

Develop and Implement Inventory in the WUSC Meter Shop



Black/Green Belt Name:	Sherry Pettit
Project Champion:	Kevin Olson
Date:	May 20, 2013



Define Phase

1. Select Output Characteristic



Project Team Members

- Jennifer Palmer
- Jason Kuhn
- Mike Curtis
- Kevin Olson
- Greg Morgan
- Guillermo Garcia
- Jim Yanker
- Keidric Trimble
- Service Center Employees

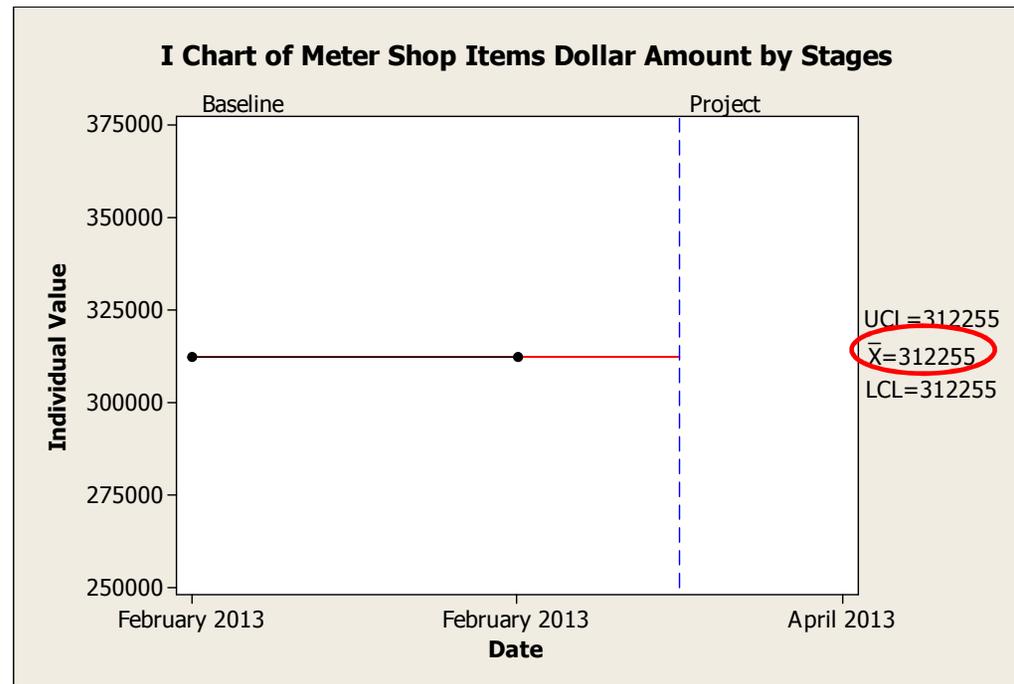


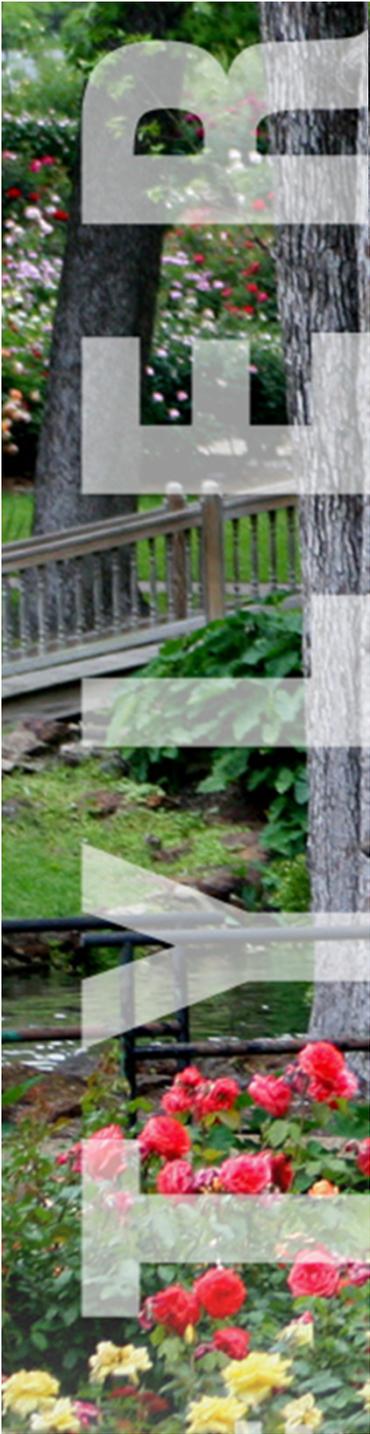
Define Phase

1. Select Output Characteristic



Initial I Chart





Define Phase

1. Select Output Characteristic



Initial Pictures



Define Phase

2. Define Performance Standards



Lean Six Sigma Project Charter

CITY OF TYLER LEAN SIX SIGMA PROJECT CHARTER																		
Project Title:	Develop and Implement Inventory in the WUSC Meter Shop	Date Started:	11-Mar-13	Project Level:	Blue													
BB/GB Name:	Sherry Pettit	Project Number	12															
1. Identify and Scope the Project	1A	WHAT is the actual problem? WHERE is the actual problem occurring and for how long?	Excessive dollar amount of Meter Shop items. There is no inventory: up. The problem has always existed.															
	1B	WHO is most affected by the problem?	City Administration, Citizens, Service Center Employees, Ordering Pr Meter Shop Supervisor, Inventory level															
2. Identify the Metrics for Improvement	2A	WHAT is the process metric (Y) that will be improved?	Inventory dollar amount															
	2B	Establish BASELINE PERFORMANCE for primary metric.	<table border="1"> <thead> <tr> <th>Metrics</th> <th>Baseline</th> <th>% Improve</th> <th></th> </tr> </thead> <tbody> <tr> <td>Dollar Amount of Existing Items</td> <td>\$312,255</td> <td>20%</td> <td>\$2</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Metrics	Baseline	% Improve		Dollar Amount of Existing Items	\$312,255	20%	\$2							
Metrics	Baseline	% Improve																
Dollar Amount of Existing Items	\$312,255	20%	\$2															
3. Identify the Cost and Impact of the Problem	3A	WHAT are the line items or cost centers that provide the foundation of the potential savings?	Hard dollars saved by reducing inventory level															
	3B	ESTIMATE the potential hard and soft dollars savings.	Cost	% Improve	Estimate Sa													
			Estimate Hard Dollar Month	\$ 312,255	20%	\$												
4. Write the Problem Statement	4A	Write the PROBLEM STATEMENT. Clearly define the situation which is impacting the organization. Using the information from steps 1-3. The problem statement DOES NOT INCLUDE the solution or actions.	The Tyler Water Utilities Meter Shop is experiencing a problem with excessive amount of non-stock items managed by the Meter Shop st. The problem has always existed. As of February 2013, the dollar amc non-stock items, which should be managed by the Meter Shop, is \$3 The acceptable dollar amount of inventory should be \$250,000. The dollar amount of inventory indicates the process is at an unacceptab															
5. Write the Objective Statement	5A	Write the OBJECTIVE STATEMENT. Should directly address the information in the Problem Statement.	Improve customer service. Reduce the total dollar amount of items managed by the Meter Shop															
	6A	Identify the PROJECT CHAMPION.	Kevin Olson															
6. Team Members	6B	Identify the PROJECT TEAM MEMBERS.	Team Members (5 to 7 Core Team)															
			Jason Kuhn	Kevin Olson														
		Jennifer Palmer	Guillermo Garcia															
		Jim Yanker	Greg Morgan															
7. Identify Estimated Project Timeline	7A	ESTIMATE the project timeline. Green Belt < 140 days, Black Belt < 90 days	Phase	Define	Measure	Analyze	Improve											
			Due Date	28-Mar-13	15-Apr-13	3-May-13	21-May-13											
		Duration	18	36	54	72												

A Lean Six Sigma Project Charter is completed for each project. The following information is required before the project is approved:

1. Identify and Scope the Project
2. Identify the Metrics for Improvement
3. Identify the Cost and Impact of the Problem
4. Write the Problem Statement
5. Write the Objective Statement
6. Identify Project Champion and Team Members
7. Identify Estimated Project Timeline
8. Obtain Project Approval Signatures



Define Phase

2. Define Performance Standards



Lean Six Sigma Project Charter

Problem Statement:

The Tyler Water Utilities Meter Shop is experiencing a problem with an excessive amount of non-stock items managed by the Meter Shop supervisor. The problem has always existed. As of February 2013, the dollar amount of non-stock items, which should be managed by the Meter Shop, is \$312,255. The acceptable dollar amount of inventory should be \$250,000. The excessive dollar amount of inventory indicates the process is at an unacceptable level.

Project Objective:

Reduce the total dollar amount of items managed by the Meter Shop



Define Phase

2. Define Performance Standards



Financial Information

Financial Information for Develop and Implement Inventory in the WUSC Meter Shop				
Estimated Hard Dollar Savings				
Initial dollar amount of Non-stock items				\$312,255.10
Reduce				20%
Estimated savings per month				\$62,451.02
Project # 12				
Develop and Implement Inventory in the WUSC Meter Shop				
Inventory Items	73			
Dollar Amount	\$312,255.10			



Measure Phase

3. Validate Measurement System



Meter Shop Products Spreadsheet

Description	Quantity	Date Purchased	Purchased From	Account #	Unit Cost	Extended Cost	Code s/mu/na/e	Managed By	Processed
Socket, Security, 1/4", for Meter	2	03/19/12	Aqua Metric	502-0743-743-0305	\$15.98	\$31.96		ms	0
Driver, Socket, 1/4" Drive	3	12/04/09	Acme	502-0743-743-0305	\$11.95	\$35.85		ms	0
Adapters, FN 3" Fem. IP x 2 1/2" Male	11	03/13/13	RFQ / HD Supply	502-0743-743-0832	\$19.72	\$217.47		ms	0
Filter, Water, Heavy Duty, American Plumber W10-PR	2	03/13/13	RFQ / Hamilton Supply	502-0743-743-0831	\$53.30	\$106.60		ms	0
Cartridge, Filter, American Plumber, W20PRHD	1	03/13/13	RFQ / Hamilton Supply	502-0743-743-0831	\$13.62	\$40.86		ms	0
Cartridge, Filter, American Plumber, W20CLHD	1	03/13/13	RFQ / Hamilton Supply	502-0743-743-0831	\$11.84	\$11.84		ms	0
Meter, Water, Omnis, 4"	1	APA	Aqua Metric	503-0743-743-2610	\$2,666.40	\$2,666.40		ms	0
Meter, Water, Omnis, 8"	2	APA	Aqua Metric	503-0743-743-2610	\$1,625.20	\$3,250.40		ms	0
Meter, Water, Turbine, 2"	1	APA	Aqua Metric	503-0743-743-2610	\$1,062.55	\$1,062.55		ms	0
Meter, Water, Turbine, 1 1/2"	1	APA	Aqua Metric	503-0743-743-2610	\$718.85	\$1,437.70		ms	0
Meter, Water, Displacement, 2"	13	APA	Aqua Metric	503-0743-743-2610	\$463.39	\$6,024.07		ms	0
Meter, Water, Displacement, 1 1/2"	12	APA	Aqua Metric	503-0743-743-2610	\$330.22	\$3,962.64		ms	0
Meter, Water, Displacement, 1"	46	APA	Aqua Metric	503-0743-743-2610	\$135.16	\$6,187.68		ms	0
Meter, Water, Displacement, 5/8"	134	APA	Aqua Metric	503-0743-743-2610	\$85.34	\$11,435.56		ms	0
MMU	1971	APA	Sensus	503-0743-743-2610	\$90.00	\$177,390.00		ms	0
Copper, Pipe, Type "L", 2"	60	03/12/13	RFQ / Hamilton	503-0743-743-2610	\$11.08	\$664.80		ms	0
Smart	1	03/12/13	Contractor	502-0743-743-0305	\$29.00	\$29.00		ms	0
Meter, Compact Fireline, 6"	1	01/00/00	Aqua Metric	503-0743-743-2610	\$8,442.79	\$8,442.79		ms	0
Meter, Compact Fireline, 8"	1	01/00/00	Aqua Metric	503-0743-743-2610	\$12,640.00	\$12,640.00		ms	0
Meter, Double Check Detector Assembly, 4"	2	01/00/00	MacArthur Gauge	503-0743-743-2610	\$1,707.65	\$3,415.30		ms	0
Meter, Double Check Detector Assembly, 6"	2	01/00/00	MacArthur Gauge	503-0743-743-2610	\$2,309.00	\$4,618.00		ms	0
Meter, Double Check Detector Assembly, 8"	2	01/00/00	MacArthur Gauge	503-0743-743-2610	\$4,072.20	\$8,144.40		ms	0
EL, Ductile Iron, Fl x Fl, 8" x 90	1	02/18/13	Municipal Waterworks	503-0743-743-2610	\$186.95	\$186.95		ms	0
Tea, Ductile Iron, Fl x Fl, 8"	2	02/18/13	Municipal Waterworks	503-0743-743-2610	\$297.72	\$595.44		ms	0
Adapter, Ductile Iron, Fl x Mj, 8"	1	03/05/13	RFQ / HD Supply	502-0743-743-0832	\$77.00	\$77.00		ms	0
EL, Ductile Iron, Fl x Mj, 8" x 90	1	02/18/13	Municipal Waterworks	503-0743-743-2610	\$149.58	\$149.58		ms	0
Flanges, 3" x 3"	4	11/02/12	MWW	503-0743-743-2610	\$31.12	\$124.48		ms	0
Valve, Gate, Fl x Fl, 3"	4	11/02/12	MWW	503-0743-743-2610	\$322.33	\$1,289.32		ms	0
Tea, Ductile Iron, Fl x Fl, 3"	4	11/02/12	MWW	503-0743-743-2610	\$60.54	\$242.16		ms	0
Spooled Piece, Fl x Fl, 3" x 6"	4	11/02/12	MWW	503-0743-743-2610	\$115.73	\$464.38		ms	0
Flanges, 4" x 2"	2	10/23/12	MWW	503-0743-743-2610	\$44.63	\$89.26		ms	0
Valve, Gate, Fl x Fl, 4"	2	10/23/12	MWW	503-0743-743-2610	\$367.96	\$735.92		ms	0
Tea, Ductile Iron, Fl x Fl, 4"	3	12/23/12	MWW	503-0743-743-2610	\$129.99	\$389.97		ms	0
Spooled Piece, Fl x Fl, 4" x 6"	4	10/23/12	MWW	503-0743-743-2610	\$120.46	\$722.76		ms	0
Valve, Gate, Fl x Fl, 6"	4	03/13/13	RFQ / HD Supply	503-0743-743-2610	\$457.25	\$1,829.00		ms	0
Tea, Ductile Iron, Fl x Fl, 6"	4	03/13/13	RFQ / HD Supply	503-0743-743-2610	\$157.46	\$629.84		ms	0
EL, Ductile Iron, Fl x Mj, 6" x 90	1	03/13/13	RFQ / HD Supply	503-0743-743-2610	\$76.79	\$153.58		ms	0
Spooled Piece, Fl x Fl, 4" x 8"	1	03/13/13	RFQ / HD Supply	503-0743-743-2610	\$78.28	\$78.28		ms	0
Spooled Piece, Fl x Fl, 6" x 6"	1	03/13/13	RFQ / HD Supply	503-0743-743-2610	\$135.53	\$135.53		ms	0
Resettlers, Meter, Ford V42-7W	21	02/05/13	HD Supply	502-0743-743-0828	\$79.21	\$1,663.41		ms	0
Resettlers, Meter, Ford V42-9W	23	02/05/13	HD Supply	502-0743-743-0828	\$80.20	\$1,844.60		ms	0
Resettlers, Meter, Ford V42-12W	4	03/05/13	RFQ / Underground	502-0743-743-0828	\$74.79	\$673.11		ms	0
Resettlers, Meter, Ford V42-15W	4	03/05/13	RFQ / Underground	502-0743-743-0828	\$77.93	\$311.72		ms	0
Connectors, Gal Cap, 3M Scotchlok UY2	1100	01/28/13	CEC	502-0743-743-0828	\$0.08	\$88.00		ms	0
Flange Pack, Meter, Brass, 2", Inc.	26	02/05/13	HD Supply	502-0743-743-0828	\$95.50	\$1,910.00		ms	0
Flange Pack, Meter, Brass, 1 1/2", Inc.	24	02/05/13	HD Supply	502-0743-743-0828	\$78.66	\$1,887.84		ms	0
EL, Brass, 1 1/2" x 45, No Lead	5	03/13/13	RFQ / Hamilton	503-0743-743-2610	\$29.22	\$146.10		ms	0
EL, Brass, 1" x 45, No Lead	2	11/28/12	Hamilton Supply	502-0743-743-0828	\$14.62	\$29.24		ms	0
Valve, Ball, 2", Fl Full Port Shut Off, w/ Handle	3	11/18/12	Hamilton Supply	502-0743-743-0828	\$23.07	\$69.21		ms	0
Valve, Ball, 2", Fl Full Port Shut Off, w/ Handle	9	03/13/13	RFQ / Hamilton	503-0743-743-2610	\$52.62	\$473.58		ms	0
Meter, Water, Turbine, 1 1/2"	0	APA	Aqua Metric	503-0743-743-2610	\$718.85	\$4,313.10		ms	0
Meter, Water, Turbine, 2"	1	APA	Aqua Metric	503-0743-743-2610	\$852.66	\$852.66		ms	0
Flange Gasket/Bolt Sets, 3"	13	11/02/12	MWW	502-0743-743-2610	\$3.20	\$41.60		ms	0
Flange Gasket/Bolt Sets, 4"	0	11/03/13	MWW	502-0743-743-0832	\$5.47	\$0.00		ms	0
Flange Gasket/Bolt Sets, 6"	0	10/07/13	Coburn	502-0743-743-0832	\$8.03	\$0.00		ms	0
Flange Gasket/Bolt Sets, 8"	0	10/07/13	Coburn	502-0743-743-0832	\$8.62	\$0.00		ms	0
Meter, Fire Hydrant, w/ Backflow Prevention	4	03/13/13	MWW	502-0743-743-2610	\$195.00	\$780.00		ms	0
Register, Meter, PNM, 5/8"	336	APA	Aqua Metric	502-0743-743-0828	\$51.76	\$17,391.36		ms	0
Register, Meter, PNM, 1"	155	APA	Aqua Metric	502-0743-743-0828	\$51.76	\$8,022.80		ms	0
Register, Meter, PNM, 1 1/2" - 2"	58	APA	Aqua Metric	502-0743-743-0828	\$162.02	\$9,407.16		ms	0
Meter, Water, SMI, 1"	1	APA	Aqua Metric	503-0743-743-2610	\$135.16	\$135.16		ms	0
Meter, Water, Omnis, 2"	1	APA	Aqua Metric	503-0743-743-2610	\$463.39	\$463.39		ms	0
Lock, Barrel, Brooks	100	11/28/12	Dixie Utility	502-0743-743-0305	\$1.89	\$189.00		ms	0
Valve, Gate, OS & Y, Fl x Fl, 6"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Valve, Gate, OS & Y, Fl x Fl, 8"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Spooled Piece, Ductile Iron, Fl x Fl, 8" x 17"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Spooled Piece, Ductile Iron, Fl x Fl, 6" x 14"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Tea, Ductile Iron, Fl x Fl, 6"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
EL, Ductile Iron, Fl x Fl, 6" x 90	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Adapter, Ductile Iron, Fl x Mj, 6"	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
EL, Ductile Iron, Fl x Mj, 6" x 90	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Flange, Companion, Ductile Iron, 3" IPS Threads	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
Flange, Companion, Ductile Iron, 4" IPS Threads	0	01/00/00	0	0	\$0.00	\$0.00		ms	0
						\$312,255.10		73 Items	

A spreadsheet was created to capture data. The description, quantity, purchased date and vendor, unit cost, account numbers, and additional information are entered in the appropriate areas.

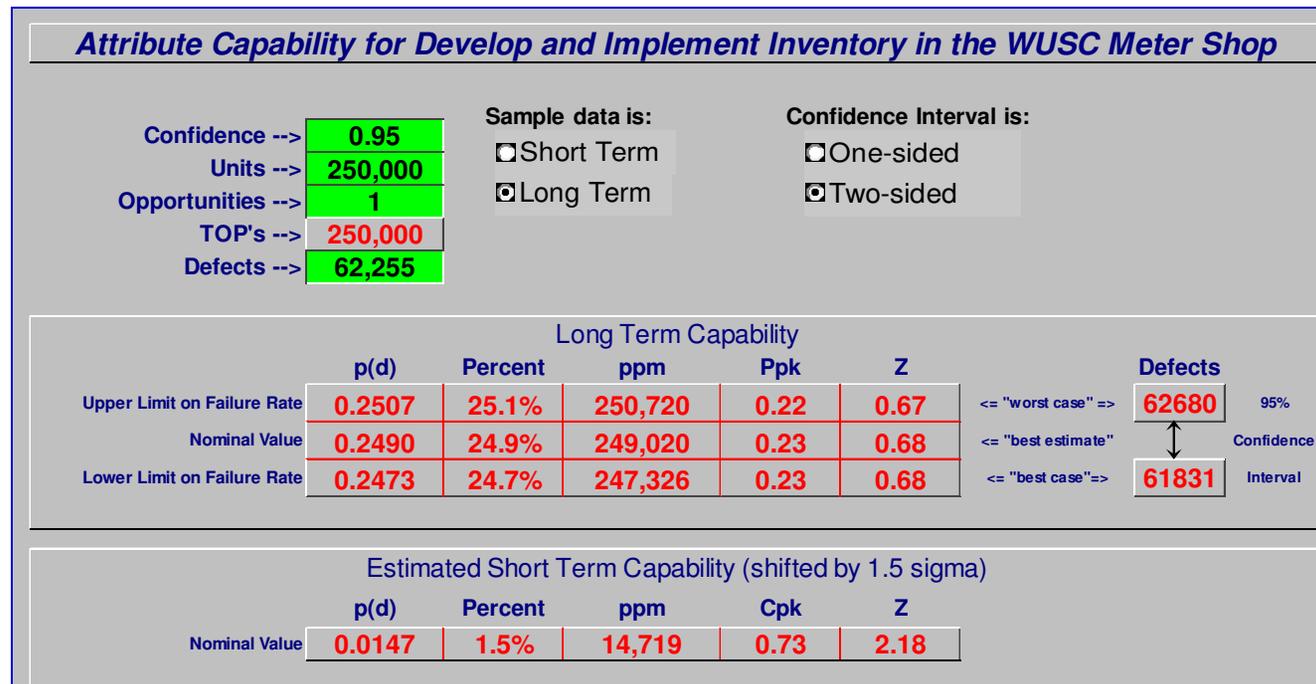


Measure Phase

4. Baseline Process Performance



Process Capability



The current Capability Analysis indicates that the process is not performing at a satisfactory level.



Measure Phase

5. Establish Goals



Goals and Benefits

Metrics	Baseline	% Improve	Goal
Dollar Amount of Existing Items	\$312,255	20%	\$250,000
Hard dollars saved by reducing inventory level			
	Cost	% Improve	Estimate Savings
Estimate Hard Dollar Month	\$ 312,255	20%	\$ 62,451
Estimate Soft Dollar Month			
Estimate Total Dollars Month			

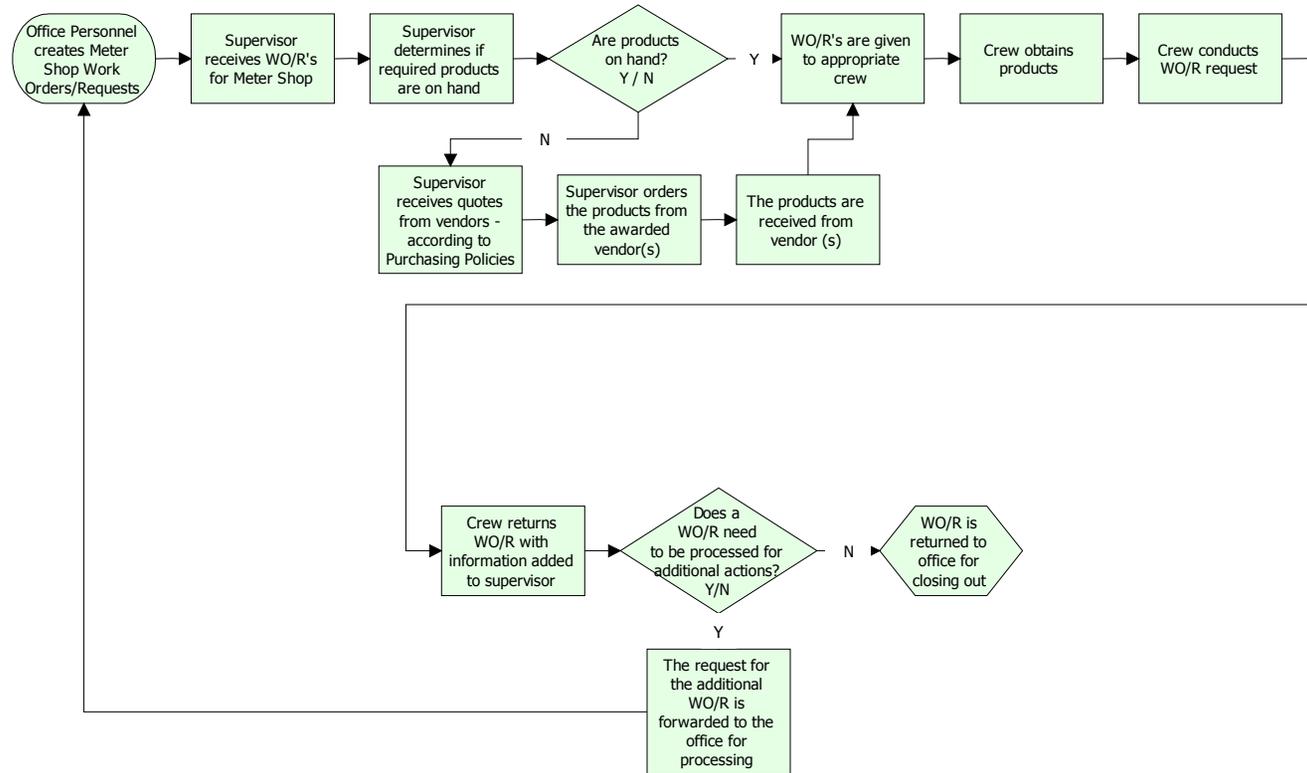


Measure Phase

6. Identify Sources of Variation



Initial Process Map for Develop and Implement Inventory in the WUSC Meter Shop

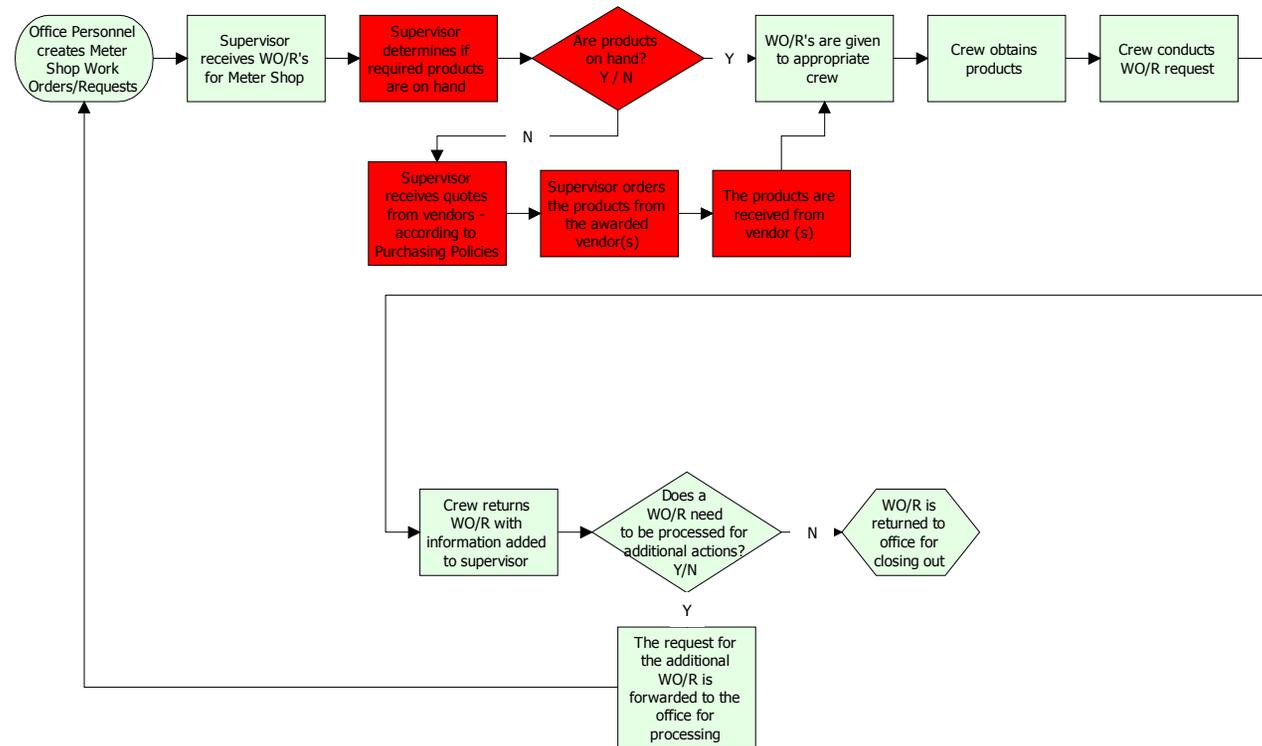


Analyze Phase

7. Determine Optimal Solution



Process Map/Unnecessary Steps for Develop and Implement Inventory in the WUSC Meter Shop

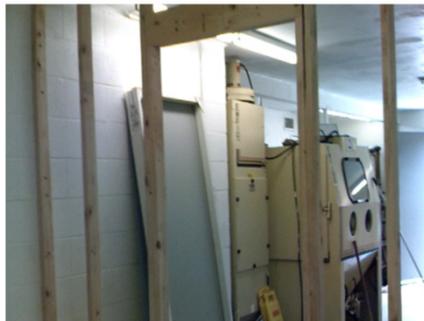


Improve Phase

9. Implement Improvements



In Progress Pictures



Improve Phase

9. Implement Improvements



HTE Inventory Account Set Up / Location Building File Maintenance

Location / Building File Maintenance - City of Tyler

File Edit Commands Help

SUNGARD PUBLIC SECTOR
NaviLine

Location / Building File Maintenance

Location code: WWM
Description: WATER UTILITIES - M.S.
Status: Active
Address: WATER UTILITIES
SERVICE CENTER - M.S.
2300 WNW LOOP 323
City: TYLER
State: TX TEXAS
Zip code: 75702

Inventory Accounts	
Asset:	50200001410800
Short/over:	50207437430602
Revenue:	
Surcharge percent:	0.00

Output queue/this location: Leave blank for default.
Printer for this location: Leave blank for default.

OK
Exit
Cancel
Delete location...



Improve Phase

9. Implement Improvements



HTE Input Spreadsheet

Reference Number	Comm / Sub Comm / Item #	Description	Location	Quantity	Min.	Max.	Date Purchased	Purchased From	Account #	Unit Cost	Extended Cost
10	659-006-00036	Adapter, Ductile Iron, Flx Mj, 6"	Lower Yard	0	1	2	01/00/00		503-0743-743-2610	\$0.00	\$0.00
20	659-006-00037	Adapter, Ductile Iron, Flx Mj, 8"	Lower Yard	1	1	2	03/05/13	Rfq / HD Supply	503-0743-743-2610	\$77.00	\$77.00
30	659-006-00038	Adapters, FH, 3" Fem, IP x 2 1/2" Male, no lead	Meter Shop	11	0	2	03/13/13	Rfq / HD Supply	502-0743-743-0832	\$19.77	\$217.47
40	765-033-00001	Cartridge, Filter, American Plumber, W20CLHD	Meter Shop	1	0	3	03/13/13	Rfq / Hamilton Supply	502-0743-743-0831	\$11.84	\$11.84
50	765-033-00002	Cartridge, Filter, American Plumber, W20PEHD	Meter Shop	3	0	3	03/13/13	Rfq / Hamilton Supply	502-0743-743-0831	\$13.62	\$40.86
60	659-030-00001	Connectors, Gel Cap, 3M Scotchlok UY2	Meter Shop	1300	200	1200	01/28/13	CED	502-0743-743-0828	\$0.08	\$104.00
70	658-035-00005	Copper, Pipe, Type "L", 2", no lead	Meter Shop	60	0	20	03/11/13	Rfq / Hamilton	503-0743-743-2610	\$11.08	\$664.80
80	445-000-00031	Driver, Socket, 1/4" Drive	Meter Shop	3	0	3	12/04/09	Acme	502-0743-743-0905	\$11.95	\$35.85
90	659-042-00042	Ell, Brass, 1" x 45, no Lead	Meter Shop	2	0	3	11/18/12	Hamilton Supply	502-0743-743-0828	\$14.62	\$29.24
100	659-042-00043	Ell, Brass, 1 1/2" x 45, no Lead	Meter Shop	5	0	3	03/13/13	Rfq / Hamilton	503-0743-743-2610	\$29.22	\$146.10
110	659-042-00044	Ell, Ductile Iron, Fl x Fl, 6" x 90	Lower Yard	0	2	4	01/00/00		503-0743-743-2610	\$0.00	\$0.00
120	659-042-00045	Ell, Ductile Iron, Fl x Fl, 8" x 90	Lower Yard	1	2	4	02/18/13	Municipal Waterworks	503-0743-743-2610	\$186.95	\$186.95
130	659-042-00046	Ell, Ductile Iron, Fl x Mj, 6" x 90	Lower Yard	2	1	2	03/13/13	Rfq / HD Supply	503-0743-743-2610	\$75.79	\$151.58
140	659-042-00047	Ell, Ductile Iron, Fl x Mj, 8" x 90	Lower Yard	1	1	2	02/18/13	Municipal Waterworks	503-0743-743-2610	\$149.56	\$149.56
150	175-095-00001	Filter, Water, HD, American Plumber W10-PR	Meter Shop	2	0	1	03/13/13	Rfq / Hamilton Supply	502-0743-743-0831	\$53.30	\$106.80
160	060-034-00002	Flange Gasket/Bolt Sets, 3"	Meter Shop	6	8	16	11/02/12	MWW	502-0743-743-0832	\$3.26	\$19.56
170	060-034-00003	Flange Gasket/Bolt Sets, 4"	Meter Shop	0	8	16	11/03/13	MWW	502-0743-743-0832	\$5.47	\$0.00
180	060-034-00004	Flange Gasket/Bolt Sets, 6"	Meter Shop	0	9	18	01/07/13	Coburn	502-0743-743-0832	\$8.03	\$0.00
190	060-034-00005	Flange Gasket/Bolt Sets, 8"	Meter Shop	0	9	18	01/07/13	Coburn	502-0743-743-0832	\$8.62	\$0.00
200	890-000-00147	Flange, Meter, Brass, 1 1/2", 2 pack, no lead	Meter Shop	24	12	24	02/05/13	HD Supply	502-0743-743-0828	\$78.66	\$1,887.84
210	890-000-00148	Flange, Meter, Brass, 2", 2 pack, no lead	Meter Shop	19	12	24	02/05/13	HD Supply	502-0743-743-0828	\$95.90	\$1,814.50
220	890-000-00149	Flange, Companion, Ductile Iron, 3", IPS Threads	Meter Shop	1	0	2	01/00/00	Rfq / HD Supply	502-0743-743-0828	\$89.42	\$89.42
230	890-000-00150	Flange, Companion, Ductile Iron, 4", IPS Threads	Meter Shop	2	0	2	01/00/00	Rfq / HD Supply	502-0743-743-0828	\$99.88	\$199.76
240	890-000-00151	Flange, Ductile Iron, 3" x 2"	Lower Yard	4	2	4	11/02/12	MWW	503-0743-743-2610	\$31.12	\$124.48
250	890-000-00152	Flange, Ductile Iron, 4" x 2"	Lower Yard	0	2	4	10/23/12	MWW	503-0743-743-2610	\$44.63	\$0.00
260	450-035-00002	Lock, Barrel, Brooks	Meter Shop	90	10	30	11/28/12	Dixie Utility	502-0743-743-0905	\$1.89	\$170.10
270	890-044-00008	Meter, Compact, Omni F2, Fireline, 6"	Lower Yard	0	0	1	01/00/00	Aqua Metric	503-0743-743-2610	\$8,442.79	\$0.00
280	890-044-00009	Meter, Compact, Omni F2, Fireline, 8"	Lower Yard	1	0	1	01/00/00	Aqua Metric	503-0743-743-2610	\$12,640.00	\$12,640.00

A spreadsheet was created for the HTE input. The reference numbers, commodity / sub commodity numbers, description, location, quantity, minimum / maximum numbers, date purchased, vendor items were purchased from, account numbers, unit cost and extended cost was entered in the appropriate areas.



Improve Phase 9. Implement Improvements



HTE Input

Item No.	Description	Unit of Measure	Value
M NA			81.00
			162.00
** OVER-STOCKED **			
A		1	1817.00 *
ITEM TOTAL			
BUILDING TOTAL		NO. OF ITEMS -	TOTAL VALUE OF ITEMS -
		71	1817.00 *
PREPARED 4/06/13, 8:50:25 ITEM LIST BY BUILDING			
PROGRAM P10101 WH THROUGH WH			
City of Tyler SELECT ALL COMMODITIES/SUB-COMMODITIES			
GRAND TOTAL ALL BUILDINGS			
TOTAL NO. OF ITEMS		TOTAL VAL	
GRAND TOTAL		71	

Page up or down beyond first or last record.

Item No.	Description	Unit of Measure	Value
			81.00
			162.00
STOCKED **			
A		1	1817.00 *
ITEM TOTAL			
TOTAL		NO. OF ITEMS -	TOTAL VALUE OF ITEMS -
		71	246764.67
PREPARED 4/06/13, 8:50:25 ITEM LIST BY BUILDING			
WH THROUGH WH			
City of Tyler SELECT ALL COMMODITIES/SUB-COMMODITIES			
GRAND TOTAL ALL BUILDINGS			
TOTAL NO. OF ITEMS		TOTAL VALUE OF ALL ITEM	
GRAND TOTAL		71	246764.67

Page up or down beyond first or last record.



Improve Phase 9. Implement Improvements



Verification Reports

PREPARED 03/18/2013, 7:42:48
 PREPARED BY: J. CHERRY
 AUDITING JOURNAL: EXP. LIST OF TRANSACTIONS
 CITY OF TYLER
 ACCOUNTING PERIOD: 03/13/13
 PAGE: 1

TRNS NO	TRNS DATE	DOCUMENT	DEBIT	CREDIT	PROJECT	DEBIT AMOUNT	CREDIT AMOUNT
890018	03/18/2013	PI	592-0083-141.00-93	MM ISSUES			7.92
891523	-	811513					
890020	03/18/2013	PI	592-0743-743.00-31	MM ISSUES		3.51	
891523	-	811513					
890030	03/18/2013	PI	592-0743-743.24-10	MM ISSUES		3.82	
891523	-	811513					
000400	03/18/2013	PI	592-8900-181.01-00	PURCH. SALES		3.51	
891523	-	811513					
000400	03/18/2013	PI	592-8900-181.01-00	PURCH. SALES			3.82
891523	-	811513					

TOTALS:
 AMOUNT CALCULATED: 15.03
 AMOUNT ENTERED: 15.03
 DIFFERENCE: 0.00

PREPARED 03/18/2013, 7:46:43
 PREPARED BY: J. CHERRY
 EXPECTED DEBITS REPORT
 CITY OF TYLER
 ACCOUNTING PERIOD: 03/13/13
 PAGE: 1

ACCOUNT	DATE	CODE	DESCRIPTION	DOCUMENT NUMBER	TRANSACTION AMOUNT
592-0083-141.00-93	03/18/2013	00	Bank of America-Pooled Cash	PI	7.92 CREDIT ADJUSTMENT
592-0743-743.00-31	03/18/2013	00	Bank of America-Pooled Cash	PI	3.51 DEBIT ADJUSTMENT
592-0743-743.24-10	03/18/2013	00	Bank of America-Pooled Cash	PI	3.81 DEBIT ADJUSTMENT

OFFSETS:
 ACCOUNT DESCRIPTION DEBIT CREDIT
 FUND 592-8900-181.01-00 Expense Summary Account / Expense Summary Account 3.51 .00

PREPARED 03/18/2013, 7:46:43
 PREPARED BY: J. CHERRY
 EXPECTED CREDITS REPORT
 CITY OF TYLER
 ACCOUNTING PERIOD: 03/13/13
 PAGE: 1

ACCOUNT	DATE	CODE	DESCRIPTION	DOCUMENT NUMBER	TRANSACTION AMOUNT
592-8900-181.01-00	03/18/2013	00	Expense Summary Account / Expense Summary Account	PI	3.51
592-8900-181.01-00	03/18/2013	00	Expense Summary Account / Expense Summary Account	PI	3.81
592-8900-181.01-00	03/18/2013	00	Expense Summary Account / Expense Summary Account	PI	3.51

OFFSETS:
 ACCOUNT DESCRIPTION DEBIT CREDIT
 FUND 592-8900-181.01-00 Expense Summary Account / Expense Summary Account 3.51 .00

PREPARED 03/18/2013, 7:46:43
 PREPARED BY: J. CHERRY
 EXPECTED DEBITS REPORT
 CITY OF TYLER
 ACCOUNTING PERIOD: 03/13/13
 PAGE: 1

ACCOUNT	DATE	CODE	DESCRIPTION	DOCUMENT NUMBER	TRANSACTION AMOUNT
592-0743-743.00-31	03/18/2013	00	Bank of America-Pooled Cash	PI	3.51 DEBIT ADJUSTMENT
592-0743-743.24-10	03/18/2013	00	Bank of America-Pooled Cash	PI	3.81 DEBIT ADJUSTMENT

OFFSETS:
 ACCOUNT DESCRIPTION DEBIT CREDIT
 FUND 592-8900-181.01-00 Expense Summary Account / Expense Summary Account 3.51 .00

Requisition, purchase orders, issue tickets and additional items were processed to insure all credits and debits were working properly throughout the system.



Improve Phase

9. Implement Improvements



Financial Data

Reference Number	Comm / Sub Comm / Item #	Description	Location	Quantity	Min.	Max.	Date Purchased	Purchased From	Account #	Unit Cost	Extended Cost
10	659-006-00036	Adapter, Ductile Iron, Fl x Mj, 6"	Lower Yard	0	1	2	01/00/00		503-0743-743-2610	\$0.00	\$0.00
20	659-006-00037	Adapter, Ductile Iron, Fl x Mj, 8"	Lower Yard	1	1	2	03/05/13	RFQ / HD Supply	503-0743-743-2610	\$77.00	\$77.00
30	659-006-00038	Adapters, FH, 3" Fem. IP x 2 1/2" Male, no lead	Meter Shop	11	0	2	03/13/13	RFQ / HD Supply	502-0743-743-0832	\$19.77	\$217.47
40	765-033-00001	Cartridge, Filter, American Plumber, W20CLHD	Meter Shop	1	0	3	03/13/13	RFQ / Hamilton Supply	502-0743-743-0831	\$11.84	\$11.84
50	765-033-00002	Cartridge, Filter, American Plumber, W50PEHD	Meter Shop	3	0	3	03/13/13	RFQ / Hamilton Supply	502-0743-743-0831	\$13.62	\$40.86
60	659-030-00001	Connectors, Gel Cap, 3M Scotchlok UV2	Meter Shop	1300	200	1200	01/28/13	CED	502-0743-743-0828	\$0.08	\$104.00
70	658-035-00005	Copper, Pipe, Type "L", 2", no lead	Meter Shop	60	0	20	03/11/13	RFQ / Hamilton	503-0743-743-2610	\$11.08	\$664.80

Initial HTE Meter Shop Inventory Input		
Account #'s to be credited	# of Items	Dollar Amounts
502-0743-743-0305	4	\$473.93
502-0743-743-0828	18	\$28,609.70
502-0743-743-0831	3	\$159.30
502-0743-743-0832	6	\$237.03
503-0743-743-2610	40	\$217,284.71
Total Inventory Dollar Amount	71	\$246,764.67

There were 71 items entered in HTE. The total dollar amount of the items entered was \$246,764.67.



Improve Phase

9. Implement Improvements



Green Dot Program

Green Dot Program:

A green dot is placed to the right of the inventory item labels to identify if items are on order.

5000430	96/192
Register, Meter, PMM,	5/8"



(See the "Meter Shop On Order Items List for Pipe Yard" concerning items which may be on order for the lower pipe yard.)



Improve Phase

9. Implement Improvements



Walkways Marked



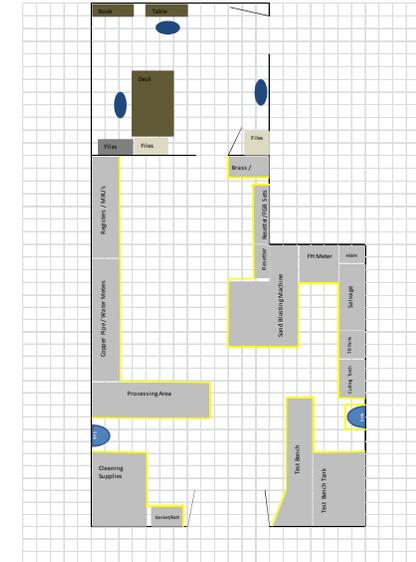
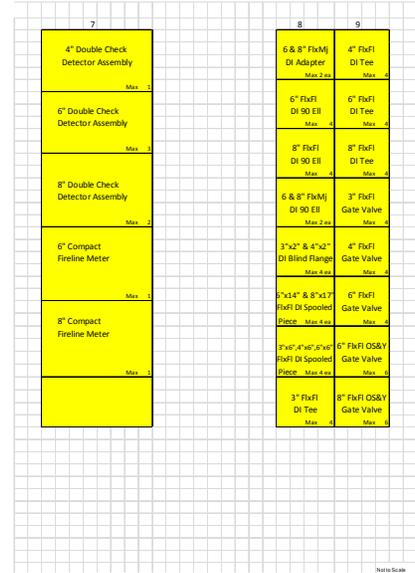
Improve Phase 9. Implement Improvements



Diagrams

Purchasing Inventory Items		Meter Shop Inventory Items	
Location/Asile		Location/Asile	
1	Gate Valves, Flx/M, M, Tapping	11	Plastic Water Meter Box Lids
2	Fire Hydrants	12	Plastic Water Meter Boxes, 65C2"
3	Anchor Couplings, Mushroom Lid, Cleanouts	13	Plastic Water Meter Boxes, 37C1"
	DI Caps, PV Risers/Lids, PV Boxes/Lids	14	Plastic Water Meter Boxes, 36C258"
4	DI 90's & 45's	15	Dual Meter Boxes, CI Meter Box Lids
5	DI Solid Sleeves, Retainer Glands, 22's & 45's	16	CI Meter Boxes, CI Lids
6	DI Reducers, Plugs, Tee's, No Hub Fittings	17	Clay: Y's, Trash Bin
7	DCM's & Compact Fireline Meters	18	Clay: Tee's, Stoppers
8	DI Adapters, 90's, Flanges, Spooled Piece, Tee	19	Clay: 90's & 45's
9	DI Tee, Gate Valves	20	Clay Pipe
10	PVC Pipe, Teplar		

Item	Quantity	Location
Staging Area	10	Gate
	9	
	8	
	20	
	19	
	18	
	17	
	16	
	15	
	14	
	13	
	12	
	11	



Diagrams of the Meter Shop and lower pipe yard were created. They are displayed on the Meter Shop visual management board.



Improve Phase 9. Implement Improvements



Forms

The image displays ten distinct form templates arranged in a 2x5 grid. Each form is titled and includes various fields, tables, and checkboxes. The forms are:

- Meter Shop Warehouse Customer Survey:** Includes a title, date, department/customer name, and a series of 10 numbered questions regarding warehouse operations, inventory, and customer service. It ends with a 'Thank you for your time' note and a signature line.
- Meter Shop Warehouse Loan Order Form:** Includes a title, customer address, phone number, and a table for tracking loaned items (City, Unit, Description, Issued, Returned). It also has sections for Loan and Return Authorization.
- Meter Shop Warehouse Request for Quotation:** Includes a title, contact information, and a table for requesting quotes for various items. It also includes a section for 'Items to be delivered FOR DESTINATION'.
- Meter Shop Warehouse Stock Invoice Form:** Includes a title, date, and a table for tracking stock items (Book No., Qty, Unit, Description, Account No.).
- Meter Shop Warehouse Requisition Form:** Includes a title, date, and a table for requisitioning items (Qty, Description, Unit, Type, Job Shop/Truck Body).
- Meter Shop Staff Meeting:** Includes a title, meeting details (date, time, location), and sections for agenda items and discussion points.
- Meter Shop Daily Vehicle Allowance:** Includes a title, date, and a section for requesting daily vehicle allowance, with a note about the 30-day review period.
- Meter Shop Outside Employment:** Includes a title, date, and a section for requesting outside employment, with a note about the approval process.
- Meter Shop Vacation / PTO Request Form:** Includes a title, date, and a section for requesting vacation or PTO, with a note about the approval process.

Forms were created for the Meter Shop. They include: Customer Survey, Loan Order, Request for Quote, Stock Invoice, Requisition, Meeting Minutes, Daily Vehicle Allowance, Fax Cover Sheet, Outside Employment, Vacation / PTO Request.



Improve Phase

9. Implement Improvements



Labels / Lists

5000010 1/2
ADAPTER, Ductile Iron, FL x MJ, 6"

**Purchase Orders
 October 1, 2012 -
 September 30, 2013**

**Water
 Meters**

Vendor Names and Fax Numbers

Cobum's L	903-371-8026	Dixie Paper	903-593-2959
HD Supply	903-593-7783	Cleancare	903-758-3082
Underground	903-757-5252	Baxter	903-759-8110
Dixie	903-831-4541	Wilson	903-758-3095
		Medsafe	903-935-2117
		Chem Co.	972-241-022
Morrison	903-592-2432	Grainger	

Vendor #	Vendor Name	Phone	Fax
52	Acme Machinery	903-592-6569	903-592-6764
11167	Aqua Metric	866-645-2782	210-967-6305
12604	APAC-Texas Inc.	903-597-3603	903-593-4902
5533	Barco	800-228-2703	402-334-8002
2835	Benchmark	937-325-1001	937-328-6477
10601	CBS	903-595-3820	903-595-4276
548	Center Chemical	903-593-1604	903-531-2384

Account Numbers		Account Numbers	
Water - 743		Sewer - 745	
Office Supplies	502-0743-743-0301	Office Supplies	502-0745-745-0301
Gloves / Clothing	502-0743-743-0304	Gloves / Clothing	502-0745-745-0304
Tools & Equipment	502-0743-743-0305	Tools & Equipment	502-0745-745-0305
Cleaning Supplies	502-0743-743-0308	Cleaning Supplies	502-0745-745-0308
Chemical / Medical	502-0743-743-0309	Building Maintenance	502-0745-745-0801
Dues / Subscriptions	502-0743-743-0410	Sewer Main Main.	502-0745-745-0804
Travel / Training	502-0743-743-0411	Maint. of Mach./Imp.	502-0745-745-0822
Building Maintenance	502-0743-743-0801	Service Line Main.	502-0745-745-0831

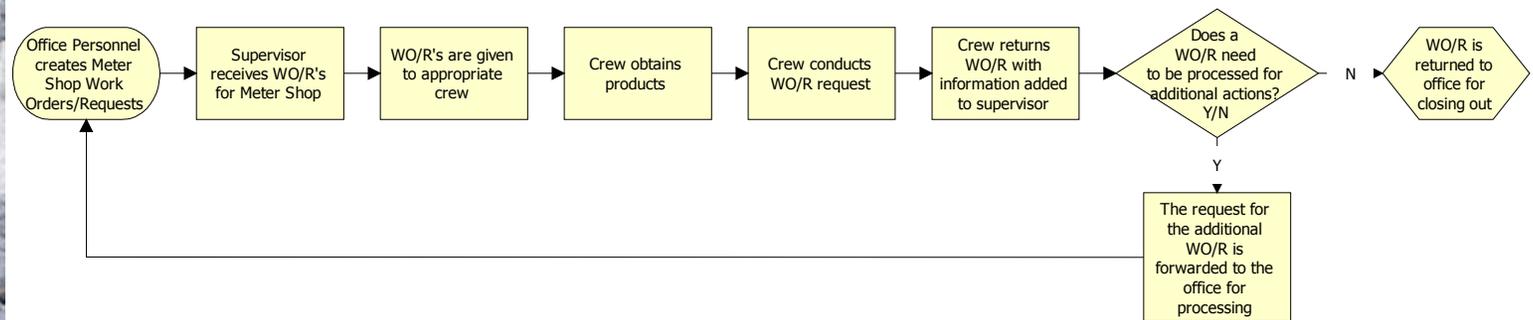


Improve Phase

1.1. Improved State Process Performance



Improved Process Map for Develop and Implement Inventory in the WUSC Meter Shop

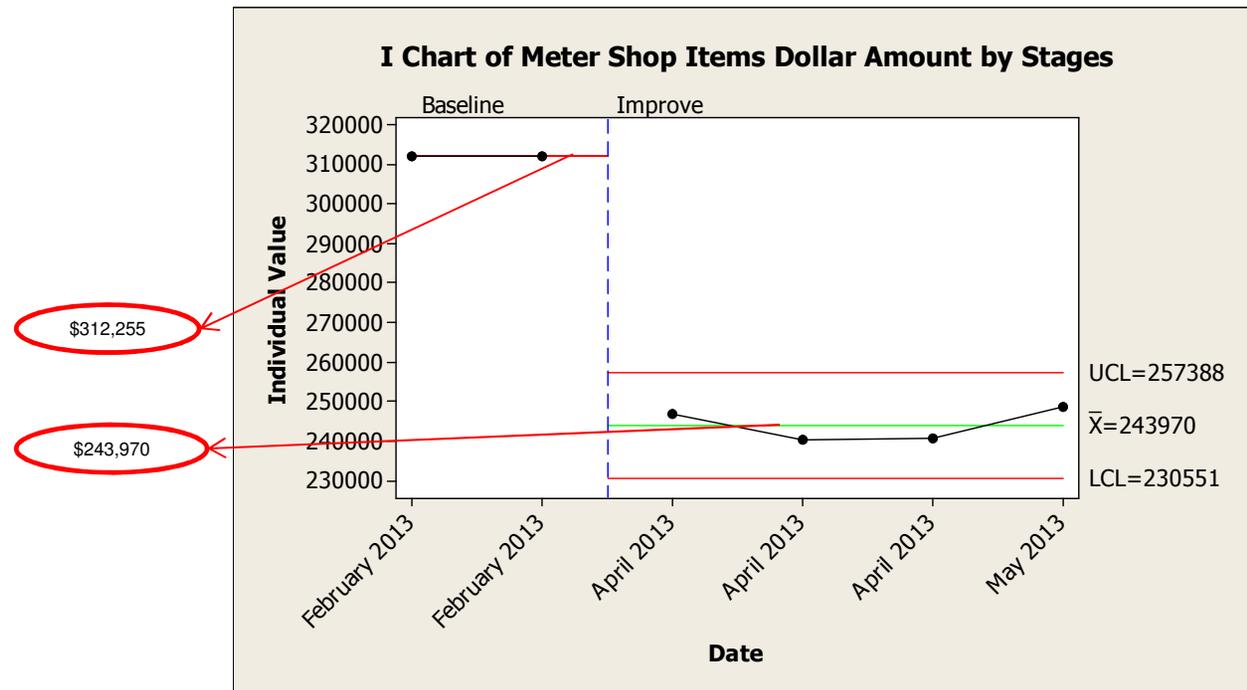


Improve Phase

1.1. Improved State Process Performance



Improved I Chart



The chart illustrates the improvement of the overall process during the course of the project.

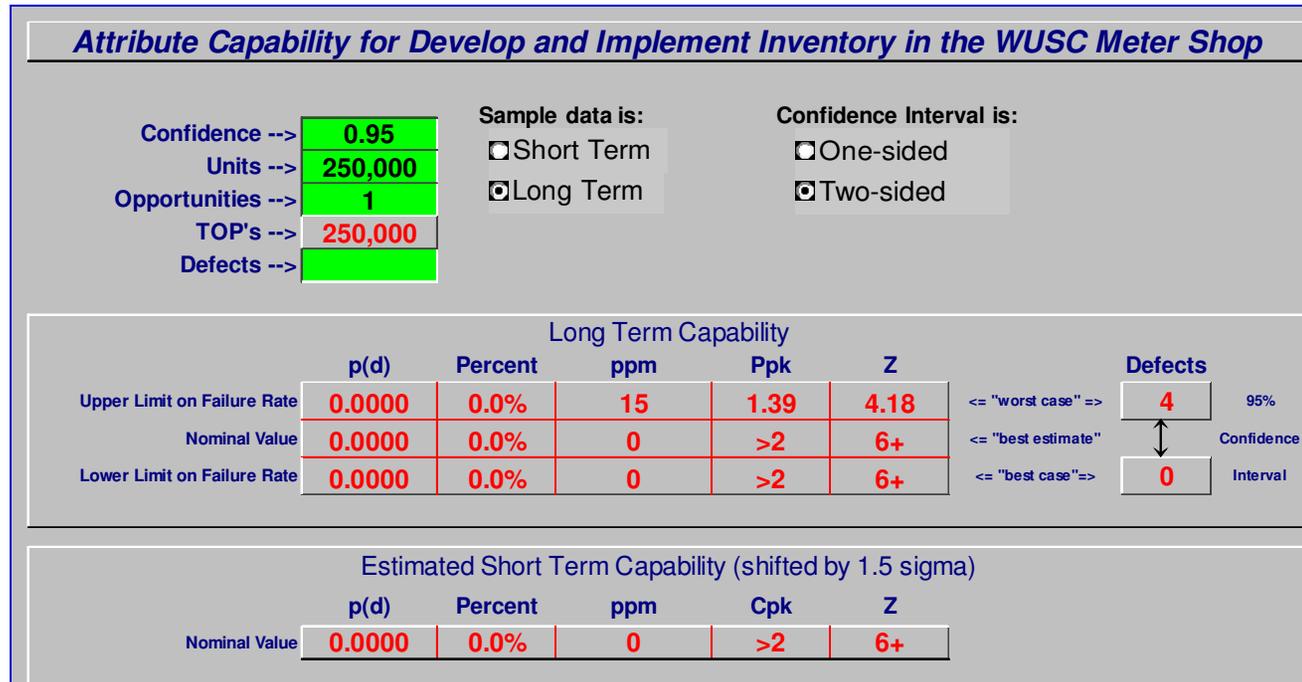


Improve Phase

1.1. Improved State Process Performance



Process Capability



The Capability Analysis indicates the process performance is at an acceptable level.



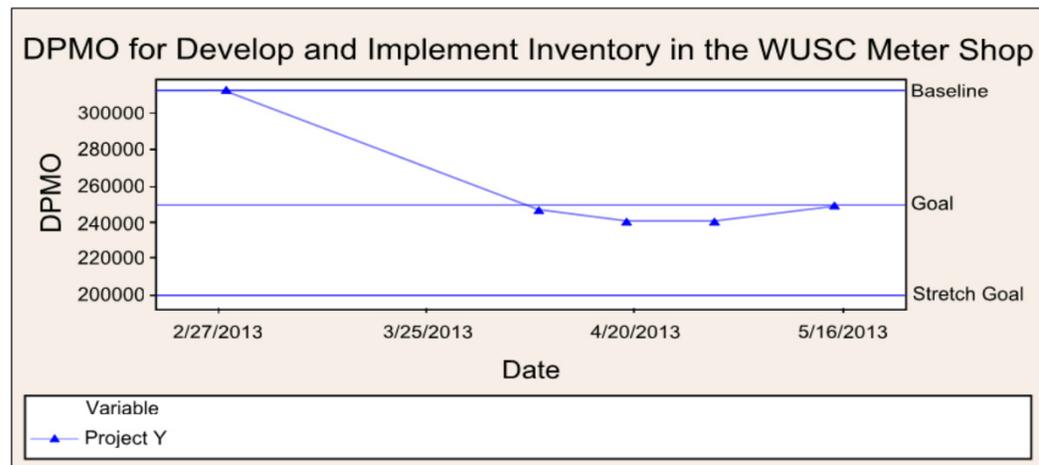
Improve Phase

1.1. Improved State Process Performance



Improved Y Metrics

Y Metrics



DPMO

	Date	Project Y
Baseline		312255
Goal		250000
Stretch Goal		200000
	2/28/2013	312255
	4/8/2013	246764
	4/19/2013	240115
	4/30/2013	240398
	5/15/2013	248601



Control Phase

12. Implement Process Controls



Visual Management Board



A Visual Management Board has been created. The project progress as well as general information will be displayed for viewing.



Control Phase

12. Implement Process Controls



Inventory Procedure Control and 5S Audit/Evaluation Information

Meter Shop Inventory Procedure Control

In order to control inventory, the following procedures need to be followed.

Inventory Reorder Report

There is an inventory reorder report in H T E that should be generated and printed out once a week to insure that no items have been missed for reordering. This report will show what items as well as how many needs to be ordered. To generate this report H T E /P I will need to be entered. The desired building code will need to be selected and the "Inventory Reorder Report" can be submitted and printed.

Kanban / Green Dot Program

Labels are placed on the items that are necessary to keep in inventory. They will list the minimum and maximum for each item. When that item is down to the minimum number, which is determined by the "Inventory Reorder Report" and visually, the item will be placed on order. After ordering the maximum amount listed, a green dot is placed beside the item label. This will be a visual check for anyone questioning if the item has been ordered. When the item is received, it is placed in the appropriate area and the green dot is removed. The Kanban's should keep an even flow of the inventory items.

On order items for the pipe yard are placed on a list and posted on the Meter Shop Visual Management Board

Slow Moving Items

There is a substantial amount of slow moving items which remain in inventory. They are necessary due to having various types and sizes of products in the water distribution system. Items have to be available for emergency situations.

Monthly Updates

Monthly updated charts showing the decrease/increase of inventory dollar amounts will be placed in the "Lean Six Sigma Information" section of the Meter Shop visual management board for visual aide.

5S Audit/Evaluation Information

Control Checklist:

1. Water Utilities Service Center Employee Training
2. 5S Audit Conducted Monthly - Posted on Meter Shop Visual Management Board
3. Inventory Procedure Control Followed
4. Location Diagrams Displayed on Meter Shop Visual Management Board

Inventory Procedure Control and 5S Audit/Evaluation Information documents were created and is located on the Meter Shop Visual Management Board.



Control Phase

12. Implement Process Controls



Meter Shop Audit Program

Meter Shop Audit Program

Scoring System: 0 = not observed, 1 = "Yes", 2 = "No/Minor", 3 = "Good"

Location: Water Utilities Service Center Meter Shop

Date: _____

Auditor(s): _____

SS Element	Criteria	Score	
WASTE	Desk	Organized, items identified	S
	Table	Organized, items identified	S
	Bookshelf	Organized, items identified	S
	Filing Cabinets	Organized, items identified and managed	S
	Microtask / Printouts	In proper location and identified	S
MEETINGS/FORMS	Tasks and assignments	Assigned to identified persons	S
	Checklist / Change Items	Identified and managed	S
	Inventory Items	Materials are organized in identified places	S
	Waste Receptacles	Clean and adequate capacity	S
	Clutter / Wires	Removed and organized in identified places	S
	Equipment	Clean, labeled or color-coded	S
	Sources of debris	They are contained	S
	Signs	Recognized and clear	S
	Floor Markings	Recognized and clear	S
	Visual Control	Recognized and clear	S
Lighting	Enough or all workstations	S	
MS TOOLS	Inventory Items	Materials are organized in identified places	S
	Asphalt Markings	Recognized and clear	S
	Waste Receptacles	Clean and adequate capacity	S
	Sources of debris	They are contained	S
DEPARTMENT PROCEDURES	Regulation Form	Completed and processed subsequently	S
	Stock Transfer Form	Completed and processed subsequently	S
	Issue Ticket Processing	Completed and processed subsequently	S
	Inventory Shrink Report	Managed, No Zero Date	S
	Request for Change Form	Completed and processed all in accordance with the City of Tyler Purchasing Policies and Procedures	S
	H.T.C. Regulations	Completed and processed subsequently	S
	Purchase Order	Completed and processed subsequently	S
Receipt Processing	Completed and processed subsequently	S	
Inventory	Completed and processed subsequently	S	
LSS Project	LSS informed on and sheets are covered and displayed	S	
Warehouse Customer Survey	Completed and processed subsequently	S	

Scale of Evaluation:

> 90%	World Class SS
80% - 70%	Good
60% - 50%	Medium
< 50%	Poor

100

Result by SS Elements

MS Office	MS Inventory Area	MS Tool	Document Processing
100	100	100	100

SN	Propose Improvement Actions	WHO	Due Date
1			
2			
3			
4			
5			
6			
7			

Sign and agreed by: _____ Date: _____

A Meter Shop Audit Program was created and is completed on a monthly basis. The results are posted on the Meter Shop Visual Management Board for all to review.



Control Phase

12. Implement Process Controls



Meter Shop On Order Items List for Pipe Yard

Meter Shop On Order Items List for Pipe Yard

1. Adapter, Ductile Iron, Fl x Mj, 6"
2. Adapter, Ductile Iron, Fl x Mj, 8"
3. Ell, Ductile Iron, Fl x Fl, 6" x 90
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

A Meter Shop On Order Items List for Pipe Yard was created to identify items which may be on order.



Control Phase

12. Implement Process Controls



Procedural Controls / Meter Shop Warehouse Work Instructions

Meter Shop Warehouse Work Instructions

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Creating a Requisition for Purchase Order (Stock Merchandise)	20
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Fax Cover	48
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Department	Water Utilities Service Center – Meter Shop
Procedure	Operations Procedure (Meter Shop Warehouse)
I. Purpose: Detail the daily operations for Meter Shop Inventory	
II. Scope: Meter Shop	
III. Definition: Warehouse Work Instructions	
IV. Procedure:	
Walk Through	
A Walk Through is conducted at the start and end of each working day. The Meter Shop supervisor faces, straightens, cleans and makes sure items are in their proper location. This includes the indoor and outdoor warehouse areas. Missing items, items getting below minimum, as well as additional issues may be noticed by conducting the Walk Through on a daily basis.	
Requisition Form Completion	
MSWHF001_Meter Shop Warehouse Requisition Forms are required to be completed by all personnel receiving merchandise from the Meter Shop warehouse. The Meter Shop supervisor processes the completed forms as needed.	
Obtain completed MSWHF001_Meter Shop Warehouse Requisition Forms.	
Make sure the date, name of employee requesting the items, quantity, complete description, size, type, job site/truck stock, job number (if applicable) and the approval signature is filled out.	
Compare information on the MSWHF001_Meter Shop Warehouse Requisition Form with the missing items on shelves, pipe yard, etc., in order to insure the correct merchandise was gathered.	
Write the stock number, located on the item label (if applicable), beside each item on the MSWHF001_Meter Shop Warehouse Requisition Forms for future reference. If a label is not present, locate the stock number in the Meter Shop Inventory List. The Meter Shop Inventory List is located on the W Drive – Meter Shop Supervisor Folder – Meter Shop Inventory List document.	
Restock or face shelves, slots, etc. as needed.	
Place the completed MSWHF001_Meter Shop Warehouse Requisition Forms in the requisition notebook until an appropriate processing time, depending on amount received.	
Requisition Form Processing	

Procedural Controls were created for the Meter Shop warehouse. They are 49 pages of detailed instructions and 10 forms, which were required for the processes.



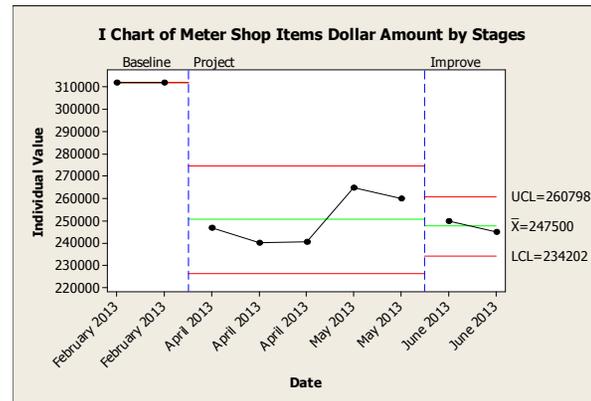
Control Phase

12. Implement Process Controls



I Chart Instructions

I Chart Instruction Manual for WUSC Meter Shop Visual Management Board Monthly Graphs



Sherry Pettit
May 1, 2013



Control Phase

12. Implement Process Controls



Training

VISION
The City of Tyler's vision is to be the standard for performance excellence in local government.

MISSION
To provide exceptional services to our citizens and to be recognized as a model of performance excellence in local government.

THE BLUEPRINT CORE VALUES
The City of Tyler is committed to the highest quality of service to our citizens and to the highest quality of performance excellence in local government.

OUR FOUNDATION
The City of Tyler is built on a foundation of trust, integrity, and respect for the individual.

OUR GOAL IS TO SERVE

S STREAMLINE
To improve the efficiency of our operations and to reduce costs.

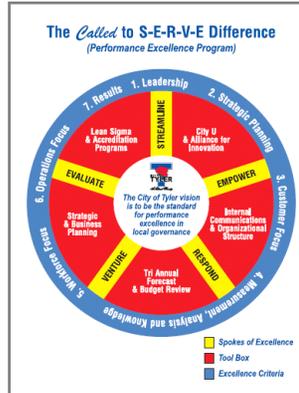
E RESPOND
To respond quickly and effectively to the needs of our citizens.

R EVALUATE
To evaluate our performance and to identify areas for improvement.

V VENTURE
To explore new opportunities and to embrace change.

E EMPOWER
To empower our employees and to encourage innovation.

HOW WE ARE DIFFERENT
We are the *Called to S-E-R-V-E* Difference.



CITY OF TYLER, TEXAS

POLICIES & FORMS

(Originally adopted 10/1/99)
Affirmed as revised 6/11/03 (BT)
Affirmed as revised 1/1/09 (MMCD)

1/1/2009

PURPOSE:
To establish a standard procedure for obtaining goods and services that complies with generally accepted purchasing procedures and State of Texas purchasing law.

POLICY:
It is the policy of the City of Tyler that the highest quality goods and services will be acquired for the lowest possible price. The Purchasing Agent is charged with establishing procedures and controls in the purchasing process to comply with all applicable purchasing laws and regulations. City procurement practices must conform to requirements as set out in the City Charter, City Code, and State law (see Title, Local Gov't Code, Ann., § 252.001, et seq.) It is the policy of the City for City Council to make final award on any expenditure exceeding \$25,000.00, whether the item is subject to bid or not, (see City Code Section 2-6, (Amended 1/16/06) (1/27/08) (2/27/09)).

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- a. Responsibilities of Purchasing p. 3-30
- b. Responsibility of the User Department p. 3-31
- c. Purchasing Procedures and Guidelines p. 3-33
- d. Public Works Projects p. 3-37
- e. Post-Award Process for Tyler Transit p. 3-39
- f. Invoices and Payments p. 3-43
- g. Purchasing Card Program p. 3-44

a. Responsibilities of Purchasing:
Purchasing's duties are to:

1. Maintain a City Vendor's List and an annual Contract/Price Agreement List classified according to materials, equipment, and services.
2. Monitor competitive bidding at all times.

Meter Shop Warehouse Work Instructions

Table of Contents	Page
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Control Phase

12. Implement Process Controls



Data and Cost Calculation Document

Hard Dollar Savings	\$ 65,490	Develop and Implement Inventory in the WUSC				
Soft Dollar Savings	\$ -	Meter Shop Data and Cost Calculation				
Total Savings	\$ 65,490	June 2013/June 2014				
Data		Hard Dollar Calculations		Soft Dollar Calculations		
Month	Monthly Inventory Ending Balance	Initial Inventory	Savings			Soft Dollar Savings
June-13	\$ 246,765	\$ 312,255	\$ 65,490			
July-13		\$ 312,255				
August-13		\$ 312,255				
September-13		\$ 312,255				
October-13		\$ 312,255				
November-13		\$ 312,255				
December-13		\$ 312,255				
January-14		\$ 312,255				
February-14		\$ 312,255				
March-14		\$ 312,255				
April-13		\$ 312,255				
May-14		\$ 312,255				
June-14		\$ 312,255				

The Data and Cost Calculation captures the hard dollar savings as a result of the completed project.



Control Phase

12. Implement Process Controls



Improved Pictures



Develop and Implement Inventory in the WUSC Meter Shop



Improved Pictures



Develop and Implement Inventory in the WUSC Meter Shop



Project Summary:

As of February 2013 the average dollar amount of available Meter shop products was \$312,255.10. The Meter Shop inventory was developed and implemented. By going through the 12 step process, the dollar amount was reduced to \$248,600.73. This is a \$63,654.37 or 20% reduction. The implementation cost was \$938.59.

Conclusion:

The team illustrated that the new process has been standardized and is in control.

A monitoring system is in place that will ensure the results are sustained and that changes in the process can easily be detected, therefore, holding the gains.



Develop and Implement Inventory in the WUSC Meter Shop



Close Out Luncheon

