



PRESENTED BY  **hasc**

GENERAL CONTRACTOR EXTRA LARGE BEST IN CLASS

Brown and Root provides industrial services to chemical, petrochemical, refining, and other sites and facilities. Our company offers engineering, construction, maintenance, turnaround, painting, scaffolding, insulation, and other services. Brown and Root is committed to the highest level of health, safety, and environmental performance. Brown and Root is committed to zero harm 24/7.



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Enterprise
Products

JOHN BOLLLOM





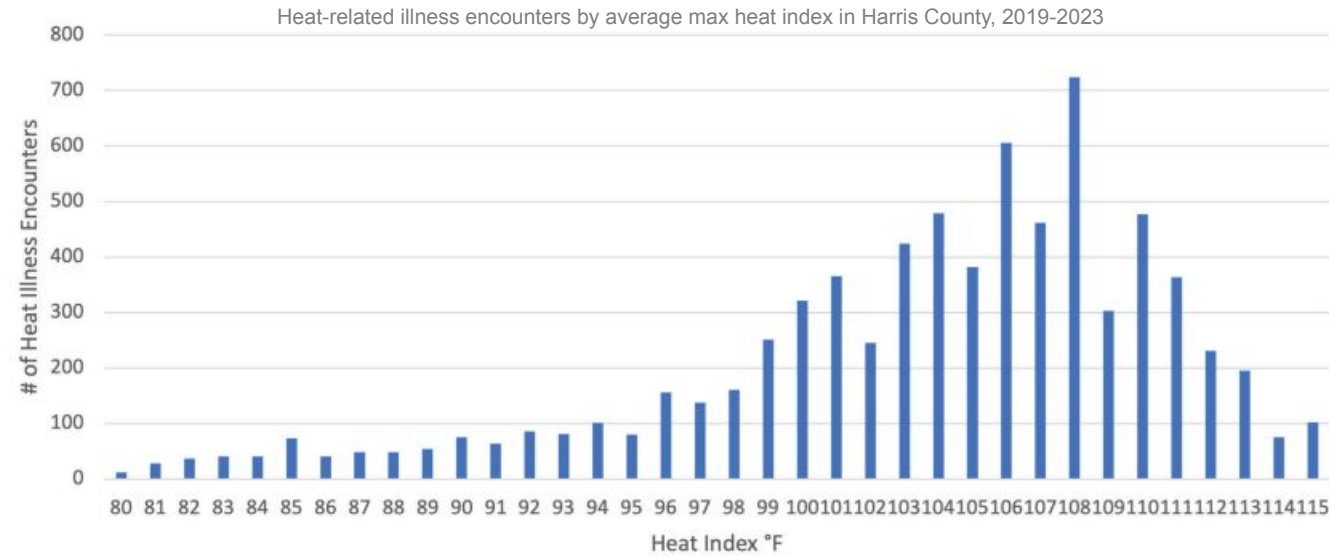
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BEST PRACTICE AGENDA / OUTLINE

- Purpose
- Execution & Implementation
- Benefits & Results
- Examples
- Future Use & Applications
- Summary & Wrap Up
- Q&A

ZERO HARM-Reducing Heat Injuries

- The number of heat-related illnesses has increased by 329% between 2019 and 2023
- Between 2019 and 2023, there were 7,627 total heat-related illnesses reported in Harris County
- 61% of heat-related illnesses occurred at a heat index of 103°F or higher
- 75% Americans are chronically dehydrated



How do you KNOW what your hydration level is?



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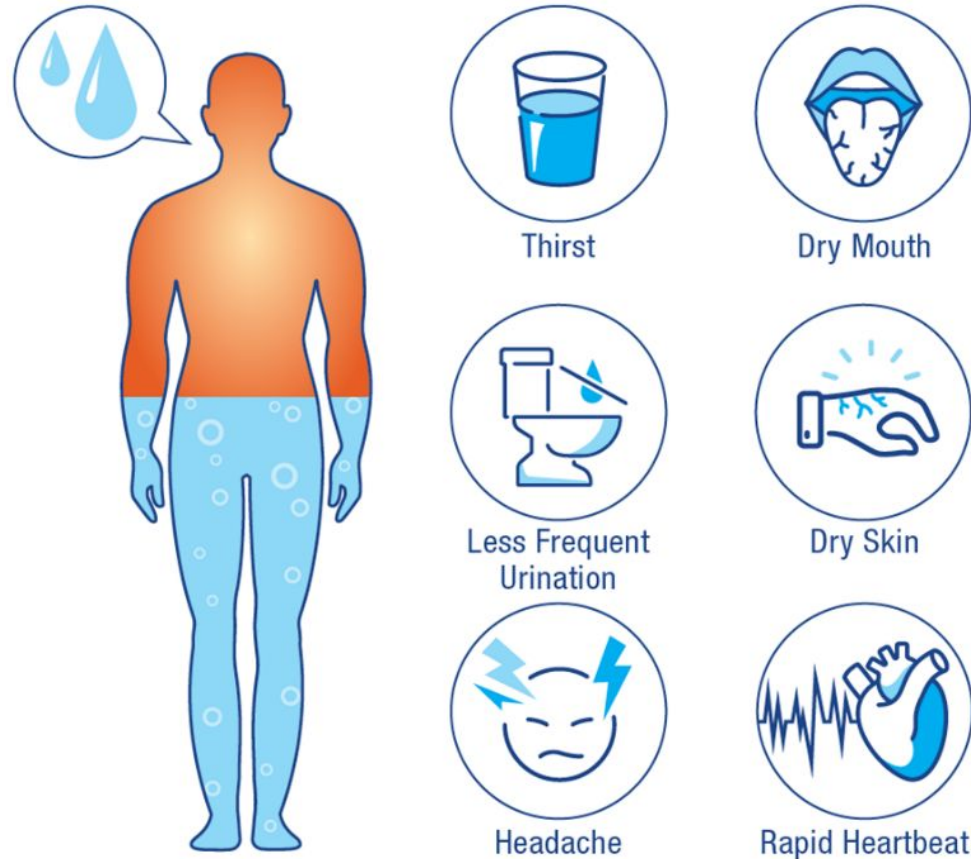
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75% Americans are chronically dehydrated

How do we track Hydration?

- Lab-based Testing
Complex
Expensive
- Urine Specific Gravity
Unreliable Spot Check
Very Invasive
- Urine Color
More Unreliable than USG
Left up to Worker's discretion



Urine Trouble



Well hydrated
No trouble here!
Maintain hydration.



Hydrated
Drink a little more water
to stay out of trouble!



Dehydrated
Trouble! Drink water until
you are well hydrated.



Severely dehydrated
Big trouble!
Drink water immediately!

Don't wait to hydrate!
Prevent heat illness.



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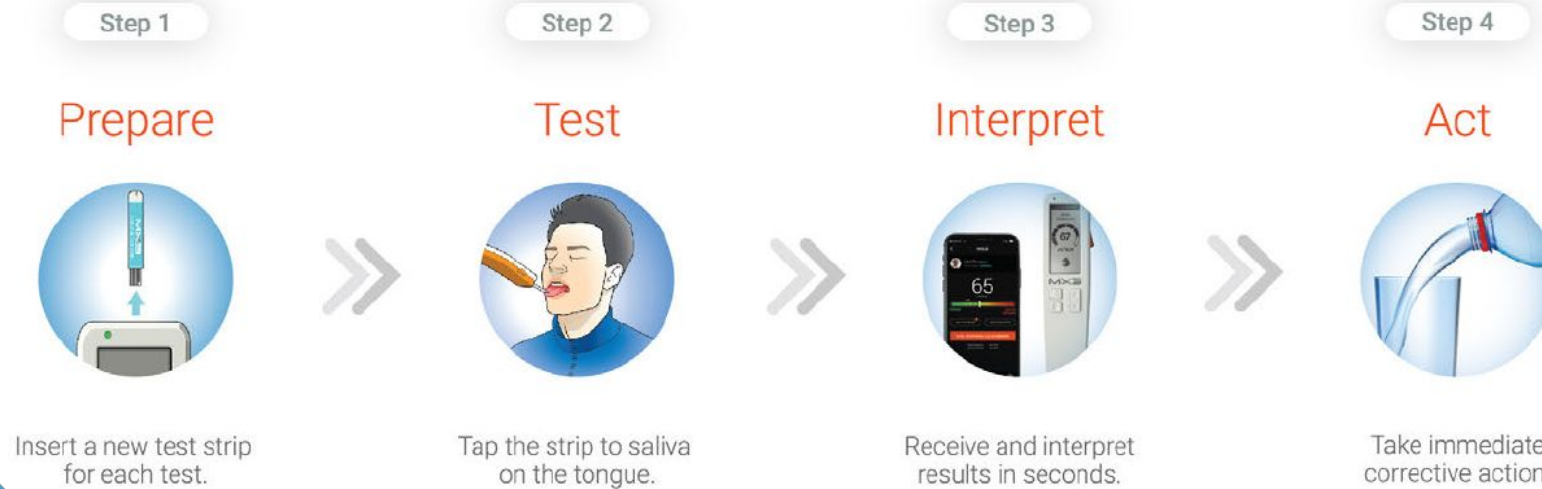
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Hydration Test

Real-time testing of an individual's hydration levels enabling immediate action.

How Testing Works



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Power APP Hydration Log

SALIVA HYDRATION TEST

MX3

HYDRATION TEST STRIP

TEST

Prepare

Measure

INTERPRET: Fluid Level

67

Hydrated

Mildly Dehydrated

Moderately Dehydrated

Severely Dehydrated

< 65 mOsm

65-100 mOsm

100-150 mOsm

> 150 mOsm

LOCAL MODE

Mildly Dehydrated

67

mOsm

MX3

Hydration Log

Date: 6/18/2024

Business Line: Maintenance

Site: Lubrizol - Deer Park TX - Maintenance

Employee Num: 591425

Employee Name: Smith, William

Unit/Area: 800 Maintenance Area

Date/Time of Reading: 6/18/2024 8:04

Hydration Level: 45 Hydrated

Notes:

Hydration Log

Date: 6/18/2024

Business Line: Maintenance

Site: Lubrizol - Deer Park TX - Maintenance

Employee Num: 591425

Employee Name: Smith, William

Unit/Area: 800 Maintenance Area

Date/Time of Reading: 6/18/2024 8:04

Hydration Level: 77 Mildly Dehydrated

Notes:

Hydration Log

Date: 6/18/2024

Business Line: Maintenance

Site: Lubrizol - Deer Park TX - Maintenance

Employee Num: 591425

Employee Name: Smith, William

Unit/Area: 800 Maintenance Area

Date/Time of Reading: 6/18/2024 8:04

Hydration Level: 143 Moderately Dehydrated

Notes:

Hydration Log

Date: 6/18/2024

Business Line: Maintenance

Site: Lubrizol - Deer Park TX - Maintenance

Employee Num: 591425

Employee Name: Smith, William

Unit/Area: 800 Maintenance Area

Date/Time of Reading: 6/18/2024 8:04

Hydration Level: 168 Severely Dehydrated

Notes:

Zero Incidents is Achievable

ZER HARM

Zero Incidents is Achievable

ZER HARM

Zero Incidents is Achievable

ZER HARM

Zero Incidents is Achievable

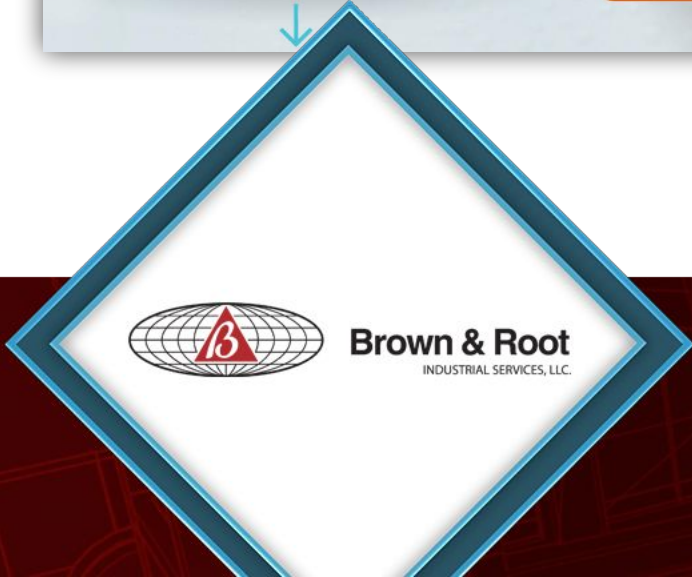
ZER HARM

Exit

Submit

Exit

Submit



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Technology to Combat Hydration

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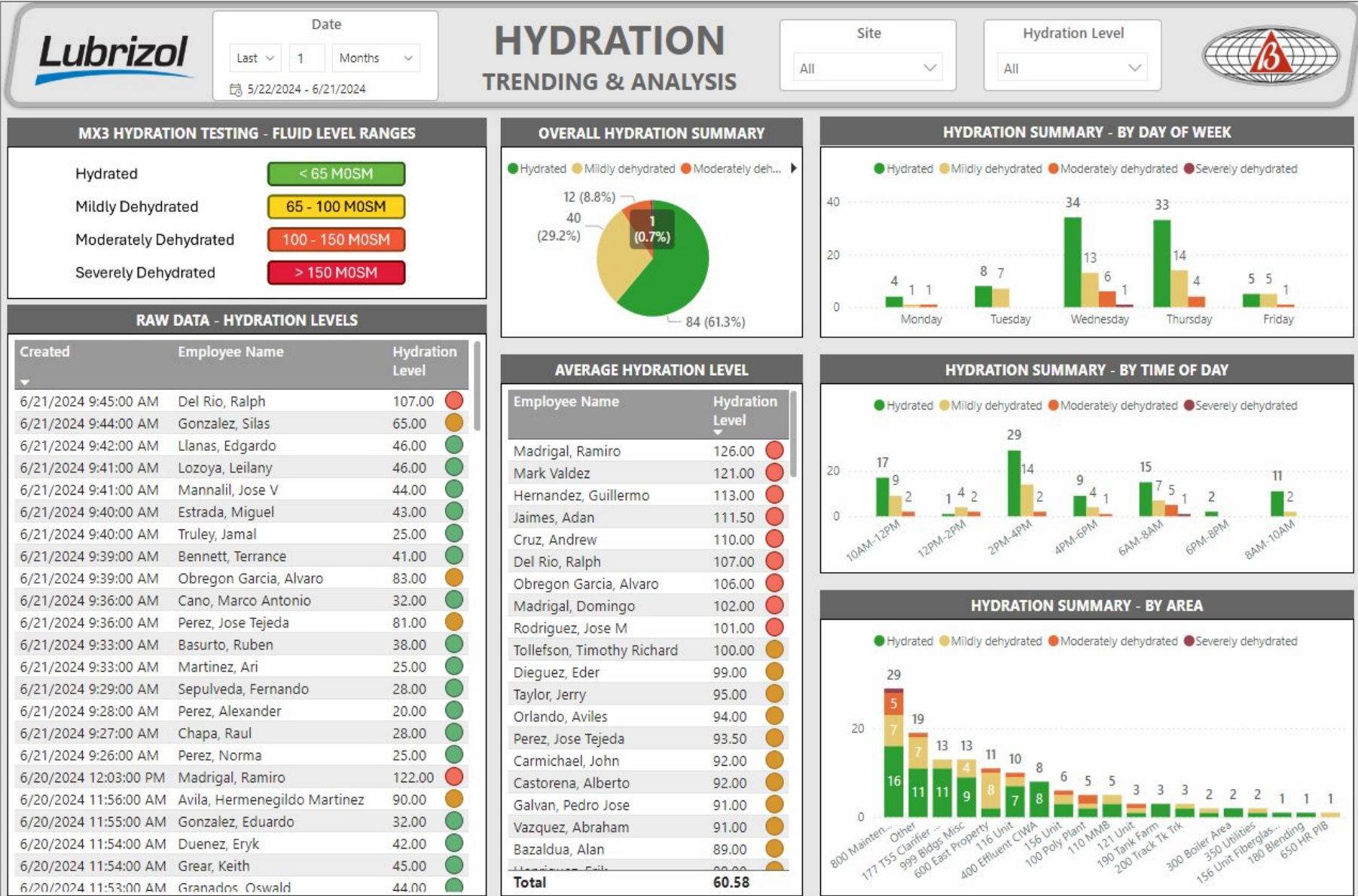
MX3 Hydration Testing System

Brown & Root implemented the MX3 Hydration Testing System to prevent heat related illnesses.

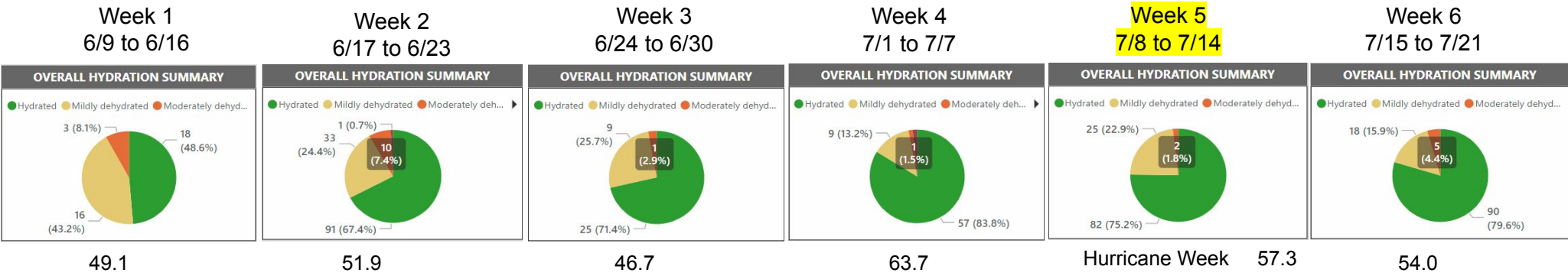
- Portable solution for measurement of hydration anytime and anywhere
- Number that it generates is a tangible representation of an individual's state of hydration
- Creates new levels of engagement with instant results to the individual and the dashboard which equips managers to analyze and adjust critical factors that cause heat illnesses



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We tested 50 people a day, which let us test roughly 75% of the work force per week



- ✓ It gave a tangible result to the workforce so that they could act on.
- ✓ Even after Beryl hit, our workforce continued to remain hydrated because we were able to maintain our focus on hydrations
- ✓ The enhanced engagement that this tool provided allowed new and different conversations about hydration which led to a summer without a heat related incident at our pilot site.



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Putting the Data to use

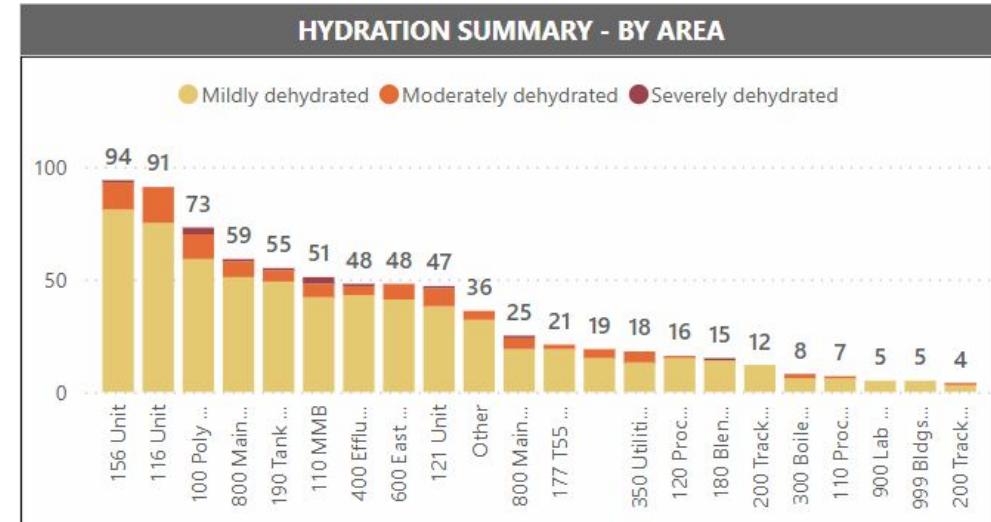
□ Leadership Engagement

- ✓ Tangible Results
- ✓ Coaching Sessions
- ✓ Heightened Awareness

□ Diagnostic Tool

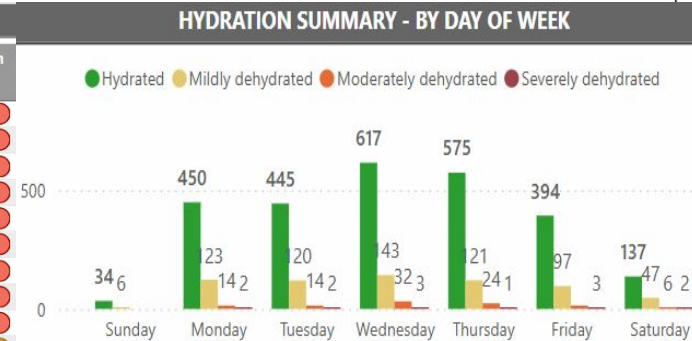
- ✓ Instant Health Condition Monitor
- ✓ Data driven decision
- ✓ Heat Mapping

2025 SAFETY EXCELLENCE AWARDS | BEST PRACTICES SEMINAR



AVERAGE HYDRATION LEVEL

Employee Name	Hydration Level
Rudy Blanco	132.00
Sergio Lopez	126.00
Mcgowen, Scott Forrest	123.67
Molina, Lionel Pablo	122.00
Mark Valdez	121.00
Christopher Meadows	113.00
Robles, Arturo	108.00
Arnold LZ	106.00
Loeser II, Gregory Todd	101.50
Cantu, Juan	100.00
Marcus Jimenez	99.00
Alvaro Obregon	98.00
Leal, Alan	97.50
Meadows, Christopher	96.67
Salazar, Carlos	94.67



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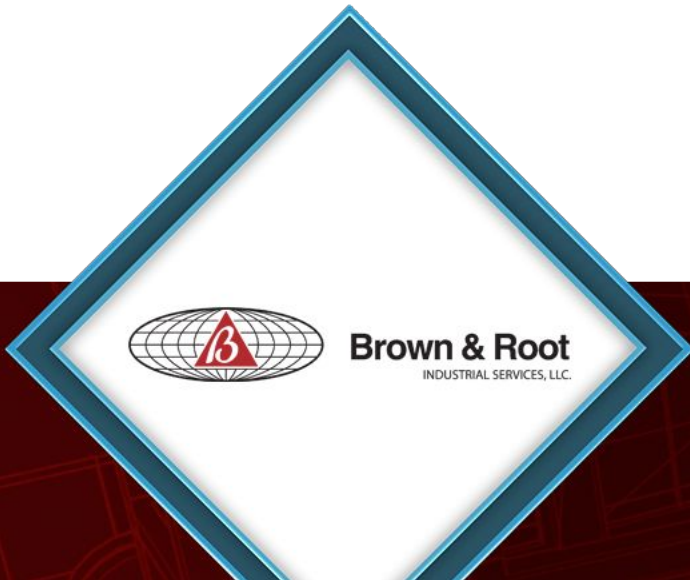




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Questions?



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