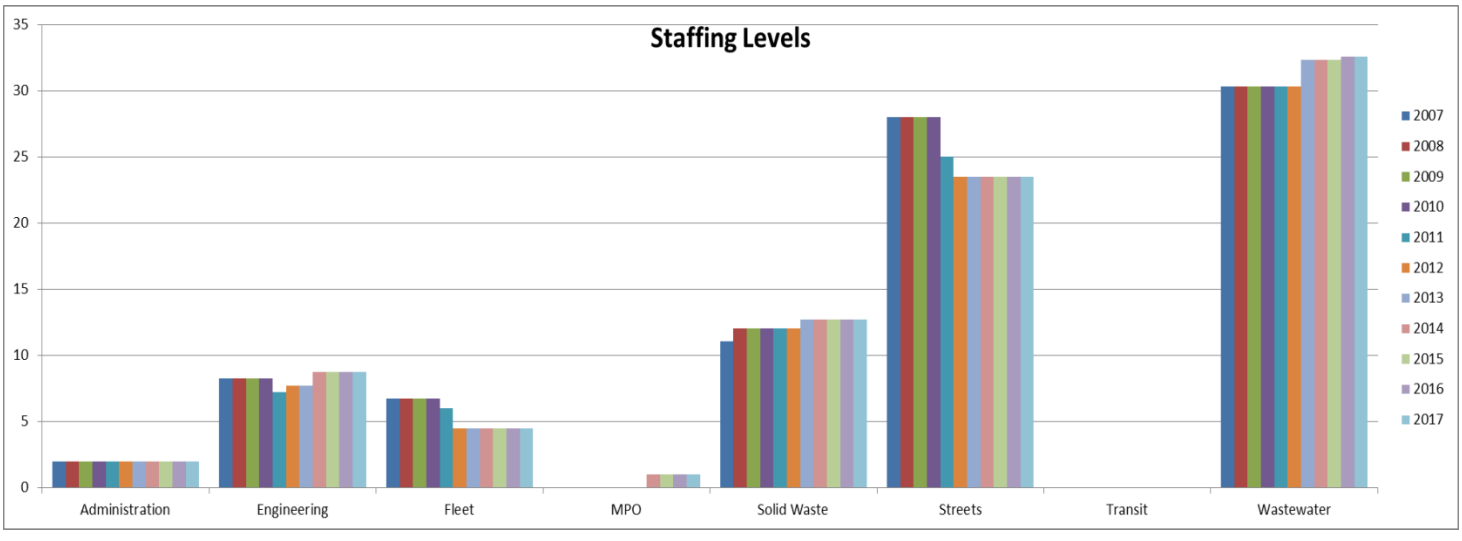
This includes only funds covered by the City Budget, and excludes direct payments by others as occurs with some federal programs.

One of the hidden costs is the deterioration of infrastructure. Infrastructure is similar to vehicles, repair and maintenance costs increase over time and performance diminishes until you finally replace it; scheduled preventive maintenance/repair/replacement is usually much less expensive than emergency repair/replacement. The Asset Management System under development will track this and be able to predict deterioration and provide budget estimates for each asset class.

The recent Pavement Survey provided this information for our streets. It estimated the value of the pavement at $462,214,000 and the amount needed for surface treatments at $2,980,000. The sum of all pavement activity cost about $3 million annually, and the surfaces are in reasonably good condition (5 to 10 points above the regional average of 60 to 65).

As indicated below, Public Works has numerous revenue sources. The green spikes are bonds, primarily related to Wastewater. The orange hovering around $10 million is sanitary sewer fees. The blue line that goes negative in some years is property tax.





The City grew 10% to 12% from 2006 to 2016: increasing by 3.3 square miles and 84 lane miles. Work for each division is directly proportional to the size of the City.
Staff has decreased in Fleet Services, and Streets and Drainage.
Engineering Services has had increases and decreases in staff. The level for fy 2017 is deceptive in that 1.75 FTE were intentionally left vacant, which would be a total FTE of 7 or a reduction of 1.25 from the beginning of the period.
Solid Waste staff rose to meet increased demand.
Wastewater staff increased to meet demand and changed to comply with a Council directed reorganization, which is nearing completion.

From 2007 to 2017 the following awards were received:

- Engineering Division – 2013 Concrete Pavement Construction Best Local Project
- Wastewater Division – 2013 Certificate of Appreciation
- Engineering Division - 2014 Central Platte Natural Resources District Community Conservation
- Wastewater Division – 2014 Certificate of Appreciation
- Wastewater Division – 2014 Gold Safety
- Wastewater Division – 2014 Scott Wilbur Outstanding Facility
- Wastewater Division – 2015 Certificate of Appreciation
- Wastewater Division – 2015 Silver Safety
- Wastewater Division – 2015 Scott Wilbur Outstanding Facility
- Wastewater Division – 2015 WEF Laboratory Analyst Excellence
- Engineering Division – 2016 Concrete Pavement Construction Best Urban Street Project
- Streets Division – 2016 NELTAP & APWA Winter Maintenance Motor Grader Second Place
- Streets Division – 2016 NELTAP & APWA Winter Maintenance Motor Grader Third Place
- Wastewater Division – 2016 Certificate of Appreciation
- Wastewater Division – 2016 Silver Safety
- Wastewater Division – 2016 Scott Wilbur Outstanding Facility
- Wastewater Division – 2016 Scott Wilbur Large Facility Best in Class
- Wastewater Division – 2016 Scott Wilbur Innovation

Depending on duties, Public Works employees require specialized training, certifications, and licenses, most of which is required by federal and/or state law. Most of these require annual training and/or testing to retain.

Certifications:

- ACI Concrete Field Testing
- AICP (American Institute of Certified Planners)
- Asbestos Supervisor
- ASE A1 Engine Repair
- ASE A2 Automatic Transmission/Transaxle
- ASE A3 Manual Drive Train & Axles
- ASE A4 Suspension & Steering
- ASE A5 Brakes
- ASE A6 Electrical/Electronic Systems
- ASE A7 Heating and Air Conditioning
- ASE A8 Engine Performance
- ASE A9 Light Vehicle Diesel Engines
- ATSSA Traffic Control Supervisor
- ATSSA Traffic Control Technician
- DOT ABS Brake System
- Elgin Sweeper Technician
- Engineer-In-Training
- First Aid/CPR/AED
- Foaming
- HAZWOPER (Hazardous Waste Operations and Emergency Response)
- MIG Welding
- NASCO PACP MACP LACP
- NDOR Asphalt Field Technician

- NDOR Earthwork Tracking
- NDOR Erosion and Sediment Control
- NDOR Plant Technician Level 2
- NDOR Responsible Charge
- Rail Safety
- Sacramento State Collection Systems Methods for Evaluating and Improving Performance
- Sacramento State Operations and Maintenance of Wastewater Collection Systems 1
- Sacramento State Operations and Maintenance of Wastewater Collection Systems 2
- Sacramento State Manage for Success Effective Utility Leadership Practices
- Sacramento State Advanced Wastewater Treatment
- Sacramento State Operation of Wastewater Treatment Plants 1
- Sacramento State Operation of Wastewater Treatment Plants 2
- Sacramento State Industrial Waste Treatment
- Spartan Chassis Technician (Fire Truck)
- SWANA MOLO (Solid Waste Association of North America Manager of Landfill Operations)
- ISME Traffic Signal Technician
- Vactor Combo Unit Technician
- Wastewater Treatment Facility Operator Class 2
- Wastewater Treatment Facility Operator Class 4
- Water Operator Class 6
- Work Zone Flagger

There are plans for obtaining APWA (American Public Works Association) certification for the Department. The Wastewater Division has completed several steps toward this.

Licenses:

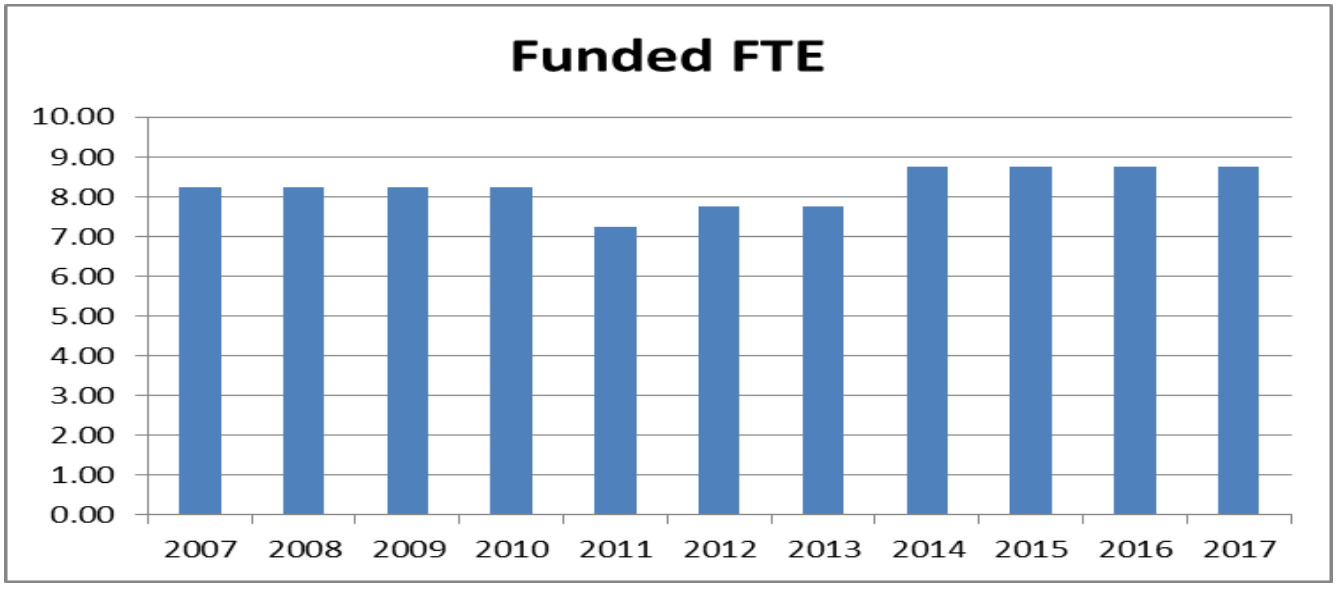
- CDL Class A
- CDL Class B
- Department of Health Water Well Monitoring
- Electrical Contractor
- Journeyman Electrician
- Pesticide Applicator – Aquatic Pest Control
- Pesticide Applicator – Right-of-Way Pest Control
- Professional Engineer
- Street Superintendent – Class A

There are a number of interdependencies between Public Works' Divisions and even other Departments, so that activities and changes in one affect others.

Public Works is more visible than most City Departments, directly interacting with everyone in the City (residents and visitors). As a result we receive numerous request and complaints each day. All are investigated and distributed for action within the activities listed herein.

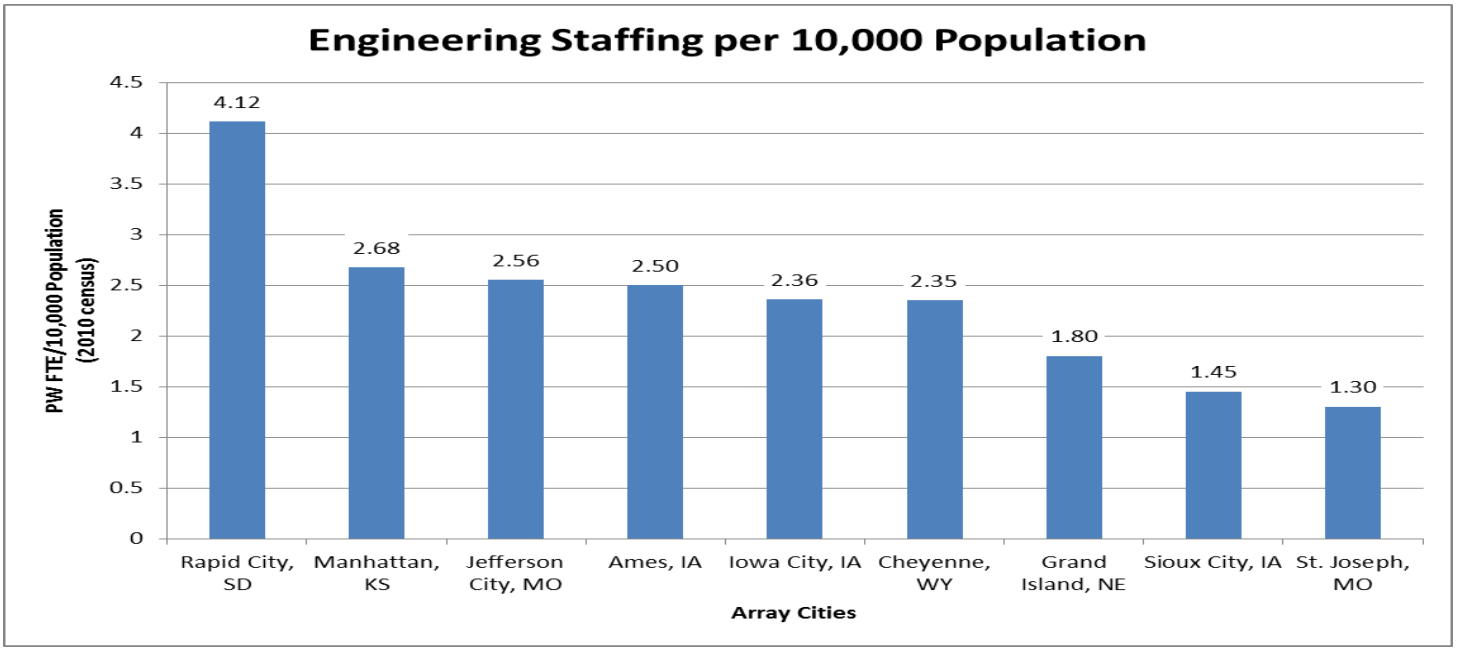
Engineering Division

Staffing



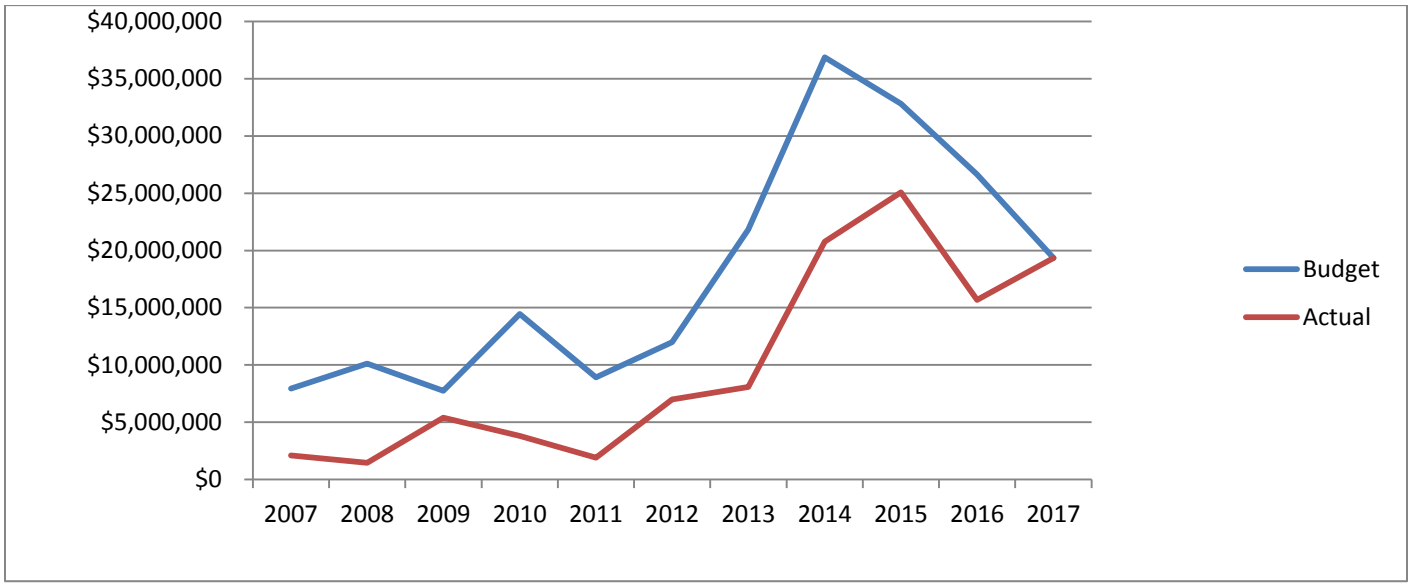
Administration Division Staff were excluded for consistency.
Wastewater Staff housed in Engineering were excluded as the function was part of Wastewater until late 2011 and inclusion would skew year over year comparisons.
The skill sets needed for this work are uncommon in the Grand Island area making it difficult to find qualified applicants; it is not unusual for a position to be vacant for more than a year. Engineering typically has 2 or 3 vacancies at any time.

Array Comparison



It is reasonable to conclude that Grand Island's staffing level is near the bottom of the City's array, but there are many differences in organization and environment that must be examined to draw more detailed conclusions. The absence of a Traffic Unit and an Inspection Unit account for much of this difference.
A comparison based on infrastructure would be more appropriate, but measures were inconsistent between municipalities. In general, our array had higher population Cities with less infrastructure than Grand Island.
Cost avoidance is an important role of the licensed engineers; about 10% or $8million was saved on the recent Wastewater projects.

Capital Project Expenditures



2017 actuals are estimated. Actual expenditures are limited by budget, and unless something unusual occurs, should always be less.
Annual expenditures have typically ranged from a few hundred thousand to $5 million. The combination of the large wastewater rehabilitation projects and increased streets and drainage projects caused this to spike over $25 million, a factor of 5 over the previous peak. The increase in streets and drainage projects was due to the very large backlog (there was very little construction in the prior 10 years). The increase in wastewater projects was due to two factors:

1. Poor design and construction practices as exhibited in the Northeast Interceptor which failed after only 35 years (design life is 50 years and typically this type of pipe lasts more than 80 years); and
2. Poor operation and maintenance as exhibited by the old headworks building. The building lasted the 50 year design life, but typically it would have been possible and economical to renovate. Evidence is that staff performed all of their assignments, making this a management failure. The two primary contributors to failure were: a) inspection and exercise of several critical components did not occur; and b) for extended periods the plant was operated beyond reasonable parameters.

It takes City staff 7% to 10% as much time as the consultant to manage the consultant, depending on the size and complexity of the project. This work load is anticipated to decrease for the next 5 years:

- Wastewater projects should diminish over the next 5 years until the South Interceptor project becomes necessary. We are attempting to extend this time with several small projects addressing critical defects.
- The need for streets and drainage projects remain, but the work will diminish due to a combination of reduced funding and state project expense.

Note that the staff responsible for handling wastewater projects operated independently of the Engineering Division and were located at the Wastewater Treatment Plant until 2011; combining staff has increased expertise and improved output.

Engineering programs and activities:

The Engineering Division is an eclectic collection of programs and duties. Many of the functions are mandated by federal and/or state government and further defined in numerous publications. There are a number of statures that define the duties and limitations of the City Engineer, but these are very general and have less practical effect than the other requirements.

Standards – compile design/construction standards to meet local needs without violating numerous laws, standards, practices, judicial rulings and such. This is effort intense. Several standards have been updated over the last 5 years, but many are 1960/70 vintage. Inadequate or outdated standards reduce life of infrastructure, and increases costs for contractors as well as the City.

Traffic – staff can handle the basic activities, but the City lacks the expertise and equipment for most. As the array comparison indicated, it is unusual for a City the size of Grand Island not to employ a dedicated Traffic Engineer and support staff. Common duties include:

- Traffic counts
- Turning counts
- Warrant analysis
- Intersection modeling
- Collision analysis
- Speed analysis
- School zone analysis
- Pedestrian crossing analysis
- Traffic signal phasing plan
- Pedestrian signal phasing plan (included with traffic signal when both are together)
- Traffic signal coordination plan
- Traffic Signal Construction Design & Construction
- Network analysis (i.e. how will implementing a sign or speed limit in one location affect other locations)
- Develop and maintain a City traffic model

We receive many traffic related requests/complaints, most of which must be investigated to ensure the safety of the public and avoid potential liability.

Drainage –

- Asset inventory, including flow lines
- Drainage model
- Establish elevation at strategic points so that local drainage can be designed to flow properly and grade can be reset
- Review drainage in developments

Design – most of this is outsourced as the City has neither the expertise nor staff to handle the quantity of work required over the last 5 years. Projects designed by City staff have cost about one third as much to design as those handled by consultants, and there was no consultant management overhead. It takes 7% to 10% as much professional staff time to manage the consultant as it takes the consultant to perform the work; past failure to properly manage consultants is one of the primary causes of the high construction and engineering cost, poor asset performance, and early asset failure we have experienced.

Construction Management –

- Project observation – for projects of any size a record of activities on site is not only needed to ensure the contractor fulfills his contract, but also to identify reasons for problems found later. This is usually handled by a sub professional.
- Project Inspection – completed work is inspected to ensure it was completed according to contract. Larger projects require professional or paraprofessional inspectors to examine the work at critical points.
- Testing – samples of various materials are collected and submitted to labs for testing, electrical or mechanical devices are tested for function, and some infrastructure may be tested for load or capacity.
- Change orders
- Invoice verification and processing
- Constructability review and value engineering – two activities that are usually performed together prior to final design and often performed at critical points during construction.

Conditional Use Review – ensure City assets are not jeopardized and that there is no unusual danger to the public.

Development/Subdivision Review – ensure sidewalks, streets, drainage, and wastewater infrastructure meet City requirements and that a functional grading plan is developed, and ensure a traffic plan is developed when needed.

Over size/weight Permits – ensure city assets are not damaged by large vehicles, and that when damaged, assets are repaired properly.

Sanitary Sewer Connections and Disconnections – permits to ensure the wastewater collection system is not damaged and accommodate new buildings and renovations.

Driveway Permit – ensure public safety and infrastructure integrity while accommodating new street and drive connections.

License agreement – ensure safety is maintained, infrastructure is not harmed, and liability is not increased while accommodating private infrastructure on public property.

Street Opening Permit – accommodate the needs of excavators and ensure the safety of the public and integrity of the streets and rights-of-way.

Responsible Charge – throughout each project there is a quantity of documentation required by NDOR and FHWA; this must be performed by a certified Responsible Charge.

Environment

- Assessment - inspecting property and researching its history, and testing to identify environmental issues.
- Clearance - a long process to acquire federal approval; the details vary depending on a number of factors.
- 404 – federal permit for construction impacting wetlands.

Public Notification/Hearing – many activities require public notification and/or hearing to comply with state and/or federal law; the details vary greatly depending on each situation.

Site Obstruction – areas along roads, especially at intersections must maintain clear site zones to allow safe vehicle and pedestrian usage; objects must be evaluated and when necessary altered to maintain this area.

Street Closure – close streets to accommodate public and private construction and ensure safety.

RFP/RFQ (Request for Proposals/Request for Qualifications) for Professional Services – ensure all City, State, Federal and Professional requirements are met in a consistent process; and ensure all activities are properly scoped so that the product meets the actual needs of the City. Past weakness here has created some of the issues we have been addressing.

Consultant Management – ensure the product complies with the contract and meets the needs of the City. Poor management during design created several instances of mismatched units at the Wastewater Treatment Plant, which increased operating costs and wear, while contributing to early failure in the collection system; both directly contributed to rate increases over the last few years.

Right-of-Way Permit – authorize work within the rights-of-way (sidewalk construction, driveway connections, drainage, etc.).

Pavement Management – assess the condition of each street segment and determine which to treat and the most cost effective treatment. This also provides the street value portion of the GASB 34 report.

Public Event Applications – review races, parades and other public events taking place on the City's rights-of-way to ensure public safety.

Block Party Requests – Coordinate requests to use streets for block parties to ensure public safety.

Asset Management – a collection of activities including: assessing the condition (i.e. grade) of each asset, determining the life cycle, tracking work orders, tracking costs, programing maintenance and replacement, and such with the goal of predicting costs and preventing failures. Public Works is implementing Cartegraph to record this.

GIS – a number of tasks such as creating a geospatial inventory of assets which can be used to model drainage or wastewater flow, study traffic, support asset management and other such functions of the City.

Bridge Program – ensure structures are inspected in accordance with federal requirements and take action to repair when necessary.

Sidewalks – ensure developments meet the City's sidewalk requirements and ensure sidewalks meet federal ADA requirements and retrofit existing sidewalks as necessary. Address safety issues as reported.

Pedestrian Crossing – ensure all pedestrian crossings meet all safety requirements, including warrants for traffic control.

Site Review – review the individual lots for compliance with drainage and street access; this is not normally done due to staffing limits. Drainage deficiencies are investigated on a complaint basis and corrected when possible.

Geometric analysis – ensure the streets can be safely navigated by the anticipated traffic; determine how intersections should be shaped to operate properly.

Parking – ensure street parking is designed/constructed safely and ADA requirements are met; manage Downtown Parking District 1 and Downtown Parking District 2.

Capital Improvement Program (CIP) – develop and manage the CIP to comply with numerous regulations, meet the City's needs and schedule to optimize cost efficiency.

Surveys – staff collects basic survey information for the initial design or for staff work; elevations for flowlines is a typical example. Detailed surveys are contracted due to skill and staffing limits.

Property acquisition – staff often negotiates for simple acquisitions, but large and/or complex acquisitions are contracted.

Right-of-way/Easement Vacations – review easement/right-of-way vacations as requested and prepare related actions.

Storm water Program

This program is federally mandated by Environmental Protection Agency (EPA) and further regulated by Nebraska Department of Environmental Quality (NDEQ). This is an expanding collection federal mandates intended to control water quality and discharge. The City established this program in 2005 at the direction of the NDEQ. The state provided a grant of about $100,000 annually in the early years, but this has been reduced each year and is now about $30,000. There is 1 FTE assigned to this program (Storm water Program Manager) and the work is occasionally supplemented by other staff. The City has a June 2018 deadline for implementing new regulations focused on localized treatment and detention rather than regional facilities and runoff; this has been pushed to January 2017 for some communities such as Kearney. The extent this will increase work is currently indeterminate, but we anticipate handling it with existing staff.

Polluted storm water runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s), from which it is discharged untreated into local water bodies. To prevent harmful pollutants from being washed or dumped into an MS4, operators must obtain an NPDES permit and develop a storm water management plan.

- Phase I, issued in 1990, requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their storm water discharges.
- Phase II, issued in 1999, requires regulated small MS4s in urbanized areas (populations of 50,000 to 99,999), as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges.

Since being issued a NER300010 MS4 permit in January of 2006 the City of Grand Island has been continually working towards the goal of fully implementing the Storm Water Management Plan (SWMP). The plan was written with a large focus on the education of the local community. Programs developed under the SWMP focus on meeting federal and state regulatory requirements while creating reachable goals and outcomes in pollutant reduction. Currently the City of Grand Island is working with other small MS4s across the State to develop a new MS4 permit similar to the 2006 permit, but with increased focus on Post-Construction Water Quality designs and controls requiring new developments to treat storm water before discharging it into the storm sewer collection system.

Requirements

- National Pollutant Discharge and Elimination System Permit from the NDEQ (valid for 5 years)
- Develop and Implement a Storm Water Management Plan (SWMP) which must be submitted within 180 days of permit application and reviewed annually to maintain program effectiveness.
- Develop goals and evaluate effectiveness of the SWMP
- Submit Annual Reports to (NDEQ) with results illustrating program compliance with measurable assessments and activities.

Current SWMP has 7 required Minimum Control Measures (MCMs)

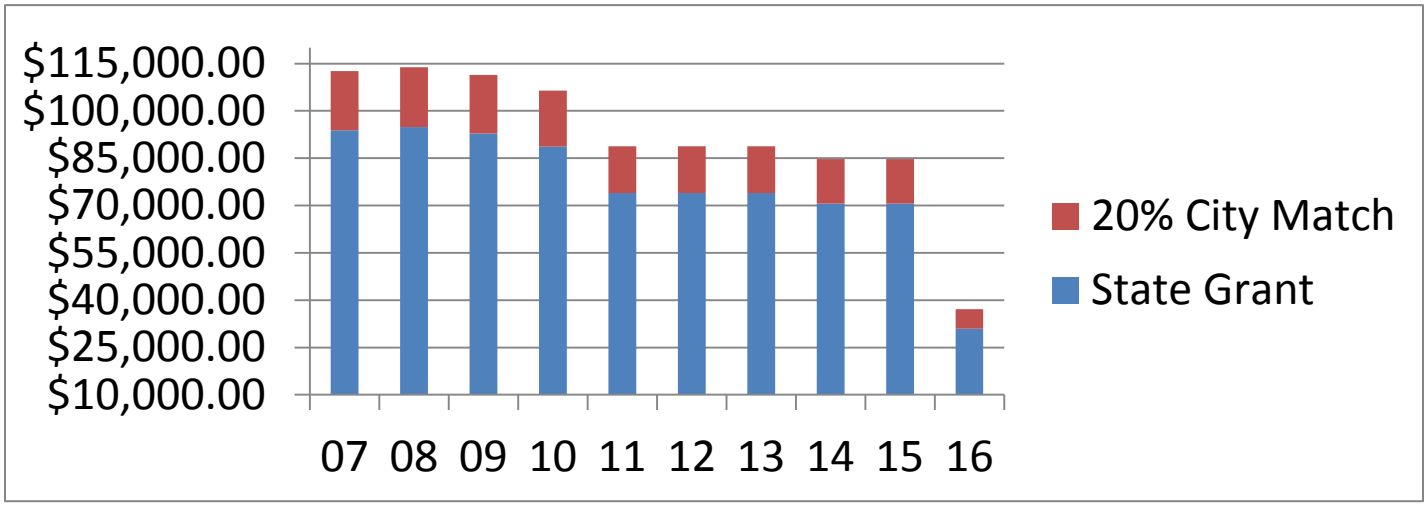
1. Public Education & Outreach - educate the public on pollution prevention, inform them on changes to program,
2. Public Involvement/Participation - involve public in program changes and implementation.
3. Illicit Discharge Detection & Elimination
    - Detect, Investigate, and Eliminate non-storm water discharges, including illegal dumping into the MS4
    - Perform Dry Weather Screening of storm water outfalls biannually
    - Perform Investigations into reports of illegal dumping and discharges, Initiate corrective measures
    - Inspect permitted connections to the MS4
    - Educate and Train citizens and city staff on illicit connections
4. Construction Site Storm Water Runoff Control
    - Develop and Implement a program to ensure operators of “construction activities” are adequately protecting storm water runoff
    - Review/approve all storm water pollution prevention plans
    - Perform inspections of all construction activities inside the MS4 boundary, initiate enforcement actions if required
    - Ensure minimum requirements are implemented for 6 areas of concern (Sediment and Erosion Controls, Soil Stabilization, Dewatering, Pollution Prevention Measures, Prohibited Discharges, Surface Outlets)

5. Post-Construction Storm Water Management
    - Develop and Implement a program to ensure locally owned and operated storm water treatment controls are developed on sites > 1 acre in size
    - Review/approve all Post-construction Site Plans for performance standards
    - Perform quarterly and annual inspections of all private and public treatment facilities inside the MS4 boundary
    - Goal is to have more privately owned and maintained storm water treatment measures saving the City in upkeep and maintenance costs
6. Pollution Prevention/Good Housekeeping
    - Assess and Inventory municipal facilities and activities for storm water pollution risks and prevention measures
    - Inspect “high priority” facilities to ensure pollution prevention measures are adequate
    - Coordinate with streets division to develop and implement a storm sewer inlet/pipe/catch basin cleaning strategy
    - Storm inlets are labeled with a visible pollution prevention message
    - Train and educate city employees involved in pollution prevention
7. Wet Weather Monitoring
    - Develop standard operating procedures for baseline wet-weather monitoring
    - Continue to test for pollutants to assess BMPs for effectiveness
    - Conduct water sampling at major outfalls during rain events > .75”
    - Test water from major outfalls in a lab for 14 individual pollutants
    - Alter BMPs based on findings and continually test for effectiveness

Proposed Future Permit will be reduced to 5 MCMs, should be in effect August 2017

1. Public Education, Outreach, Involvement, and Participation
2. Illicit Discharge Detection & Elimination
3. Construction Site Storm Water Runoff Control
4. Post-Construction Storm Water Management
5. Pollution Prevention/Good Housekeeping

Grant has decreased over time



Metropolitan Planning Organization Division (MPO)

The Grand Island AREA Metropolitan Planning Organization (GIAMPO) was established in 2013 and is mandated by the federal Department of Transportation (DOT). The Federal Highway Administration (FHWA) is the primary regulator, with sister agencies Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and Federal Aviation Administration (FAA) contributing additional regulations. The MPO is 80% federally funded with 20% local match; usually the 20% is divided among all of the transportation providers in the MPO area, but Grand Island City provides 100% of the match. MPOs are usually a separate agency similar to the EDC; this is likely to happen once the population reaches 100,000 (the division between a small MPO and a full MPO). One FTE is dedicated to this function, and other employees provide assistance.

GIAMPO has the smallest staff, but at a size that is adequate at this time. There are a number of differences in the MPOs covering our array, one of which is that many cover more than one municipality. Manhattan, Kansas is the MPO most similar to GIAMPO.

City	Population	MPO FTE
Ames, IA	61792	1.5
Iowa City, IA	73415	4
Jefferson City, MO	43330	2.5
Lawrence, KS	90811	2.5
Rapid City, SD	72638	3.5
Manhattan, KS	55000	2.5
Sioux City, IA	82684	4
St. Joseph, MO	76967	2
Cheyenne, WY	62448	4.5
Grand Island, NE	50000	1

A Metropolitan Planning Organization (MPO) is a federally mandated and federally funded transportation policy-making organization that is made up of representatives from local government and transportation providers. The United States Congress passed the Federal-Aid Highway Act of 1962, which required the formation of an MPO for any urbanized area (UZA) with a population greater than 50,000. The Grand Island Urbanized Area exceeded 50,000 persons in the 2010 Census with a population of 50,440. The land area for the Grand Island Urbanized Area is 28.1 square miles.

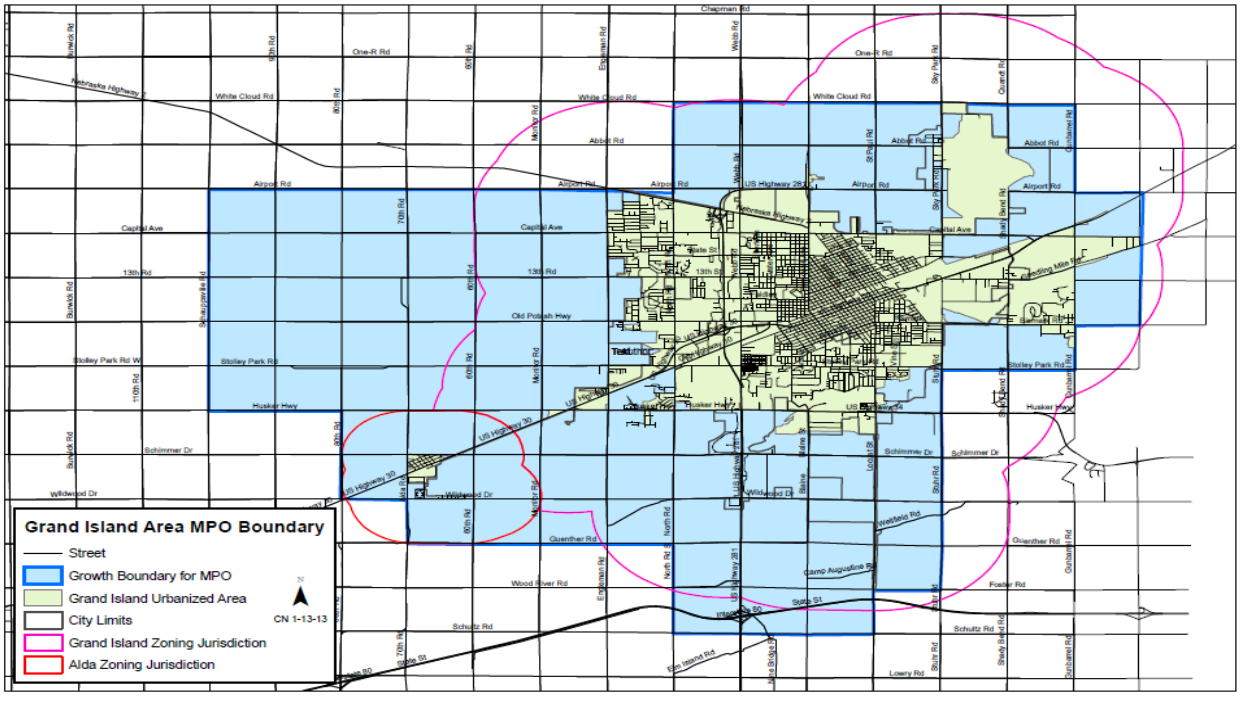
MPOs were created to ensure that existing and future expenditures of federal funds for transportation projects and programs are based on a continuing, cooperative, and comprehensive ("3-C") planning process. Statewide and metropolitan transportation planning processes are governed by federal law (23 U.S.C. §§ 134–135). Transparency through public access to participation in the planning process and electronic publication of plans now is required by federal law.

The MPO is a transportation policy-making and planning body for the metropolitan region. It carries out the multi-modal transportation planning for the region. The MPO is responsible for regional transportation planning/coordination.

The Grand Island Area Metropolitan Planning Organization (GIAMPO) was established by a designation agreement. The Governor of Nebraska designated the GIAMPO as the official MPO for the Grand Island Urbanized Area; the formal transportation planning body for the Grand Island metropolitan area. As of 2015, there are 408 MPOs in the United States. GIAMPO is the first metropolitan planning organization designated by the State of Nebraska in over three (3) decades.

The GIAMPO is responsible for transportation planning activities within a geographic area identified as the Metropolitan Planning Area (MPA). The GIAMPO approved its current MPA in May 2014. The MPA encompasses the City of Grand Island, the Village of Alda, portions of Hall County, a portion of west of Merrick County, and the anticipated urbanized area in 2040.

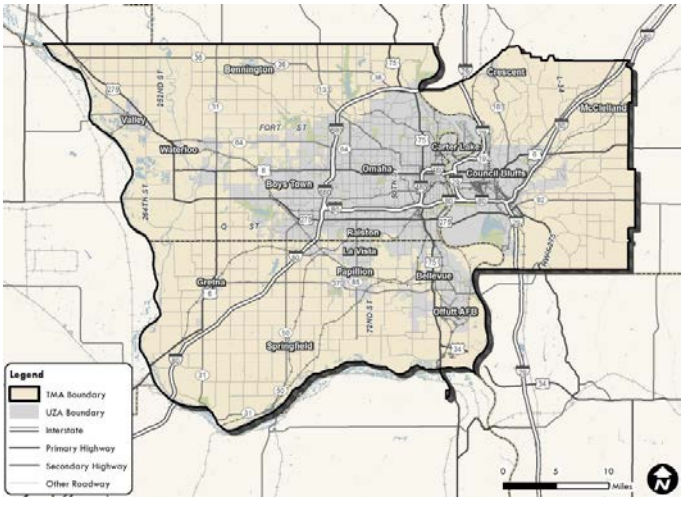
Below is a map that shows the MPO growth boundary. The MPA is shown in the blue area. The Grand Island Urbanized Area is shown in the yellow area.



There are four MPOs in Nebraska, including GIAMPO. The other MPOs are Council Bluffs Metropolitan Area Planning Agency, Lincoln Metropolitan Planning Organization, and Siouxland Interstate Metropolitan Planning Organization.

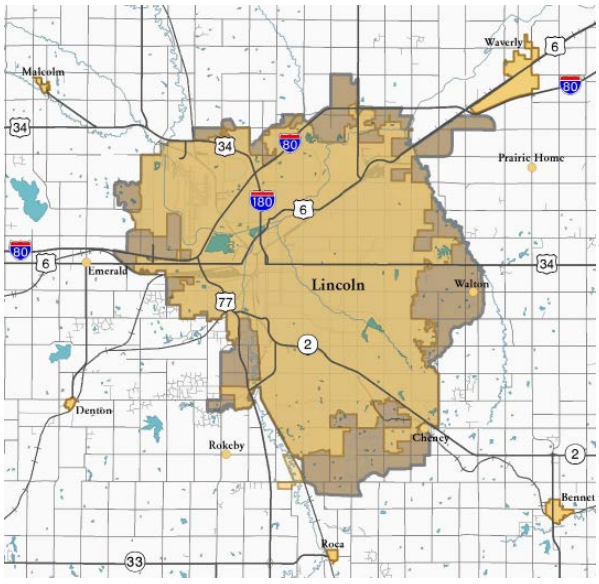
Omaha - Council Bluffs Metropolitan Area Planning Agency (MAPA)

- Bi-state MPO – Nebraska and Iowa
- Established in 1967
- Urbanized area is 725,008 people in 2010.
- Land Area is 271.2 square miles.
- Transportation staff includes 6 people.



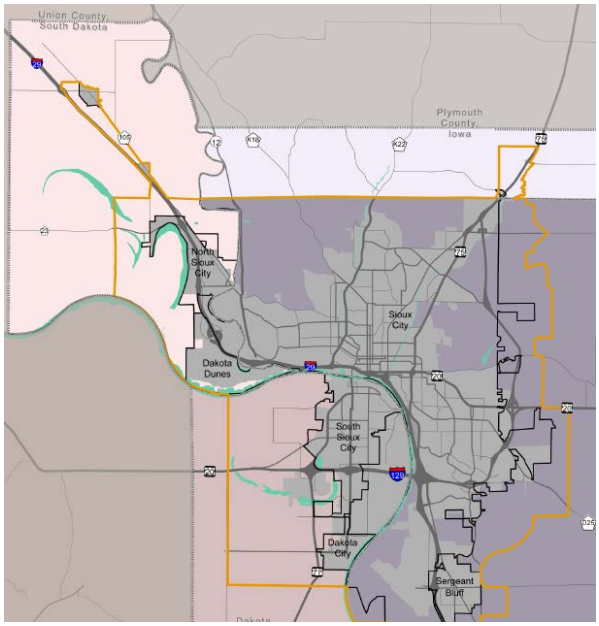
Lincoln Metropolitan Planning Organization

- Established in 1974
- Urbanized area is 258,719 people in 2010.
- Land area is 88.5 square miles.
- Transportation staff includes support from three city departments.

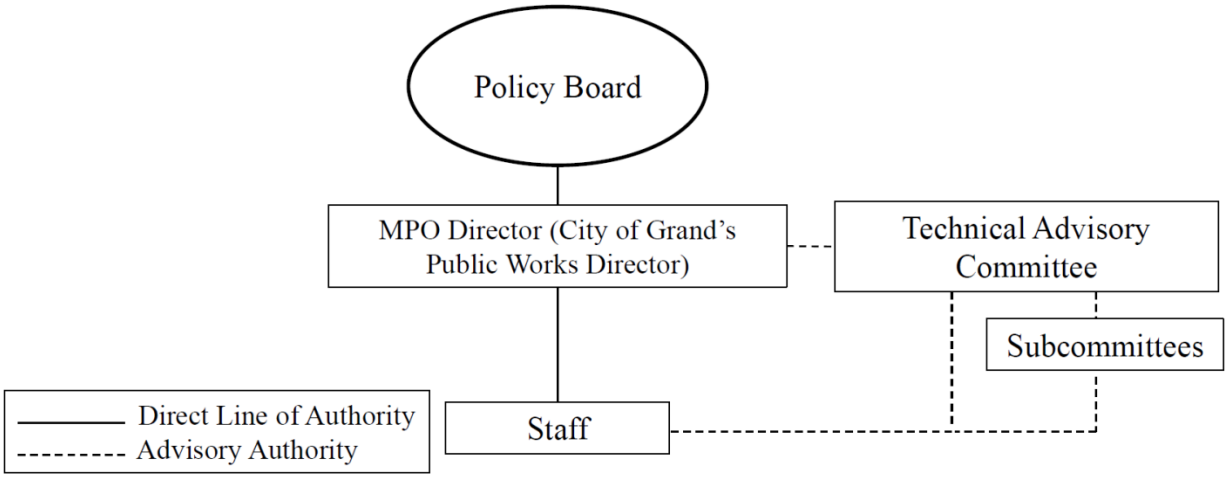


Siouxland Interstate Metropolitan Planning Organization (SIMPO)

- Tri-state MPO – Nebraska, Iowa, and South Dakota
- Established in 1965
- Urbanized area is 106,494 people in 2010.
- Land Area is 54.4 square miles.
- Transportation staff includes 3 people.



GIAMPO Organization



A MPO is required to have a decision-making "policy body". The GIAMPO Policy Board is the regional legislative body governing the MPO. This board is comprised of elected and appointed officials representing local, state, and federal government and agencies. There are 9 voting members and 2 non-voting members. The City of Grand Island's Mayor serves as the Chair. The Vice-Chair is elected from the voting membership of the Policy Board. The Policy Board sets regional long-term transportation policy and approves work products.

The GIAMPO Technical Advisory Committee (TAC) is a staff-level committee of local, state, and federal government agencies and organizations. There are 9 voting members and 11 non-voting members. The TAC provides technical support and recommendations to the Policy Board. Subcommittees can be formed to provide technical support and recommendations to the TAC. There is currently a Bicycle and Pedestrian Advisory sub-committee.

The City of Grand Island's City Engineer/Public Works Director serves as the MPO Director. The MPO staff is comprised of the MPO Program Manager. The MPO Program Manager is responsible for providing information and technical support to the Policy Board and Technical Advisory Committee, preparing required state and federal documents, managing the planning process, and coordinate transportation studies and projects.

MPO Work Products

The primary MPO work products include the Unified Planning Work Program (UPWP), Long Range Transportation Plan (LRTP), and Transportation Improvement Program (TIP).

The UPWP is a federally required document that describes how the federal planning funds allocated to the GIAMPO will be used and what planning activities the MPO staff will undertake for the state fiscal year. The time horizon of this document is one year, and it is updated annually. The GIAMPO completed its first UPWP in 2014.

The LRTP is a 25-year plan which provides a list of transportation projects to meet the future transportation needs in the Grand Island metropolitan region. The time horizon of this document is at least 20 years, and it is updated every five years. The GIAMPO completed its first LRTP in April 2016.

The TIP is a short-range program that identifies transportation projects using federal transportation funds and/or regionally significant to be implemented in the Grand Island urban area over a five year period. The time horizon of this document is at least four years, and it is updated annually. The GIAMPO completed its first TIP in April 2016.

Other MPO Products include the following

- Public Participation Plan
- Annual MPO Self-Certification
- Annual Listing of Obligated Projects
- Performance measures tracking
- Travel Demand Model
- Corridor and other major studies

Funding

MPO work activities are funded by the federal government (Federal Highway Administration and Federal Transit Administration) at 80 percent and the local government (City of Grand Island) – 20%. Below are the MPO total expenditures for state fiscal years 2014 through 2016.

- State FY2014 – $115,775
- State FY2015 – $90,543
- State FY2016 – $306,823

Transit Division

This division manages and oversees the activities and operations of transit for the City of Grand Island and Hall County. This is a discretionary program, but has many federal mandates when transit is implemented. One of these regulations prevented Hall County from continuing the program in the urbanized area (where the majority of usage exists) when the City became an MSA. The programed moved to the City in 2013 and the City has been working to meet the federal requirements. The MPO Program Manager supplemented by others has been handling this program. A fulltime employee is now needed to meet federal requirements and ensure federal funding is not lost. The FTE will be fully dedicated to administration and planning which is funded 80% federal and 20% local.

History

In 2012, the City of Grand Island became the designated recipient to receive FTA 5307 (Urban) transit. At that time, FTA 5311 (Rural) transit funds funded transit operations in the City of Grand Island, and Hall County received these funds from the Nebraska Department of Roads.

In 2013, the City of Grand Island and Hall County entered into an interlocal agreement for Hall County Transportation to continue to operate services within Grand Island using unexpended FTA 5311 (Rural) transit funds during a transitional period.

In June 2016, the City began operating services through Senior Citizens Industries, Inc., the same contractor that had provided services when the County operated this program.

FTA 5307 (Urban) Transit Funds

The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes federal resources available to urbanized areas for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.

Since 2013, the City of Grand Island has received an annual allocation of FTA 5307 (Urban) transit funds. From FY 2013 to FY 2016, the City has received $2,819,292.

	Federal Allocation
FY 2013	$695,823
FY 2014	$704,800
FY 2015	$703,126
FY 2016	$715,543
Total	$2,819,292

The program available balance is $2,414,522. Two grants have been awarded, and they are the following:

- $304,770 is programmed towards Transit Operations from July 1, 2016 to June 30, 2017
- $100,000 is programmed towards the Transit Needs Study.

Eligible projects under FTA 5307 (Urban) transit funds include the following:

- Planning 80% federal
- Capital 80% federal
- Operating Assistance 50% federal

Work Activities

Transit Program activities include:

- Prepare and manage state and federal grant applications.
- Submit required federal reports such as quarterly Financial Status Reports and Milestone Progress Reports.
- Oversee transit related programs such as the Title VI Civil Rights Program Requirements.
- Ensure compliance with the FTA Annual Certifications and Assurances and the Triennial Review. FTA Annual Certifications and Assurances means the City of Grand Island will comply with all federal laws, regulations, and requirements, follow applicable federal guidance, and comply with the applicable Certifications and Assurances for a grant application award. A Triennial Review is the process by which FTA meets its statutory obligation to review and evaluate completely every three years the performance of a recipient of FTA 5307 (Urban) Transit Funds. Grand Island is scheduled to have their Triennial Review in the summer of 2018.
- Manage the local transit operations contract with Senior Citizens Industries, Inc.

The MPO Program Manager with significant assistance from other employees has been filling this function with significant support from other staff, but the limited time is making it difficult to meet federal requirements.

Transit Service Operator

Senior Citizens Industries, Inc. is contracted to provide transit service for the general public within the City of Grand Island and Hall County. The total contract amount for State FY2016 is $638,430. The funding sources for this contract are federal, state, and local funds. Services consists of Portal to portal demand response service (Dial-a-Ride) Monday through Friday from 6:00 a.m. to 5:00 p.m. with a $2.00 boarding fee.

FTE Array Comparison

	City or Agency FTE	Provider FTE	Comments
Ames, IA	157	City System	partnership between Iowa State University, ISU Student Government & Ames, IA
Iowa City, IA	50	City System	
Manhattan, KS	unknown	44	A nonprofit is the contracted service provider
Sioux City, IA	unknown	12.3	City provides fixed route - para transit is contracted
Rapid City, SD	29.75	City System	
Jefferson City, MO	27.5	City System	
Cheyenne, WY	17	City System	
Lawrence, KS	3	91	similar to GI
St. Joseph, MO	1.5	53	similar to GI
Grand Island, NE	0	10.78	

Comparison to Other Small Urbanized Area Transit Programs

Transit Programs are managed differently among small urbanized area. Below is a comparison with Lawrence, KS, Cape Girardeau, MO and Jefferson City, MO in relation urbanized area population, service area, governance, service type, operations, vehicle ownership, vehicle maintenance, and staff.

	Lawrence, KS	***Cape Girardeau, MO***	***Jefferson City, MO***
Urbanized Area Population	88,053 people	52,900 people	58,533 people
Service Area	City of Lawrence	City of Cape Girardeau Cape Girardeau County	City of Jefferson City
Governance	Lawrence City Commission	Cape Girardeau County Transit Authority (CGCTA)	City Council
Service Type	Fixed Routes (6 am to 8 pm Mon to Sat) Night Line (8 pm to 6 am Mon to Sat)	Deviated Fixed Routes (6 am to 6 pm Mon to Fri and 9 am to 5 pm Sat) Demand Response Vehicles (24 hours a day, 6 ½ days a week)	Fix Routes (6 am to 6 pm Mon to Fri) Handi-Wheels (6 a.m. to 5:30 p.m. Mon to Fri)
Operations	Service Contractor	CGCTA	City of Jefferson City
Vehicle Ownership	City of Lawrence	CGCTA	City of Jefferson City
Vehicle Maintenance	Service Contractor	CGCTA	City of Jefferson City
Staffing	City – 2 Full-time Administration Positions Service Contractor – 1 General Manager, 75 Drivers and 4 Reservationists	CGCTA – 2 Full-time Administration Positions, 50 Drivers, 6 Dispatchers, and 3 Maintenance Workers	City – 2 Full-time Administration Positions, 20 Drivers, 2 Dispatchers, and 3 Maintenance Workers

Transit Needs Study

GIAMPO is conducting a Transit Needs Study in order to plan public transportation services in the future as a result of moving from a designated rural to urban community.

Below is the schedule of activities for the Transit Needs Study.

- RFQ Submittals Deadline Nov. 17, 2016
- Notification of Selection Dec. 20, 2016
- Issue Notice to Proceed Feb. 15, 2017
- Regional Transit Needs Analysis Plan Adoption Nov. 2017

This plan will have preferred transit alternative, budget and implementation plan

Streets Division

The Street Division provides for the maintenance of safe and efficient driving conditions for the traveling public by keeping over 900 lane miles of roadway in a good state of repair, maintaining traffic control devices, mowing and drainage maintenance, as well as, performing snow and ice removal.

The Streets Division maintains facilities and buildings on two campuses:

- Streets Division Office and Main Yard – 1111 W. North Front
  This property is leased from the Union Pacific Railroad. A twenty-year lease was approved by City Council in December of 2003 for the amount of $75,822.00; if renewal is desired it should be negotiated in 2023 and budgeted in FY 2024.

  This facility has been slowly updated through the years with the most recent updates being motor grader room ventilation installation, light fixture upgrade to LED, and installing a sink, cabinet, countertop in the breakroom.

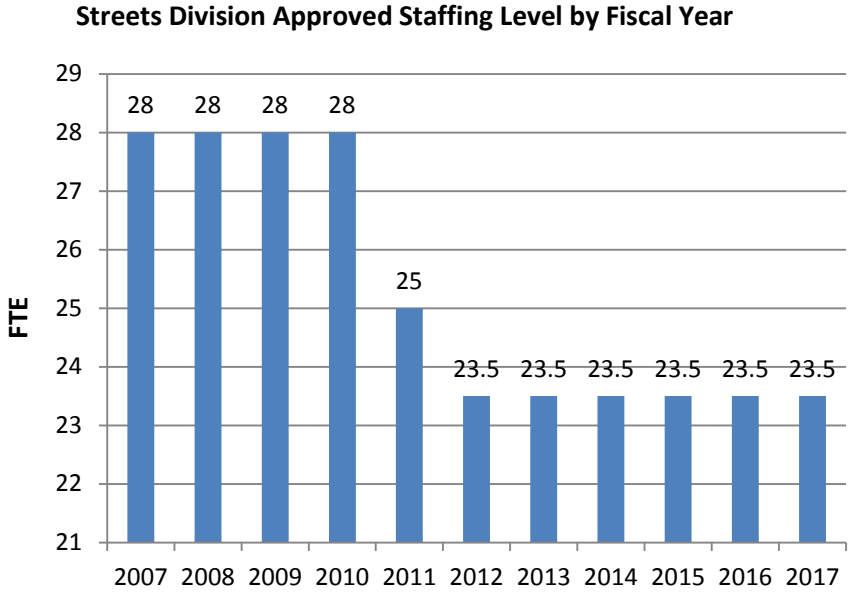
- West Yard - 2124 Old Lincoln Hwy
  This property is owned by the City of Grand Island and houses the salt storage dome, traffic signal shop, sign shop, and several equipment storage buildings. Time, effort, and funds have been spent on keeping the facility as functional and safe as possible over the last few years. These updates include a new five bay building (unheated), installing gutters on an existing building where ice accumulation was a problem, roof repair, separation of welding and wood working area, wash bay improvements, and "soft" remodel of a dedicated traffic signal shop including access to City Network and phone service.

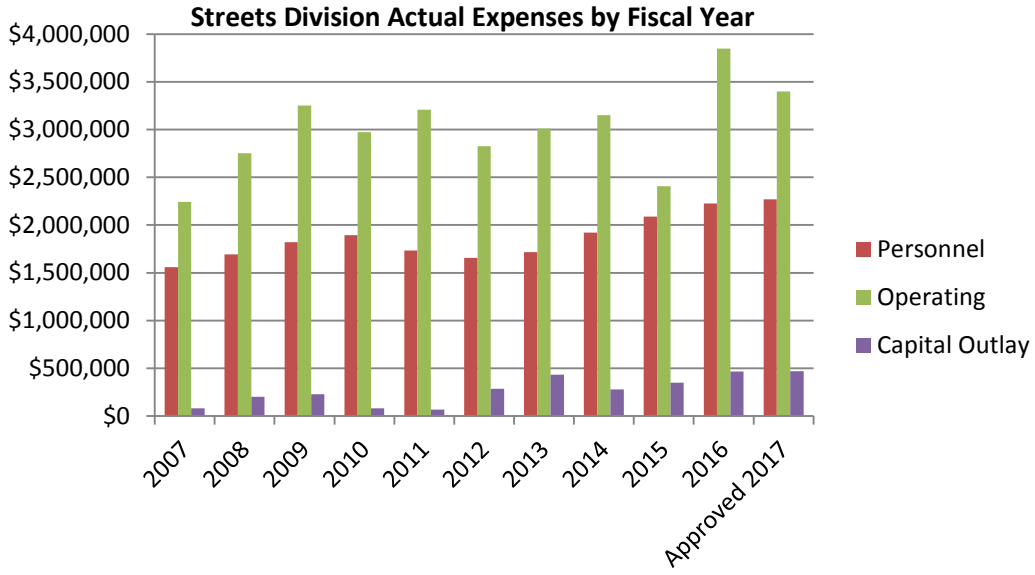
Staffing

Street Superintendent (1)
Foreman (2)
*Sr. Maintenance Worker (2)
*Sr. Operator (5)
*Operator (5)
*Maintenance Worker (5)
*Traffic Signal Tech (2)
**Accounting Tech (0.5)
TOTAL (23.5)

*AFSCME Union

**IBEW Union





The most significant change in FY 2016-2017 budget was separating the Streets Division's accounts from the General Fund by creating a specific Gas Tax Fund. This transition will not impact the operation and maintenance budget allocation but will better illustrate the use of funds that are restricted to the maintenance and construction of the City's roadway network.

Operating

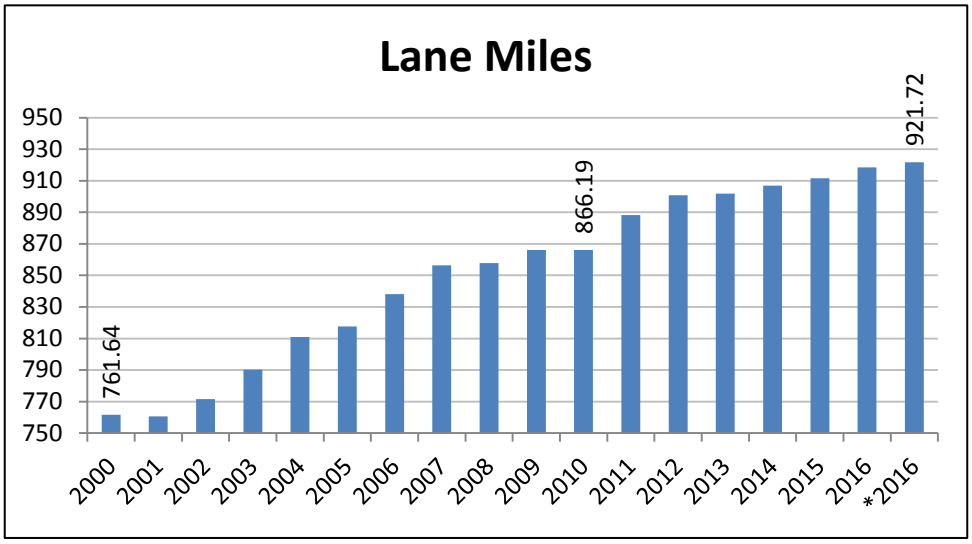
The Streets Division Operating Budget is grouped into sections; General Operating, Snow and Ice Removal, Street Maintenance, Drainage, Traffic Control, and Non-Capital Projects.

Operating expenses include funds for a range of items from street repair materials to contract services to water bills for landscaped medians. Below are the three large line items in Streets Operating budget and the ten-year average costs.

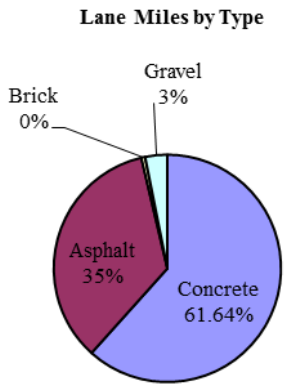
- Resurfacing Project - $664,817
- Contracted Concrete Repair - $607,710
- Street Light Utilities - $328,640

Revenue - Revenue sources obligated for "Street" maintenance and/or construction.

- Highway Allocation (Gas Tax Fund, requires 25% local match)
- Motor Vehicle Fees (Gas Tax Fund)
- Motor Vehicle Property Tax & Local Sales Tax
- NDOR Urban Maintenance Agreement
- Road Incentive Payment
- Federal Fund Purchase Program, Bridge (New in FY 2015)
- Federal Fund Purchase Program, Surface Transportation Program (New in FY 2016)



*Includes Capital Ave. widening



Lane miles are part of the calculation to apportion Highway Allocation Funds (gas tax) to municipalities:

- Total Population (50%)
- Total Motor Vehicle Registrations (30%)
- Miles of Traffic Lanes of Streets (20%)

Lane Miles are determined using the below guidelines.

- Only existing streets that are open to traffic qualify for lane mile credit.
- Alleys are not considered streets; therefore they are not to be included.
- Medians are not included in the width of a street; only travel ways.
- Paved shoulders should not be included in travel way width.
- Earth and gravel roads receive 2-lane credit regardless of width.
- Paved streets (asphalt, concrete and brick) receive credit using the following:

10'-20' wide	= 1 lane	40'-49' wide	= 4 lanes	70'-79' wide	= 7 lanes
20'-29' wide	= 2 lanes	50'-59' wide	= 5 lanes	80'-89' wide	= 8 lanes
30'-39' wide	= 3 lanes	60'-69' wide	= 6 lanes	90'-99' wide	= 9 lanes

Equipment

Functioning production equipment is critical for successful performance of Streets' activities. With an estimated value of $7million this is a major investment, and a significant annual commitment of funds.

Large Equipment – Estimated Value: $6M

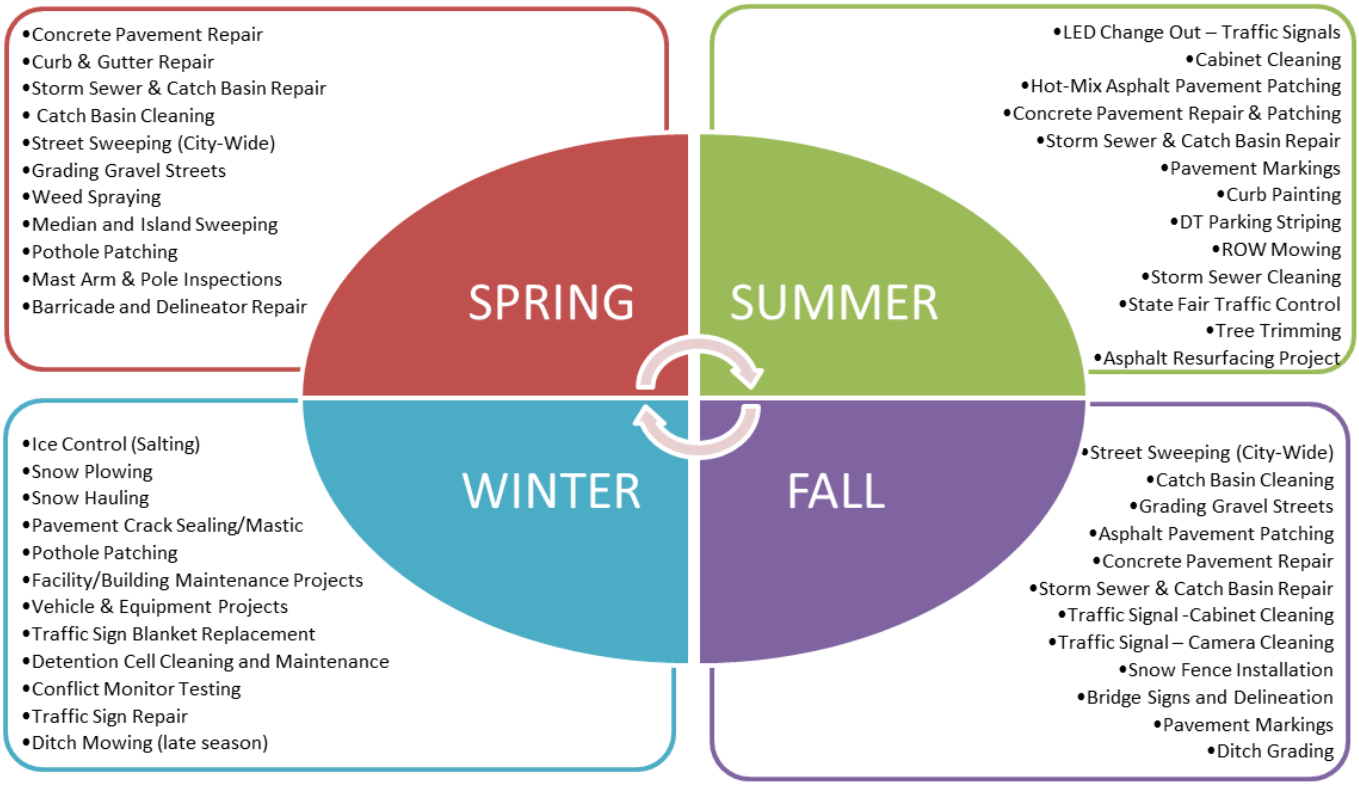
- Backhoe (1)
- Skid Steer (2)
- Front End Loader (3)
- Tractor, Large (2)
- Tractor, Small (1)
- Motor Grader (4)
- Street Sweeper (4)
- Dump Truck 10 YD (8)
- Dump Truck 5 YD (3, 2 in winter)
- Salt Truck (3, 4 in winter)
- Pickup ½ Ton (8)
- Pickup ¾ Ton (2)
- Pickup 1 Ton + (2)
- Aerial Lift Truck, Insulated (1)
- Aerial Lift Truck, Non-Insulated (1)
- Platform Lift Truck (1)
- Sewer Flush/Vac Truck (1)
- Milling Machine (1)
- Grade All (1)

Ancillary Equipment – Estimated Value: $1M

- Weed Spraying Tank and Spray Bar (2)
- Asphalt Zipper (1)
- Snow Heaver (2)
- Vee Plow (2)
- Broom
- Rock Saw
- Drop Hammer
- Concrete Saws
- Mower Deck (skid steer)
- Mower Deck (tractor, 4)
- Routers
- Paint Machine (2)
- Groover/Grinder
- Crack Sealing Kettle
- Mastic Kettle (en route)
- Air Compressor (3)
- Sand Blaster
- Trailers
- Sign Making Equipment
- Forklift
- Paint Shaker
- Thermoplastic Applicators and Pre-Melters (2)
- Vactor Nozzles and Camera
- Utility Locator
- Conflict Monitor Tester

Programs

Activities based on Season

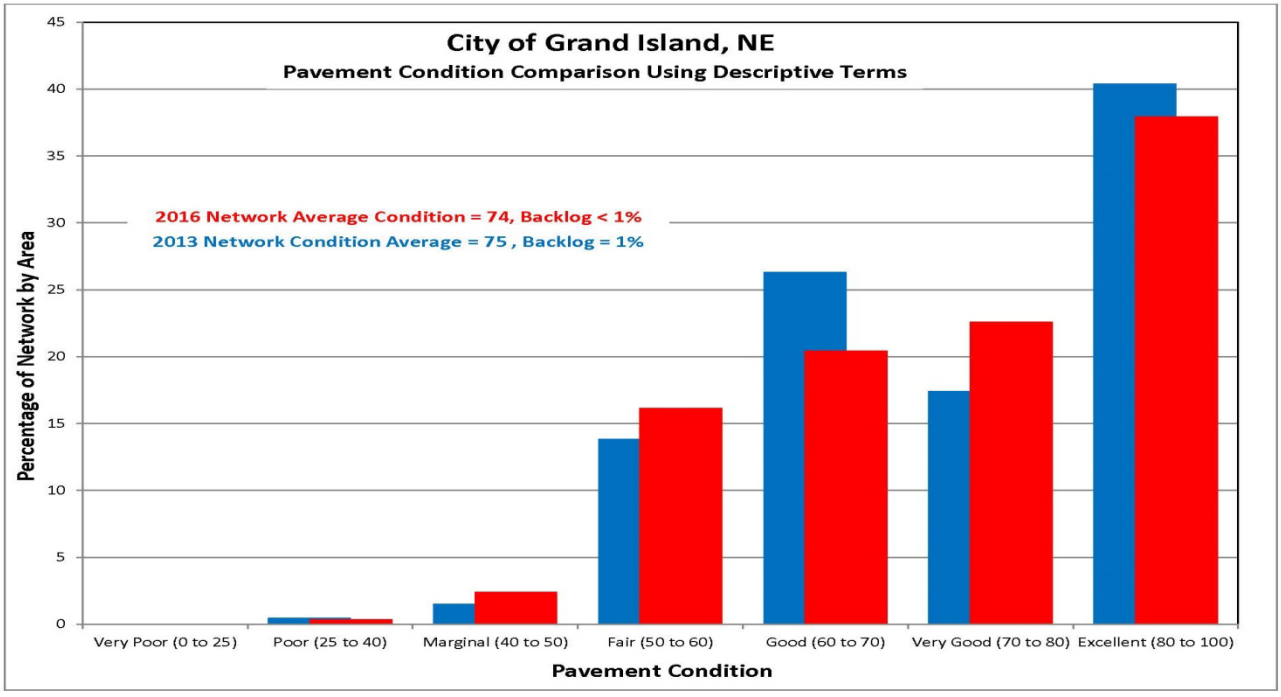


Non-Seasonal Functions

- Locates
- Traffic Signal Call-Outs
- Sign Repairs
- New Street name signs
- Curb Milling
- Alley and Gravel Street Grading
- Special Event & Block Party Traffic Control
- Driveway & Sidewalk Inspections
- Downtown & Special Event Area Sweeping
- Traffic Regulation Changes (parking, speed limits)
- Bridge Inspections
- Traffic Control Plans
- Adopt A Road bag collection
- Banners & Flags

PAVEMENT MAINTENANCE AND REPAIR

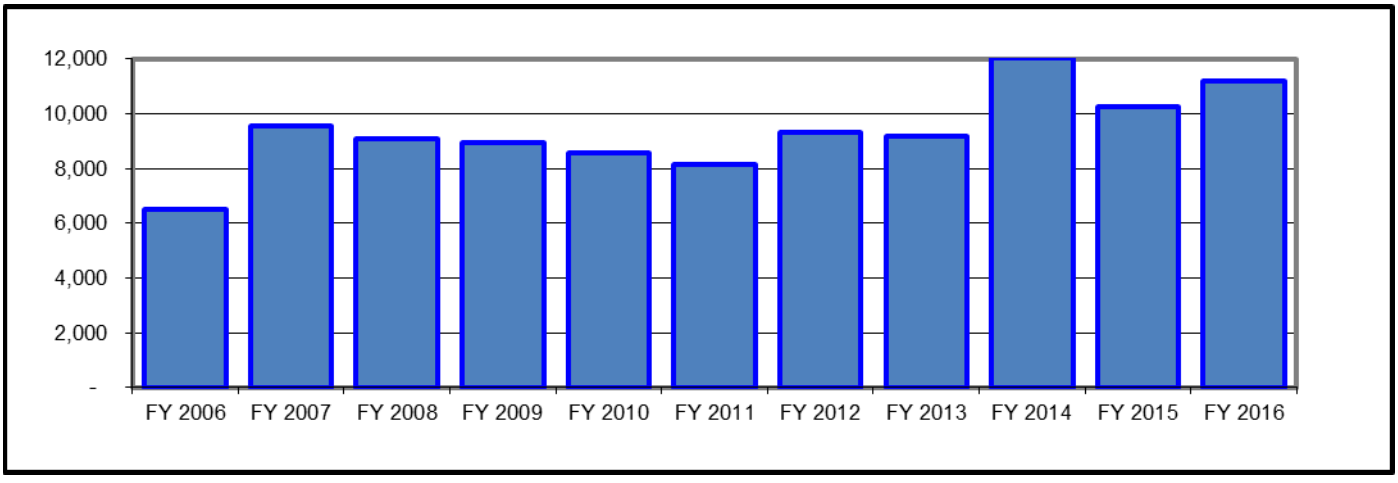
The City is responsible for safety of motorists and can be held liable if damage or collisions occur due to poor maintenance. Financially, we are required to maintain infrastructure assets at (or above) the condition level established and disclosed by the governing body (GASB 34). To meet the GASB 34 requirements the City has the pavement condition assessed on a three-year cycle.



The Streets Division is also responsible for surface maintenance of several State Highways within the City Limits through an annual maintenance agreement with the Nebraska Department of Roads.

Concrete Pavement Repair

Average 9,344 SY

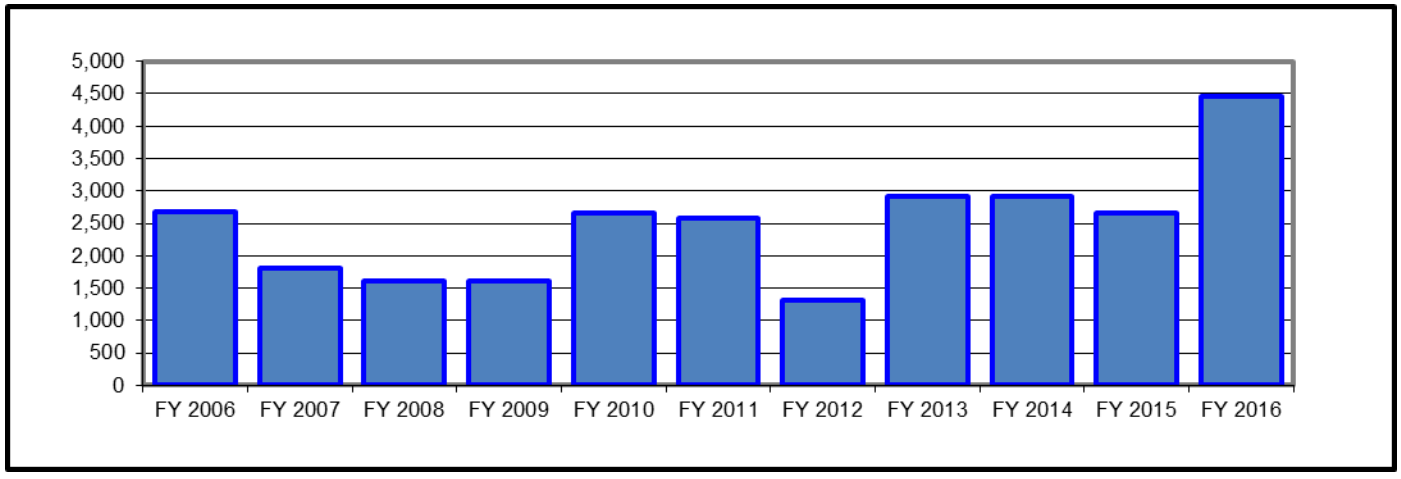


One crew within Streets division does the majority of the large/complicated repairs averaging over 9,000 SY/year.
Complicated repairs include intersection reconstruction, storm drain repairs, and bridge deck repairs.
Annual contract to complete concrete panel replacement, curb and gutter repairs, and storm sewer repairs.
Improvements/Changes:

- 2012, Streets began doing larger projects versus just panel replacement with a goal of completing one major project a year. Since that time we have completed the following larger projects:
- Eddy St Underpass Pavement Patching
- Sycamore Underpass Pavement Patching, walkway repair, and led lighting
- 13th St westbound – Webb to 281
- Anna St Intersection Improvement – Locust to Elm
- Walnut St – Division to Charles
- Faidley Ave eastbound – Webb to Custer
- 2013, Upgrade skid steer to larger unit with high flow hydraulics and tracks.
- 2013, Rock Saw attachment procured and allows pavement to be removed more quickly.
- 2013, Upgrade to crew cab pick-up to fit the 5-person concrete crew making it more efficient to move the crew around instead of multiple vehicles.

Asphalt Pavement Patching

Average 2,475 tons/year



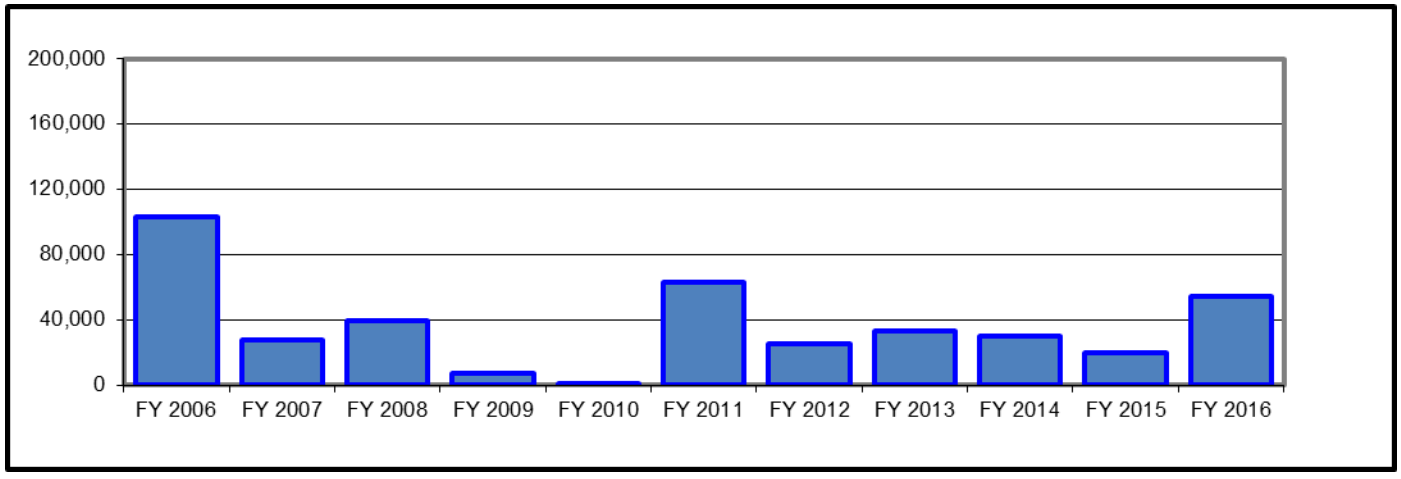
Asphalt Patching is completed by one crew within the Streets Division that averages 2,475 tons/year and had its most productive year in 2016 placing over 4,000 tons. This function is only performed when hot-mix asphalt is available from a local asphalt plant. This is considered a hot weather function and the majority of the work is completed in the summer.

Improvements/Changes:

- 2013, Purchase of Asphalt Zipper; Faster milling times and saves on wear/tear of large milling machine.

Crack/Joint Sealing & Mastic

Average 36,673 lbs. /year



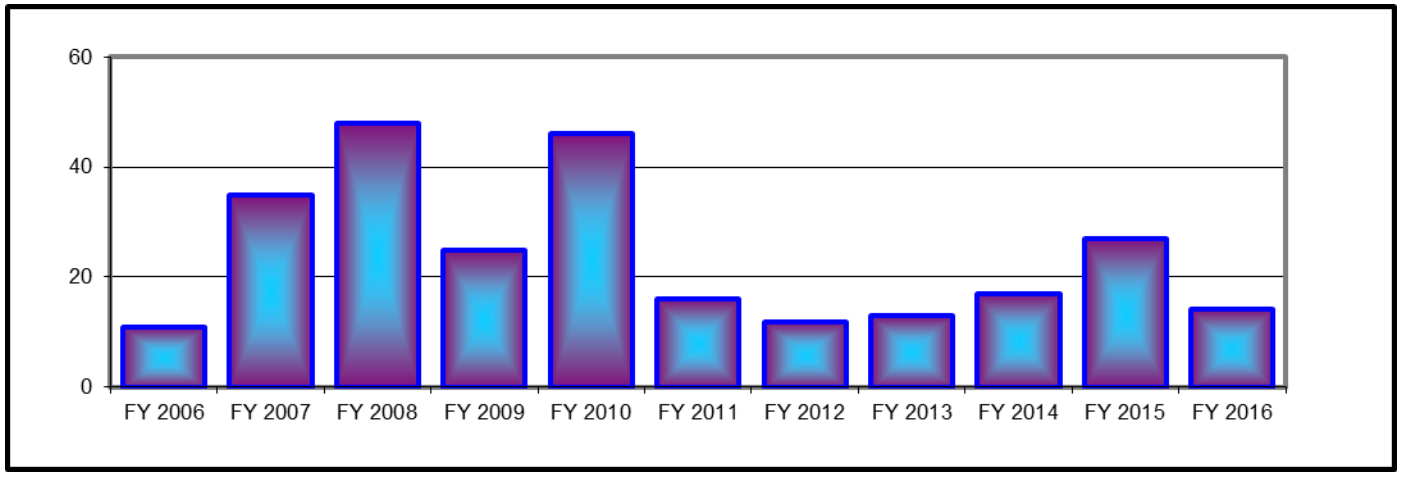
25,000-35,000 lbs/year used on new concrete patches to seal joints and cracks on roadways to reduce the intrusion of water. This activity is not practical when the surface is covered with moister.
Mastic application is a material to crack sealant but includes fine aggregate. Mastic can be used to patch potholes, "bridge" thermal cracks in asphalt pavements, and fill pop-outs and large cracks in concrete pavement.
The Streets Division begin using mastic in 2015, and has since placed over 45,000 LBS. This material has shown potential to be a more permanent fix for potholes compared to UPM (cold asphalt mix) and is best placed in the cool/cold weather.

Improvements/Changes

- 2017, New mastic kettle ordered and delivered in December 2016. A kettle was rented prior to this purchase and cost around $8,000 for two months rental.

Pothole Patching

Average 24 tons/year



Potholes filled throughout the year; potholes typically become more prevalent in the winter due to the freeze thaw cycle. A cold patch product is placed in the holes and compacted to aid in service life.

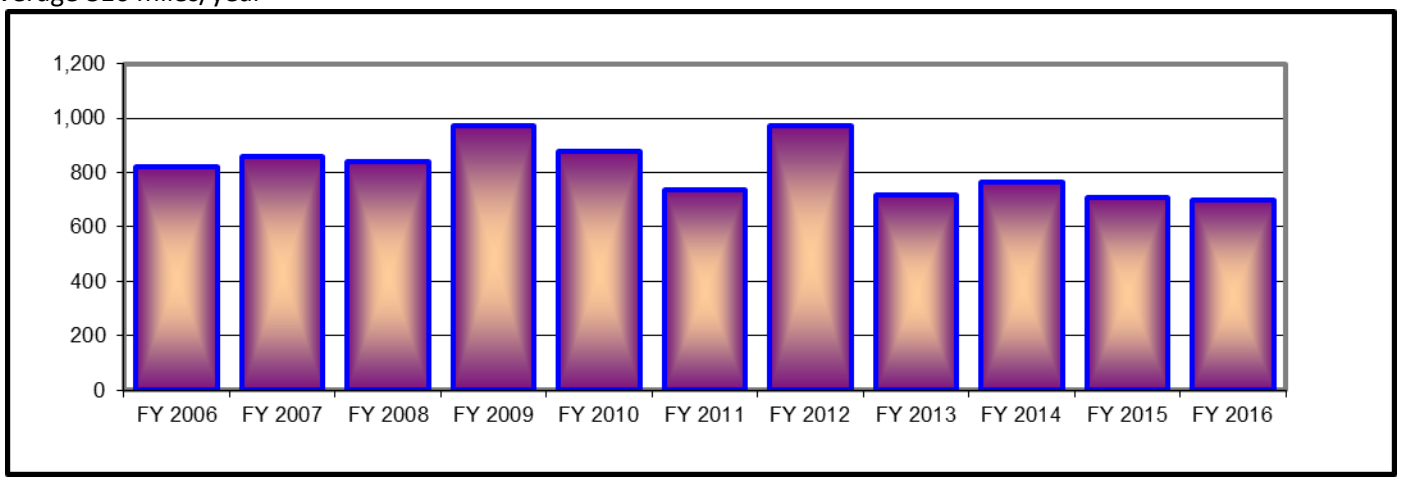
Resurfacing

Annual asphalt resurfacing and surface treatment project performed in partnership with the Engineering Division.

Right-of-Way Maintenance

Grading

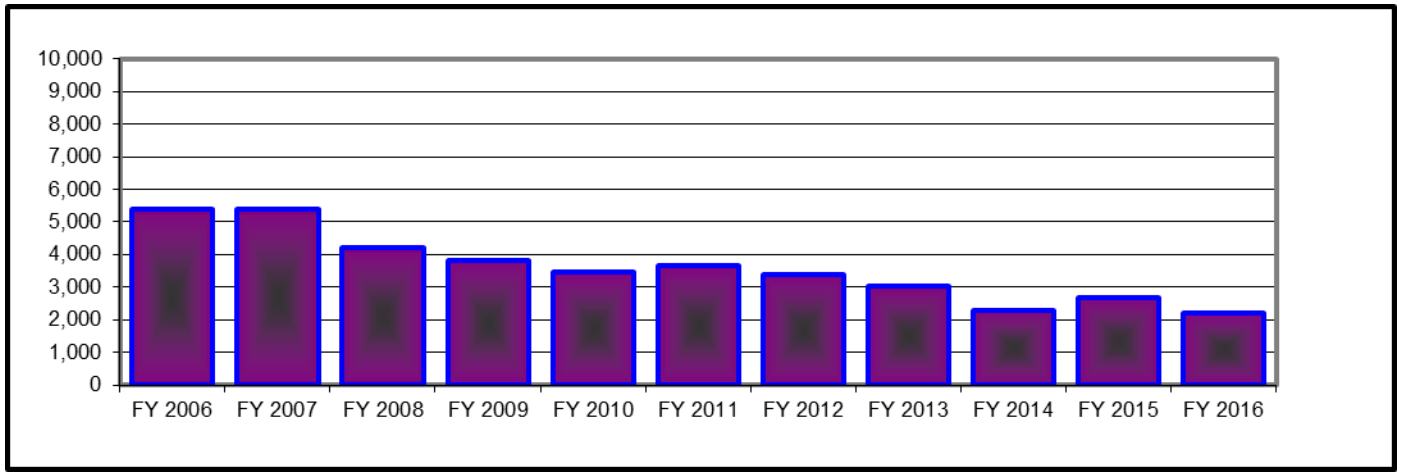
Average 816 miles/year



Gravel streets are graded seasonally in the fall/winter and as needed or by request the rest of the year. Gravel alleys are graded by request. Depending on the weather conditions throughout the year, gravel is hauled and placed on the gravel streets to maintain the structure.

Street Sweeping – EPA Stormwater Pollution Prevention Best Practice (until becomes mandated due to Stormwater Quality requirements)

Average 3592 miles/year

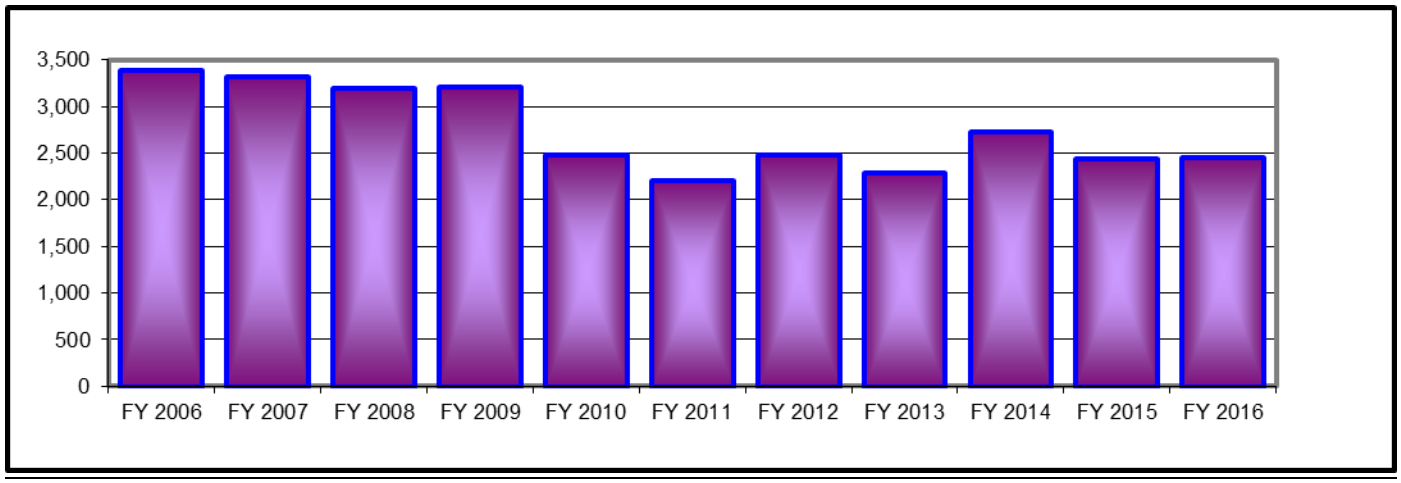


City-wide street sweeping is performed in the spring and fall with four sweepers. During the summer months sweeping is accomplished with one sweeper/operator. Last year the sweepers covered approximately 2,500 miles and brought in 3,500 CY of material. The downtown area may be swept more often depending on special events held in the area. The Streets Division sweeps the downtown area prior to events such as the Harvest of Harmony Parade, Downtown Christmas (weather permitting), and car shows.

This function can be considered part of the drainage program. Debris left on the roadways will eventually enter the storm sewer and may slow or block drainage of the streets. Sweeping is our front-line preventive measure for maintaining the City's storm sewer infrastructure.

Mowing– Best Practice, City Code

Average 2747 miles/year



Mowing right-of-way is completed in the summer months with three mower/operator units used full time. Ditches and detention cells are mowed throughout the year typically in the late fall or winter.

Weed Spraying– Best Practice, Noxious Weed Control Act
Paved islands and medians are sprayed annually to eliminate weeds. Larger areas such as detention cells and right-of-way is on-going.
Spraying was contracted after the Hall County Weed Authority discontinued spraying for the City, but this was unsuccessful. Streets is implementing a spraying program with staff.
Improvements/Changes include:

- 2016, Four Streets employees received pesticide applicators license.

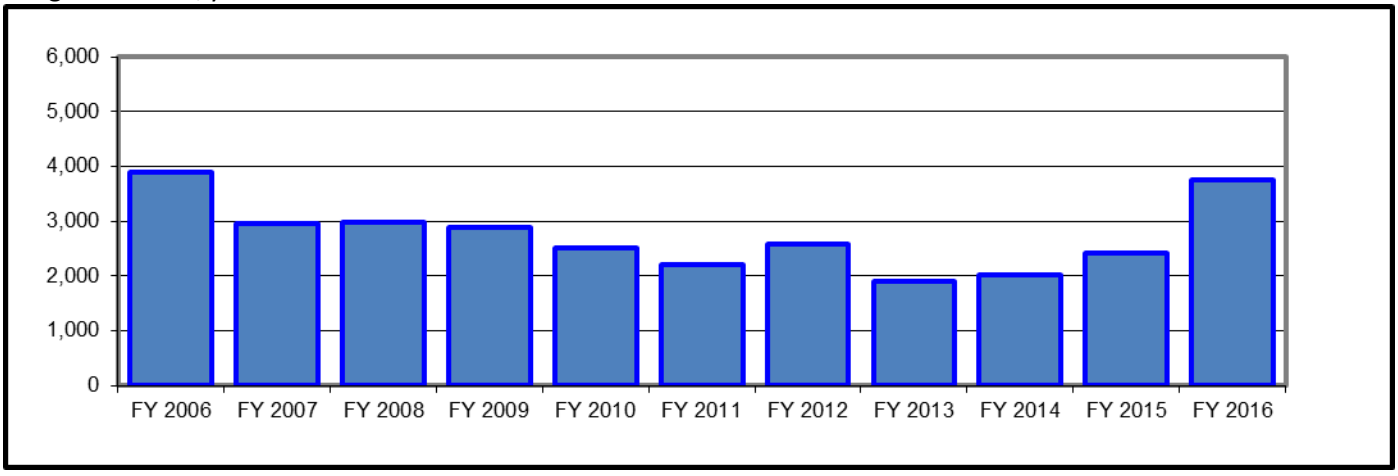
Adopt-A-Road– Best Practice
Program is done in partnership with Clean Community Systems of Grand Island.

The Adopt-A-Road Program is an anti-litter program intended to build community pride and assist in welcoming visitors to our City. Adopting a road is a partnership between citizens and the City by agreeing to keep it free of litter. This program offers individuals and groups a way to make a very positive impact on the appearance of their community without a large time commitment. Participants are asked for a twice-a-year clean-up of their adopted roadway.

Groups/Organizations are recognized with an official Adopt-A-Road Sign with a name plaque at each end of the adopted roadway section which is seen by all motorists/pedestrians that travel the adopted section of roadway. The Streets Division customizes and installs the adopt-a-road signs and retrieves the full bags once a section of roadway has been completed.

Curb Milling – Best Practice

Average 2734 feet/year

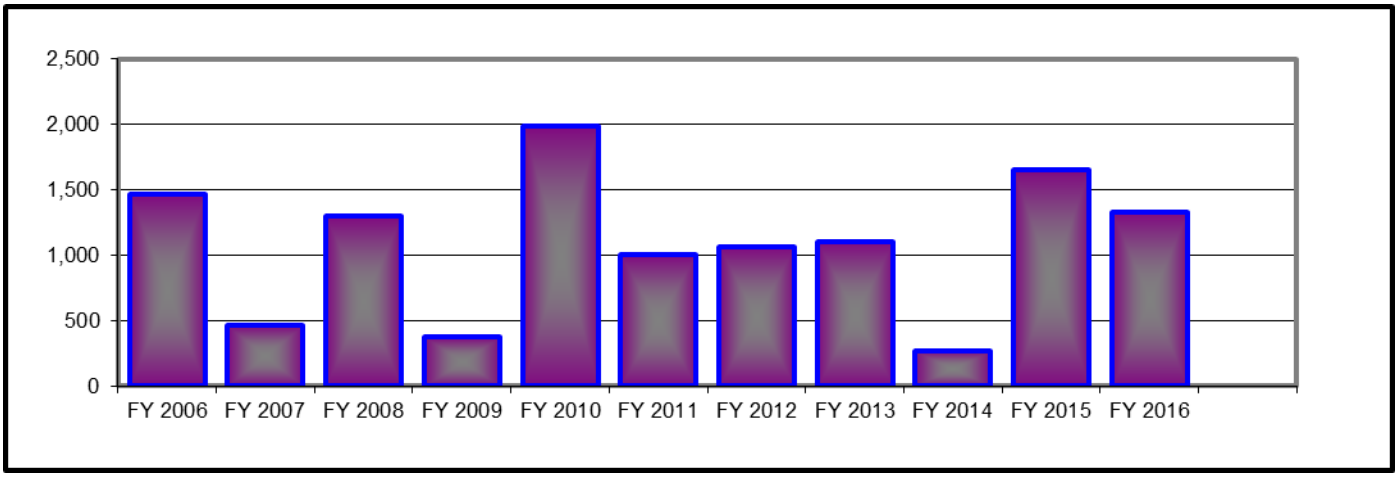


The Streets Division uses it large milling machine to grind the curb for the approach when new driveway are constructed or existing driveways are widened.

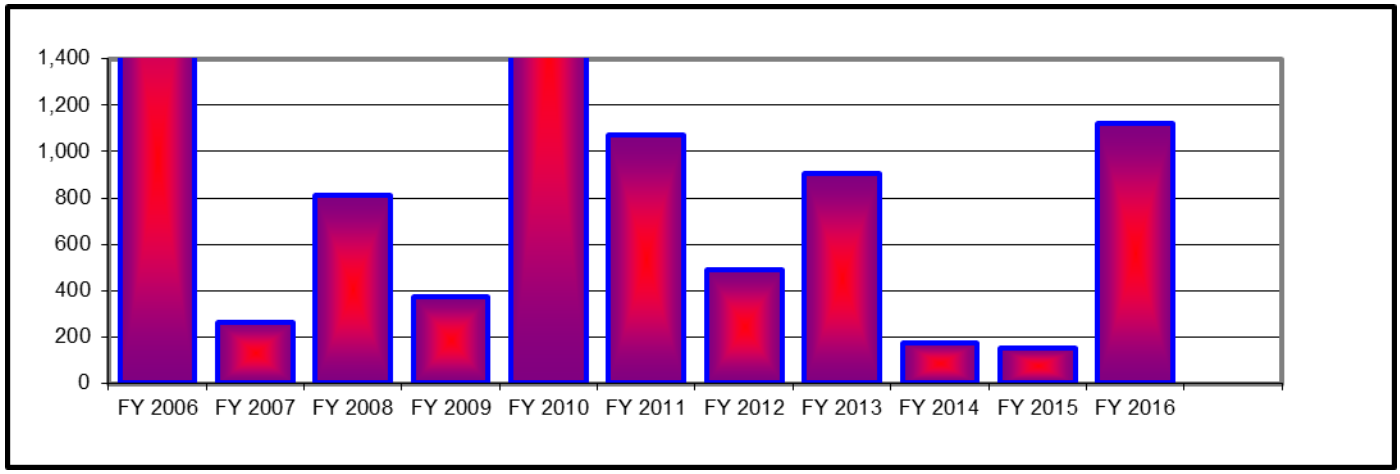
Sidewalk & Driveway Inspections – City Code, Best Practice
A permit is required to construct or repair driveways and sidewalks. The permittee is required to contact the Streets Division for an inspection prior to placing any materials. The inspector verifies that the City Standards have been followed.

Snow and Ice Control – Best practice, City Policy

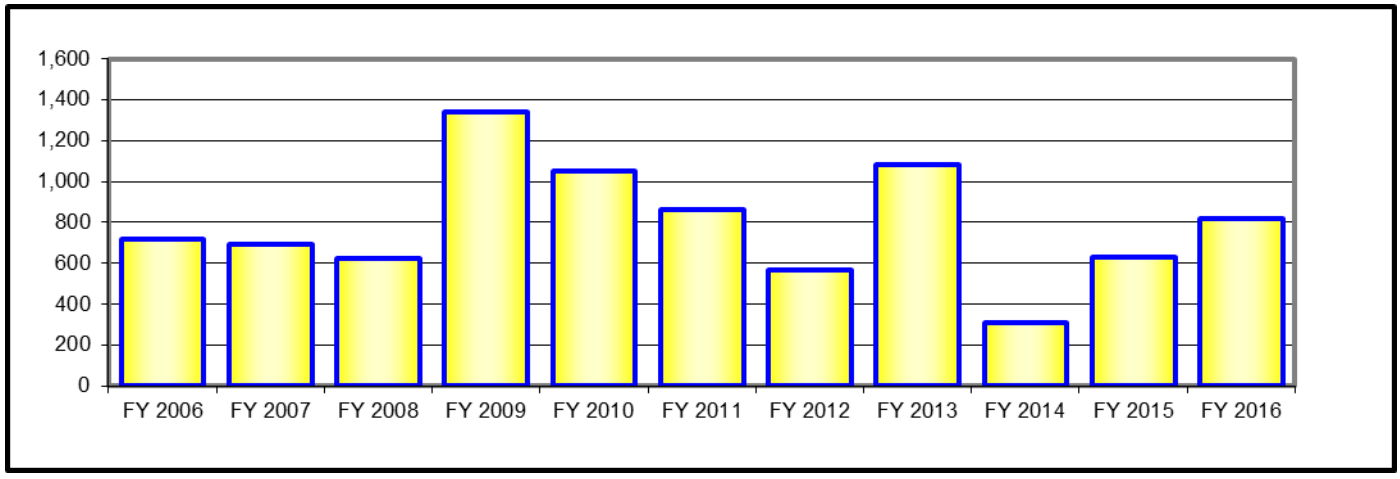
Average 1,092 hours/year



Average 927 cubic years/year



Average 788 tons/year of salt



The Snow Plan is updated each year. Snow emergency routes are plowed after two inches of accumulation and residential streets are plowed after three inches of accumulation. The Streets Division works 24-hours a day until streets are cleared. This is accomplished by working two 12-hour shifts and gaining equipment operators from Utilities and Wastewater.

Four salt trucks place salt along each of 4 routes. Salt is placed at varying rates based on pavement temperature, ambient temperature, time of day, and the weather forecast; if temperatures drop below 10 degrees F the salt is pretreated with liquid calcium chloride. The time to complete this has increased as the City has grown, and we anticipate dividing the City into 5 routes and adding a 5th truck in the next 5 years.

We are continuing to research the numerous liquid anti-icing and ice fighting options to determine which are most advantageous. The biggest hurdles to changes are the initial investment and limited staffing.

Improvements/Changes include:

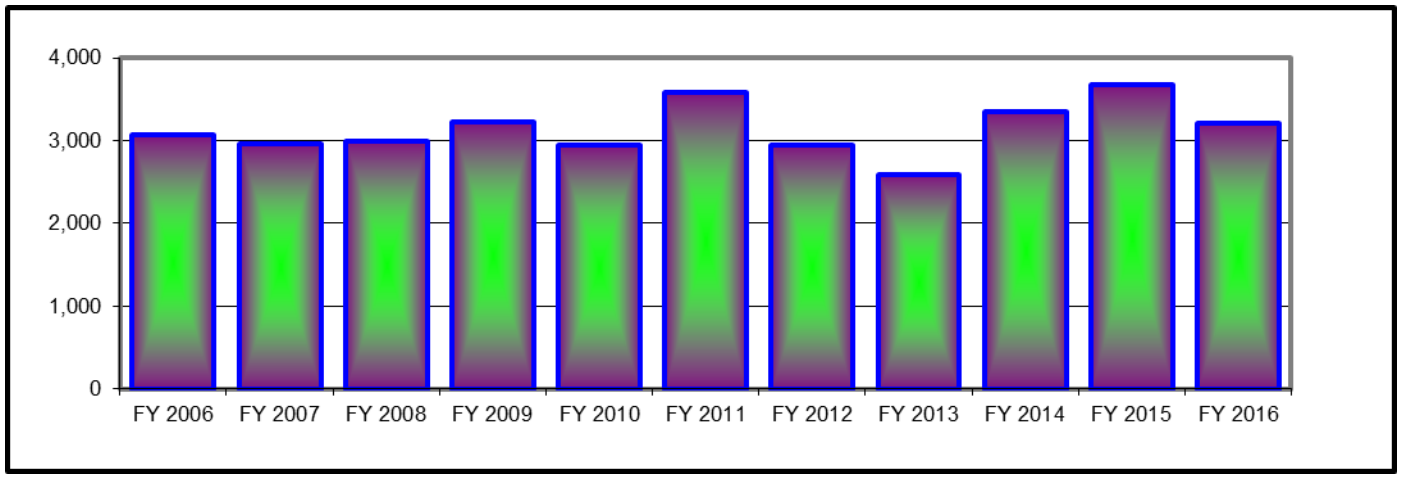
- 2012 – 1st Annual Winter Operations meeting
- 2012 or 2013 – Snow emergency status page added to City website. Facebook/twitter used to inform public of snow emergency status and progress.
- 2013, Vee Plows purchased for loaders
- 2013, undercoating added to salt trucks to prevent further rusting
- 2013 & 2014, new salt spreader box for salt truck (re-used chassis)
- 2014, windrowing downtown streets while plowing emergency routes
- 2015, additional operator added to the night crew

- 2015-2016, Ice slicer integrated into salting application
- 2016, undercoating added to all dump trucks to prevent rusting
- 2016, change from straight plows to reversible plows for all truck plows

Traffic Control – Federal Highway Administration requirements and Institute of Traffic Engineers best practice standards.

Traffic Signals

Average 3,138 hours maintenance



78 signalized intersections (79 with the addition of the Stolley Park/Adams signal)
41 school/pedestrian signals and flashing yellow signals
3 Coordinated Corridors
41 School/Pedestrian/Bike Trail Crossings & Advance Flashing
Routine maintenance and repairs are performed by the Streets Division. Annual preventive maintenance includes cabinet cleaning and replacement, detection camera cleaning, pole/mast arm crack and welds inspections, conflict monitor testing, and LED lamp replacement.
Streets staff include two certified traffic signal technicians. FHWA, ITE staffing level recommendation is 30-40 signals per technician for agencies that operate a minimum of 150 signals.
The utility bill for the traffic signals is part of the Streets Division operating budget. In 2016, approximately $19,700 was spent on power for the City's traffic signals.

Improvements/Changes

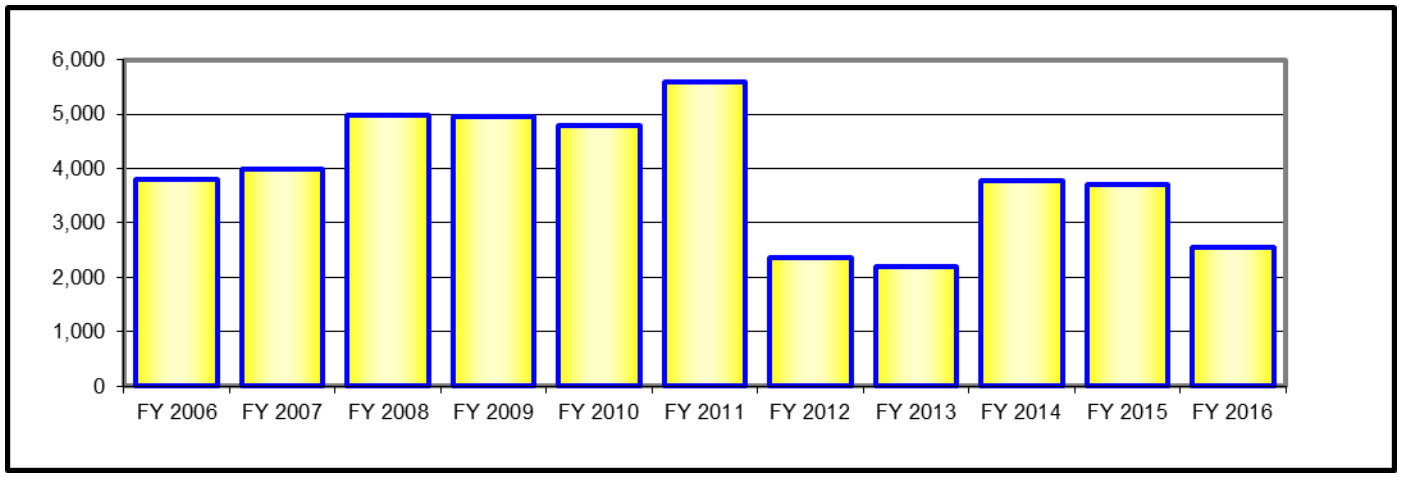
- 2012, Relocated all traffic signal inventory, tools, etc. to a central "signal shop" located at the West Yard
- 2013-2014, Internet access added to the signal shop
- 2014, Addition of quiet zone to the downtown area. The signal technicians were tasked with monthly inspections of the wayside horns as well as any repairs or maintenance that is required.
- 2015-2016, Traffic Signal timing software upgrade to Tactics and database backup on City Hall servers
- 2015, Began use of Cartegraph for managing traffic signal assets and tracking work history.
- 2015, Began bench testing new cabinets before installation.
- On-Going, software and hardware upgrades to replace outdated or obsolete technologies
- 2016, New bucket truck insulated for safety while working with electricity, a two-man bucket, and material handling job.

Street Lighting

The City of Grand Island Utilities maintains the majority of the street lights within the City Limits. There is a section of the Hwy 281 corridor in which the street lights are maintained by Southern Power District. The street lighting utility bill is part of the Streets Division operating budget. In 2016, approximately $340,000 was spent on power for the City's street lights.

Signs/Barricades/Delineators

Average 3,884 signs/year



Approximately 8,400 signs are maintained by the Streets Division. Signs are replaced when knocked down or significantly damaged. The Manual on Uniform Traffic Control (MUTCD) is the guideline by which signs are placed and maintained. A blanket sign replacement method is used to bring the City's traffic control signs into compliance with the MUTCD; with the highest priority on regulatory and warning signs. Under the current program signs are assumed to meet minimum reflectivity standards for ten years. When blanket replacement is performed on a section of roadway it is also used as an opportunity to review sign relevance and clean up areas with excessive signage.
The Streets Division is equipped to produce traffic signs. This equipment is used to make specialty signs for work zone traffic control and re-use/re-cover large overhead signs. A number of overhead signs are re-covered each winter to meet new MUTCD reflectivity requirements and improve visibility.
Barricades and delineators are also maintained and repaired. In the past year, Streets checked and repaired all broken barricades within the City.
Improvements/Changes include:

- 2011-2012, Blanket sign replacement initiated to meet new 2009 MUTCD reflectivity requirements
- 2013, Sign producing software/ hardware upgrade to include updated MUTCD requirements
- 2014, One-way system signing re-worked to meet new MUTCD requirements.
- 2014, Initiated adding block numbers when re-covering overhead signs

Tree Trimming and Removal

ROW tree trimming is performed on an as-needed basis this is determined if the trees are causing visibility problems with traffic control signs or motorists.
Some tree removal is done in the ROW most of this is done around box culverts and in drainage ditches. In that regard, this could be considered part of the drainage maintenance program. There are trees that were purposely planted or scrub trees that are within the ROW that is maintained by Streets and if these trees need removed that falls under Streets responsibility.

Temporary Traffic Control (Work Zones)

Streets sets up and maintains all temporary traffic control for their work zones. In the last three years the majority of the staff has become Certified Traffic Control Technicians and six have achieved Certified Traffic Control Supervisors. Temporary traffic control is regulated by the MUTCD and plays a significant role in the day to day operations of the Division. Traffic control has become a high priority to maintain safe conditions for the traveling public as well as the workers within a work zone.

Streets supplies traffic control for special events such as the Harvest of Harmony Parade, Race for Grace, and the State Fair Marathon.

After hours Streets checks other work zones and rectifies deficiencies.

Improvements/Changes include:

- 2011, City Ordinance No. 9289 to include temporary traffic control of unattended workzones be checked both day and night. Streets added this to the work schedule to ensure requirements were meet at night, weekends, and holidays.
- 2012 – Purchase crash attenuator to improve safety and meet requirements while working on high speed roadways (over 45 mph).
- 2016 - All Streets field staff are American Traffic Safety Services Association (ATSSA) trained on traffic control and we currently have five (5) ATSSA certified traffic control supervisors.

Pavement Markings

Pavement markings consist of a variety of materials including: paint, cold plastic, and thermoplastic. Historically Streets employees striped all roadways each year (including arrows and lane lines) but in 2014 most this function was contracted. Two benefits of using contractor services are working at night to reduce traffic disruption and the ability to reassign staff to other programs; in this case, storm sewer cleaning.

Streets still places pavement markings for concrete/asphalt patches, downtown parking stalls, raised islands, curbs, school crosswalks, and parking changes/restrictions.

A groover/grinder was purchased to allow the Streets Division to place permanent pavement markings where appropriate such as high traffic intersections. Thermoplastic pavement markings are placed on newly overlaid streets in high traffic areas.

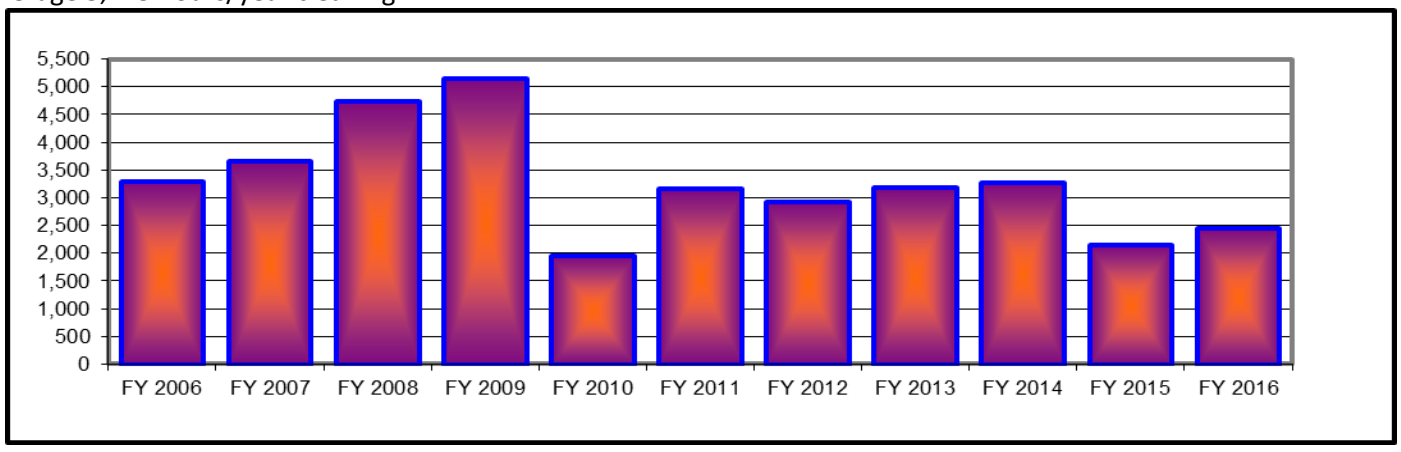
Improvements/Changes include:

- 2014, Eliminated unnecessary pavement marking (arrows) at signalized intersections for an estimated savings of over $16,000 per year.

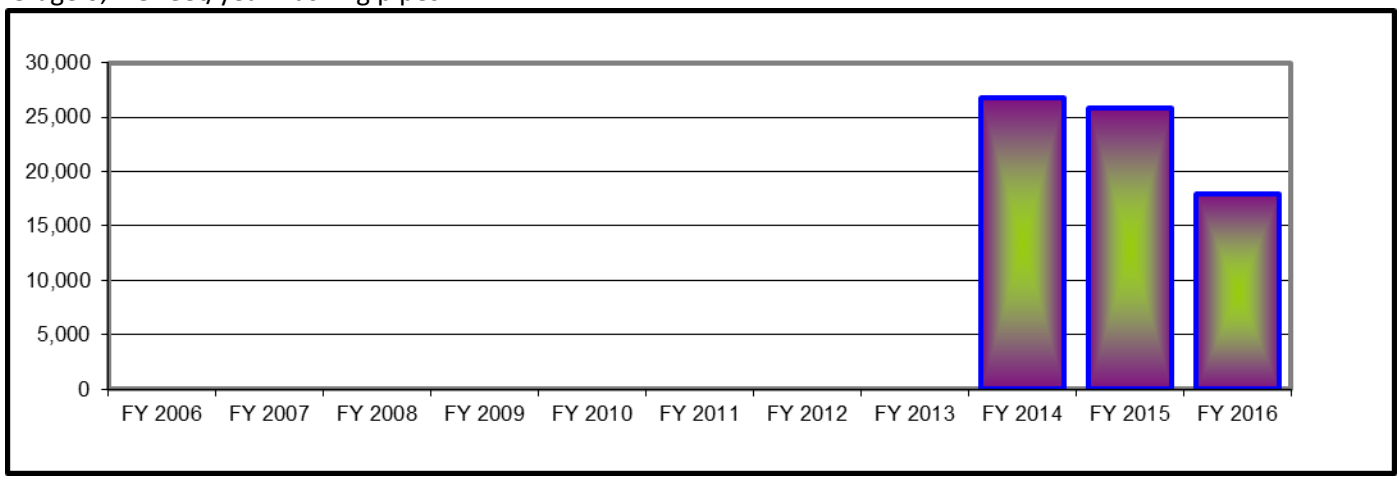
Drainage - EPA Stormwater Pollution Prevention Best Practice (will soon be mandated with the new Stormwater Quality regulations)

Storm Sewer Cleaning

Average 3,273 hours/year cleaning



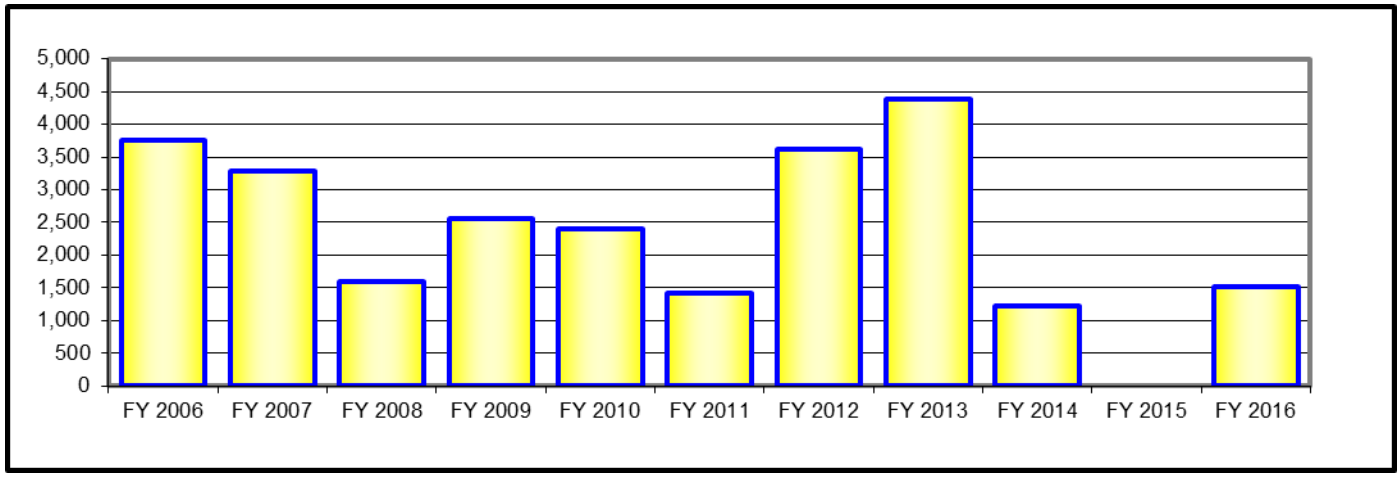
Average 6,413 feet/year flushing pipes



The Streets Division previously cleaned catch basins twice per year but did not have the equipment to clean the pipes. With the procurement of a new combination vacuum/flusher truck, a crew of two started begin the process of cleaning the storm sewer pipes as of 2014. Storm sewer and catch basin failures (breaks) are repaired by the concrete crew on an as-needed basis.

Catch Basin Cleaning

Average 2,572 hours/year



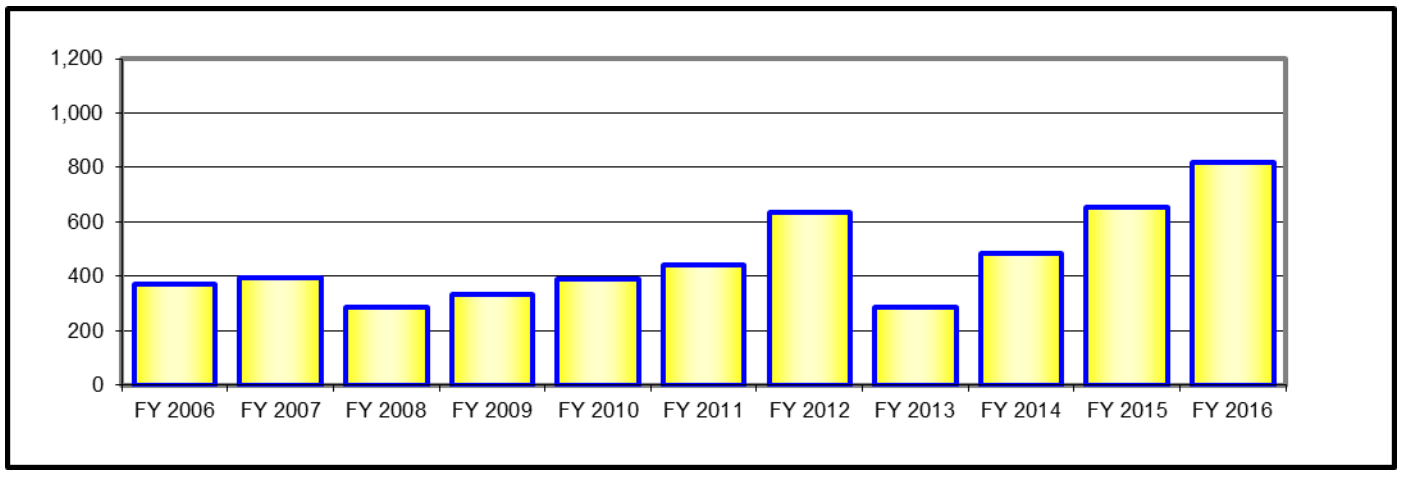
Catch basin cleaning takes place in the spring and fall each year with the goal of cleaning half the City each time and focusing on the areas with large number of trees; this program was suspended for a short time when the storm pipe cleaning was added until a viable routine could be developed.

Outfall Ditches/Roadway Ditches/Detention Cells

Ditches and detention cells are mowed seasonally after the right-of-way is completed. Detention cell low-flow liners are cleaned on an annual basis in the winter. Streets installs concrete low-flow liners when time and weather allows.

Locates – Nebraska State Law Required, statute 76-2301:2331

Average 464 locates/year



Locates are preformed to protect City infrastructure that is buried underground. Typically performed by the Traffic Signal Crew, both storm sewer and traffic signal assets are marked. Once the locate tickets are received there is a forty-eight hour time limit for completion. The quantity of locates varies widely depending on the time of year; during construction season, there are days when this takes 100% of a crew.
Improvements/Changes include:

- 2014, Began receiving electronic tickets (email) instead of faxed copies. Traffic Signals and Storm Sewer added to the list of City of Grand Island utilities on each ticket. Now responding to every locate request via e-mail or physical locating.

Bridge Maintenance – FHWA requirements

Bridge Inspections
The City of Grand Island owns and maintains 25 bridges. A biennial inspection by a certified bridge inspector is required. Structurally deficient bridges have additional inspection requirements; with the replacement of the Blaine St Bridge, the City currently has no recorded structurally deficient bridges. Maintenance work is generated from inspections.

Deck Repairs
Deck and joint repairs are completed as needed. These repairs are part of the pavement repair program.

Guardrail Repair and Delineation
Guardrail is a key safety feature for bridges when properly installed and maintained. If installation or repair is done incorrectly, guardrail can become a hazard. Since repairs are key to proper function, a specialty contractor is hired to complete most repairs. The number of guardrail repairs varies from year to year but is typically low. Therefore, the investment in equipment, training, and inventory of parts is not cost effective.
Guardrail is a fixed object within the clear zone and has specific delineation standards. The bridge delineators assist motorists with identifying bridge rail in low visibility and make a safer roadway. Prior to 2015, very few if any of our bridge guardrail were delineated properly. Since that time, Streets has been rectifying a few bridges each year and will continue until they are complete.
Improvements/Changes include:

- 2015 – Rail delineation completed on all S. Locust bridges, south of Hwy 34.
- 2016 – New W-Beam rail installed on Stuhr and Stolley Bridge
- 2016 – Rail delineation completed on Stuhr/Stolley Bridge, Blaine St Bridge over diversion, and all Shady Bend Bridges.

Specials – Community Tradition

Flags and Banners

Streets Division staff puts up and takes down American Flags in the down town area for Memorial Day, 4th of July, and Veterans Day.

Seasonal Banners placed and taken down as follows:

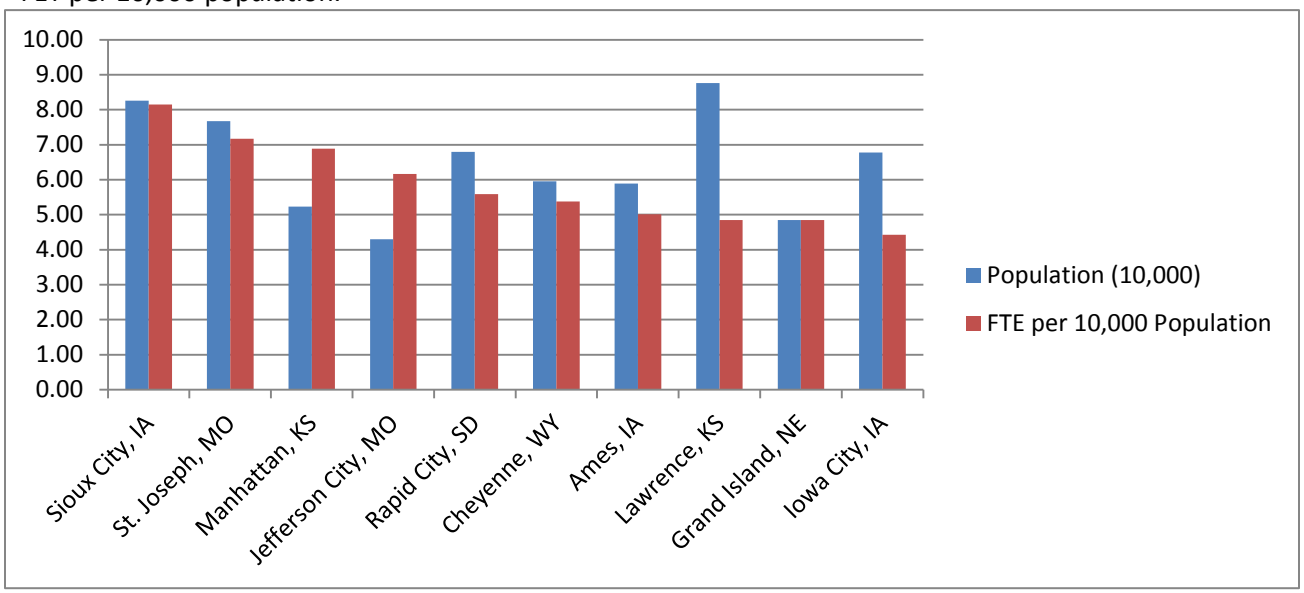
- Welcome/State Fair Banners – South Locust
- Harvest of Harmony Banners - Downtown
- Holiday Banners – South Locust St

Special Event Traffic Control

Streets Division assists with traffic control plans and installing traffic control devices for block parties and community events including:

- Race for Grace
- State Fair
- State Fair Marathon
- Harvest of Harmony Parade

Array - FET per 10,000 population.



Budget, staffing level, division of responsibilities vary between communities. Some of the differences include:

- Higher cost items such as street light utilities, traffic signal utilities, annual resurfacing project, and equipment replacement were tracked in separate funds, rather than in Streets Division operating budget.
- All but one Array Community had a separate Traffic Division that was responsible for traffic signals, pavement markings, signs, and special event traffic control.
- Six of the communities had a Storm Water Utility Fee for storm water drainage maintenance, drainage improvements and/or NPDES permit compliance. In Grand Island this expense is divided between Streets Division and the Engineering Division. Note that drainage related complaints are common.
- City ROW trees were maintained by an Urban Forestry Division or as part of the Parks Division in six of the Array Communities. Grand Island performs little routine tree maintenance other than to address trees blocking traffic control signs or effecting driver visibility.

Fleet Services Division

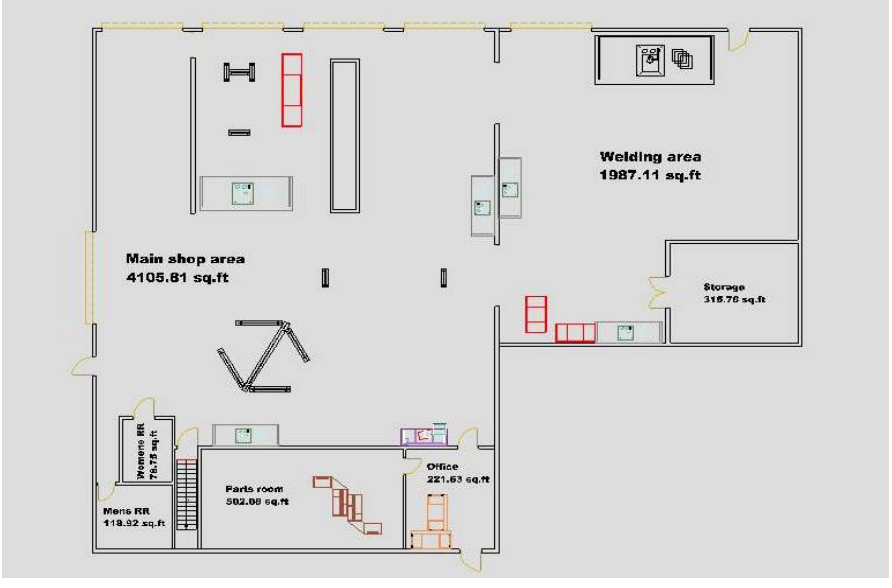
Fleet Services is an established Internal Service providing equipment and vehicle services to 450 plus units owned by various City Departments. The primary purpose is to repair production equipment that is needed to perform services and functions within each department, provide equipment repairs during emergencies (24/7), and repair security sensitive equipment (such as police vehicles); the Fleet Services Division has also been cost competitive.

Warranty repair on "LADDER 1"

The Division is responsible for purchasing parts and supplies to make repairs as well as purchasing and dispensing fuel for the City's fleet. Additionally, the Division operates a preventative maintenance program which provides routine oil changes, warranty checks, and other manufacturer recommended preventive maintenance tasks based on equipment use.

The Fleet Services Division maintains and is located at the shop garage: 1111 W. North Front Street.

The 6,000 square foot shop houses seven bays; two bays are equipped with hoists to accommodate cars. One bay has a hoist for pickups. Another bay has a large hoist that will accommodate pickups, ambulances, and a few trucks. There is also a truck service pit. These areas are utilized for the service and repair of various sizes of vehicles and equipment. There is a welding and fabrication area that has a drive in bay.



Shop Garage Floor Plan

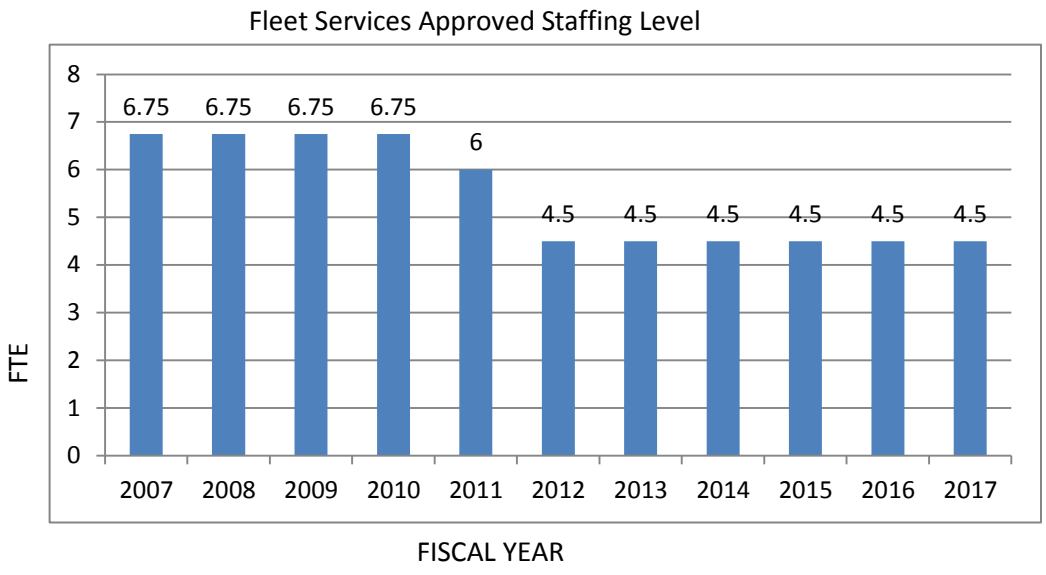
Fleet Services has been updating the shop garage and equipment to meet safety requirements, technology advances, and promote a positive work environment. The following are completed and planned facility updates:

- LED Lights, 2013 - Shop overhead lights replaced with LED light fixtures.
- Welding Area Vent Hood, FY 2013 - Install welding area vent hood to reduce the amount of welding exhaust fumes from entering the main shop area.
- Tire Machine, FY 2013 - New machine to find leaks and repair tires; capable of handling larger tires than previous machine.
- Fuel Dispenser Replacement, FY 2014 - Replace all four dispensers located at Fleet Services.
- New Server, FY 2014 and CFA (Fleet Management Software) Upgrade, FY 2015 - The CFA version being used by Fleet Services was obsolete and therefore upgraded. Prior to the software upgrade, Fleet Services needed to replace its database server. Wastewater also required a server upgrade at that time so Fleet was able to split the costs and share a server with the treatment plant.
- Scan Tool, FY 2016 -The upgraded scan tool gives Fleet Services the ability to diagnose and clear more electronic codes. This tool also has the ability to work with larger trucks which the old tool lacked.
- Ceiling Dry Wall, FY 2017 - New drywall over existing ceiling drywall.
- Fuel System Software Upgrade, Planned 2017 - Fueling system software is obsolete and is planned for an upgrade to avoid a major shut down of the entire fueling system.
- Painting, Planned 2017 – Painting the new ceiling drywall is underway as winter work for staff (contractor quotes were too high. After the ceiling is completed, the walls will be painted when time allows.

Staffing

Foreman (1)
Mechanic (3)*
Accounting Tech (0.5)**
TOTAL (4.5)

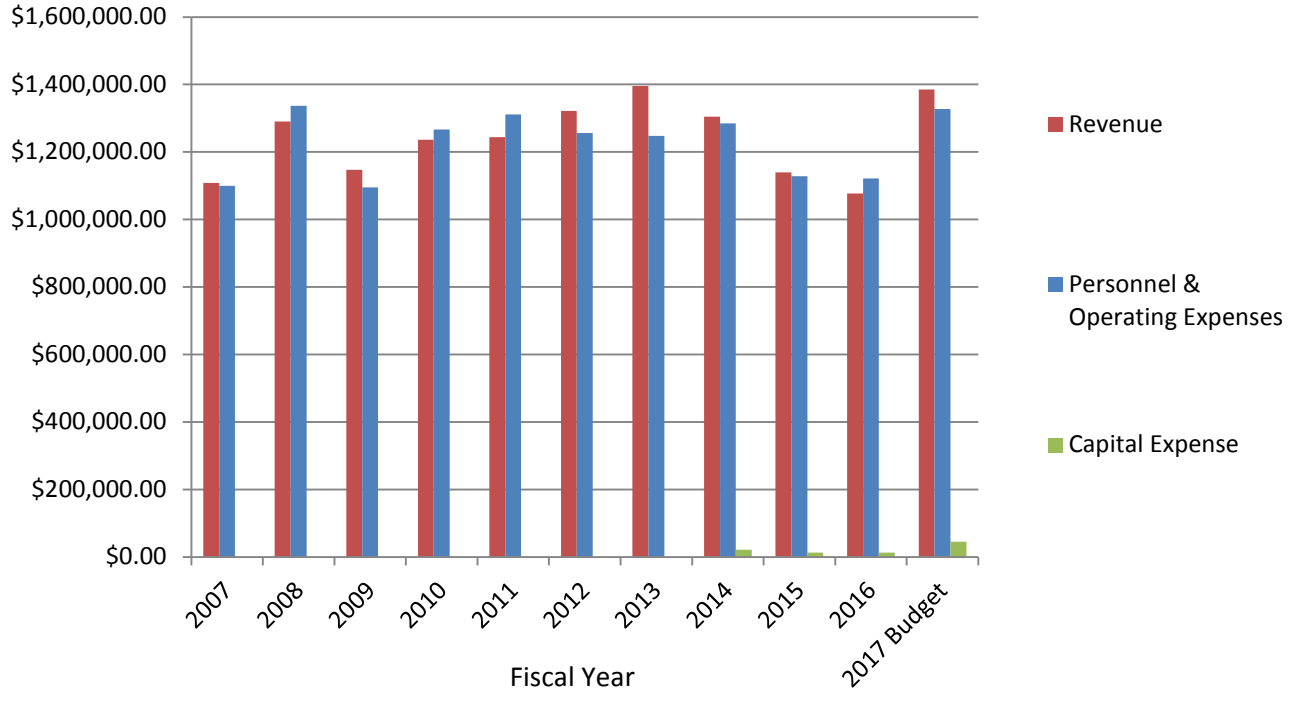
*AFSCME Union
**IBEW Union



The Repair Shop Mechanics are ASE certified; including ASE Master Automotive Technician and ASE Master Medium/Heavy Truck Technician certifications. Repairing equipment during emergencies is a core function, and staff are on-call in the winter for snow and ice events.

Funds

Fleet Services is an Internal Service Fund that strives to be financially self-sustaining by billing for parts, labor, and fuel to the departments which it serves. The graph below depicts revenue, operating expenses, and larger capital expenses.

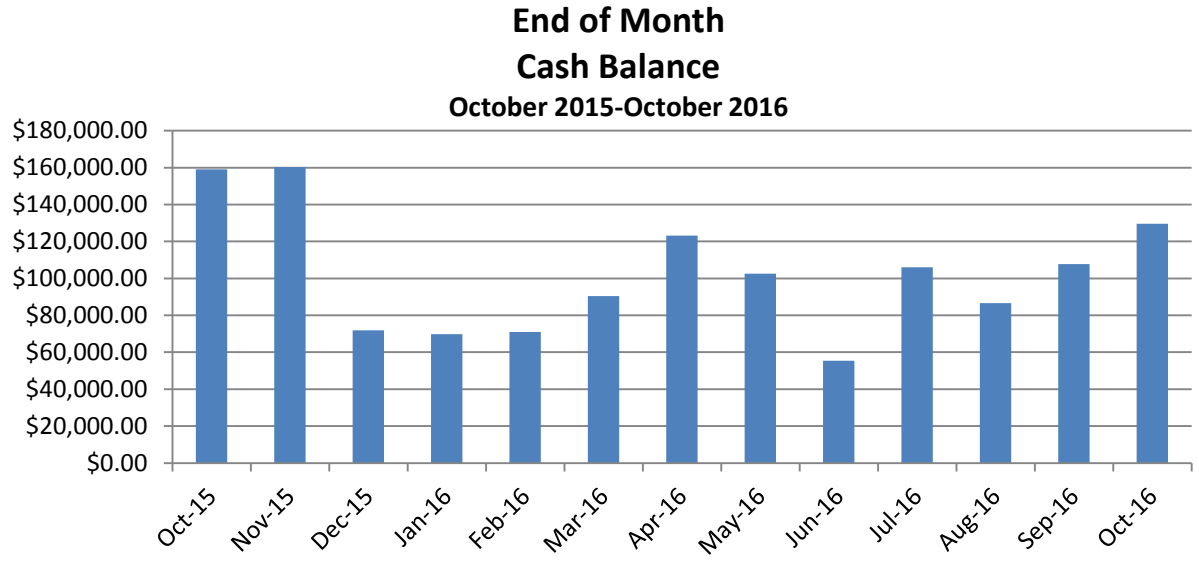


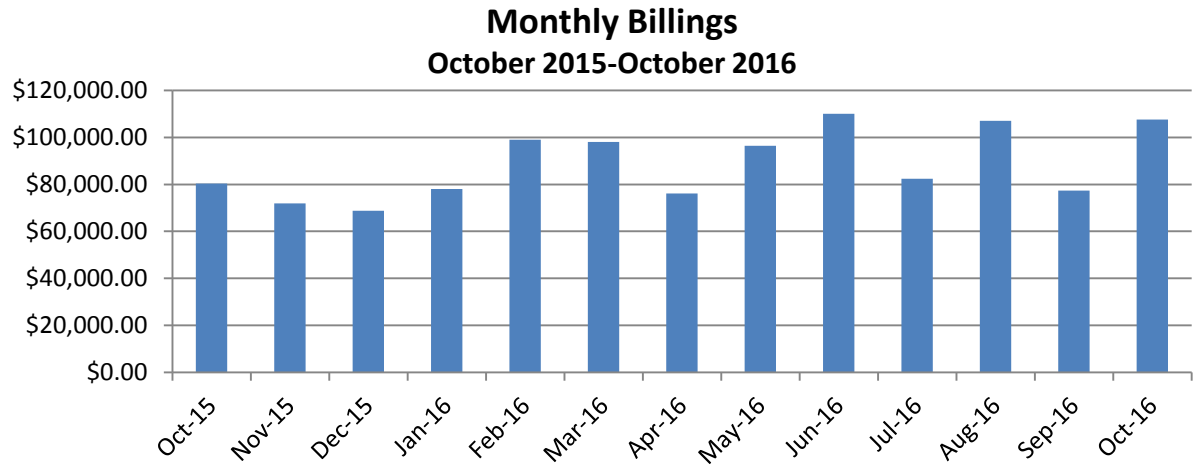
Ideally revenue will exceed expenses but there are two reasons it may not:

1. more funds were expended than recouped (an actual loss); and
2. high cost repairs/sales during the last 2 months of the year which will not be recouped until the next fiscal year (an accounting loss).

Since Fleet Services invoices for parts and labor on a monthly basis there is can be a large amount of expenses going out before the revenue is received. For example, fuel is a large purchase item for Fleet Services averaging $9,000 per delivery. A late September 2016 purchase of fuel increases the fiscal year expenses substantially but the revenue will not be collected until the fuel is sold and bills are paid which can take two months.

The End of Month Case Balance graph depicts how a good month or two of sales can bring down the cash balance quickly and then recover. Note the large drop in cash balance from November 2016 to December 2016, caused by a onetime worker compensation expense charged in December. In prior years this was divided into equal monthly payments so the cash balance impact would be smaller.





Labor rates and parts mark-up rates are evaluated each fiscal year and fuel prices are evaluated after every purchase. Goals include:

- Mechanic billable hour efficiency at or above 80%.
- Parts mark-up rate at or below private shops.
- Fuel mark-up per gallon to be at or below commercial pump prices.
- Net profit of 1% of operating budget (not including capital outlay).

The cash balance is used for capital outlay, large building improvements, large equipment purchases, and fuel system upgrades.

Changes/Improvements

- FY 2013, Base Fee was eliminated. Labor rates, parts mark-up rates, and fuel rates were adjusted.
- FY 2016, Surplus equipment disposal service made available for other divisions.

Programs

Fuel

Fleet Services manages a fueling island equipped with three underground storage tanks and eight pumping stations. City departments, including the Police Department, Streets Division, Fire Department, and Utilities Department use this facility on a 24-hour basis to fuel vehicles and equipment. The electronic fueling system requires users to enter the vehicle number and meter reading before fuel will be dispensed. This information is used to schedule preventive maintenance work and produce a monthly fuel bill for each Department. In 2016, Fleet Services' average monthly fuel purchase was 9,000 gallons of ethanol and 6,400 gallons of diesel.

Preventive Maintenance

Fleet Services sends out a weekly notification of equipment due for service. Preventive maintenance services range from oil changes to warranty work that is only required at specific manufacturer's recommended intervals.

Large Repairs

A good preventive maintenance program deters large repairs. The decision to make large repairs with staff or contract it depends on the type of repair needed and the current work load within the shop.

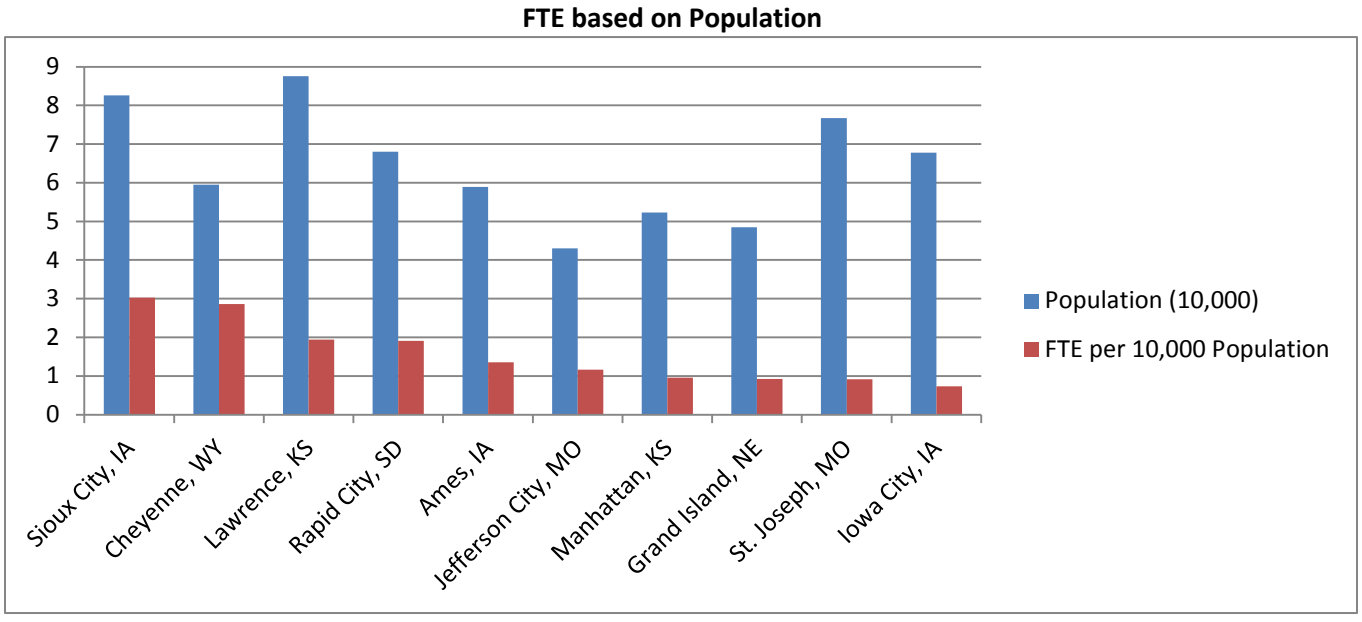
Parts Inventory

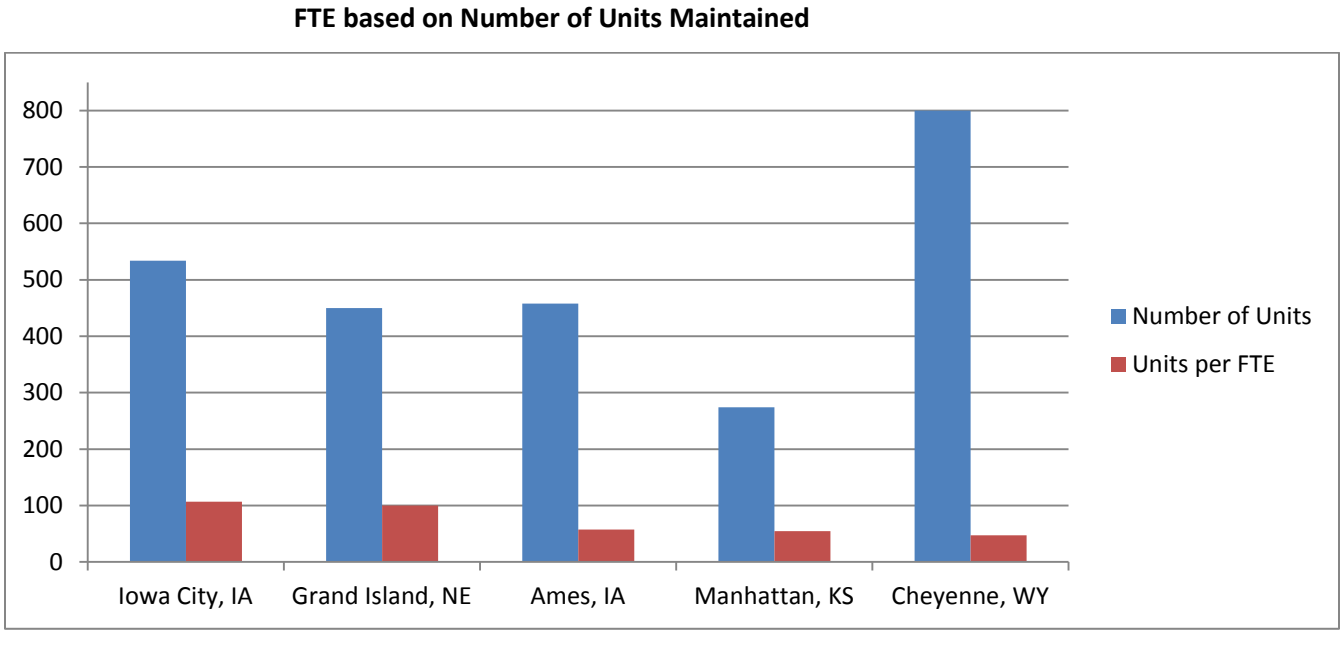
Commonly needed parts are kept on-hand for faster turnaround times. The inventory of parts is managed closely to reduce the amount of "cash" on the shelves. Inventory is done regularly to keep up with demand and a complete parts inventory and value is submitted as part of the City's fiscal year audit. At the end of FY 2016, Fleet had a parts inventory value of $110,700.

Towing

Fleet Services provides a towing service for all City Departments. The service is frequently used to assist the Police Department with parked/stalled vehicles or vehicles moved to the Law Enforcement Center as evidence. The wrecker is also commonly used to move city-owned equipment due to breakdowns or accidents. Wrecker towing is billed at a flat rate per trip.

FTE





Note that quantity of equipment was not available for many cities. The number is based on that listed in the budget and may not reflect equipment utilized.

Budget, staffing level, division of responsibilities vary between communities. Differences include:

- Some Cities had full time staff responsible for managing an equipment fund and procuring new equipment.
- A few communities had Municipal Airports with equipment serviced at their central garage.
- Sioux City, IA noted services were provided for the City, Airport, County, State, Federal Agencies, Schools, Regional Transit, and Surrounding Communities.

Solid Waste Division

The transfer station and landfill are licensed through the Nebraska Department of Environmental Quality (NDEQ) as solid waste facilities. This means that liquid materials will not be accepted. This would eliminate all paint, gas, oil, and liquid chemicals from being placed in the loads.

In addition, the State and Federal government has mandated bans on other materials such as tires and white goods (refrigerators, stoves, washers, dryers, hot water heaters, dehumidifiers) and tires. The transfer station and landfill will remove these items and recycle them for the customer for a fee or the customer may recycle them at a location of their choice. PCB containing materials and lead acid batteries cannot be accepted.

Common materials accepted by the Solid Waste facilities are:

- General household garbage
- Furniture
- Construction and demolition materials
- Shingles
- Cardboard
- Plastic
- Clothing
- Toys
- Lumber
- Insulation materials
- Pallets
- Railroad ties
- Carpet
- Metals

Transfer Station

Located at 5050 Old Potash Highway, Grand Island, Nebraska 68801

Hours of Operation:

Mon-Fri 7a.m.-4p.m.
Sat 7a.m.-noon

Most of the general public utilizes the Transfer Station site, which is located just 3 miles west of Grand Island, at the corner of Monitor Road and Potash Highway. The Transfer Station is the proper site for manual unloading of materials, and is also the location for the Yard Waste Site.

Yard Waste Site

Grass, leaves, and tree branches are accepted at the Yard Waste Site at no charge to residents.

The Yard Waste Site is located on Monitor Road, which borders the Transfer Station property to the East.

Hours of Operation:
Mon-Fri 10:00 a.m.-6:00 p.m.
Sat 8:00 a.m.-4:00 p.m.

Yard waste to be disposed of, must be clean of waste and debris. Residential customers who bring in grass, leaves, and tree branches are responsible for ensuring that their load is secured so as to prevent littering along the roadways, for dumping out plastic bags, discarding bags into a dumpster, and unloading their own vehicle. Free disposal of yard waste is only for homeowners and renters, not contractors for hire.

The finished compost is sold for $5.00 per cubic yard and wood chips can be purchased for $1.50 per cubic yard to help defer costs.

Landfill

Located at 19550 West Husker Hwy, Shelton, Nebraska 68876

Hours of Operation:
Mon - Fri 7:30a.m. - 4:00p.m.
Sat - 7:30a.m. - Noon

The landfill is the disposal site that actually buries waste materials. It is located approximately 18 miles west of Grand Island near the Hall/Buffalo County line.

This facility is open to the public, however loads that enter this site must be unloaded hydraulically. No manually unloaded vehicles are allowed at this site.

Clean Community System Partnership

The City of Grand Island has contracted with the Clean Community System (CCS) for over 30 years to coordinate recycling efforts, household hazardous waste collection facility, educational outreach programs, neighborhood clean-up events and many other activities to beautify the City of Grand Island.

This year, CCS staff again worked with the City and other organizations to ensure that the City of Grand Island and surrounding areas work together to promote a cleaner environment for us and for future generations.

Wastewater Division

Wastewater Treatment Facility

The Wastewater Treatment Facility (WWTF) operates under the terms and conditions of its NPDES (National Pollutant Discharge Elimination System) Permit. The NPDES Permit is negotiated with the Nebraska Department of Environmental Quality (NDEQ) and approved by the Environmental Protection Agency (EPA). Most of the functions performed by the Wastewater Division are driven by the terms and conditions of our NPDES Permit.

The limits in an NPDES Permit are driven in large part by the body of water discharged to. The limits become more lenient as the size of the receiving body of water increases. The Grand Island WWTF NPDES Permit contains some of the most stringent limits in the State of Nebraska, because the receiving bodies of water, the Wood River and the Platt River are perennial (occasionally dry). More stringent limits translate to higher capital costs, higher O & M costs and potentially higher staffing levels; and usually higher rates. Omaha and Lincoln have more lenient ammonia limits because they discharge to larger bodies of water.

The replacement costs of Wastewater assets is:

- WWTF: 13.1 MGD x $12/gallon = $157,200,000
- Collection System: 225 mile x 5,280 ft/mile x $150/ft = $178,200,000
- 4,300 manholes x $10,000/manhole = $43,000,000
- 14 lift stations x $500,000 = $7,000,000

Total Estimated Replacement Cost (i.e. value): $385,400,000

The WWTF has an NPDES Permit rated capacity of 13.1 MGD (Million Gallons per day); a population equivalent of 131,000. We are currently treating a population equivalent of 77,000 +/- people because of the City's high industrial discharge.

The WWTF was designed to meet secondary limits – 90% removal of Influent TSS and $BOD_{5;}$ but typically meets tertiary limits – 95% removal of the Influent TSS and BOD_5 though the facility has no Tertiary Filter. As an example, the following pollutant removal took place during FY 2016 (October 1, 2015 – September 30, 2016).

- BOD_5 – 97.5%
- TSS – 93.5%
- Ammonia as N – 99.6%

The current WWTF NPDES Permit contains limits for chlorides and conductivity that are effective January 1, 2021. We should be able to meet the chloride and conductivity limits provided our industrial dischargers meet the chloride and conductivity limits in their respective NPDES Permits; but there is little margin for overages. Sampling indicates water softening is a significant source of chlorides. We are investigating the possibility of offering rebates to customers that exchange old salt inefficient water softeners for new salt efficient water softeners.

Sanitary Sewer Collection System

The Sanitary Sewer Collection System consists of 225 miles of sanitary sewer lines, 4,300 Sanitary Sewer Manholes and 14 Lift Stations. A small percentage of the sanitary sewer pipe is over 100 years old; the design life for vitrified clay sanitary sewers is 50 years. $250,000 to $350,000 is budgeted each year for collection system rehabilitation.

The EPA has an informal metric for Sanitary Sewer Collection System Operations and Maintenance – 4 SSOs (Sanitary Sewer Overflows) per 100 miles of sanitary sewer collection system. The City is well below this, rarely experiencing SSO's.

The EPA developed the CMOM (Capacity Management Operations and Maintenance) program mandating a proactive approach to Sanitary Sewer Collection System Operation and Maintenance. We are complying with most CMOM requirements. The exception is a FOG (Fats, Oils and Grease) program, which is in development and should be implemented this year.

Personnel

The Grand Island Wastewater Division has 27 approved positions, 7 of which anticipate retiring in the next 5 years. Staffing levels compare favorably to our Array of Cities and to the NEIWPCC (New England and Interstate Water Pollution Control Commission) Guide.

Our NPDES Permit mandates 24/7/365 day coverage. Coverage was being met using 8 hour shifts. We negotiated a six month MOU (Memorandum of Understanding) with the wastewater bargaining unit for 12 hour shifts for the wastewater operators. 12 hour shifts were rolled out in August 2015. The MOU was extended to the end of the current contract based on the feedback from the wastewater operators.

Major Projects

Projects included:

- SCADA Enhancements
- Primary Clarifier Rehabilitation
- Aeration Project – Blower Replacement, automated controls and diffuser replacement
- Headworks Project – Mechanical Bar Screen, Influent Pumps. Grit Removal
- Asset Management
- South and West Interceptor
- 4th & 5th Eddy to Vine
- North Interceptor Phase 1
- North Interceptor Phase 2
- Abandon Lift Station #2
- Abandon Lift Station #8
- Abandon Lift Station #10
- Abandon Lift Station # 13
- Abandon Lift Station # 15
- Abandon Lift Station # 19
- Wildwood Sanitary Sewer
- 281 Sanitary Sewer
- SID #2 Sanitary Sewer
- Add Lift Station # 25
- Add Lift Station # 26

Automation played a role in the SCADA Enhancement Project, Aeration Project, Headworks Project, Wastewater Treatment and Sanitary Sewer Collection System Asset Management Projects. Automation improves efficiency and lowers costs.

The NDEQ will be adding BNR (Biological Nutrient Removal- Phosphorus/Nitrate) requirements to our NPDES permit in the near future. Dr. Chon is configuring Bio-Win (Wastewater Modeling Software) to our WWTF. Among other things he will be looking at the impact BNR requirements will have on our WWTF and the potential cost impact. We intend to start setting money aside money in a second restricted account for BNR removal.

The 2013 Master Plan recommended the design and construction of the South Interceptor in two phases to accommodate growth. The Lift Station #20 project currently under design is the first step.

Funds

We developed monthly variance reports comparing actual costs to budgeted costs during the Fall of 2013. It is good practice to know if we are above or below budget and why. That report has been tweaked several times since then. The existing Wastewater Chart of Accounts did not reflect our current organizational structure and reduced the effectiveness of the monthly variance report. We met with Finance and modified our Chart of Accounts to reflect the current organizational structure.

The equipment inventory of 2012 identified a number of vehicles that were no longer needed, and several that were no longer cost efficient. As a cost control, excess vehicles were disposed and older ones scheduled for replacement.

We financed the first half of our wastewater infrastructure program using conventional municipal bonds. We received $40,000,000 in CWSRF (Clean Water State Revolving Fund) loans from the NDEQ for the second half of our wastewater infrastructure program. The interest rate is 2.25% for Green (reduce carbon footprint) and 2.5% Non-Green projects.

Wastewater rates are comparable to those in the City Array, several of which plan to increase rates in the next year.

	Base Rate/Month cubic feet	Rate/100 cubic feet	Average Monthly Bill
St. Joseph, MO	$33.40 in city, $78.38 outside city	$4.98 in city, $11.38 outside city	$ 70.95
Lawrence, KS	$12.10 in city, $12.91 outside city	$5.17 in city, $6.20 outside city	$ 51.08
Manhattan, KS	$20.60 for first 200 cf	$3.10	$ 43.97
Iowa City, IA	$8.15, includes the first 100 cubic feet	$3.99	$ 38.23
Jefferson City, MO	$10.72 in city, $32.16 outside city	3.22	$ 35.00
Grand Island, NE	8.24	$3.28 in city, 20% surcharge outside city	$ 32.97
Sioux City, IA	$3.96 / mos.	4	$ 32.08
Ames, IA	$10.71 / mos.	$2.74	$ 31.37
Cheyenne, WY	$ 4.61 for 5/8" meter, 50% surcharge outside city	$3.31 in city, 50% surcharge outside city	$ 29.57
Rapid City, SD	$3.48 for 5/8 total meter charge	$3.25	$ 27.99

NPDES permit limit comparison Omaha, Lincoln and Grand Island

		Grand Island WWTF		Lincoln WWTF (Theresa st.)		Omaha WWTF (Missouri River)		Omaha WWTF (Papillion Creek)	
	Permit Expiration Date	December 31, 2019		June 30, 2019		March 31, 2018		March 31, 2018	
	Permitted Flow Rate (MGD)	13.1		27.4		30.0		72.8	
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow & T.	Flow	Report	Report	Report	Report	Report	Report	Report	Report
	Temperature	Report	Report	Report	Report	Report	Report	Report	Report
		Monthly Average	7 Day Average	Monthly Average	7 Day Average	Monthly Average	7 Day Average	Monthly Average	7 Day Average
cBOD, TSS, TN & TP	cBOD	25 mg/L	40 mg/L	25 mg/L	40 mg/L	40 mg/L	60 mg/L	40 mg/L	60 mg/L
		1240 kg/day	1983 kg/day	2593 kg/day	4148 kg/day	4542 kg/day	6813 kg/day	11021 kg/day	16532 kg/day
	TSS	30 mg/L	45mg/L	30 mg/L	45 mg/L	45 mg/L	65 mg/L	45 mg/L	65 mg/L
		1488 kg/day	2231 kg/day	3111 kg/day	4667 kg/day	5109 kg/day	7380 kg/day	12399 kg/day	17910
	Total Nitrogen	Report	Report	Report	Report	Report	Report	Report	Report
	Total Phosphorous	Report	Report	Report	Report	Report	Report	Report	Report
		Daily Minimum	Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Daily Maximum	Daily Minimum	Daily Maximum
pH	pH	6.5	9.0	6.5	9.0	6.5	9.0	6.5	9.0
		Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
E.coli	E.coli	# 126/100 mL	Report	# 126/100 mL	Report	# 126/100 mL	Report	# 126/100 mL	Report
Ammonia	Interim Spring Ammonia			8.3 mg/L	21.9 mg/L				
	(March 1 - May 31)			619.3 kg/day	1621.2 kg/day				
	Interim Summer Ammonia			3.0 mg/L	7.9 mg/L				
	(June 1 - Oct. 31)			243.6 kg/day	637.8 kg/day				
	Interim Winter Ammonia			9.8 mg/L	25.7 mg/L				
	(Nov. 1 - Feb. 28[29])			787.6 kg/day	2061.8 kg/day				
	Final Spring Ammonia	1.11 mg/L	1.95 mg/L	5.7 mg/L	14.36 mg/L	53.7 mg/L	155.3 mg/L	40.5 mg/L	61.1 mg/L
	(March 1 - May 31)	57.0 kg/day	100.3 kg/day	495 kg/day	1247 kg/day	5419 kg/day	15658 kg/day	8895 kg/day	13417 kg/day
	Final Summer Ammonia	0.98 mg/L	1.87 mg/L	3.0 mg/L	5.9 mg/L	40 mg/L	100 mg/L	34.1 mg/L	55.5 mg/L
	(June 1 - Oct. 31)	49.0 kg/day	93.4 kg/day	273 kg/day	535 kg/day	3894 kg/day	9736 kg/day	7474 kg/day	12160 kg/day
	Final Winter Ammonia	2.30 mg/L	3.93 mg/L	5.6 mg/L	12.8 mg/L	89.3 mg/L	210.8 mg/L	64.7 mg/L	99.1 mg/L
	(Nov. 1 - Feb. 28[29])	107.3 kg/day	187.1 kg/day	511 kg/day	1172 kg/day	8440 kg/day	19905 kg/day	13785 kg/day	21115 kg/day
Chloride & Chlorine	Interim Chloride, Total	Report	Report	*	*	*	*	*	*
		Report	Report	*	*	*	*	*	*
	Spring Final Chloride, Total	230 mg/L	390 mg/L	*	*	*	*	*	*
	(March 1 - May 31)	11807 kg/day	20027 kg/day	*	*	*	*	*	*
	Summer Final Chloride, Total	230 mg/L	389 mg/L	*	*	*	*	*	*
	(June 1 - Oct. 31)	11499 kg/day	19473 kg/day	*	*	*	*	*	*
	Winter Final Chloride, Total	230 mg/L	380 mg/L	*	*	*	*	*	*
	(Nov. 1 - Feb. 28[29])	10725 kg/day	17733 kg/day	*	*	*	*	*	*
	Spring TRC - Outfall 001	*	*	0.011 mg/L	0.020 mg/L	0.1 mg/L	0.27 mg/L	0.08 mg/L	0.2 mg/L
	(March 1 - May 31)	*	*	0.956 kg/day	1.737 kg/day	11 kg/day	28.80 kg/day	17.66 kg/day	46.24 kg/day
	Summer TRC - Outfall 001	*	*	0.011 mg/L	0.020 mg/L	0.13 mg/L	0.33 mg/L	0.09 mg/L	0.23 mg/L
	(June 1 - Oct. 31)	*	*	1.000 kg/day	1.778 kg/day	14.12 kg/day	36.97 kg/day	22.00 kg/day	57.58 kg/day
	Winter TRC - Outfall 001	*	*	0.011 mg/L	0.020 mg/L	0.1 mg/L	0.27 mg/L	0.07 mg/L	0.19 mg/L
	Nov. 1 - Feb. 28[29])	*	*	1.007 kg/day	1.803 kg/day	10.19 kg/day	26.67 kg/day	16.02 kg/day	41.93 kg/day
	Spring TRC - Outfall 001H	*	*	0.024 mg/L	0.065 mg/L	*	*	*	*
	(March 1 - May 31)	*	*	3.27 kg/day	8.86 kg/day	*	*	*	*
	Summer TRC - Outfall 001H	*	*	0.023 mg/L	0.061 mg/L	*	*	*	*
	(June 1 - Oct. 31)	*	*	3.13 kg/day	8.31 kg/day	*	*	*	*
	Winter TRC - Outfall 001H	*	*	0.023 mg/L	0.061 mg/L	*	*	*	*
	(Nov. 1 - Feb. 28[29])	*	*	3.13 kg/day	8.31 kg/day	*	*	*	*