

City of St. Charles 10 Year Water Utility Master Plan



Government Service Committee Meeting

August 27, 2018

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Presentation Agenda

- ◆ Background & Purpose of Master Plan
- ◆ Status Update on Master Plan Schedule
- ◆ Scope & Organization of the Master Plan
- ◆ Next Steps & Recommendations
- ◆ Questions?



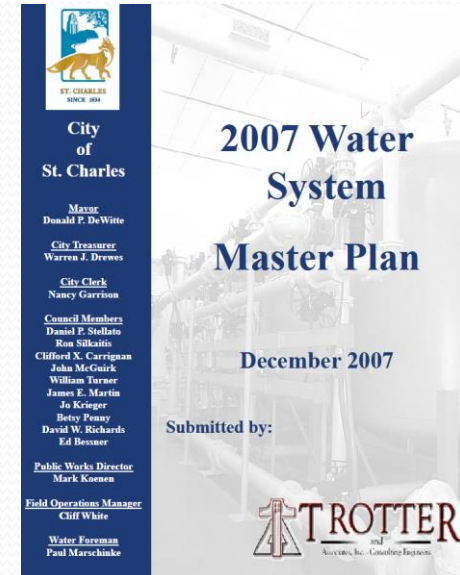
Background & Purpose

Background

- Prior to 2006 project planning was rooted in situational decisions
- 2007 Water Utility Master Plan
 - Peak Development Growth
 - Focus on Water Quality & **Quantity**

Purpose

- Planning tool for Capital Project Programing
- Required as part of IEPA Loan Funding Qualification
- Continuation of trajectory that began in 2006 (Roadmap)



Status of 2018 Master Plan

- ◆ Budgeted \$125,000 FY 17/18
- ◆ September of 2017 Issues RFP/Q
- ◆ October of 2017 Awarded to Trotter & Associates
 - ◆ NTE \$88,500
- ◆ November 2017 – March 2018
 - ◆ TAI & City Staff Data Gathering
 - ◆ Site Visits to Water Facilities
 - ◆ 15 + Meetings/Conference Calls
- ◆ April 2018 – Present
 - ◆ Fine Tuning of Capital Estimates, Data & Recommendations
 - ◆ 98% Complete



Scope of Master Plan

◆ Document is Comprised of Seven Sections

1. Introduction & Background
2. Community Needs (Growth)
3. Distribution System Evaluation
4. Alternatives for Distribution System
5. Water Supply & Treatment Evaluations
6. Alternatives for Supply & Treatments
7. Recommendations & Summary



Organization of Master Plan

- ◆ Document is Organized to Compliment the Water Utilities Operations
- ◆ Comprised of Four Components
- ◆ Intentionally Mimics 2007 Plan Organization
 1. Water Supply
 - Analysis of City's Population & Uses
 - Projection of City Growth and Demand on **Water Quantity**
 - Groundwater Assets (Aquifers, Well Siting, Etc.)
 - Impact on Water Treatment Component – **Water Quality**
 - Future Discussion Anticipated



Organization of Master Plan Cont....

2. Water Treatment

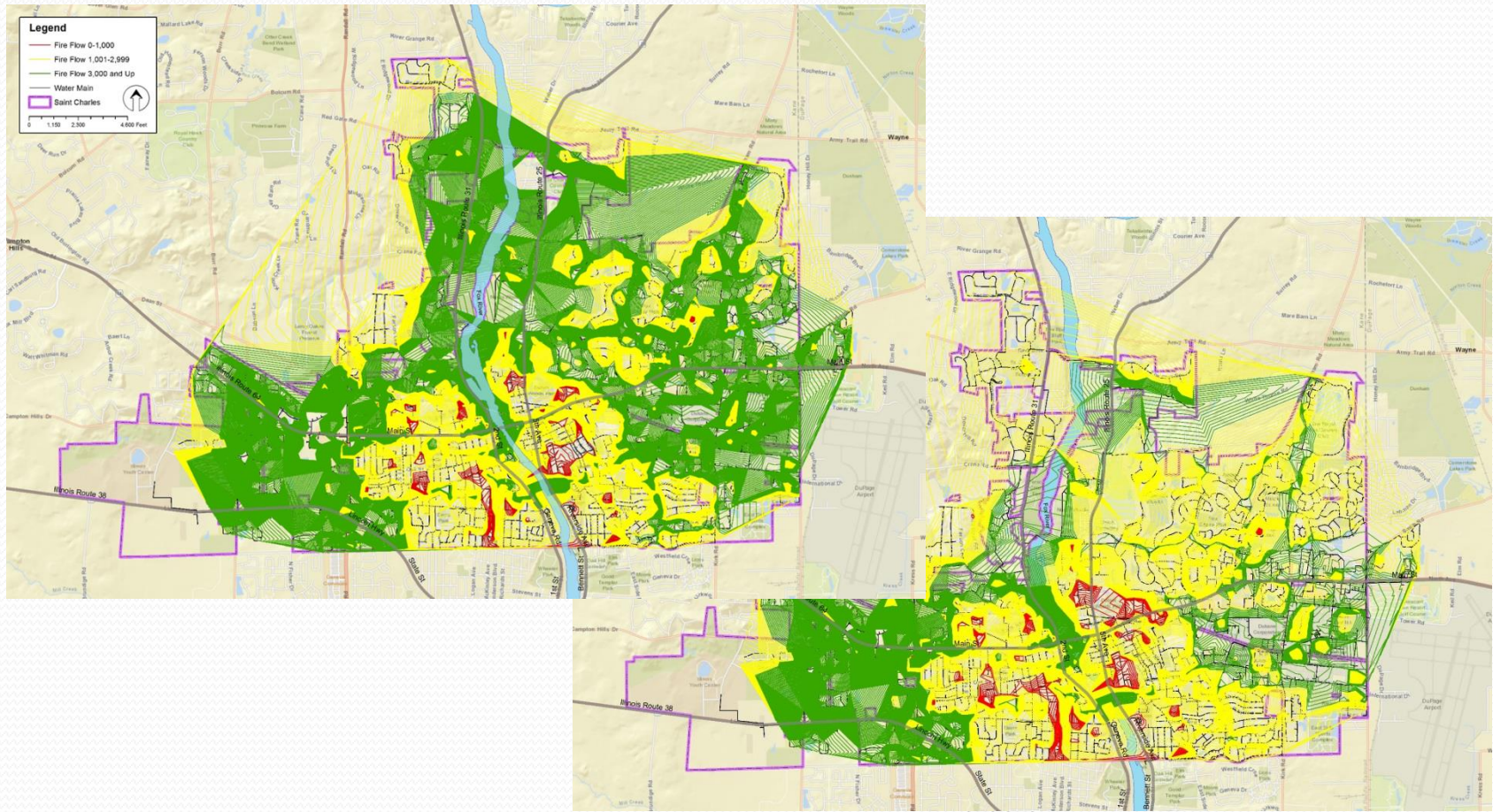
- Highly Dependent on Water Supply
- Varies based on Water Supply & Regulatory Requirements
- Impacts **Water Quality** & End User “experience”
- Future Discussion Anticipated

3. Water Storage

- Comprised of Water Towers, Ground Tanks, etc.
- Needs Primarily Addressed in 2007 Plan
- Redgate Water Tower most recent Storage Project
- Substantial Fire Flow Improvements to the System
- No Future Discussion Anticipated



Fire Flow Success from 2007



Organization of Master Plan Cont....

4. Distribution System

- Comprised of Underground Piping, Valves, Fire Hydrants, etc.
- Moves Water from Wells & Storage Locations to Customers
- Provides Fire Protection (Hydrants & Sprinkler Systems)
- City Operates Two Distribution Zones that act Independently of each other. (Inner & Outer Zones)
- Water Quality in two Zones is Different due to Side Effects to Treatment Processes
- 2018 Plan Suggests Continued Replacement of Aged Assets
- No Further Discussion Anticipated



Master Plan Recommendations

- Water Supply
 - **Construct an Additional Supply Source to meet Future Demand**
 - Type & Location yet to be Determined
- Water Treatment
 - Dependent on Supply Source & Location
 - **Type of Treatment yet to be Determined (May include providing water of a lower hardness that currently supplied)**
- Water Storage
 - Maintain Existing Facilities
- Water Distribution
 - Continue with Distribution System Replacement



Next Steps

- ◆ Staff will provide more detailed information on Water Supply & Treatment in near future (30 – 60 days)
 - ◆ Longer term
 - ◆ Determine the most advantageous additional water supply source
 - ◆ Consider treatment impacts of “new” water supply source
- ◆ Continue to Incorporate Distribution System Improvement into the Budget Process
 - ◆ Shorter Term



Questions?

