



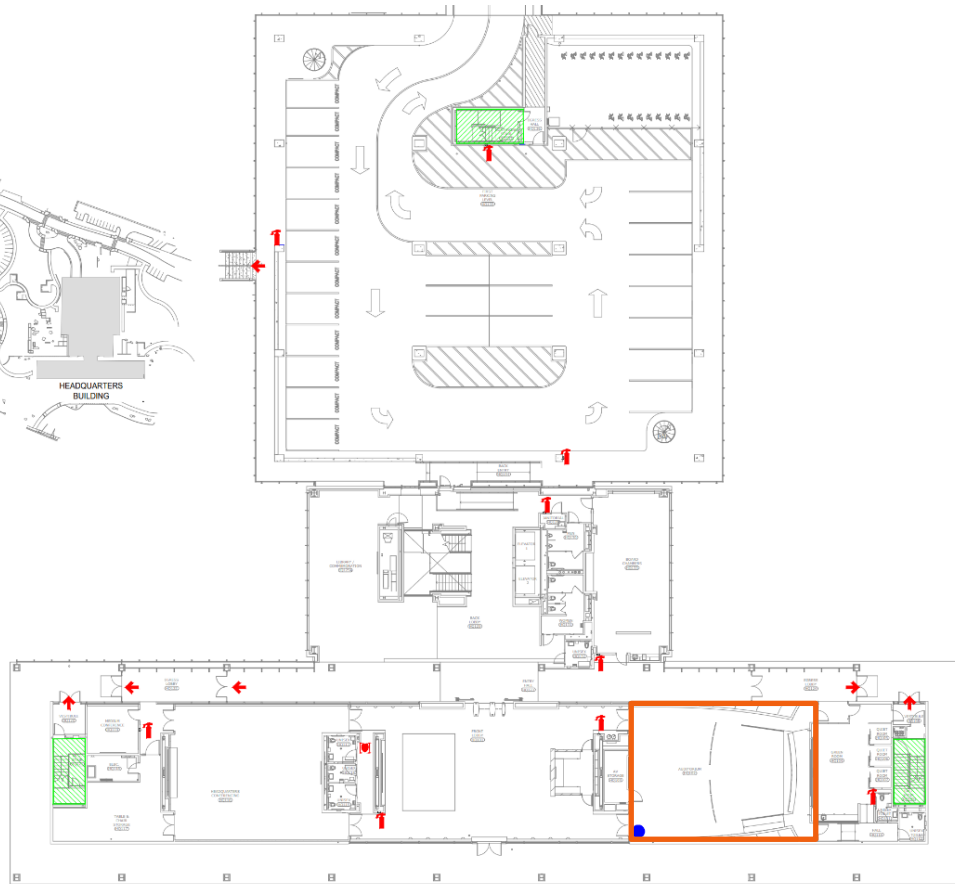
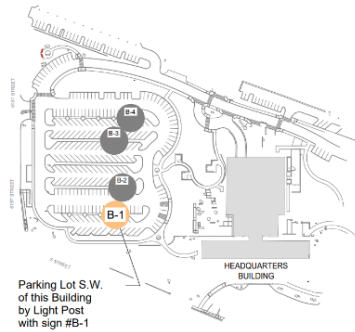
# A Holistic Approach to Ergonomics at a Public Utility

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# EVACUATION ASSEMBLY POINT:



## EVACUATION PLAN

### KEY

- YOUR LOCATION
- ← Exit
- ↑ Fire Extinguisher
- A Fire Alarm Pull Station
- Exit Stair
- ♥ A.E.D.
- C Evacuation Chair

### GENERAL EVACUATION PROCEDURES

- Emergency Phone Number ext. **911**
- Evacuate the building quickly by using the closest safe exit.
- Do not use elevators to exit.
- Be alert to instructions from emergency personnel.
- Take only those possessions that are necessary (ID, medication, etc.)
- Persons who walk slowly or have difficulties with stairs should walk to the right.
- Report to your assembly area outside the building. Report anyone who is missing to the Emergency Incident Assistant (EIA).
- Remain in your assembly area until the "All Clear" signal is given or further directions are received by emergency personnel.

SMUD HQ  
6201 S STREET  
FIRST FLOOR



# SMUD

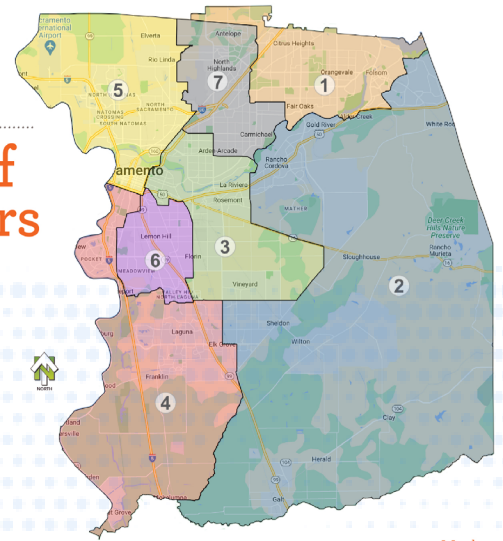
Powering our community more than 75 years.



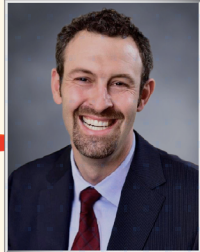


## Sacramento Municipal Utility District

# Board of Directors



Ward map



### Ward 1

**Brandon Rose (2017)**

Renee Taylor (2008 - 2016)  
Linda Davis (1993 - 2007)



### Ward 2

**Nancy Bui (2009)**

Susan Patterson (1999 - 2008)  
Anthony Pescetti (1993 - 1998)



### Ward 3

**Gregg Fishman (2015)**

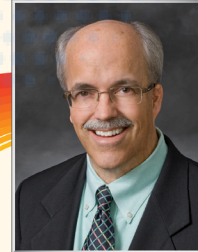
Howard Posner (1997 - 2014)  
Edward Smeloff Jr. (1987 - 1997)



### Ward 4

**Rosanna Herber (2019)**

Genevieve Shiroma (1999 - 2018)  
Wendy Reid (1991 - 1998)



### Ward 5

**Rob Kerth (2014)**

Michael Picker (2013 - 2014)  
Rob Kerth (2009 - 2012)



### Ward 6

**Dave Tamayo (2015)**

Larry Carr (1999 - 2014)  
Robert Pernel (1995 - 1998)



### Ward 7

**Heidi Sanborn (2019)**

Bill Slaton (2003 - 2018)  
Kara Cottrell (1995 - 2002)

# 1.5 million

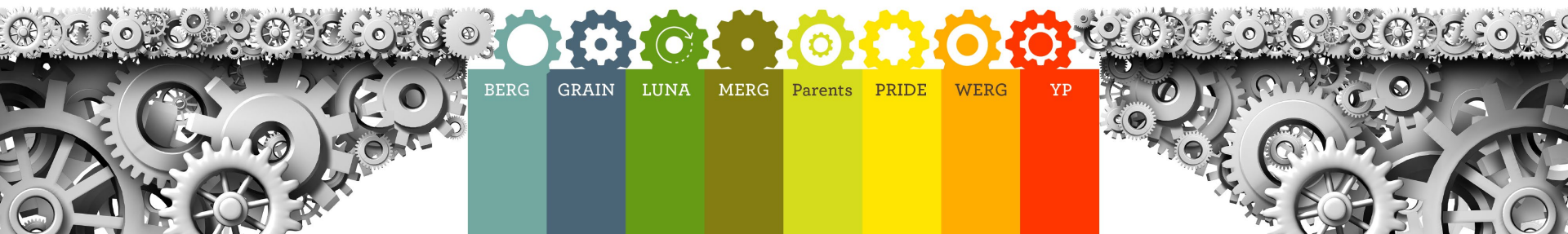
Population in our service area

# 900 square miles

Size of our service area

# 673,318 total accounts

Residential and Business



# Ergonomics Safety for Life

# Safety Journey

## Ergonomics

At SMUD, we tailor work assignments and workspaces to individuals' needs to make them safer, healthier, more at ease, and more effective..

## Safety for Life

To incorporate safe practices into everything we do, at work, at home and at play by protecting what matters most: our people, our families and our future.

## World Class

In all areas of our workplace, SMUD has a strong safety culture that promotes positive interactions that results in respect, honesty, ethics, a sense of shared responsibility, etc.). We are proud of our highly effective safety program, which is built upon our Safety for Life culture.

# SMUD Best Practices

- Safety Management Systems
- Employee driven safety process
- Enterprise-wide Safety Roadmap
- Driving Rodeos
- Ergonomics everywhere

We all work towards world-class safety standards.



# World Class Safety



## Safety & Reliability

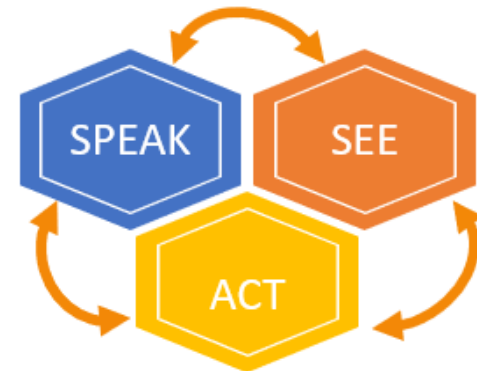
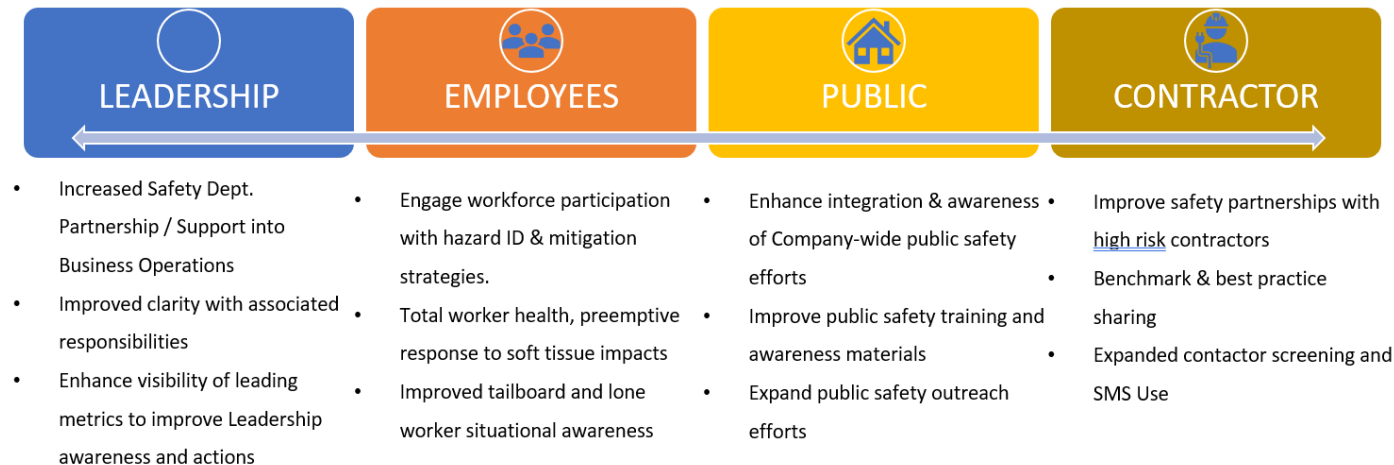
Safety is always our overriding priority. Transitioning to zero carbon, maintaining reliability and keeping rates low are possible only when safety is a top priority. Transitioning away from fossil fuels will change the way we source energy and how it's delivered to customers. The transition will also dramatically increase the amount of load served through electrification. These changes create new opportunities for working together with our customers to optimize how we use existing infrastructure, plan for the locational impact of new load and mitigate grid upgrade needs.

- Maintain and modernize safety standards, regulatory compliance and meet reliability objectives while addressing infrastructure and new technology needs.
- Balance grid infrastructure investments with load flexibility tariffs and programs to support electrification and sales growth.
- Continue to advance technologies that provide higher levels of grid visibility and location-based operation.
- Prepare for increased energy market and extreme weather volatility.
- Create facilities and work environments that enable safe and reliable operation of a zero-carbon grid.



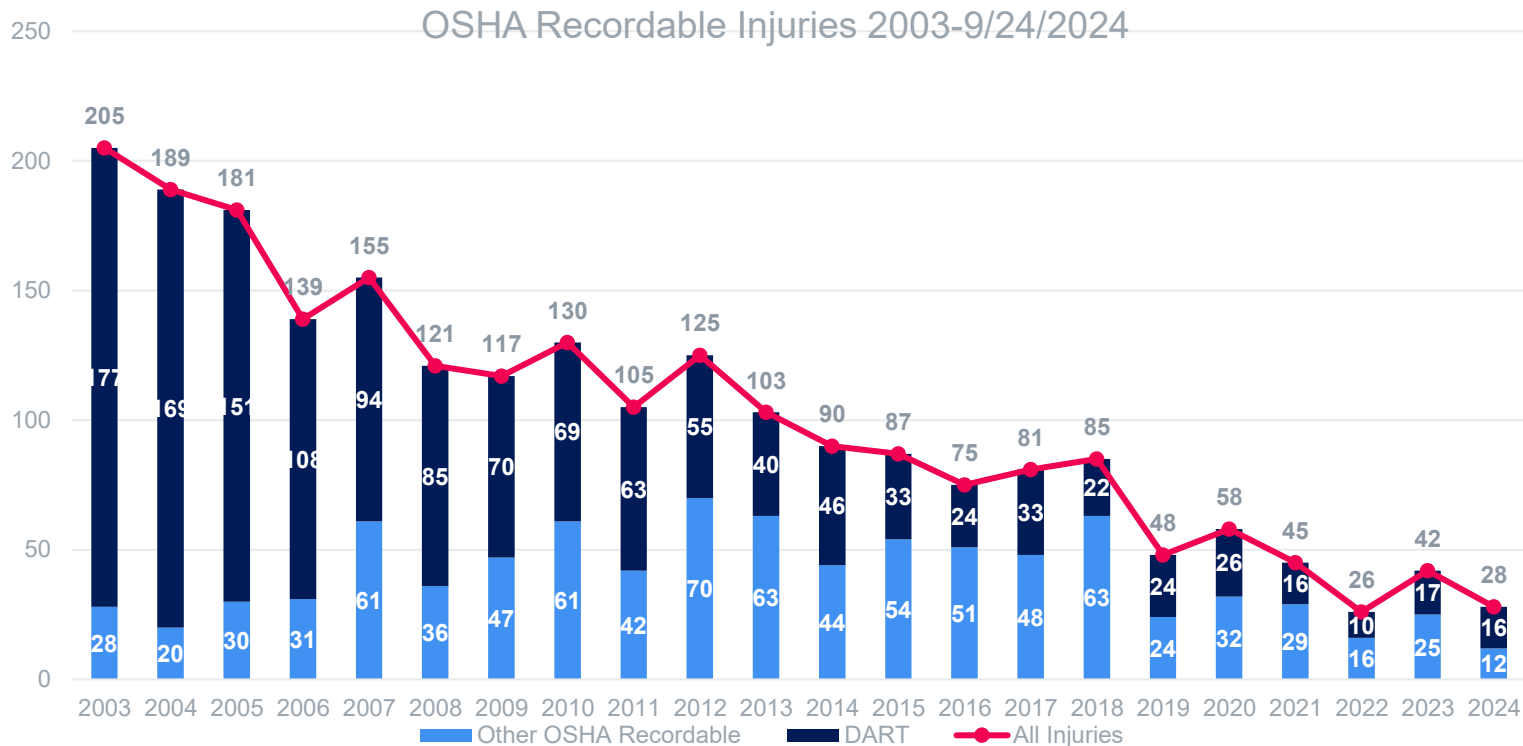


## Four Pillars to Success





# New Risk Reduction Efforts



# Risk Reduction Efforts

- Make every move a safe move
- Open Safety Culture
- Safety Management System makes valuable safety information readily available
- Serious Injury & Fatality (SIF) prevention utilizing Tap Root research
- Soft Tissue Injuries reduction effort for Office and Field Forces
- Driver Safety Program Enhancements

# Ergonomics at Work

## Office

- Evaluations
- Equipment fitting
- Break for Eight



## Field

- Observations and assessments
- Tools and equipment
- Daily Dozen



## Vehicle

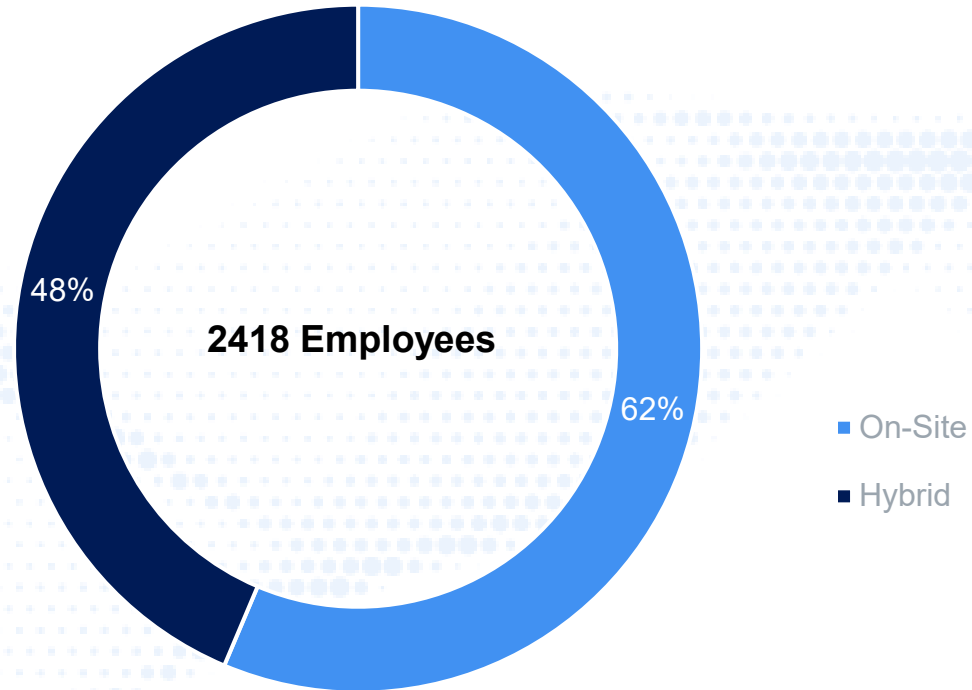
- Evaluations
- Modifications
- Tools and technology
- Driving Rodeo



# Ergonomics at Work - Office

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# SMUD Workforce



# Hybrid Workforce

- Challenges
- Successes and improvements
- SFL newsletter personal testimonials
- Wellness Wednesdays Webinars
- Reduction in incidents

# Ergonomic Evaluations

- SMS Concern Report
- In person and virtual
- Near miss/Good catch
- Safety Observations (**SCORCH**)



# Proactive Measures with Ergonomic Equipment

- Monitors
- Keyboard
- Pointing devices
- Ergonomic office chair
- Headset
- Webcam





# Office and Field Stretches

## SMUD's "Break for Eight"

8 great stretches to do in the office



### 4-way Neck Stretch (30 seconds each side)

- Rotation:** Turn chin to one side, looking out over the opposite shoulder. Keep body facing forward while turning head. Hold position and repeat on other side.
- Lateral Flexion:** Bring right arm behind back and place hand over lower back or lower left back pocket. Gently lower left ear towards left shoulder-left shoulder. Hold and then repeat on the opposite side.



### 10-Huts (10 repetitions)

Stand tall with tight core. Bend arms slightly in front of the body with palms facing up. Re-track the thumbs and arms back behind the body until you feel moderate squeeze between the upper back and shoulder blades



### Back Extension (30 seconds)

Feet hip-width apart and knees slightly bent. Place both hands, with fingers pointing down, just above the hips/buttocks. Lengthen through upper torso and lean back slightly while standing tall. Avoid bending knees or over-extending the back.

All movements should be performed slow and controlled. Stay within your limitations and avoid strain and pain. Do not perform any stretch that causes strain or pain. If you have any questions regarding any of these movements, please contact SMUD's Fitness Center @ ext. 5885.



### Forward/Reverse Arm Circles (10 repetitions each way)

Knees slightly bent with torso tall and lengthened. Arms horizontally extended. Face palms towards ceiling and, working in slow small circular motions, rotate forward for a count of 10 and then repeat in reverse for a 10 count.



### Wrist Rolls (10 repetitions each way)

Standing tall with knees slightly bent, raise arms horizontally with closed fists. Gently rotate hands in a slow circular motion stretching wrists and forearms. Rotate forward for a count of 10 and then repeat in reverse.



### Wrist Flexion/Extension (30 seconds each side)

Standing tall, raise hands out in front of body with one palm facing away. Use other hand and gently pull cut-facing hand towards body creating a back-flex in the wrist. After 30 seconds, rotate out-facing palm in and, again, use the other hand to gently pull it towards the body. Repeat on other side.



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## The Daily Dozen Pre-shift warm-up and stretch



### Marching In Place -OR- Jumping Jack (12 Repetitions)

Begin with feet hip-width apart and arms down by your sides. **March In Place:** Extending one arm forward above your head and lift opposite knee. Reverse arm and leg as you continue. **Jumping Jacks:** Laterally jump your feet out to shoulder-width stance as you raise your arms in a circular minor overhead.



### Shoulder Stretch (10 Count each side)

Extend one arm out to the side of your body as you bend your elbow and using your opposite hand pull the arm across your body. Hold and repeat opposite shoulder.



### Lunge Calf / Oblique (8 Count each side)

Feet pointed straight ahead, take a step forward with one foot. Keeping back leg straight and your heel on the ground. Lunge forward and reach opposite right arm towards ceiling and hold. Repeat opposite side.



### Neck Rotation (5 Count)

Turn your chin to one side looking over the shoulder. Hold position and repeat opposite side.



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### Body Weight Squats (8 Repetitions)

Feet shoulder-width apart, toes turned out slightly with weight in heels. Initiate "hips and heels" movement by hinging back from the hips while maintaining a neutral spine.



### Forward/Reverse Arm Circles (10 Count each direction)

Knees slightly bent with torso tall. Arms horizontally extended. Begin with palms down in a forward 6° circular motion then with palms up in a reverse 6° circular motion.



### 10-Huts (10 Repetitions)

Arms slightly in front of the body, palms up and elbows slightly bent. Retract thumbs and arms back behind your body until moderate squeeze is felt across the upper back and shoulders.



### Sumo Squat (8 Repetitions)

Feet positioned outside shoulder width, toes turned out with weight evenly distributed. Lower your body with your weight in your heels and lengthen up through your sternum while maintaining neutral spine.



### Back Extensions (10 Count)

Extend feet hip-width apart, knees slightly bent, strong thighs and core. Place both hands with fingers pointing down against your upper buttocks. Bring length up through the upper torso while staying strong throughout your body and maintaining pelvic tilt.



### Lateral Neck Flexion (5 Count)

Lean one ear toward your shoulder as you reach the opposite arm and fingertips away from your side. Hold and repeat opposite side.



### Hamstring March (8 Repetitions each leg)

Feet hip-width apart while extending up through your sternum. Extend one arm in front of your body and gently raise your opposite foot toward the extended hand within your possible range of motion. Repeat on opposite side.



### Hamstring Stretch (10 Count)

Feet hip-width apart with a slight bend in the knees. Establish good length up through your sternum and shoulders back. Hinge your hips as you lift your sit-bones to extend your upper torso forward with your arms relaxed down your thighs.

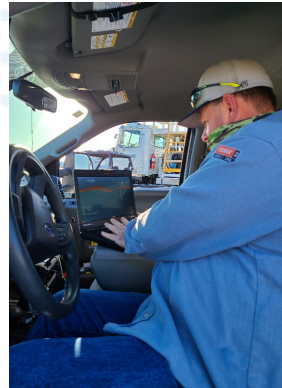
**Caution Zone:** These warm-up and stretch activities shall be performed only AFTER completing the Savvy F.I.T. workshop.

# Ergonomic at Work - Field



# Field ERGO

- Vehicle assessments
- Job site evaluations
- Solutions and improvements



# Job Task Evaluation

## Concerns:

- EE experienced RMI to right wrist
- Repetitive manual crimping of connectors
- Unreported until injury occurred

## Resolution:

- Evaluation
- Risk identification
- Tool Modification



[Kable Kontrol](#)™ Stainless Steel Cable Tie Gun



[PANDUIT](#) Cordless Cable Tie Tool: Milwaukee

# Driving Rodeo

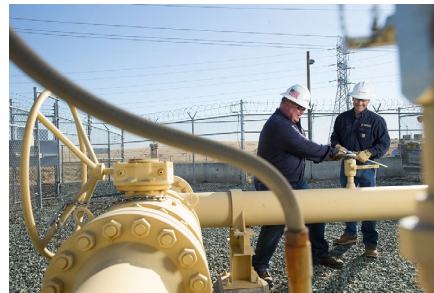
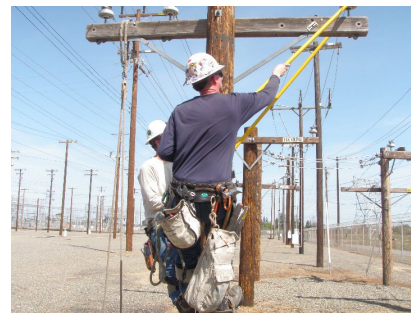
- Vehicle Inspection with Ergonomics
- Blind Spot and back p camera station
- S-Curve Station
- Parallel Parking Station





# SMUD Injury Prevention Outpost

- Understand types of injuries
- Challenges and barriers
- Offer solutions and improvements
- Provide options for injury prevention
- Educate the importance of body mechanics



# SMUD Injury Prevention Outpost

- Group Trainings
- Onsite Meet & Greet
- Observations
  - Job tasks.
  - Risk factors
  - Workflow
  - Follow ups
- Schedule specified onsite days
- Periodic text check-ins
- Walk-through observations
- Work around job needs
- On call



# Understand the Injury Process

## Physical Factors

- Individualized
- Task-specific risk factors
- Symptom-specific intervention
- Worker-specific biomechanics



## Mental Contributors

- Postural & biomechanical awareness
- Fatigue awareness
- Pain awareness
- Stress awareness





# SMUD Injury Prevention Outpost

## Focus:

- Prevent injury (vs react)
- Maintain health & fitness

## Changing Perspectives:

- Industrial Athlete
- Trainer approach
- Early intervention



# Strength & Conditioning Program

## 1:1 Injury Prevention Methods:

- Recovery Techniques
- Protection Techniques
- Biomechanics
- Corrective exercise
- Re-conditioning exercise
- Pre-existing conditions

# Ergonomics at Home and Play



# Ergonomics at Home - Remote

- Virtual Evaluations
- Ergonomic Set Up
- Ergonomic Chair and Equipment
- Virtual Stretch Breaks
- Mental Wellness

# Unintended Remote Work Stressors

Work as they knew it changed overnight.

- Lack of social support they once had in the office
- Distractions and constant interruption
- Balance between work and home

Exercise protects physical and mental health.

- incorporate exercise into their day.
- attending a virtual class
- doing some yoga or stretches on their own.

# Work-life Balance

Encourage employees to take steps to help maintain their mental health.

- Maintain a daily routine
- Get outside, take a walk, and enjoy fresh air
- Virtually checking in with colleagues
- Set aside “me” time
- Include the family into work





# Ergonomics At Play



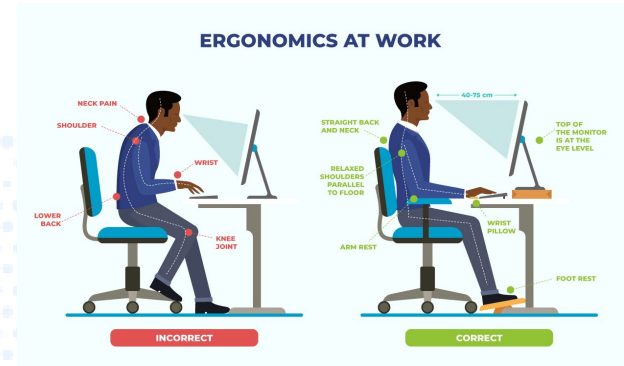
# Holistic Ergonomics





# Physical Ergonomics

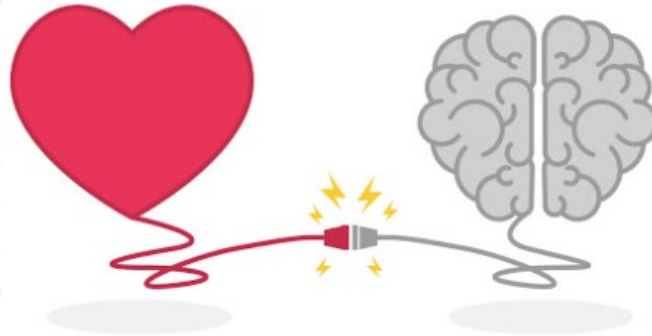
- Workstation Set Up
- Stretch breaks
- Nutrition, Exercise, Sleep and Weight Management



- ✓ Sleep
- ✓ Exercise
- ✓ Diet

# Emotional Wellness

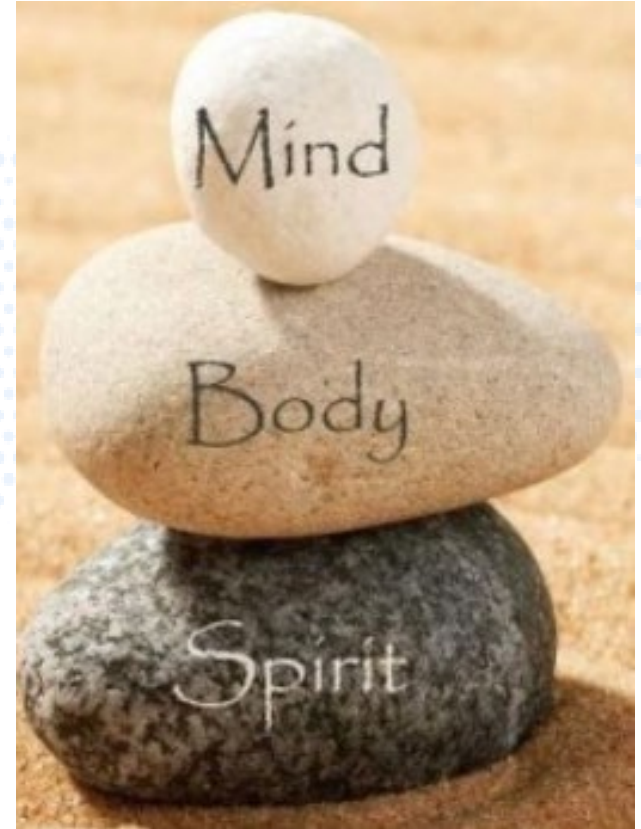
- Inspires self-care, relaxation, stress reduction and the development of inner strength



# Spiritual Wellness

Being connected to something greater than yourself

- Having a set of values, principles, morals and beliefs that provide a sense of purpose
- Self care is an act of self love
- Be kind to yourself
- Achieve balance and harmony between mind, body and spirit



# Social Ergonomic

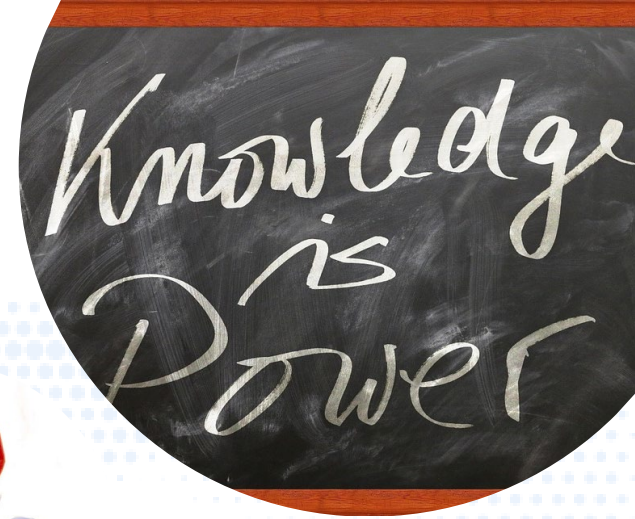
The relationships you have and how you interact within them:

- Team Camaraderie
- Watching out for one another
- See something, say something
- Limit exposure to ergonomic risks



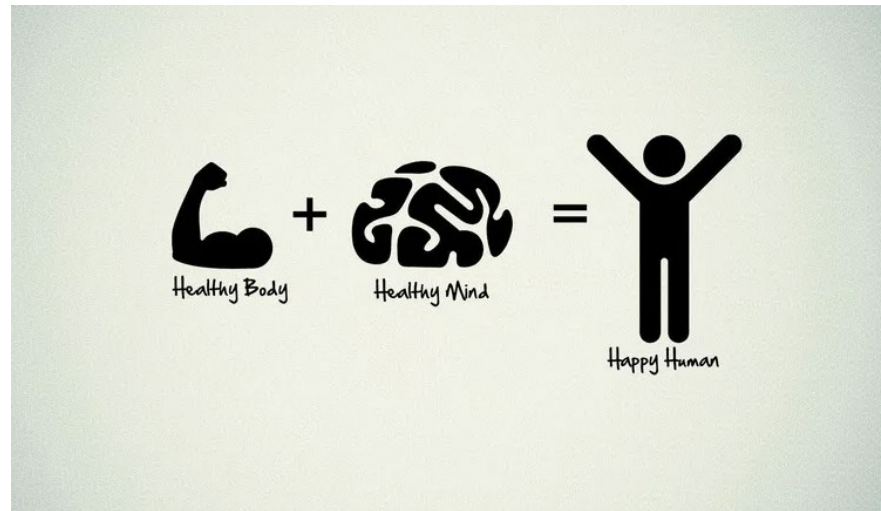
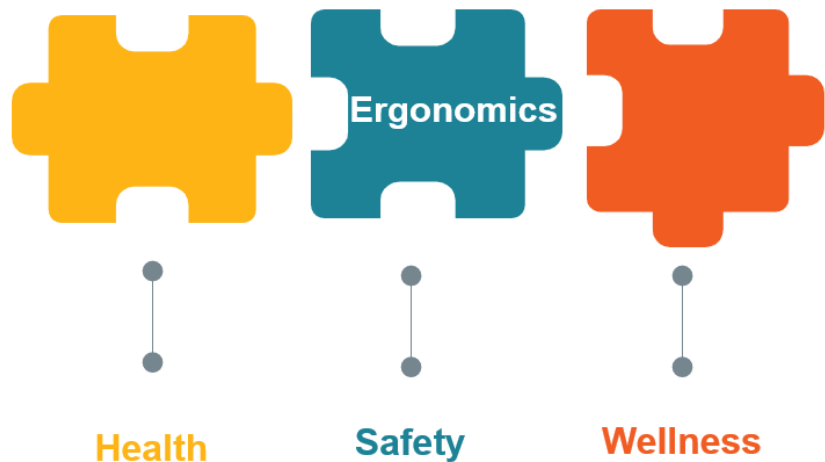
# SMUD Family Safety Day

- Workshops and seminars
- Hands on demonstrations
- Job shadowing and tours
- Vendor booths
- Education fair





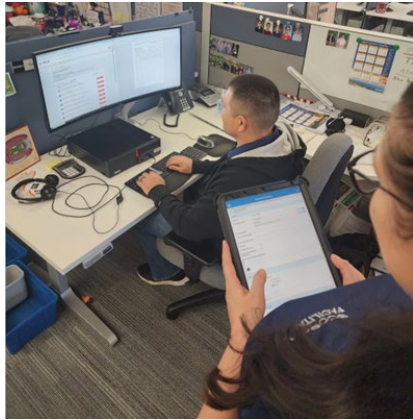
# Safety Health and Wellness



Putting the pieces together

# SMUD's Behavior Based Safety Process SCORCH

Safely Conducted Observation Reduce Common Hazards





## Safely Conducted Observations Reduce Common Hazards

# Identifying your Safety Why...



# SCORCH Process

## Safely Conducted Observations Reduce Common Hazards

Employee driven; leadership supported leading indicator process

No name, No blame (Non-disciplinary)

Successfully educating and influencing behavior ownership for 24 years

Safety observations are open to all SMUD employees to participate

SCORCH takes a proactive approach to preventing injuries/accidents from occurring

Combination of peer-to-peer & self observations used to identify safe and at-risk behaviors

Feedback from the observations shared via safety/team meetings, tailboards, awareness campaigns, digital monitors, dept. safety shares

Contributes directly to SMUD's Enterprise Strategy goal for having a World Class Safety culture

**Not a replacement, but an enhancement**



# The SCORCH connection to Safety for Life

## Safety for Life & Behaviors (PPE) Hand Protection



At Work



At  
Home



At  
Play

## Which behavior do you model?



At-  
Risk=Exposure



Safe=Protect  
s



# SCORCH

Safely Conducted Observations Reduce Common Hazards

A graphic with an orange background. At the top, it says "7 minutes for safety" in large white text. Below this are three circular icons: a red stopwatch with a "7 Minutes" label, a blue hard hat, and a green laptop with a "7 Minutes" label. At the bottom, it says "Take 7 minutes to assess your safety awareness. Complete a SCORCH Safety Observation today." next to a QR code.

**7 minutes for safety**

Take 7 minutes to assess your safety awareness. Complete a SCORCH Safety Observation today.



*“Influencing ownership of safe behaviors, one observation at a time”*

# Thank You!





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