

STRATEGIC PLANNING COMMITTEE
SPECIAL MEETING
The Metropolitan District
January 24, 2023

PRESENT: Commissioners Andrew Adil, John Avedisian, John Bazzano, Richard Bush, Allen Hoffman, Alvin Taylor, Calixto Torres, and District Chairman William A. DiBella (8)

REMOTE

ATTENDANCE: Commissioner Jacqueline Mandyck and Dominic M. Pane (2)

ABSENT: Commissioners John Gale, James Healy, Jon Petoskey and James Woulfe (4)

ALSO

PRESENT: Commissioner Donald Currey (Remote Attendance)
Commissioner Jean Holloway
Scott W. Jellison, Chief Executive Officer
Robert Barron, Chief Financial Officer (Remote Attendance)
Christopher Stone, District Counsel
John S. Mirtle, District Clerk
Christopher Levesque, Chief Operating Officer
Susan Negrelli, Director of Engineering
Robert Schwarm, Director of Information Technology (Remote Attendance)
David Rutty, Director of Operations
Tom Tyler, Director of Facilities
Jamie Harlow, Director of Human Resources
Jason Waterbury, Manager of Engineering Services
John Fleming, Manager of Operations
Dean Gozzo, Assistant Utility Maintenance Superintendent
Peter Stochlinski, Assistant Utility Maintenance Supervisor
Anthony Pantaleo, Utility Maintenance Superintendent
Julian Tinsley, Senior Utility Maintenance Supervisor
Matthew Skehan, Senior Utility Maintenance Supervisor
Nick Salemi, Communications Administrator
Carrie Blardo, Assistant to the Chief Executive Officer
Victoria S. Escoriza, Executive Assistant
David Baker, IT Consultant
Joe Szerejko, Independent Consumer Advocate

CALL TO ORDER

District Counsel Christopher Stone called the meeting to order at 4:27 PM

ELECTION OF CHAIRPERSON

District Counsel Stone called for the election of the Chairperson. District Chairman DiBella placed Commissioner John Avedisian's name in nomination, and was duly seconded by Commissioner Bush.

There being no further nominations, the nominations were closed. Commissioner John Avedisian was elected Chairman of the Strategic Planning Committee for 2023. Chairman Avedisian assumed the Chair.

ELECTION OF VICE CHAIRPERSON

The election of Vice Chairperson was postponed.

PUBLIC COMMENTS RELATIVE TO AGENDA ITEMS

No one from the public appeared to be heard.

APPROVAL OF MINUTES

On motion made by Commissioner Bush and duly seconded, the meeting minutes of the Strategic Planning Committee meeting of October 14, 2021 were approved.

2003 BARRINGTON WELLES MANAGEMENT STUDY UPDATE
OPERATIONS DEPARTMENT

Chris Levesque, Chief Operating Officer, led a presentation regarding the Operations Department.

Peter Stochlinski, Assistant Utility Maintenance Supervisor; Julian Tinsley, Senior Utility Maintenance Supervisor and Matthew Skehan, Senior Utility Maintenance Supervisor presented on meter pits and various operations materials.

METROPOLITAN DISTRICT COMMISSION 2003 MANAGEMENT STUDY ANALYSIS



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Operations

- ▶ Organized into 5 divisions to manage the sewer collection system and water distribution system
 - ▶ Repair - responsible for all corrective maintenance associated with excavations to repair, replace and install water and sewer assets as well as facility projects as needed.
 - ▶ Sewer Maintenance - responsible for all sewer maintenance, including jetting, vacuuming, rodding, inspecting through CCTV or other methods, maintenance and operation of SSO/CSO structures and monitoring equipment, maintenance of flood control gates and structures. Responsible for sewer backup investigations during normal working hours. Also O&M of 6,638 Catch Basins in the City of Hartford.
 - ▶ Hydrant Maintenance - responsible for all annual hydrant maintenance (1,200 private and 10,200 public), coordination with local Fire Marshals and Chiefs, execution of all pressure and flow tests.
 - ▶ Meter Management - responsible for installation and replacement of meters, meter reading and leak investigations during normal working hours. Department manages over 100,000 meters as well as ensures accurate monthly reads.
 - ▶ Valve Maintenance - responsible for operation and maintenance of all distribution valves, installation and repair of pressure reducing valves, operation and maintenance of transmission valves, assist with operation and maintenance of raw water transmission valves. The District has over 50,000 valves in its Distribution System.

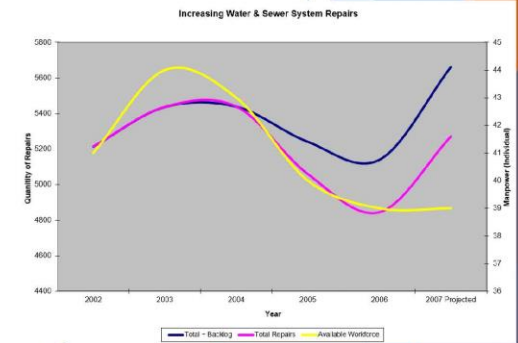
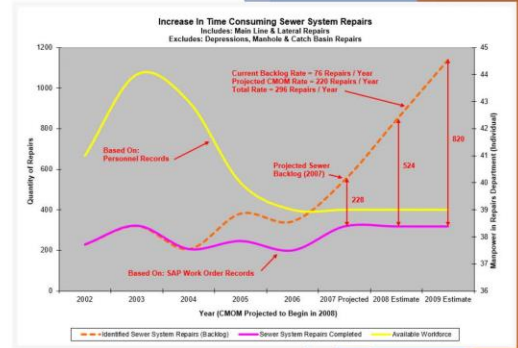
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1-REORGANIZE DISTRICT OPERATIONS OVERVIEW

- In 2007, the Chief Operating Officer at the time, Scott Jellison, began evaluating succession planning needs in the Operating Departments and future needs related to the Clean Water Program. The results of the study demonstrated that the current methods of managing and executing the work with the current workforce needed to be addressed to maintain current levels as well as new requirements under the CWP. The capability of the current workforce was also reviewed against pending retirements (Below Table) and skill level needed to meet future demands.
- Additional staff were hired to address the immediate needs of the organization, but a more sustainable plan to execute and complete more work with the same or less resources was needed.
- Prior to the job merging, management reviewed what how the engagement with other departments and use of all resources can help improve the management of the work. Engineering began supporting the infrastructure repair activities through CMOM projects and CWP infrastructure rehabilitation projects. Also priority lists for water infrastructure replacements were created, communicated and executed to reduce recurring failures on the same assets. Additional resources supported the Town paving programs and addressed failing infrastructure prior to failure and the restoration of the towns' streets, which in turn never allowed failures to make the backlog.

	Local 184 Skilled Workers	Local 1026 Supervisor Union	Local 3713 Administrative Union
Total Members	329	84	126
Ten Years to Retire Rule 85	125 - 38%	35 - 42%	47 - 37%
Five Years to Retire Rule 85	39 - 12%	16 - 19%	29 - 23%

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1-REORGANIZE DISTRICT OPERATIONS

- Operations Repair and Maintenance departments were combined into one department. This allowed for cross-training of multi-tasking job descriptions. Currently employees are routinely rotated through preventive maintenance activities which includes sewer cleaning, hydrant maintenance, meter maintenance/installation and valve maintenance as well as corrective maintenance and excavation activities which includes water and sewer main repairs, service installation and replacements and new pipeline installations. Rotations typically last 3 months which allows all staff to be trained to address peak season demands.
- Due to the ever increasing demands on Operations to support CWP requirements and the Water Main Replacement Program, the various activities performed by the Operations Department were evaluated to identify new efficiencies. Through the use of the multi-tasking job description, typical repair crews are now 5 staff compared to 6 staff. Support activities typically requiring 4 staff have been decreased to 2 staff which includes taps and valve maintenance.
- Management and Supervision have also looked at other methods of planning/scheduling work to maximize production which includes performing multiple repairs and installations in a single working day to reduce non-productive time.



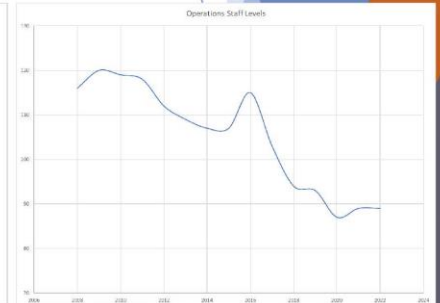
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Previous:	Now:
Sewer Maintainer 1, LT05 Gate Maintainer 1, LT04 ** Hydrant Maintainer 1, LT04 Pipe Joiner, LT05	Utility Maintainer 1, LT05
Utility Shift Maintainer, LT09 Util Oper Maint (Primary Response), LT08 Customer Service Maintainer 1, LT07 Customer Service Maintainer 2, LT08 Compressor Truck Operator, LT07 Gate Maintainer 2, LT07 Hydrant Maintainer 2, LT07	Utility Maintainer 2, LT09
Sr Sewer Maint Crew Leader, LT12 Systems Repair Crew Leader, LT13	Sr. Utility Maintainer Crew Leader, LT13



1-REORGANIZE DISTRICT OPERATIONS

- Since 2015 MDC Operations has been able to utilize the multi-tasking job descriptions to increase the volume of work completed as the same time create efficiencies that has decreased the required staff to perform the work. Staff are continuously trained and retrained, typically rotated in a 3 month rotation between preventative maintenance activities and corrective/excavation maintenance (repair) activities.
- In 2009 MDC Operations was comprised of 120 and in is now 89. To the right is a graph of staffing levels since 2008 as multiple improvements were ongoing over the past 15 years.



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1-REORGANIZE DISTRICT OPERATIONS COORDINATION WITH INVENTORY

- The warehouse function controls all of the spare part inventory
 - These high value components are needed to maintain core business functionality when critical infrastructure needs repair. The main 'customers' are operations and maintenance.
 - Many parts also have very long lead times between order placement and part receipt, so having certain parts in stock is vital
- Historically the District operated one main warehouse and several decentralized warehouse areas
 - All smaller warehouse areas were eliminated and the main warehouse became 'parts central' for the District
 - Overall inventory quantities were reduced
 - Better organizational control was established
 - Staffing was reduced
- In 2016 The warehouse implemented using lock boxes for Operations repair department covering the most common size pipe repairs for weekend and after hour repairs reducing overtime. In 2020 the third shift at the warehouse was eliminated reducing the overall staff.



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Failure Events & Responses

- ▶ One of the major components to our ability to respond and address the issue timely is training staff to be multi-skilled as well provide training for employees on how to properly assess and take action in those events.
- ▶ In recent history MDC staff responded to significant emergencies including the Palasido Ave Water Main Break, Linbrook Rd Sewer Line Failure, 54-IN Transmission Repair along I-84, CAA PFAS release, Homestead Ave Sewer Failure along with a number of large water main breaks.
- ▶ The timely responses are due to continuous communication between departments, preparation for events and dedication of the District staff to provide our services at the highest level of quality for our customers.



Preparedness for Emergencies



3-PERFORMANCE MEASUREMENT PLAN OPERATIONS

➤ Operations

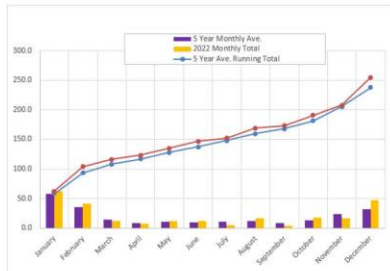
- All routine preventive maintenance activities have been evaluated and daily and monthly production goals have been established. Goals include feet of sewer cleaned and inspected, hydrants maintained, valves exercised and maintained and meter installations. Staff are evaluated based on performance and further training is provided when performance is not obtained. Performance measures are utilized to meet USEPA CMOM compliance for operation and maintenance of the collection system.

Hydrants – 30 to 35 hydrants /blow offs will be flushed daily
 Gates – 40 to 50 gate valves will be cleaned & operated w/2 man crew daily
 Sewers – 5,800' to 6,400' of daily sewer cleaning per jet truck
 Sewers – 104,400' to 115,200' of monthly sewer cleaning per jet truck
 Sewers – 522,000' to 576,000' of total sewer cleaned by department – jet trucks
 Sewers – 1,500' to 1,800' of daily rodding by the rod truck
 Sewers – 23 minimum catch basins per day – 414 to per month per vehicle

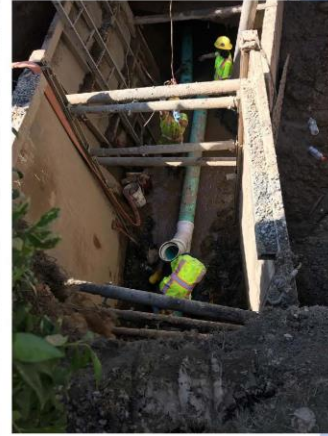


3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - REPAIR

Monthly Water Main Leak Summary							
Month	2017	2018	2019	2020	2021	5 Year Average	2022
January	46	96	93	29	96	68.0	102
February	24	15	41	18	79	35.4	42
March	15	14	9	10	25	14.6	12
April	8	6	9	9	13	9.0	7
May	9	10	12	7	17	11.0	12
June	10	10	4	12	11	9.4	12
July	5	14	14	10	9	10.4	5
August	6	18	16	9	10	11.8	17
September	7	5	12	11	7	8.4	4
October	11	23	14	14	6	13.6	18
November	24	33	17	23	21	23.6	17
December	32	34	41	35	21	32.6	47
Annual Total	197	278	252	187	275	237.8	256



3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - REPAIR



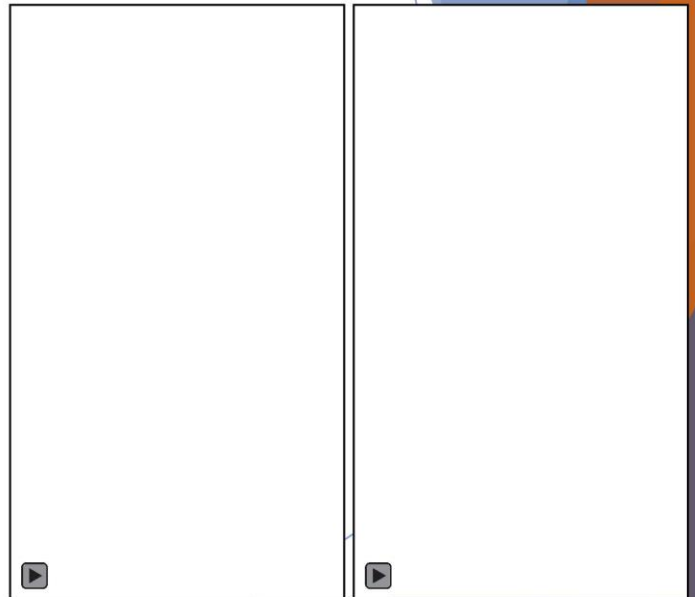
New Water Service Taps Installed by Operations													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
2022	0	0	32	45	53	88	150	141	60	112	116	118	915
2021	48	52	60	174	122	128	97	108	126	128	151	73	1267
2020	27	27	19	170	114	57	206	136	142	171	82	56	1207
2019	19	5	2	34	88	24	48	41	87	127	98	28	602
2018	0	4	9	33	62	6	36	94	85	59	11	45	444
2017	3	1	2	15	25	16	27	121	22	14	20	11	280

Sanitary Sewer Point Repairs													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
Bloomfield	0	0	2	0	0	0	0	0	0	1	0	0	3
East Hartford	1	2	2	1	1	1	0	0	0	0	2	2	12
Farmington	0	0	0	0	0	0	0	0	0	0	0	0	0
Hartford	1	10	8	2	12	8	8	5	2	3	6	7	70
Newington	0	0	2	0	1	3	0	0	2	2	0	0	10
Rocky Hill	0	0	0	0	0	0	0	0	1	0	0	0	1
West Hartford	4	5	12	7	16	10	2	5	10	1	10	5	87
Westfield	0	0	1	2	1	1	0	2	1	1	0	0	9
Windsor	0	0	1	0	0	0	0	1	0	0	0	0	2
Total	6	17	29	12	31	21	10	13	17	7	18	14	194

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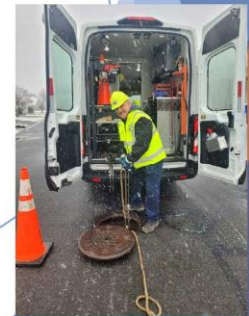
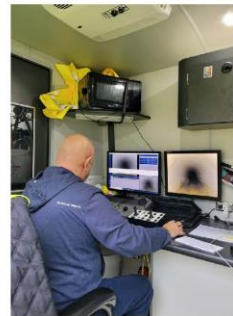
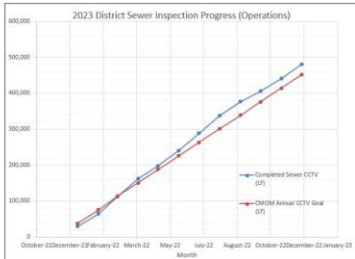
3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - SEWER MAINTENANCE

Sanitary Sewers Cleaned Linear Distance (ft) in 2022													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
Bloomfield	21,649	23,335	25,739	33,549	0	13,148	15,437	5,262	2,900	2,700	80,528	52,634	276,879
East Hartford	38,098	38,335	78,064	52,080	38,421	53,350	20,378	13,494	18,094	15,283	9,378	5,150	267,071
Farmington	0	0	0	0	0	0	0	0	0	0	0	0	0
Hartford	3,788	11,794	10,072	6,126	12,713	11,610	4,740	9,111	7,268	10,017	10,920	17,673	116,310
Newington	12,260	11,763	2,637	5,841	2,673	4,636	3,100	6,288	6,080	3,678	5,711	4,653	72,610
Rocky Hill	25,364	27,220	1,813	0	6,958	4,365	1,797	0	0	1,175	2,368	70,921	109,611
West Hartford	19,476	35,118	64,797	58,329	26,928	38,042	21,867	5,017	28,703	33,816	27,505	34,785	384,333
Westfield	2,650	29,506	85,534	60,317	45,925	42,820	64,874	37,608	93,419	73,412	39,818	29,900	567,783
Windsor	2,850	3,160	3,420	3,750	5,840	2,400	16,360	48,808	50,264	61,738	51,864	24,981	273,361
Total	115,814	180,221	275,136	218,962	137,558	170,829	148,553	125,649	170,245	200,542	224,697	171,232	2,139,168



3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - SEWER MAINTENANCE

CMOM: CCTV Crews Linear Distance Inspected (ft) in 2022													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
Bloomfield	0	0	7,867	0	622	1,629	186	54	0	0	0	0	10,338
East Hartford	9,532	5,744	3,841	15,573	4,474	14,666	6,319	2,288	17,537	13,896	768	3,925	100,533
Farmington	0	0	0	0	0	0	0	0	0	0	0	0	0
Hartford	15,668	16,035	17,789	12,210	14,912	4,295	3,472	6,976	4,235	1,746	2,824	3,778	104,020
Newington	0	1,118	250	0	2,678	5,359	12,904	19,489	10,594	8,326	3,343	0	64,061
Rocky Hill	325	2,607	995	0	0	0	0	337	0	663	18,475	24,648	48,030
West Hartford	3,788	2,416	8,626	3,228	8,031	1,759	874	11,491	6,234	4,689	9,263	6,765	67,377
Westchester	0	5,876	3,478	18,936	4,451	12,654	8,002	313	212	0	0	84	54,008
Windsor	0	1,522	3,898	358	526	2,603	14,411	7,965	0	0	602	296	32,184
Total	28,313	35,318	46,887	50,305	35,697	42,965	48,148	48,813	38,812	29,290	35,405	39,496	490,549
													Total Miles
													61.91



3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - SEWER MAINTENANCE

Catch Basins Cleaned and Inspected													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
2022	21	63	288	138	172	143	271	245	197	81	145	121	1887
2021	248	0	339	437	396	322	254	314	149	191	335	240	3225
2020	224	215	215	82	62	228	296	27	268	261	406	99	2413
2019	54	102	13	332	434	263	505	296	236	216	413	47	2893
2018	4	31	281	334	271	184	384	259	338	527	188	139	2930
2017	169	145	252	356	351	279	359	588	493	226	209	86	3515

CMOM: Catch Basins > 50% Full (All Basins)													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
2022	5	20	58	73	53	61	88	99	38	17	61	70	643
2021	134	0	177	206	82	86	205	77	26	73	142	100	1,310
2020	194	114	86	70	38	70	78	101	57	59	59	24	861
2019	0	69	108	181	309	189	242	120	150	178	203	8	1,735
2018	0	2	89	114	58	124	452	114	74	136	29	32	1,234
2017	64	62	188	120	120	103	165	53	230	100	114	25	1,344
2016	112	26	51	192	227	113	239	199	15	5	68	49	1,296
													Total CBs
													8,433

CMOM: Catch Basins > 50% Full (MDC Owned)													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total
2022	5	20	38	52	38	47	49	63	30	11	44	49	446
2021	94	0	125	127	77	69	151	38	23	37	116	87	944
2020	72	86	77	61	32	60	85	77	28	39	40	8	645
2019	0	36	94	151	201	152	171	70	110	135	155	6	1,281
2018	0	2	64	92	52	66	300	67	50	76	20	23	812
2017	62	54	123	88	100	76	113	40	210	75	96	15	1,052
2016	110	26	46	131	119	81	158	154	15	5	68	46	959
													Total CBs
													6,139



3-PERFORMANCE MEASUREMENT PLAN

OPERATIONS - SEWER MAINTENANCE (FLOOD GATE OPERATION AND MAINTENANCE)

- ▶ In coordination with the Greater Hartford Flood Commission and the City of Hartford, the MDC operates and maintains critical flood control gates to ensure that the CT River does not adversely effect the low areas along the river during high river stage periods. Typically these gates are utilized to divert stormwater flow to pumping facilities that are no longer able to be passed via gravity flow.



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3-PERFORMANCE MEASUREMENT PLAN

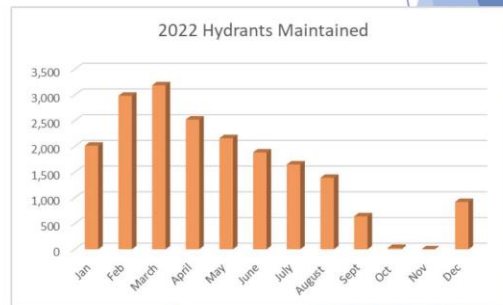
OPERATIONS - HYDRANT MAINTENANCE

- ▶ Hydrant Maintenance Metrics

	All Hydrants Replaced												Total
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	
Bloomfield	0	1	1	0	0	1	0	0	0	0	0	1	4
East Hartford	0	3	2	1	0	0	0	1	0	0	1	0	8
East Granby	0	0	0	0	0	0	0	0	0	0	0	0	0
Farmington	0	0	0	0	0	0	0	0	0	0	0	0	0
Glastonbury	0	0	0	0	0	0	0	1	0	0	2	0	3
Hartford	2	1	2	4	1	4	4	1	3	2	2	2	28
Newington	0	0	0	1	0	0	2	1	0	0	1	0	5
Rocky Hill	0	0	1	0	1	0	0	0	0	0	0	0	2
South Windsor	0	0	0	0	0	0	0	0	0	0	0	0	0
West Hartford	0	1	0	3	2	0	2	0	0	0	1	0	9
Wethersfield	0	0	0	1	0	0	0	0	2	0	0	0	3
Windsor	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	2	6	6	10	4	6	8	4	5	2	7	3	63

	Hydrants Repaired / Flushed / Maintained / Pumped out												Total
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	
Bloomfield	89	0	63	1,019	0	0	0	0	0	0	0	0	1,171
East Hartford	0	0	112	0	0	0	194	1,047	0	0	0	0	1,353
Farmington	0	0	137	37	0	0	0	0	0	0	0	0	174
Glastonbury	0	0	0	0	0	0	0	256	641	8	0	0	905
Hartford	1,057	1,542	0	0	0	946	1,205	0	0	15	0	0	4,765
Newington	0	23	587	0	735	138	0	0	0	0	0	0	1,481
Rocky Hill	0	740	0	0	858	0	0	0	0	0	0	0	1,598
South Windsor	0	0	717	0	0	0	250	87	0	0	0	0	1,054
West Hartford	0	0	1,385	232	0	0	0	0	0	0	0	0	1,617
Wethersfield	0	679	188	0	167	301	0	0	0	0	0	0	1,835
East Granby	0	0	0	75	0	0	0	0	0	0	0	0	75
Windsor	889	0	0	1,159	400	0	0	0	0	4	0	0	3,352
Avon	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,015	2,804	3,189	2,522	2,180	1,883	1,649	1,390	641	27	0	520	19,380

[Youtube Video - Hydrant Maintenance](#)



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3-PERFORMANCE MEASUREMENT PLAN OPERATIONS - METER MANAGEMENT

	Meter Installations												Total
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	
Bloomfield	3	8	8	13	6	7	8	10	10	10	8	8	103
East Hartford	4	16	8	17	24	29	30	29	28	31	67	17	300
Farmington	2	0	2	1	2	2	2	0	0	0	0	2	13
Glastonbury	4	8	6	3	3	5	7	7	11	2	12	15	81
Hartford	26	29	34	25	34	17	12	17	12	22	38	20	288
Newington	4	2	4	3	5	7	2	13	3	9	6	1	58
Rocky Hill	7	5	6	9	3	8	6	1	10	3	3	10	71
South Windsor	3	1	3	6	2	4	0	3	0	2	2	4	30
West Hartford	20	16	27	17	31	22	47	62	20	40	38	71	412
Westchester	5	3	0	5	5	9	6	4	3	2	5	6	53
Windsor	8	3	8	7	7	10	12	16	16	13	11	10	122
Total	86	80	108	106	122	113	132	162	113	134	152	164	1,523

[Youtube Video - Meter Pit/Replacement](#)



Month	Total Estimations	NRD Account Estimations	RFP (Itron Read) Water Accounts			Ave. Successive Estimations
			All RFP Estimations	Estimated Once	2 or More Successive Estimations	
January	832	585	247	58	189	12.2
February	814	566	248	78	170	11.7
March	823	548	275	85	190	11.1
April	815	541	274	73	201	11.0
May	791	533	258	62	196	11.8
June	812	514	298	90	208	10.8
July	843	495	348	136	212	9.6
August	858	477	381	113	268	9.2
September	842	449	393	103	290	9.3
October	811	425	386	110	276	9.2
November	774	395	379	79	300	9.9
December	758	376	382	102	280	10.0

2-BUSINESS PROCESS IMPROVEMENT PROGRAM METER MANAGEMENT

Meter Management and Water Service Management

- ▶ In 2008, MDC began a meter replacement program to replace installed meters that far exceeded their useful life as well as install reading equipment which would allow the for monthly reads. At the time, approximately 42,000 accounts were identified as estimated with an unverified meter read over 5 years. Through the installation of new meters and Itron automated meter reading equipment, the District currently has less than 600 accounts that are estimated and we are addressing those through a No Access Water Account program.
- ▶ Advancement in Meter Technology



Move to Ultrasonic Meters from Turbine & Positive Displacement

- Utilized on 1 1/2" & 2" Meters in 2016
- Utilized on 3" & larger in 2018
- Contracts for 5/8" to 2" in 2020
- No moving parts
- Improved accuracy at low & high flows
- No maintenance – meter blockage
- FM (fire rated) meters for combination and dedicated fire services
- Improved warnings – meter tamper, empty pipe, leak, burst pipe



Advanced Meter Infrastructure

- Utilize a fixed network radio or cellular system to provide daily meter readings
- Hourly metered consumption
- Detect customer leaks, meter tampering, others in real time
- Improve staff safety, reduce repair time
- Improve customer service, reduce credits



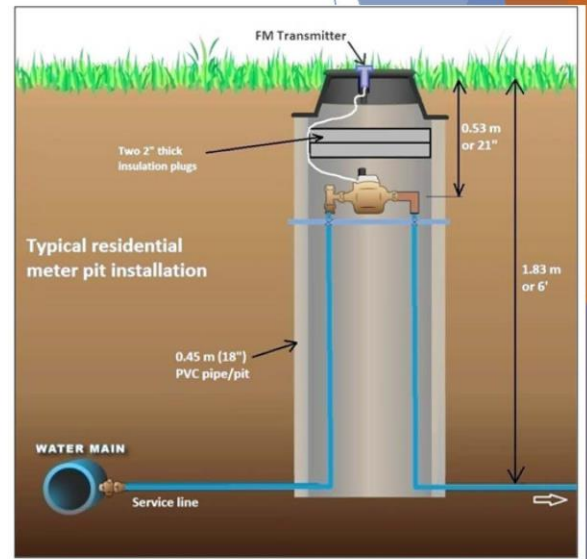
Meter Management and Meter Pit Program

Meter and Consumption Management

- ▶ Review of monthly meter exception reports
 - ▶ Zero reads, no reads, high reads - address as identified
 - ▶ Accounts with Outstanding Balances - Shutoffs on Hold (COVID)
- ▶ Address aging meters through routine replacements
- ▶ Completion of AMR program following COVID restrictions

Meter Pit Program

- ▶ MDC has adopted meter pits as the standard for all metered water services.
- ▶ The installation of pits are being incorporated into all water main replacement projects, new service connections, water service renewals and repairs and Town pavement reconstruction projects.



Meter Pit Program

Business Drivers

- ▶ Reduce costs for future meter replacements and routine maintenance
- ▶ Decrease Non-Revenue Water
- ▶ Allow for ease of adopting new meter technology
- ▶ Reduce customer disruptions during meter maintenance and replacement
- ▶ Avoidance of CT DCP interpretation that would require licensed plumbers and electricians to perform interior meter replacements and wiring to transmitters
- ▶ Avoidance of concerns with transmitter devices
- ▶ Ease in performing shut-offs with new redundant valves
- ▶ Ability to inventory service materials for LCR requirements
- ▶ Create opportunity for customer to replace their aging water service through MDC's Service Replacement Program

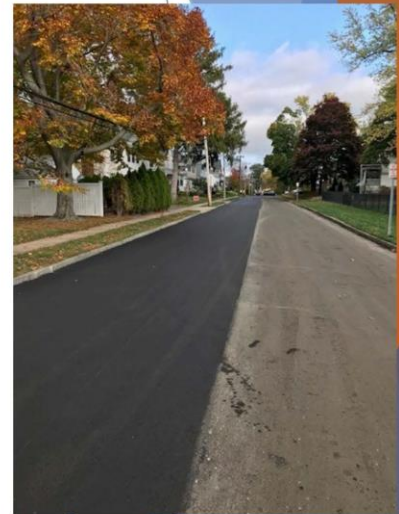


2-BUSINESS PROCESS IMPROVEMENT PROGRAM

PAVING PROGRAM

Paving Program and Coordination with Town Paving Schedules

- ▶ Throughout the year, the District is coordinating with the Town’s Engineering and Public Works departments to identify required infrastructure work in advance of the Town’s paving work. Below is a list of activities regularly conducted in advance of the Town’s work.
 - ▶ Schedule meetings with Towns
 - ▶ Receiving and adjusting to Town changes
 - ▶ Sewer Lateral Replacement based on lateral condition assessment (Depression Log/Dye Tests, Private Lateral Inspections)
 - ▶ Water Service Renewal/Replacements based on age and material
 - ▶ Sewer Repairs (Point/Lining) based on CCTV inspections
 - ▶ Water Main Replacement based on age and break history
 - ▶ Valve and Hydrant Replacement based on age and operability
 - ▶ Manhole Rehab based on condition assessment
 - ▶ Customer Outreach for Service Replacement Program
- ▶ If the Town and the District have shared interest in the street the costs of rehabilitation can be shared to reduce overall costs for each. This has allowed the Towns to complete more streets and the District to extend its rehab and replacement budget to perform more needed work.



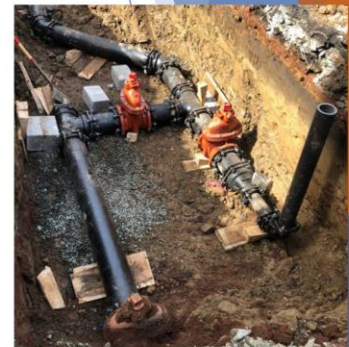
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2-BUSINESS PROCESS IMPROVEMENT PROGRAM

OPERATIONS COORDINATION WITH ENGINEERING AND PLANNING

MDC Operations and Engineering and Construction have been executing a number of cost saving measures over the past 2 years to drive down the cost of each repair event and water and sewer main project, which include:

- ▶ Soil Disposal Handling and Catch Basin Grit Disposal
- ▶ Pavement Restoration via State Contracts
- ▶ Materials Procurement Contracts
- ▶ Use of Flagging Services
 - ▶ Police Officer \$600-\$1,300 per day vs. Typical Flagger \$300-400 per day
 - ▶ Use of flaggers by Operations, Annual savings: \$300k+
- ▶ Coordinating replacements with Town Paving Programs



2-BUSINESS PROCESS IMPROVEMENT PROGRAM OPERATIONS - PLANNING AND ORGANIZATION

MDC Operations has been addressing process improvements over the years with finding methods to reduce costs of operations as well reduce wastes in the operations performed, improvement include:

- ▶ Soil Handling, Dewatering, and disposal including unsuitable backfill material and catch basin grit
- ▶ Organization of Compressor Trucks, Sewer Trucks, Pump Trailers and Gate Trucks
- ▶ Continuous management of required materials and coordination with Inventory to support upcoming work as well as adjust to supply shortages
- ▶ Introduction of new tools and equipment, including:
 - ▶ Insertion Valves
 - ▶ Recycler Truck
 - ▶ Hydro Excavator
 - ▶ New pipe repair materials
 - ▶ Sewer Flow Sensors



2-BUSINESS PROCESS IMPROVEMENT PROGRAM OPERATIONS - PLANNING AND ORGANIZATION

MDC Operations has been utilizing Insertion Valves for the past 5-6 years as a tool to resolve difficult shutdowns as well as provide redundant valving in support of construction projects. The Insertion valves provide Operations a tool to quickly restore and/or maintain service to customers during a water main break. District staff have received training from the vendor and have taken on facilitating all new installs for the past 3 years without assistance and have incorporated into the Utility Maintainer Training Program.



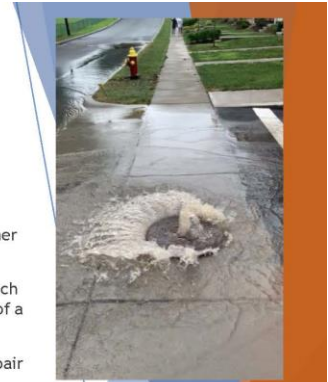
2-BUSINESS PROCESS IMPROVEMENT PROGRAM EMERGENCY MANAGEMENT

Coordination with Towns - Wet Weather etc.

Throughout the year, weather events require the District to prepare our infrastructure as well as coordinate potential impacts to member towns. Prior to impactful weather events the District, the District Command Center issues Wet Weather protocols to identify the potential hazards and appropriate response plans and emergency contact information.

District staff have greatly improved its ability to prepare and to manage emergencies over the past 15 years. Activities such as installing emergency generators at all pump stations and facilities, installation of monitoring equipment and creation of a robust radio frequency network for communication independent of telephone or cable utilities.

Other activities include purchasing of equipment to respond to various infrastructure failures including bypass pumps, repair kits and excavation safety equipment



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5-BUSINESS AND PRODUCT COST ACCOUNTING OPERATIONAL SERVICES

▶ Hydrant Maintenance Fees

- ▶ In 2017, the District evaluated its fee for public and private hydrant maintenance. Based on the services provided and the costs for rehabilitation and replacement the District annual averages approximately \$175-\$180/hydrant per year. At the time the District was applying a fee of \$130/year/hydrant. The fee has been increased by \$5/yr to reduce impact to Town budgets and currently stands at \$150/year/hydrant (2023).

▶ Other Operational Services and Cost of Service Application

- ▶ X-Connection Fees
- ▶ FOG/MIU/SIU charges
- ▶ Liquid Waste Fee
- ▶ Adjustments to meter install and replacement costs
- ▶ Fire Service Fees and account validations
- ▶ Municipal and Private Water and Sewer Agreements
- ▶ DPA Billing process
- ▶ Hydrant Maintenance program
- ▶ Hydrant Meters
- ▶ Catch Basin Cleaning
- ▶ High Flow
- ▶ Closing process
- ▶ AMI/AMR Radio Frequency Program
- ▶ Rate Models
- ▶ Right sizing meters
- ▶ Claims billing



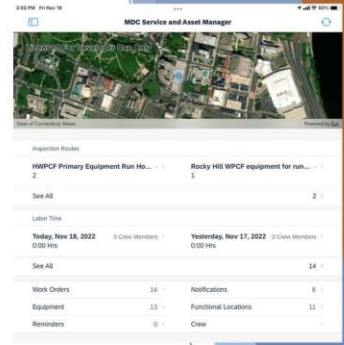
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12-WORKFORCE PLAN

SAP

- ▶ The District Operational Departments utilize SAP for various activities to meet business requirements. The use of SAP and other tools is inline with the culture of our future workforce and has attracted many to our organization
- ▶ Utilization of SAP Plant Maintenance, Project Systems and Customer Service Modules
 - ▶ The District Operations departments utilizes SAP to document all work related to Facilities, Field Operations and customer interactions.
 - ▶ Improvements have been made over the years to allow meter reads to automatically populate customer accounts and calculate billing from the Automated Meter Reading system the District Operations department implemented in 2008.
 - ▶ All interactions with customers are recorded in the Customer Interaction System for use by CS and Ops staff for future interactions as well as documenting findings for future use.
 - ▶ Operations also utilizes service order functionality within SAP to record work that is billable to customers, this includes work related to developer projects, repair to damage infrastructure and/or other requested services performed for a fee.
 - ▶ Operations work has also been integrated into the Project Management tools within SAP so that support work related to projects can be assigned and managed across departments
 - ▶ All plant maintenance and central equipment maintenance preventive and corrective maintenance is also managed in SAP. Preventive maintenance plans have been established to ensure the right maintenance at the right time is being performed. Currently the maintenance is time based and counter based. Future improvements are scheduled to incorporate real time condition monitoring data from various sources including SCADA to further enhance the preventive and predictive maintenance programs.
- ▶ Materials Management
 - ▶ District staff manage all critical and routine spares in SAP. Total value of inventory for field and plant operations is greater than \$8,000,000 and is managed through a Materials Resource Planning method which monitors min and max stock leveling and ensures adequate stock is available.
 - ▶ The District has been purchasing all project stock for its contractors since 2020 and is continually improving this process through SAP to ensure that we are able to maintain adequate supply levels for planned projects through all the supply chain challenges.

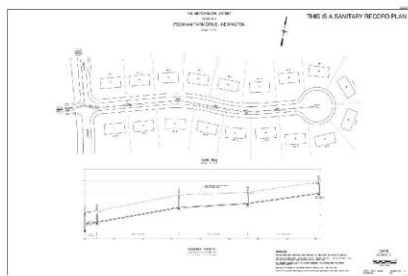


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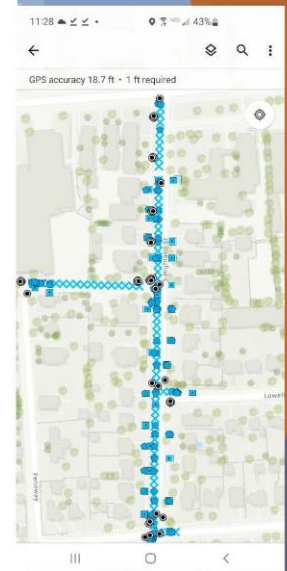
12-WORKFORCE PLAN

FIELD TOOLS - GIS & SAP

- ▶ Utilization of ESRI Collector and Field Maps
 - ▶ The District Operations department utilizes ESRI Collector to collect performance data on a daily basis. The software provides a sleek user interface that allows our maintainer to input objective and subjective data on the assets that are being maintained. The results of the data collection are provided on a Key Performance Indicator dashboard and are utilized for management of daily activities as well as regulatory requirements.
 - ▶ The District Engineering and Construction group has recently developed a process for obtaining highly accurate survey data through simple and efficient GPS tools while infrastructure is being installed. The engineering team worked with the GIS group to develop a system that allows for the results of the data to be populated real time in a mobile application and ultimately used to update the GIS system and historical records. The process has decreased a previously two year process to obtain all final measures and final records to less than two weeks.
 - ▶ As similar tool to the Engineering GPS toolset has been implemented in Utility Services and Operations to record daily modifications to the water and sewer systems so that a typical multi week process to record changes in various systems can be completed in the same day.

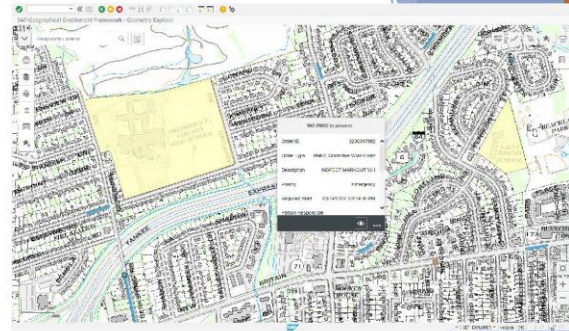


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12-WORKFORCE PLAN FIELD TOOLS - GIS & SAP

- ▶ SAP Geographical Enablement Framework
 - ▶ In 2020, the District went live with a fully integrated solution with SAP and ESRI which has provided a capability to show all work management activities on a map and allow technicians and maintainers to visualize the location of their work, select the work activity from the map and execute the work activity all from the same screen. MDC was one of the first SAP clients to go live with the application.
 - ▶ The District has been purchasing all project stock for its contractors and Operations department since 2020 and is continually improving this process through SAP to ensure that we are able to maintain adequate supply levels for planned projects through all the supply chain challenges.
- ▶ Implementation of a Mobile Work Management Solution
 - ▶ The District is currently in the process of implementing a SAP mobile work management solution will provide the GEF/GIS tools and SAP work management tools into one application for field and plant workers.
 - ▶ The application will provide a one stop tool that currently requires employees to utilize multiple unconnected tools to complete their work. Improvements will include real time updates from the field and one time documentation of the work without a need to retouch data for placement to final storage location.
 - ▶ Required follow-up activities related to issues found in the field will automatically be created so accountability, service levels and customer service will be improved.



5 Items

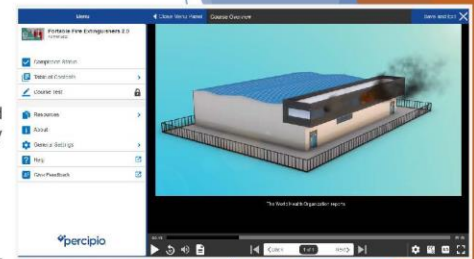
Paving Cut Components (5)

Paving Cut Components	41.740181°N 72.870220°W	1.78x2 ft.
Paving Cut Components	41.740180°N 72.870209°W	1.78x3 ft.
Paving Cut Components	41.740190°N 72.870234°W	1.78x3 ft.

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17-SUPERVISOR AND MANAGEMENT TRAINING

- ▶ The District has been exploring Management and Supervisory Training over the past several months and will continue to explore options for management programs through this and other providers.
- ▶ The District began utilizing Skill Soft (Percipio) a digital training platform to both administer and track employee training in 2018. This systems provides employees access to training on a variety of topics, including Leadership, Management, Security, Software and Compliance training.
- ▶ The District has conducted virtual and in person training for compliance topics such as Sexual Harassment Prevention and Workplace Violence, Confined Space, etc.
- ▶ Health and Safety Compliance training for Operational staff is based on the employees role and potential workplace hazards the employee can be exposed to. A curriculum has been created for each job title and assigned/unassigned to the employee at hire/transfer/termination through the Percipio Learning Management System. Employees receive approximately 2-4 hours of safety compliance training every month and completion is tracked through the LMS.
- ▶ District Operational Management and Supervision have been receiving leadership training through a vendor. Training includes core competencies in leadership, mentoring of leaders, as well as skill development in leadership and improving core business functions through lean/six sigma training.
- ▶ MDC staff are currently involved in Lean Training to improve four processes central to Operations. The training and workshops include staff from other departments with the intent of developing uniform knowledge and skills in process improvement that can be used moving forward.



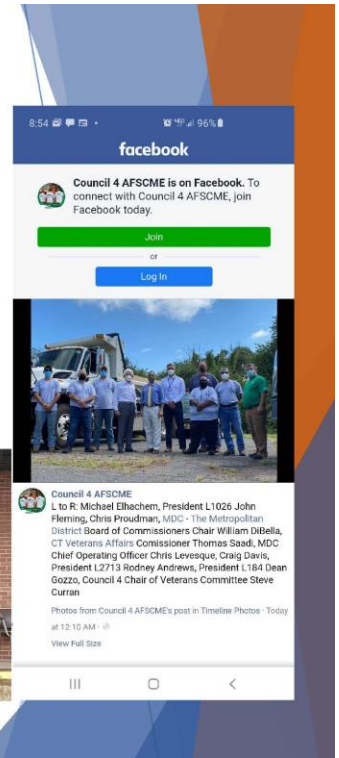
**LEAN TRAINING
2023**

CONNSTEP
A CONNEXUS COMPANY

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13-SUCCESSION PLAN

- Established a training program in lieu of the former spare program. The training program has provided training opportunities to staff that are interested in furthering their career through development of skill and knowledge. Following the program, additional staff are now qualified to perform the work and promotions within the labor union are made based on truly qualified and most senior.
- Other labor agreements have allowed Management to reorganize as needed to adapt to arising business needs which include customer requirements, regulator requirements and infrastructure needs.
- The District has been successful in negotiating more flexible language into the contracts which provides more opportunity for the District to train, promote and hire qualified and experienced successors.
- Multi- tasking jobs help to prepare workforce for higher level jobs
- MDC was also given the opportunity to support our nation's veterans and to honor our employees that have served our country through donations to the CT Veteran Affairs. Since 2020, MDC has donated nearly 100,000 bottles of water to the Veteran Affairs in support of their facilities and events.



Commissioner Bush exited the meeting at 5:49 PM

OPPORTUNITY FOR GENERAL PUBLIC COMMENTS

No one from the public appeared to be heard.

ADJOURNMENT

The meeting was adjourned at 6:22 PM

ATTEST:

John Mirtle
 John S. Mirtle, Esq.
 District Clerk

February 8, 2023

 Date of Approval