

Village of La Grange

La Grange 2020 Task Force
Infrastructure

Ryan Gillingham, P.E.
Director of Public Works

Public Works

Public Works is responsible for maintaining and improving the Village's infrastructure and assets, which includes ...

Transportation – Streets, Alleys, Sidewalks

Potable Water System

Sewer System

Street Lighting

Urban Forest

Municipal Buildings

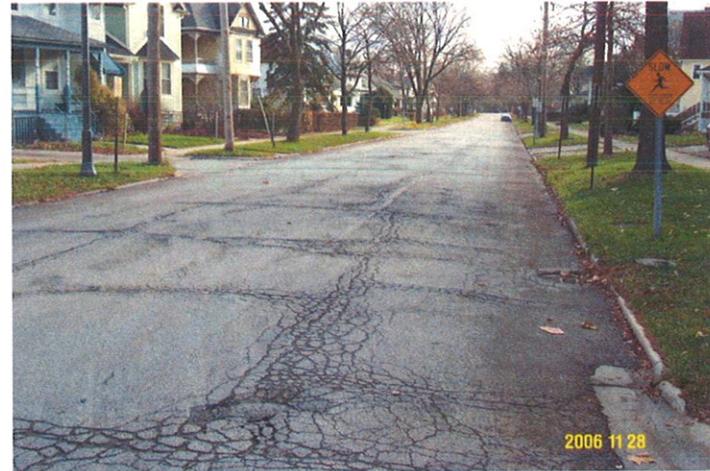
Equipment



Transportation

Facts

- 53 miles of public streets and alleys
- Maintenance of three state routes (La Grange Road, Ogden Avenue and 47th Street)
- 100 miles of sidewalks
- 3,968 signs
- Traffic signals (13 traffic signals)
- Lane markings and crosswalks
- 10 Municipal Parking Lots



Transportation

Operations / Services

- Snow and ice control
- Street patching
- Traffic signal maintenance
- Pot hole filing
- Sidewalk repair / replacement
- Lane marking and crosswalks
- Sign repair / replacement



Transportation

Capital Improvements

- Funding
 - Motor Fuel Tax Funds
 - Federal and State Grants
 - Capital Project Funds
- Street Resurfacing
 - Street Condition Survey (2011)
 - Federal Surface Transportation Program
- Coordination with Illinois Department of Transportation
- Implementation of Pedestrian Safety Initiatives



Potable Water

Facts

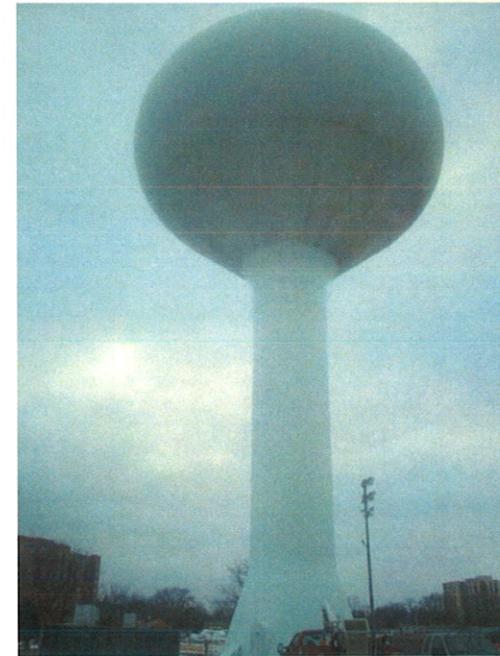
- Lake Michigan Water
- Process
 - City of Chicago treats the water
 - Water is pumped to McCook from Chicago
 - McCook stores and pumps the water to La Grange
 - La Grange stores, rechlorinates and pumps water to residents
- Demand
 - Average - 1.5 million gallons per day to Village residents
 - Peak Demand - 2.5 million gallons per day
- Funding
 - Water Fund – Enterprise Fund



Potable Water

Facts

- Storage System
 - 1.75 million gallon storage tank at East Avenue Pump Station
 - 2.2 million gallon stand pipe at Birks Court
 - 1.5 million gallon elevated tank at Tilden Avenue
- Distribution System
 - 60 miles of water main
 - Ranges in size from 4" to 16"
 - 4,900 water meters (5/8" to 10")
 - 591 fire hydrants
 - 862 main line valves



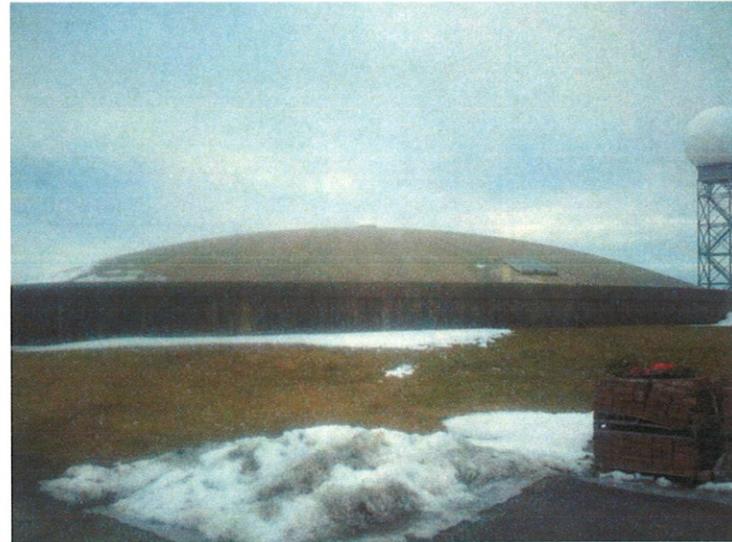
Potable Water

Facts

- Pump Station – 24 hour operation
 - 5 large pumps capable of providing up to 2,000 gallons per minute each
 - Generator, electrical and computer systems to control operation
 - Gas chlorine injection system

Regulations

- Illinois Environmental Protection Agency (Water quality, operations, backflow prevention requirements)
- Illinois Department of Natural Resources (Source of water)



Potable Water

Discussion / Capital Improvements

- Aging system
 - Many mains installed during Woodrow Wilson Administration (1920)
 - 33 miles installed before Eisenhower Administration
 - Pump station is over 30 years old
- Water Main Replacement
 - Based on age, water breaks, condition, street resurfacing
 - Water main lining
- Pump Station Upgrade



Sewer System

Facts

- Components
 - 38 miles of combined sewers
 - 6 miles of sanitary sewer
 - 25 miles of storm sewer
 - 1,482 manholes
 - 2,347 storm inlets
 - Sewers range in size from 6" to 10 feet in diameter
- Funding
 - Sewer Fund – Enterprise Fund supported by sewer rates charged based on volume of water used by consumer
 - General Fund



Sewer System

Operation

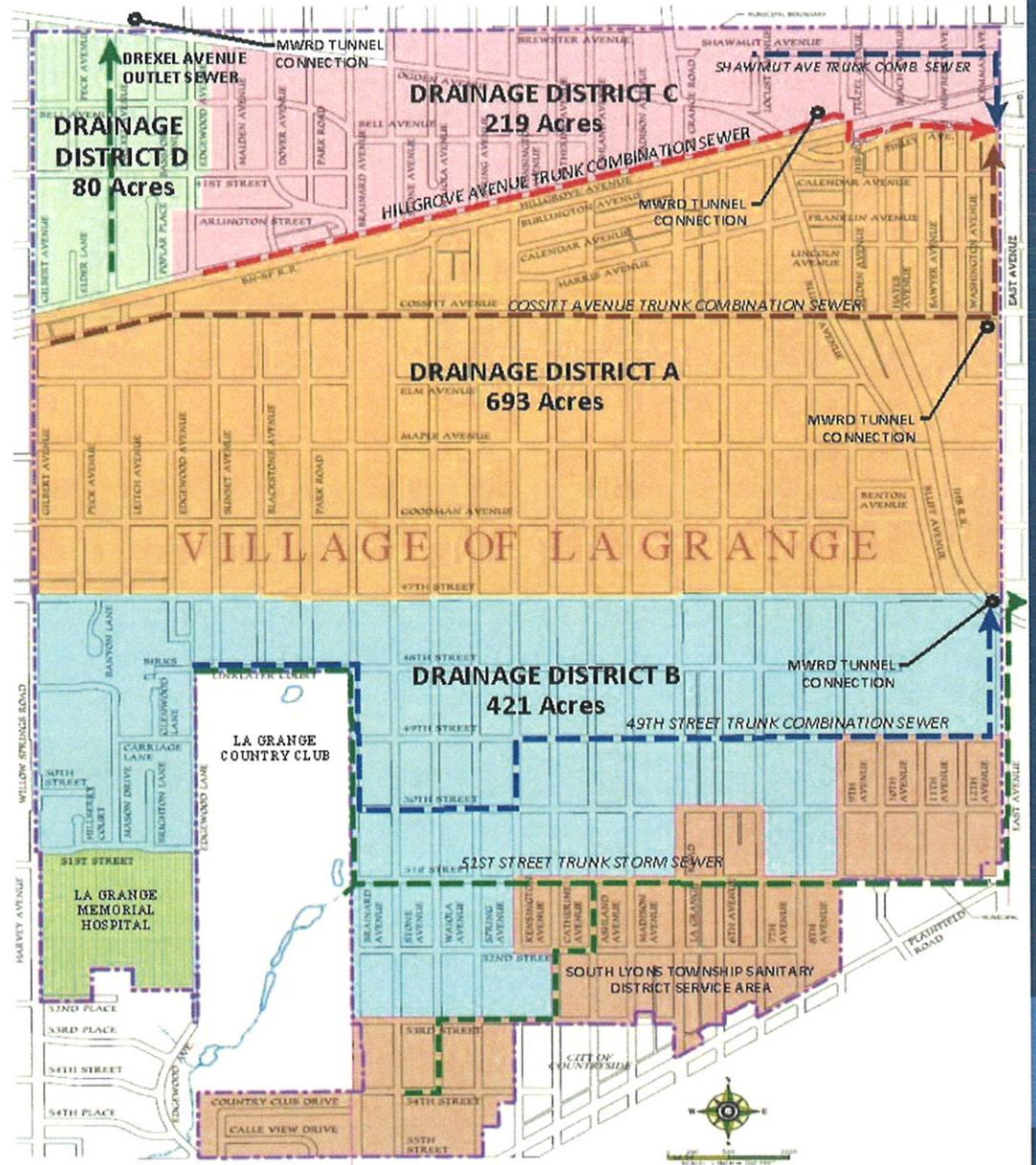
- Combined Sewer System (85%)
 - Single pipe that carries both storm water and sanitary waste
 - Antiquated system with limited capacity
- Separate Sewer System (15%)
 - South Lyons Sanitary District

Treatment – Sanitary

- Metropolitan Water Reclamation District of Greater Chicago
- Stickney Plant

Overflow – Deep Tunnel

- Reservoir completion



Sewer System

Operations

- Repair collapsed mains
- Clear sewer backups

Regulations

- Metropolitan Water Reclamation District
- Illinois Environmental Protection Agency
 - Municipal Separated Storm Water System Permit
 - Combined Sewer Discharge Permit



Sewer System

Discussion

- Aging system
 - Some sewers over 100 years old - constructed of brick
- Flooding
 - Combined Sewer Backup
 - Seepage
 - Overland flow
- Antiquated Combined Sewer System
 - Limited capacity
 - Future maintenance



Sewer System

Capital Improvements

- Improve capacity of combined sewers
 - Maple Avenue Relief Sewer (MARS) - \$11 million
 - \$5.6 m spent to date
 - \$5.4 m to complete
 - Ogden Avenue Relief Sewer (OARS) - \$6 million
 - South of 47th Street - \$22 million
- Overhead sewer installation
- Sewer Replacement
 - Sewer lining
 - Lot 13 Permeable Paver Installation



Street Lighting

Facts

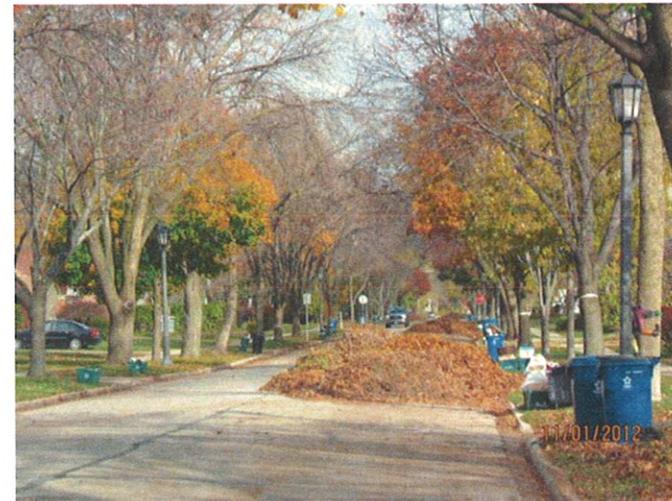
- Components
 - 2,400 street lights
 - 47 controller cabinets
 - 308,000 feet of street light cable
- Operation
 - Monthly street light outage surveys
- Funding
 - Street light bond in late 90's to upgrade entire system (\$3.9 million)
- New Technology
 - No more mercury
 - LED (Parking Lot 2 and 13)



Urban Forest

Facts

- Components
 - 12,000 trees
 - 80 different tree species
 - 13 acres of landscape
- Operations
 - Yearly Tree Trimming Program
 - Tree Planting Program
 - Tree Removal Program
 - Maintain landscaping around municipal facilities
 - Spring and Fall Flower planting
 - Leaf pickup



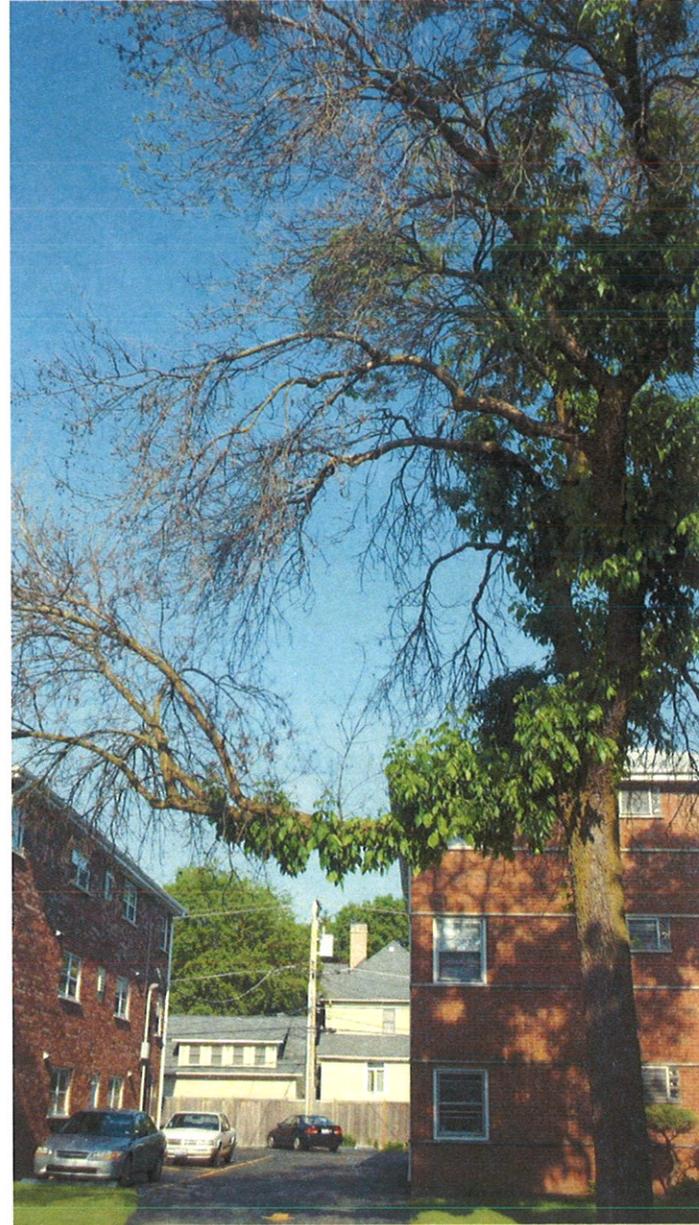
Urban Forest

Emerald Ash Borer

- 512 Trees Removed To Date
- 1,104 Ash Trees to be removed
- Goal is to restore the urban forest
 - Planted 214 Replacement Trees To Date

Discussion

- Tree Benefits
- Future Threats?
 - Diversification of species
- Tree City USA – 31 years



Municipal Buildings

Facts

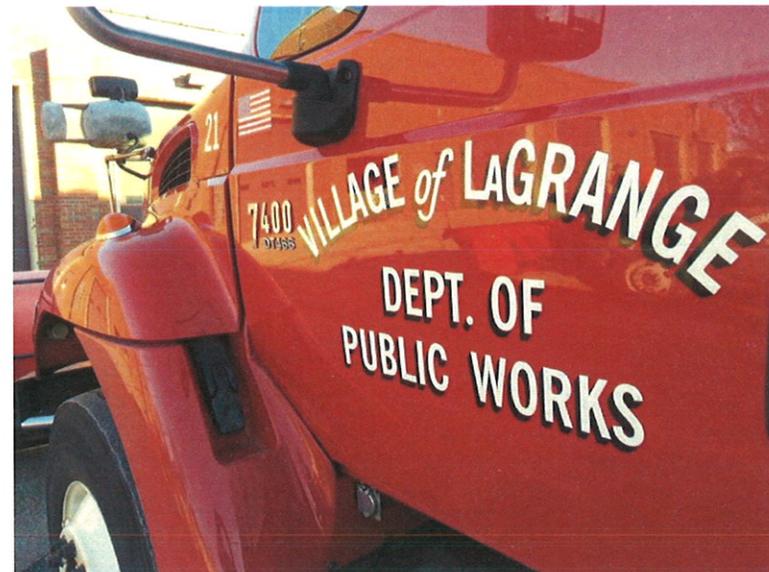
- Village Facilities
 - Village Hall (1899)
 - Police / Fire Facility (1950's, Upgraded 1990)
 - Public Works (Early 1900's with various additions)
 - Parking Structure
- Other Facilities
 - La Grange Road Train Station
 - Stone Avenue Train Station
- Facilities Plan



Equipment Replacement Fund (ERF)

Public Works

- 60 pieces of equipment
 - Plow trucks, backhoe, trailers, sweeper, bucket trucks, etc.
- Each vehicle is assigned a estimated useful life and funds are allocated for replacement based on these intervals
- Equipment reliability during emergency operations is critical



24 Hour Emergency Response



Summary / Future Outlook

- Increasing Service Requests
- Aging infrastructure
- New regulations
 - New sewer requirements (IEPA, MWRD)
 - More water testing requirements
- Further integration of transportation modes
- Funding challenges
 - State / Federal Grants - More competition for fewer funds, expect less
 - Reduction in capital expenditures three years ago
 - Reduced personnel in Public Works as part of cost containment plan



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Questions?

