

Maintaining and Evaluating Successful Practices

City of Phoenix CMOM Continuous Improvement Program

NACWA 2008 Winter
Conference
February 8, 2008





City of Phoenix Water Services Department

17 Divisions

1500 Employees

Vision: ***“We will provide superior water services while perpetuating environmental excellence and focusing on safety”***

Mission: ***“To provide high quality, reliable and cost effective water services that meet public needs and maintain public support”***

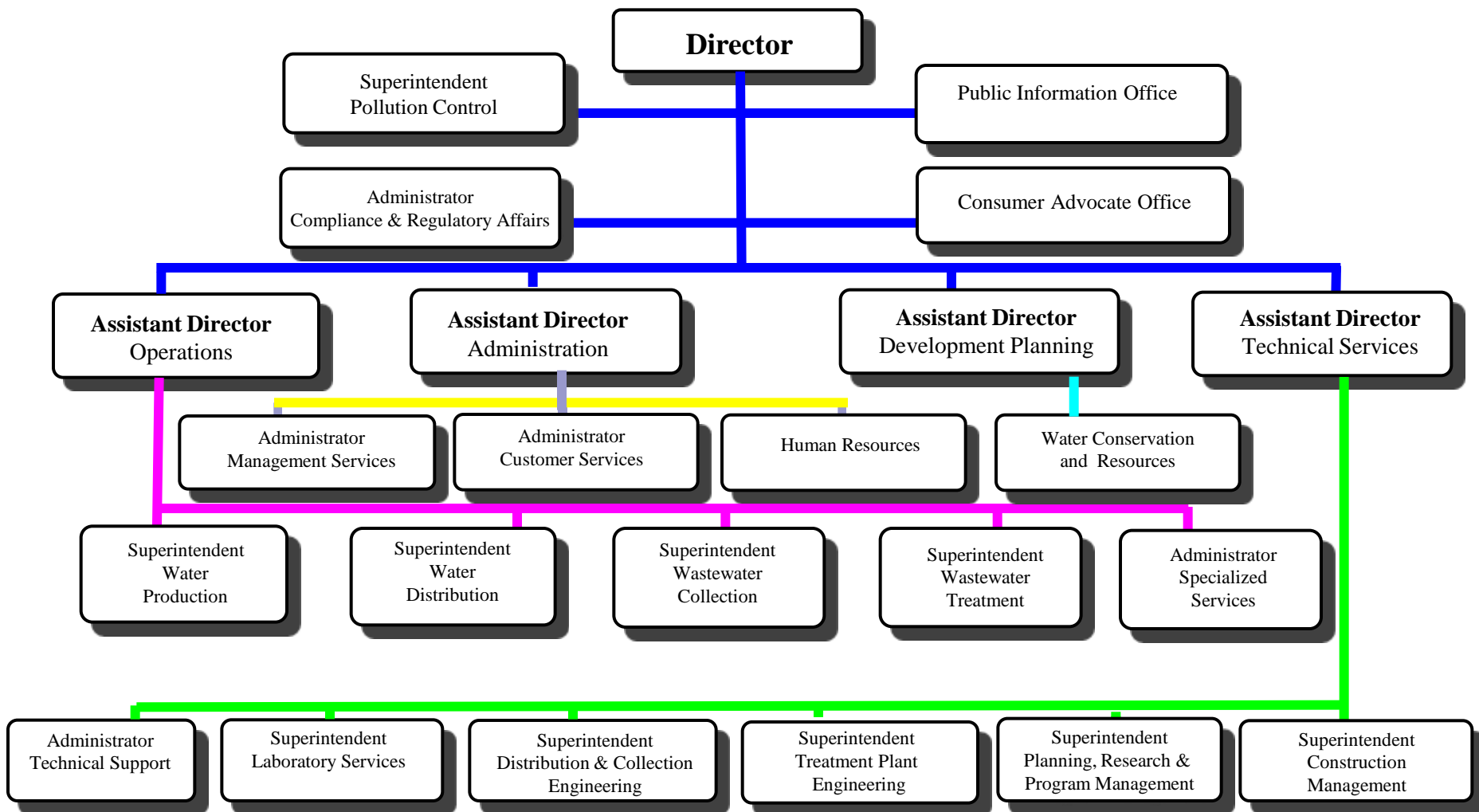
■ Water

- **Produce** nearly 110 billion gallons annually from 5 facilities
- **Distribute** nearly 300 million gallons daily through 6700 miles / infrastructure

■ Wastewater

- **Collect** nearly 6.5 billion gallons annually through 27 lift stations
- **Treat** approximately 200 million gallons daily at 2 facilities

City of Phoenix Water Services Department

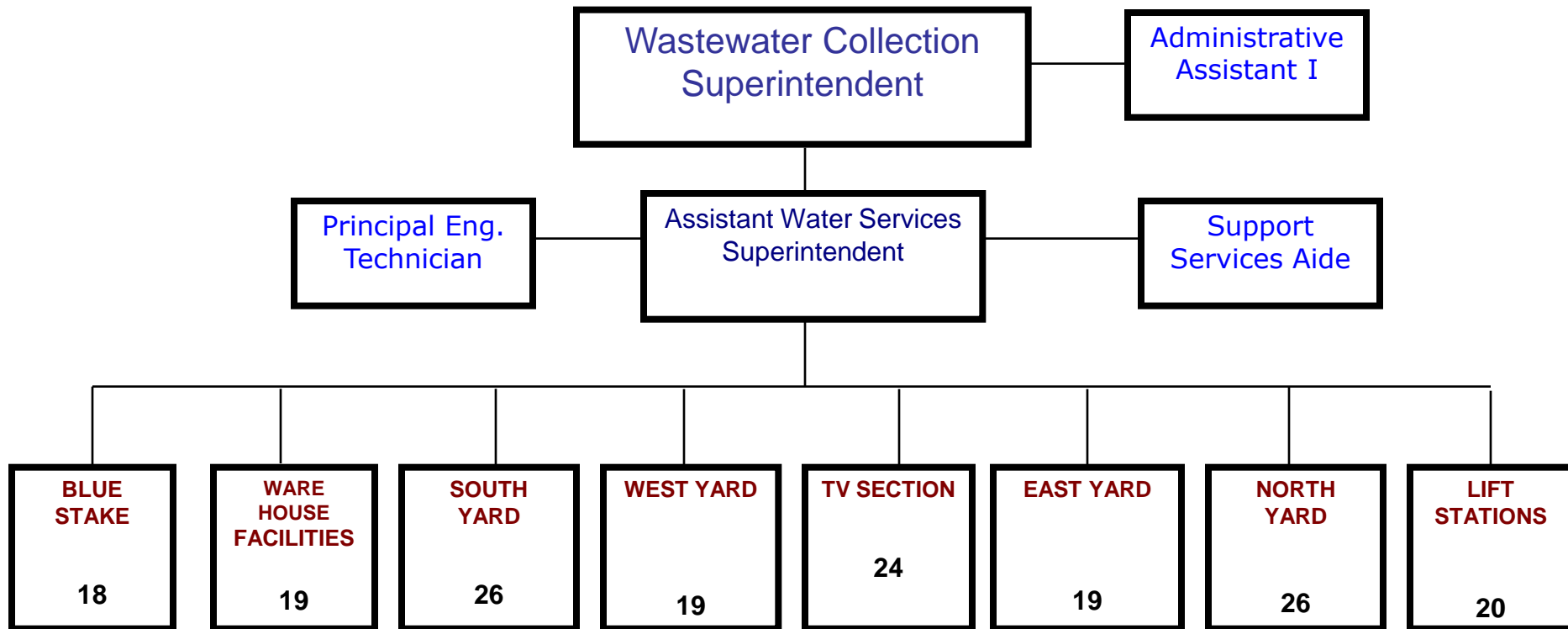




Wastewater Collection Division

- **Purpose:** To provide uninterrupted sewer conveyance to our customer base through proven methodologies and techniques.
- **Core Functions:**
 - Inspection
 - Cleaning
 - Repair & rehabilitation
 - Overall general maintenance / stewardship of the City's sanitary sewer infrastructure

City of Phoenix Water Services Department Wastewater Collection Division



176 Employees



Wastewater Collection Division

Mission Statement

“We strive to protect our customer and the environment by providing quality service, in a timely manner, within the most cost effective means.”

Operating Philosophy

- People Focused
- Inclusive Work Environment
- Ethical
- Plan Organizationally vs. Organizational Planning
- Have Fun and Enjoy a Laugh Daily

“To Achieve Sustainability”

Statistical Summary

■ City of Phoenix

- 518 Geographical miles of coverage area
- 4,780 Miles of Sanitary Sewer Piping
- 420,127 Service Connections
- 91,630 Manholes/ Cleanouts

■ Historical Trends

	FY 02/03	FY 03/04	FY 04/05	FY 05/06	FY 06/07
Main Cln:	1421	1539	1294	1535	1618
TV Insp:	263	293	357	371	420
Stoppages:	156	65	51	48	36
SSO's:	N/A	37	44	39	62



Wastewater Collection Division Improvement Efforts

- **Mobile Application Program Solutions (MAPS)**
- **Collection Systems Operators (CSO) Committee**
- **Effective Practice Guidelines (EPG's)**
- **Sanitary Sewer Overflow (SSO) Training / Drills**




CMOM Continuous Improvement

“Making a Good Program Better”



Initial CMOM Initiatives

- Balanced scorecard addressing SSOs
 - Established collection system performance measures
- CMOM Assessment (Phase 1)
 - Identified needs and risks
- CMOM Steering Committee
 - Water Services Division Superintendents provide oversight and direction



CMOM Phase 2 Focused on Implementing Improvements

- AzDEQ CMOM Plan
- SSO Response Plan
- Collection System O&M Manual
- Continuous Improvement Implementation Plan



CMOM Continuous Improvement Plan

- Compared existing practices to optimized practices
- Identified and developed 14 areas for enhancement and 80 specific activities
- Plan included actions, priorities, benefits, and estimated requirements for implementation – costs, staff, timeframe

Continuous Improvement Plan

Table 6-1
CMOM CONTINUOUS IMPROVEMENT PROGRAM
CMOM Program Enhancements

Recommended Enhancement	Balanced Scorecard	Continuous Improvement Priority	Benefits	Implementation Resources/Impacts	Completion Timeframe	Additional Budget
12. Collection System O&M Information Management						
12.1 Determine CMOM information needs.	Internal	1	Identification of information needs provides ensures appropriate information is developed.	<ul style="list-style-type: none"> Requires input by managers and crews on information that is most helpful. Performed with a representative team in one or two workshops 	3 mos	
12.2 Determine O&M data to be collected	Internal	1	Only information needed is collected to minimize unneeded efforts.	Determined as part of O&M Information Management study underway by outside consultant	6 mos	
12.3 Document information processes	Internal	1	<ul style="list-style-type: none"> Promotes effectiveness and efficiency of information management. Provide most efficient data collection 	<ul style="list-style-type: none"> Requires input by managers, crews, and technicians on current information processes. Part of O&M Information Management study underway 	6 mos	
12.4 Develop CMMS enhancements	Internal	1	Enables more effective use of information, and use and integration of the existing CMMS systems.	<ul style="list-style-type: none"> Being developed in O&M Information Management Study by outside consultant Follow-on implementation by staff 	1 to 2 years	\$220,000
12.5 Develop implementation plan and training program	L&G	2	Enhances long term success of information management improvement s	<ul style="list-style-type: none"> Developed by consultant. Staff time participating in training and enhanced data collection 	1 to 2 years	\$100,000
13. Frequently Visited Areas						
13.1 Establish FVA Team and leader	Customer	1	<ul style="list-style-type: none"> Responsibility for FVA program provides reduced blockages and SSOs Evaluating and prioritizing FVA activities lowers overall costs and risks. 	<ul style="list-style-type: none"> Involvement of existing staff in overseeing and evaluating FVA activities. Estimated equivalent of 0.25 FTE of existing staff. 	3 mos	0.25 FTE
13.2 Develop records system	Internal	1	<ul style="list-style-type: none"> Provides prioritization of maintenance and FVA activities and eliminates unnecessary work 	Developed as part of O&M Information Management Study being conducted by outside consultant (See Enhancement 12)	1 year	
13.3 Conduct annual re-evaluation	Financial	1	<ul style="list-style-type: none"> Reduces risk by adding areas that need more frequent cleaning before they become a problem 	Review by FVA identified in 13.1	1 to 2 years	



Information Management is Key to Continuous Improvement

- The majority of specific enhancements for better information collection and management
- Key improvement was enhanced use of CMMS for information management

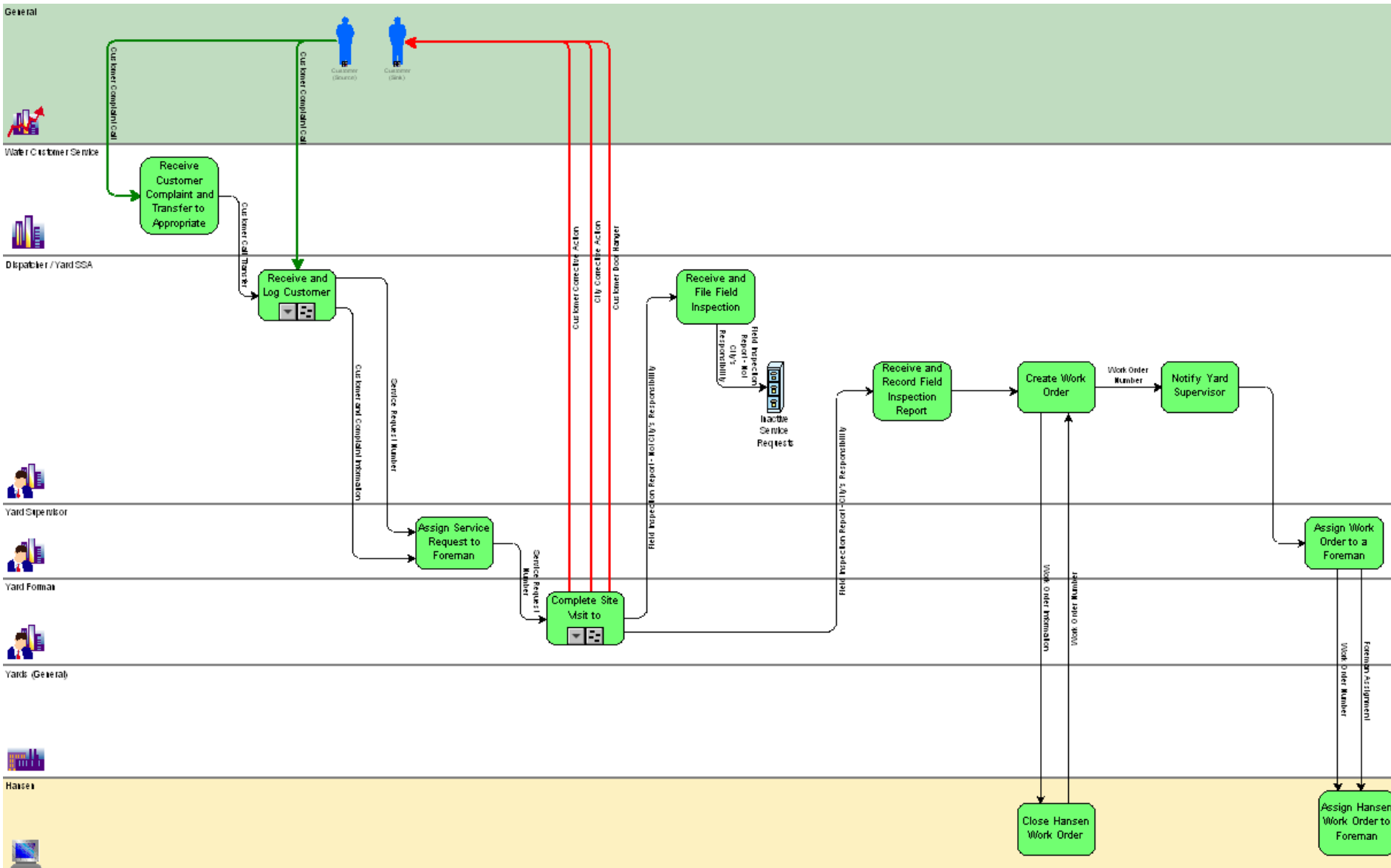



Enhanced Information Management through CMMS Enhancements

- Wastewater collection business practice assessment and mapping
- Streamlining and consolidating field data collection and reporting
- Developing new CMMS requirements to support CMOM Improvement Program

Example Work Practice Map

Manage Sewer System Complaints





Maintaining a Successful Practice Through Continuous Improvement

DISCUSSION