



Planning in a Less Planned World



CCWRD's Mission:

**Serving our community by
responsibly sustaining the
water care cycle**



Clark County
Water Reclamation
DISTRICT

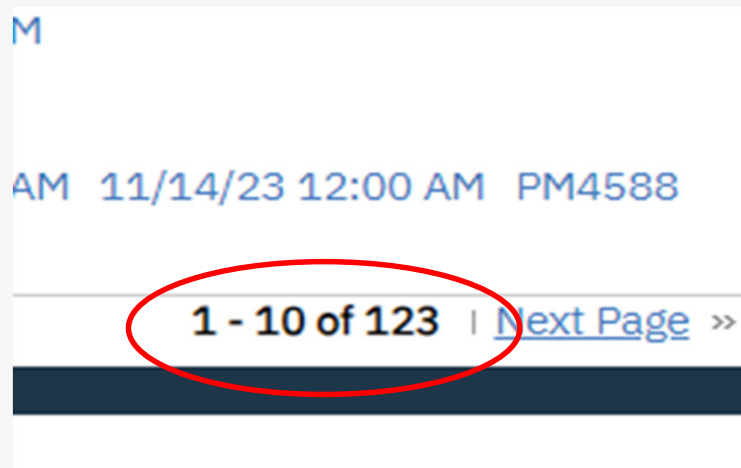
CleanWaterTeam

- Responsible for collection, treatment and reclamation of wastewater
- 6 Treatment Facilities
- 23 pumping stations
- Over 245,762 accounts
- 2,275 miles of sewer lines
- Treat over 105 mgd daily
- Largest wastewater agency in Nevada
- Use Maximo primarily for our vertical assets



Planning Background (How it was)

- Operators and office staff would submit a service request
- Planners would take the SR and turn it into a work order
- WO's ended up assigned to an Owner Group
- Technicians used a Start Center to see WO's assigned to the group
- Many times PM's and CM's all mixed together



Background (it keeps going)

- Technicians/Leads would :
 - Decide which work was to be done next
 - Figure out how to organize their day
 - Pick the best jobs
 - Take on 'hey buddy' jobs
 - Each group could have slightly different process





Why change

- Little visibility for when work was to be performed
- Missed dates on certain work
- WO's left open
- Phone calls from requestor asking when work would be done
- Work being performed without any record of it
- Trouble with multi-craft jobs

New Approach



- **Incremental approach to the changes**
 - **Back in school**

Why this approach

- **Change Management**
- **Various service centers**
 - Operations, Administration, Maintenance
- **Different owner groups**
 - CMX weren't operating same as Electricians/HVAC/Facilities
 - Very few changes for Service Area
- **Some groups didn't want to give up control**



Operations (Going Forward)

- **Maintenance needed SR's from Operations**
 - Performed briefing sessions with them
 - Retrained them
 - Asked not to call technician directly
- **Operations needed visibility from Maintenance**
 - Got a new start center showing SR's created and the WO's resulting from that for each process area
 - Started using Scheduled Dates

Maintenance (Going Forward)

- **Performed briefing sessions with maintenance**
- **Asked maintenance not to accept calls from Operations directly**
- **Created new start centers**
- **Regular review of SR's from Operations**
 - **Identify break ins**
 - **Otherwise stick to the weekly bucket**

Planners

- **Continue to process SR's and the conveyer belt of work**
- **Established weekly meeting with owner groups**
- **Cleaned up back log**
 - **Based upon existing process much work was already finished but open**
- **Started putting on Schedule Start Date for the week**
- **Follow up weekly on work performed**
- **Move work left or right on the Start Center**

Management (Going Forward)

- **Created flow charts for how work execution needs to look**
- **Documentation explaining the flow charts**
- **Trained on the new process**
- **Met with all involved service centers to communicate**
- **Compromised**
- **Created new start centers**

Process Changes

- **Start Center – 4 portlets**
 - Left Side
 - Right Side
- **Left side is for the technicians**
 - 2 to portlets to focus on
 - PM's up top
 - CM's below
- **Right side is for the planners**
 - PM's not ready to work
 - CM's still being worked



Process Changes

- Technician needs to focus on left side
- Removed the jobs not ready to work
- If job is found to be unworkable feedback given to the planner
- Smaller list for the technician
- Only put in there what can be accomplished for the week
- Meet weekly to review and add to the list (quickly)



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Process Changes

- **Planners work the right side**
- **They work the jobs until it is ready to be placed on left side**
 - **Coordination with vendors**
 - **Order Parts**
 - **Coordination with Operations (general timeframe)**
 - **Coordination with other crafts**
- **Have visibility of work needing to be planned and work as it is happening**

Lessons Learned



- First meeting with owner group will take a long time
 - Sometimes more than 1 session
- Takes a lot of effort to keep it going
 - Need 'backup' when not there
- Need only detail – some groups want to give the history (Yes or No)
- Different level of Maximo comfort
- Lots of good software for scheduling – but we focused on process for Freshman year



Feedback

- **Been positive**
- **Easier to focus on work and know what needs to be performed**
- **Less 'break ins'**
- **Less interruptions**
- **More expectations are met**
- **Easier to communicate – when will job be done**
- **Still allows flexibility**
- **Gaining consistency**

Who?

- Have 12 owner groups
- Rolled out to 5 of them so far
- Continuing the roll out incrementally

Left Side PM

PMs Scheduled Filter > 🔍 🗑️ ⬇️ 📄

WO#	Description
24-7800	MOYNO POLYMER PUMP SERVICE
24-7731	SOLIDS FLOOR DRAIN PUMP SERVICE
24-7732	SOLIDS BLDG CENTRATE PUMP SERVICE
24-7795	SOLIDS MOYNO POLY EVAL PUMP SERVICE
24-7830	SOLIDS SCREENINGS UNLOADING GATES MONTHLY
24-7850	SERVICE MEMBRANE FILTRATE PUMPS
24-7831	SOLIDS PRESSURE WASHERS SERVICE
24-7794	SOLIDS PRESSURE WASHERS SERVICE
24-7897	SOL
24-7807	SOL

[Set Chart Options](#)

Location	Scheduled Start	Lead
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:14 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, FLOOR DRAINAGE LIFT STATION	5/16/24 6:14 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, CENTRATE TRANSFER PUMP 1	5/16/24 6:15 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:15 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:16 AM	
LV, FWRC EAST, TERTIARY TREATMENT, MEMBRANE FILTRATION, MEMBRANE BLDG GALLERY LEVEL	5/16/24 6:16 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:16 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:17 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT	5/16/24 6:18 AM	
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/16/24 6:18 AM	

Left Side CM

CMs Scheduled Filter > 🔍 🗑️ ⬇️ 🗨️

WO#	Description
23-19106	BACK PULSE PUMP 2 LEAKING FROM MECHANICAL SEAL
24-6065	SOLIDS BASEMENT DEWATERING DRAIN PIPE LEAKING
24-4870	CENTRIFUGE SLUDGE PUMP 5 PACKING ADJUSTMENT
24-2920	OZONE COOLANT PUMP 1 MECHANICAL SEAL LEAKING
24-8641	CENTRIFUGE 3 LEAKING FROM BODY OF CENTRIFUGE
24-8642	FLOOR DRAIN SUMP PUMP 1602 DISCHARGE PIPING LEAK
24-8645	
24-8659	

Location	Scheduled Start	Priority	Lead
LV, FWRC EAST, TERTIARY TREATMENT, MEMBRANE FILTRATION, MEMBRANES EQUIPMENT PAD (11P)	5/16/24 6:00 AM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, FLOOR DRAIN WET WELL	5/16/24 6:00 AM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, CENTRIFUGE FEED PUMP 5	5/16/24 7:39 AM	2	
LV, FWRC EAST, TERTIARY TREATMENT, OZONE DISINFECTION, OZONE EQUIPMENT BUILDING	5/16/24 12:20 PM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, FOURTH FLOOR, DEWATERING CENTRIFUGE 3	5/20/24 11:29 AM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, FLOOR DRAINAGE LIFT STATION	5/20/24 11:31 AM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, FOURTH FLOOR, DEWATERING CENTRIFUGE 8	5/21/24 5:46 AM	2	
LV, FWRC, SOLIDS DEWATERING FACILITY, FOURTH FLOOR, DEWATERING CENTRIFUGE 3	5/21/24 12:09 PM	2	

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Right Side PM

PMs Waiting

Filter >    

WO#	Description
24-8451	OZONE SIDESTREAM INJECTION PUMPS
24-8464	SOLIDS SERVICE HUMIDIFIER TOWERS
24-8518	SERVICE MEMBRANE FILTRATE TRANSFER PUMPS

Location	Target	Scheduled	Status
LV, FWRC EAST, TERTIARY TREATMENT, OZONE DISINFECTION, OZONE CONTACT/DESTRUCT	5/24/24 12:00 AM		WAPPR
LV, FWRC, SOLIDS DEWATERING FACILITY, FIRST FLOOR	5/24/24 12:00 AM		WAPPR
LV, FWRC, SOLIDS DEWATERING FACILITY (14A)	5/28/24 12:00 AM		WAPPR

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Right Side CM

CMs Waiting Filter > 🔍 🗑️ ⬇️ 📄

WO#	Description
22-11396	REPLACE ERW PUMP STA 1, PUMP 2
23-7185	SOLIDS CFT TWAS DOOR LEAKING
23-17633	REPLACE FOUL AIR DUCTING SECTIONS
23-14090	REPLACE ERW PUMP STA 1, PUMP 1
23-12612	CENTRIFUGE SLUDGE PUMP 1, VALVE 1501 WILL NOT OPERATE
24-8629	Centrifuge-6 DA vessel drain line plugging issue
24-8628	Cake Conveyor #2 gearbox shaft making noise

24-6	Location	Target	Scheduled	Status	Priority
Set C	LV, FWRC, TERTIARY TREATMENT, REUSE WATER PUMP STATION NO 1, PUMP NO 2	8/1/23 12:29 PM	11/20/23 5:27 AM	WMATL	2
	LV, FWRC, SOLIDS DEWATERING FACILITY, FIRST FLOOR	9/1/23 9:44 AM		WPCOND	2
	LV, FWRC, SOLIDS DEWATERING FACILITY, THIRD FLOOR			WAPPR	2
	LV, FWRC, TERTIARY TREATMENT, REUSE WATER PUMP STATION NO 1, PUMP NO 1			WMATL	2
	LV, FWRC, SOLIDS DEWATERING FACILITY, BASEMENT, CENTRIFUGE FEED PUMP 1	8/21/23 7:39 AM		WPCOND	2
	LV, FWRC, SOLIDS DEWATERING FACILITY, FOURTH FLOOR, DEWATERING CENTRIFUGE 6			WAPPR	2
	LV, FWRC, SOLIDS DEWATERING FACILITY, THIRD FLOOR, CAKE TRANSFER CONVEYOR 2			WAPPR	2
	LV, FWRC EAST, ADMIN/OPS/SUPPORT FACILITIES, LABORATORY_AWT (11M)			WAPPR	2
	LV, FWRC EAST, TERTIARY TREATMENT, OZONE DISINFECTION, OZONE EQUIPMENT BUILDING			WPLAN	2
	LV, FWRC EAST, TERTIARY TREATMENT, MEMBRANE FILTRATION, MEMBRANE BLDG GROUND LEVEL			WAPPR	2

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Sophomore/Junior/Senior

- **More KPI's – evaluation using Power BI**
- **Starting to add item numbers onto Job Plans (long story on the history)**
- **Work closer with warehouse**
- **Start PM Optimization**
- **Review Job Plans**
- **Refine scheduling process**
- **Streamline tasks for planners**



A blue background featuring a cluster of 3D question marks. One question mark is highlighted in yellow, standing out prominently in the center of the cluster. The other question marks are in a dark grey color.