

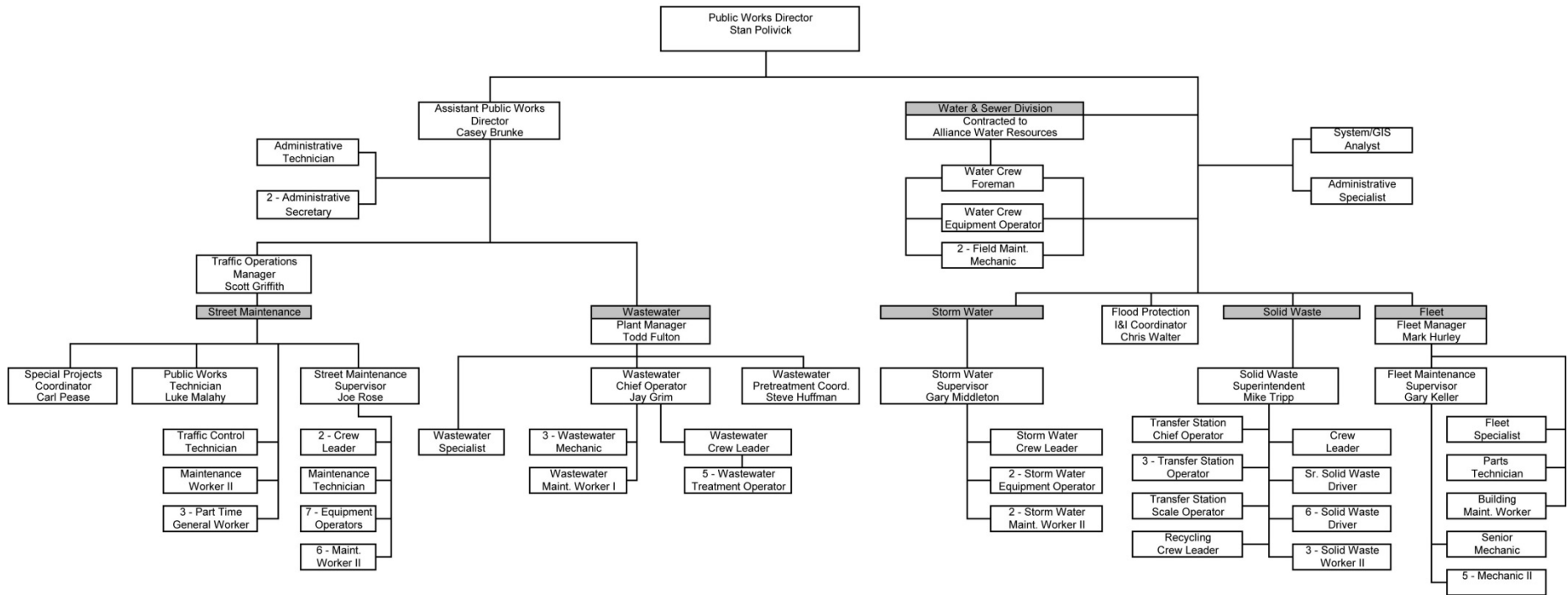
# **Public Works Department**

**Stan Polivick, P.E.  
Public Works Director**

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City of Cape Girardeau, Missouri  
Public Works Department  
Organizational Chart



# Public Works Department

## Mission : Purpose Driven Service

### Service Areas:

- Fleet Maintenance and Management – citywide
- Public Works Facilities Maintenance
- Street Repair & Maintenance, and Traffic Controls
- Solid Waste/Recycling Collection and Processing
- Water Treatment and Distribution
- Wastewater Collection and Treatment
- Stormwater Maintenance and Management

# **Fleet Management Division**

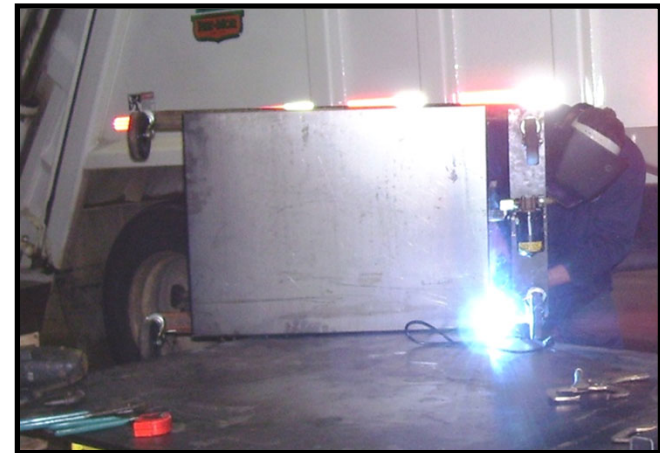
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# Fleet Maintenance

- 6 Full-time mechanics
- Over 3,000 repairs annually
- Over 350 preventative maintenance services annually
- Work on all City Units
  - except fire trucks



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# Fleet Services

Work on everything from mowers to trash trucks



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# Fleet Services

- City's fuel station
  - Over **400,000 gallons** of fuel annually for all City Divisions
  - Diesel & unleaded gas



- Stock parts and tires in house
- Sell surplus vehicles & equipment
  - Use online auction
  - Money goes back into equipment replacement fund

# Fleet Services

- Coordinate Fleet Replacement Program
- Most units are on a schedule for replacement
- Manage over 300 vehicles and over 1,000 other pieces of equipment

# Facility Maintenance

## Public Works Buildings

# Facility Maintenance

- Repair and upkeep for all PW buildings
- Daily janitorial service for PW Admin
  - Trash, floors, bathrooms, mowing
- Maintenance agreements for generators
  - Main office
  - Transfer Station
  - WWTP
  - Out Buildings
  - Pump Stations

# Street Maintenance Division

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# Street Maintenance

- Over 220 miles of streets
- 22 miles alleys
- Mow over 600 acres of right of way
- Provides weed control
- Removes dead and diseased trees; trims along streets and alleys



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# Street Maintenance

- City Crew Pavement Repairs
  - about 35,000 sf of pavement repair each year
  - Size of work area limited due to other demands
  - Also limited by manpower & equipment allocations



# Pavement Repairs by Contract



TTF 5 Street Repairs about \$7.5 million completed

TTF6 Street Repairs \$9 million budgeted for repairs

# Street Maintenance

Street Sweeping  
2 Sweepers  
10,000 miles/yr  
Strive to have every street  
swept at least once a month



## Storm Debris

Removes over 1,000 tons of  
storm-damaged limbs in a  
given year

June 2019 Wind Storm had  
over 380 tons of debris

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# Snow Removal



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# Snow Removal

- Goal is to have ALL streets passable
- Work 12 hour shifts until roads are passable
- 14 drivers, 2 supervisors, 3 mechanics, and a man on a loader for each shift - total of 20 people per shift
- Each truck will travel about 100 miles on a shift
- Use brine as a pre-treatment when practical

# Snow Removal



## Snow and Ice Miles Plowed/Treated

2008-2009	10,966
2009-2010	12,071
2010-2011	10,437
2011-2012	2,700
2012-2013	7,672
2013-2014	21,491
2014-2015	18,709
2015-2016	7,441
2016-2017	2,024
2017-2018	6,632
2018-2019	7,462
2019-2020	-
2020-2021	11,514
2121-2022	9,457

# Traffic Control Maintenance



- Operates traffic signals at 22 intersections
- Maintains over 7,400 traffic signs
  - Installed over 120 new signs last year
  - Repairs or replaces 230 signs each year
- Provides work zone traffic control devices for Department crews and special events
- Stripes on average 390 crosswalks and over 65 miles of long striping yearly (center lines & side lines)

# Street Light Program

3,287 Total Street Lights

764 City

2476 Ameren

Annual expense for  
street lights and signals  
\$480,000





# Street Light Program

Ameren continues to transition to LED fixtures



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# Pavement Condition Management

- Inspects street cuts by utilities and private contractors
- Evaluates over 100 miles of street yearly to determine pavement condition (PCI)
- PCI used to determine priorities for asphalt and concrete street repairs
- PCI is important data for TTF discussions

# Leaf Collection

- Recent Leaf Seasons about 800 tons and over 6,000 residential stops

Season runs  
October thru March

## Seasonal Tonnage

2008-2009	963
2009-2010	1,034
2010-2011	653
2011-2012	408
2012-2013	728
2013-2014	642
2014-2015	720
2015-2016	778
2016-2017	771
2017-2018	826
2018-2019	857
2019-2020	Not Available
2020-2021	930
2021-2022	724



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# **Solid Waste Division**

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# Residential Route Pick Up

- Serves 9,000 homes weekly
- 3 automated trucks and 1 rear loader truck pick up trash averaging over 266,000 pounds of solid waste weekly
- Provides Wednesday special pick-ups
  - 1 free per resident each calendar year





# Recycling Curbside Pick Up

- 2 automated trucks and 1 rear load truck collect recycled material curbside from over 4,000 residents each week
- Recycling participation increased with single stream program
- 1 automated truck floats between recycling and trash as needed



# Recycling



- Single Stream Recycling Program
- Over 8 million pounds of recycled material processed and shipped last year
- Recycling Public Drop Off Center for use by residents and glass drop off points
- Recycling Information is provided to new residents

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# Recycling Presentations

Public Works Staff gives presentations about recycling at schools and civic groups





# Recycling

- World Wide Changes in Recycling
- Must be more attentive to what goes into recycle bins
- We have begun a Recycling Education Program

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## CITY of CAPE GIRARDEAU

PUBLIC WORKS DEPARTMENT

Due to dramatic changes in worldwide use of recyclable materials, our Single Stream Recycling Program must be modified.

Effective immediately, plastic shopping bags, garbage bags and newspaper sleeves are no longer acceptable in the green recycling cart.



### Standard Non-Acceptable Items:

Plastic wrap, waxed paper, pet food bags, hazardous waste, pesticide containers, packing peanuts, bubble wrap, plastics labeled "PLA", plastics with #6, styrofoam, hardcover books, photographs, plastic utensils, paper towels, napkins, tissues, toilet paper, diapers, take out food containers/pizza boxes, foil-lined items such as cookie and chip bags

### Still acceptable Items:



You can find more information on our website at [www.cityofcape.org/recycling](http://www.cityofcape.org/recycling)  
Or our Facebook page at [www.facebook.com/capepublicworks](http://www.facebook.com/capepublicworks)

# E-Waste Recycling

- Partnered in 2010 with Midwest Recycling Center (MRC) to offer electronics recycling year round
  - Electronics recycled FREE



# Household Hazardous Waste Day



- 2019 event collected over 29,000 pounds from 282 residents
- Collection funded by a Solid Waste Management District grant and is held when funding from grant is available.
- Have received a grant one in October 2022



# Solid Waste Transfer Station

- New Multi-Use Facility opened June 13, 2016



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# Solid Waste Transfer Station

- New Multi-Use Facility opened June 13, 2016



- City trucks, the public, contractors and other cities haul waste to our transfer station for processing



- Waste is hauled from our Transfer Station to Landfill in Dexter, MO
- Average Daily Tons
  - Old Facility – 92
  - New Facility – 190

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# Old Transfer Station



Not large enough.

Subject to river flooding.  
Poor access.



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Old Transfer Station and Site

# Old Transfer Station

- We still use the old Transfer Station for storing the leaves and limbs we pick up
  - *And we pick up a whole lot of 'em*
- These are mulched each year for disposal
- 2018 mulch contract....\$53,000
- 2019 contract \$82,000...includes tree debris from wind storm.
- 2021 contract was \$62,000

# Leaves and Limbs



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# Leaves and Limbs



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# Break Time and Facility Tour

# Water Division

*Water System Operation and Management is  
contracted to Alliance Water Resources*

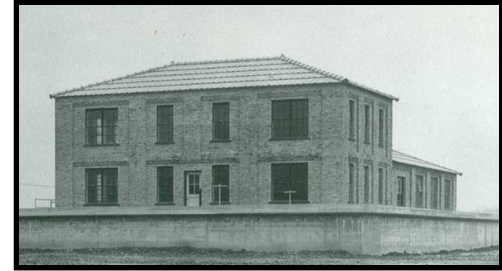


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# Water Production

- Cape Rock Plant – Plant 1
  - Built in 1931
  - Renovated / expanded in 2003
  - Production capability: 7.5 MGD
  - Average daily production: 5-6 MGD
- Plant 2, S. Sprigg St
  - Built in 1977
  - Production capability: 2.8 MGD
- Total production capacity of both plants: 10.3 MGD





# Water Operations Monthly Activities

- Read 17,836 meters
- Average 1,180 completed work orders
- Provides locates for Water Sewer Storm and Traffic Divisions
- Install 15-20 new service lines
- Repair 15 service line leaks
- Repair 5 main line leaks
- 2" replacement program
  - Replaced 99,437 feet since 1992;  
Project 71% complete
- Radio read meter replacements & new services
  - Replaced 17,335 meters since 2006;  
Project 100% complete



# Water System Improvements



- La Salle Tank
- La Salle Booster Pump Station
- Cape Rock Booster Pump Station
  
- \$18 million more in next 15 years

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# **Storm Water Maintenance Division**



# Storm Water Maintenance

- SCADA System Creek Monitors
  - 5 creek level locations
  - 1 detention basin
  - 8 remote rain gauges
  - 2 Floodwall Pump Stations
- Checks over 800 locations each rain event
- Cleans catch basins, grates and driveway pipes
- Maintains 93 miles of pipe in 12 watersheds
- Maintains Cape LaCroix and Walker Branch channels



- Mow each of 43 detention areas 12 times per year on average





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# Walker Branch at Bloomfield Road



Dry Day



Heavy Rain Event



Junction of Cape La Croix Creek  
and Walker Branch

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# Storm Water Projects



*Lisa Detention Basin*

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- Install Erosion Control Structures
- Install culverts and piping
- Remove trees and brush from drainage areas
- 2008 Parks & Stormwater Tax
  - 12 original projects completed
  - 5 additional projects were completed
  - Total expense over \$6 million
- PRS2 Projects Begun
  - 4 big projects completed
  - 2 under construction
  - 3 more in design





# Floodwall System

- 2008 City took over Operation & Maintenance
- 8,200 feet of levee/ floodwall, 5 closure structures and 2 major pump stations

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# Floodwall System

- Quarterly inspections by city staff
- Annual inspection by USACE
- Operation / Maintenance & Repairs by City
- Critical to protect downtown Cape from river floods
- River above flood stage 42 times from 1943 through 2021

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Record Duration Event 2019  
144 days above flood stage

# Nuisance Abatement

Mows / clears weed  
abatement lots



Mosquitoes - Place slow  
release tablets of larvicide to  
control mosquitos

# **Sanitary Sewer Maintenance Division**

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# Sanitary Sewer Maintenance



- **Recently outsourced this Division to Alliance Water Resources**
- 275 miles of sewer lines
- Over 5000 manholes
- Cleans approximately 100,000 feet of sewer lines yearly
- Inspects approximately 23,500 feet of sewer lines yearly
- Performs sewer repairs and cleans manholes and lift stations

# Sanitary Sewer Maintenance



- Continue progress of I & I Flow Reduction Program
    - Eliminating rain water flows from sanitary sewer system
  - 1,588 manholes to be repaired
  - Remove over 6 million gallons of rain water from sanitary sewer system flows
  - Stop manhole overflows and basement backups
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# **Wastewater Treatment Facility Division**

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# New Wastewater Treatment Facility

## Startup – December 2014



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# Wastewater Treatment Facility

- \$56 million modern facility
- Operational December, 2014
  - The largest wastewater facility in Southeast Missouri and one of the most advanced in Missouri – especially in bio-solids area
  - Capacity increased from 7 mgd to 11 mgd daily flow and 18 mgd to 50 mgd peak flow
  - Away from Mississippi River flooding

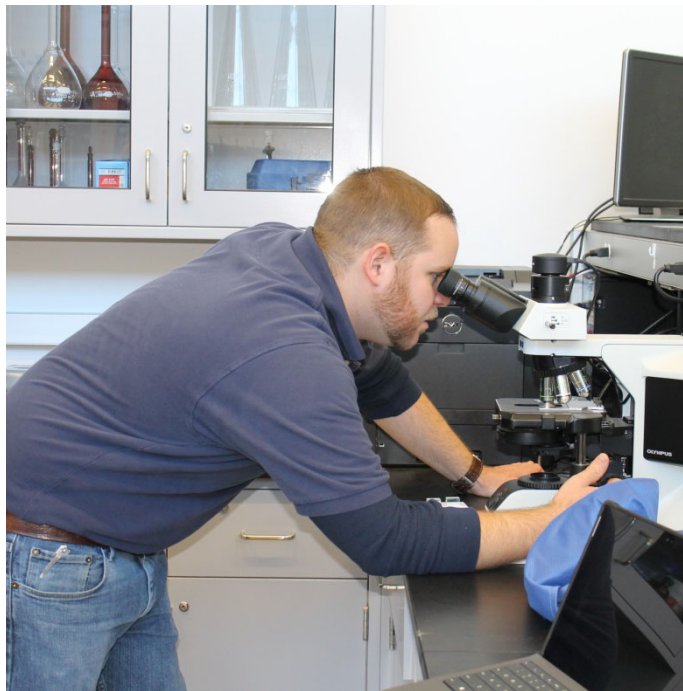
# Biosolid Recycling

- Now making a marketable fertilizer !
- A beneficial re-use of bio-solids material



# Laboratory

## Industrial Pretreatment Program



- 6 waste hauler permits
- 1 categorical industrial user permit
- 3 significant industrial user permits
- Accepts 30 loads of septage/grease per month from waste haulers
- Ensures EPA and DNR quality requirements are met
- Administers the Fats, Oils and Grease Program to protect the collection system

# Lift Stations

- Operates and maintains 32 lift stations
- SCADA System (Supervisory Control and Data Acquisition) on all 32 lift stations





# Education

- Tours given to students, including those of Southeast Missouri State University
- Classes given at the facility to maintain Missouri DNR Clean Water Certificate of Competency Licenses held by employees



# Emergency Response

10/13/2017

# South Sprigg Street

Huge Sink Holes



New Award Winning Bridge





# Flooding



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# Winter Weather



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# Tornado Assistance Other Communities



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# Cape Public Works

- **Fleet & Facility Maintenance**

Vehicles & Equipment

Buildings

- **Streets Maintenance**

Street repairs

Traffic Signs & Markings

Leaves

Traffic Signals

Storm Debris

Special Events Traffic Control

Mowing

Street Lights

Alleys

Snow / Ice Removal

# Cape Public Works

- **Solid Waste**
  - Curbside Trash and Recycle pickup
  - Recycling Center
  - Transfer Station
- **Water Division**
  - Operations by Alliance Water Resources since 1992
  - 2 Water Plants
  - Meter reading
  - Line repairs
  - 2 inch line upgrade & replacement



# Cape Public Works

- **Storm Water**

- Walker Branch & Cape La Croix Creek Maintenance
- Levee Floodwall Operation & Maintenance
- Over 93 miles of pipes
- MS4 Permit compliance
- Mosquito control & weed abatements

- **Sanitary Sewer Collection**

- Over 270 miles of pipe, over 5000 manholes
- I & I Rehab work

# Cape Public Works

- **Wastewater Treatment Plant**
  - Treatment of 5 million gal per day
  - 32 Lift Stations
  - Pre-treatment program, FOG Program
  - Class A Bio-solids
- **Emergency Response**
  - Flooding
  - Snow & Ice
  - Wind Storms
  - Sinkholes

# Cape Public Works

## Summary Comment

**Everyday...**

**We have a lot going on  
at Cape Public Works !**

# Cape Public Works Questions

