

Nomination Deadlines:

Spring Awards: February 1, 2024 Fall Awards: September 2, 2024

Agency: Diablo Water District

Project/Initiative Title: Ergonomics Program

Implementation Date: March 2023

Cost to Implement: \$15,350

Staff Time Required: Continual

Number of Employees/Facilities Impacted: All employees (24)/2 facilities

Employee/Department/Committee Nominated:

Name(s): Sophia Gonzales/Human Resources Department

Job Title/Department: Human Resources Analyst

Nomination Summary

Write a brief summary of your project/initiative. Clearly state the problem/hazard recognized by the nominee and the specific reasons that they initiated corrective action.

Our Ergonomics Program addresses the prevalent issue of workplace-related musculoskeletal disorders (MSDs) among the general work force. Reviews found that our ergonomic practices were outdated and not in line with current best practices. Recognizing the need for a healthier work environment, our Human Resources Department established the program. In response, the Ergonomics Program was launched to redesign workstations, provide ergonomic training, and conduct regular ergonomic assessments. This proactive strategy aims to enhance employee well-being, boost productivity, and ensure compliance with safety standards.

Describe the specific actions taken to resolve the problem(s) or challenge(s). Share the best practices that made this initiative successful for the agency and its impact.

In March 2023, I earned my certification in Ergonomics from the Back School. Using the knowledge I gained, I spearheaded the HR department's development of the program. The program was designed to establish an internal process with forms for requesting ergonomic assessments, generating reports, and purchasing necessary equipment. Additionally, we incorporated an ergonomic assessment within the first 30 days of hire as part of our onboarding process. Overall, the program has significantly helped reduce potential workplace injury hazards.

State whether the hazard was reduced with engineering controls, introduced a new administrative or work procedure, or relied on personal protective equipment to solve the problem.

We developed a Standard Operating Procedure (SOP) to outline this process in detail. The procedure includes scheduling assessments, facilitating sessions, drafting reports, and completing internal forms for purchases. This approach allows us to track product purchases and maintain a record of items previously used by employees, helping us measure success and identify the best products.

Describe any extraordinary circumstances that made this nominee's safety accomplishments significant.

Describe whether the nominee influenced safety in the workplace, encouraged employee participation in safety efforts, obtained organizational "buy in" to implement the solution.

Before 2023, there was no established ergonomic program, posing a potential risk for injuries and raising significant safety concerns within the workplace. To address this, we crafted and implemented a comprehensive ergonomic program tailored to meet the diverse needs and preferences of our employees. Every aspect of this program is designed to promote comfort, safety, and overall well-being in the workplace. I also secured staff buy-in by emphasizing the importance of personalized workstations to meet individual needs. This initiative has led to an overall increase in employee awareness of safety issues.

Describe whether the project/initiative addressed a hazard or exposure included in the JPIA Commitment to Excellence Program.

⊠Office/Field Ergonomics
□Vehicle Operations
□Slip/trip/falls – falls from heights
□ Emergency Readiness/Wildfire Prevention

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List and attach any supporting materials that you feel are important for the reviewers to gain a complete picture of the nomination. Digital photos, supporting documentation, sample forms, etc.

Nominated by: Sophia Gonzales Date: 05/22/2024

General Manager: Oan Manager: Date:05/22/2024

Please email this form with supporting documents and digital photos (jpg) to tlofing@acwajpia.com.





Certificate of Course Completion

This is to certify that

SOPHIA GONZALES, CEAS

has satisfactorily completed organized instruction consisting of videos, written reports and final exam in the theory of Ergonomics Assessment and prevention of Musculoskeletal Disorders, and is bestowed the title of

CEAS® I: Certified Ergonomics Assessment Specialist

Total CEU's/Contact Hours: 1.5/15

Effective this 5th day of March, 2023

Atlanta, GA Est. 1979

Ronald W. Hotter, P.T. GASITE

Ron Porter, Director, PT, CEAS III

CEAS® I: Ergonomics Assessment Certification









SOP for Ergonomic Requests

1. Purpose

The District is committed to fostering a safe and healthy work environment for all employees. The intent of this procedure is to minimize the occurrence of repetitive motion and musculoskeletal injuries. This procedure is designed to create a uniform method of requesting, approving, and monitoring employee ergonomic requests/needs.

2. Definitions

- a. Ergonomics is the science of designing and assessing work environments to the specific employee, such as a method of performing job tasks, tools, and equipment to prevent musculoskeletal injuries (also known as repetitive motion injuries).
- b. Ergonomic evaluation is an assessment completed by a Certified Ergonomist. As part of the assessment, recommendations for equipment and physical positioning are provided for a workspace where any exposures for repetitive motion and musculoskeletal injuries are identified.
- c. Repetitive Motion Injuries (RMIs) are caused by performing repeated motions which result in damaging nerves or tendons.
- d. Physical apparatus a physical piece of equipment such as machinery, tools, materials, etc. that have a particular function or are intended for a specific use.

3. Process

- a. Each new employee shall be offered an ergonomic evaluation within 30 calendar days of employment. An ergonomic evaluation can also be requested at any time by an employee or their supervisor by submitting a verbal or written request to Human Resources. Upon completion of the evaluation, the Human Resources Program Analyst will make recommendations for necessary equipment and/or workspace modifications. All equipment must be a piece of physical apparatus.
- b. Upon completion of the ergonomic evaluation, the Human Resources Program Analyst may submit all requests to order any necessary equipment in the most appropriate, prompt, and economical manner possible. Upon approval of purchase from Human Resources, there may be cases where the employee is responsible for purchase of the equipment and submittal of a reimbursement request.



- c. The employee will be responsible for monitoring their work area, implementing ergonomic recommendations/safe work habits, and contacting their supervisor or Human Resources to report any discomfort.
- d. If an employee is aware of a specific item needed, they can submit an Ergonomic Equipment Request Form to Human Resources. The Human Resources Program Analyst will review the completed form within 10 business days to determine if an ergonomic evaluation is required, if the equipment purchase is warranted based on essential job functions, and/or if the request needs to go through an alternative process (such as the Reasonable Accommodation process).
- e. Ergonomic equipment provided by the District should only be utilized for work-related use.
- f. Should an employee's need require an accommodation related to a disability such as, but not limited to, extensive modifications of a workstation (including providing mechanical or electrical aids), changes in job duties or schedule, reassignment to another position, or time off (with or without pay), the employee will need to submit requests through the Reasonable Accommodation process. For more information, see the Reasonable Accommodation SOP.
- g. If an employee is experiencing any physical pain, or ergonomic equipment is no longer functioning, they should immediately report it to their supervisor or Human Resources directly. Supervisors are responsible for reporting the complaint immediately to Human Resources. Once reported, Human Resources will initiate the Worker's Compensation Claim process.

4. Documentation

- a. Ergonomic Equipment Request Form
- b. Ergonomic Equipment Approval Form (if applicable)



Ergonomic Equipment Request Form

Employee Name			Date		
What specific accommodation (Be as specific as possible, for Must be a physical piece of ap	example, computer mou		d, specia	lized equipment	; etc. NOTE:
Reason for Accommodation (Please do not disclose your u equipment will help you do you	nderlying diagnosis or m			ain how the requ	uested
Estimated Cost of Equipment Cost: (please attack		ition.)			
Denied:					
 Signature of Employee				Date	_
General Manager				Date	_
Human Resources				Date	_
HR USE ONLY					
☐ Ergonomic Assess	ment attached				
☐ Ergonomic Assess	ment not required				
☐ Request anticipate (requires GM Appr		requ		rther information ss, please refer equests.	



Ergonomic Equipment Approval Form

Employee Name			Date		
	atus is approved for purchas sible, for example, computer m				
Specifications for us	e				
Approved amount Up to: (please	e attach any additional informa	ntion.)			
deficiencies to Human	onsible for implementation of th Resources. The purchase of th velopmental, or mental injuries	ne above equip			
Signature of Employee	t			Date	
General Manager		-		Date	
Human Resources				Date	
HR USE ONLY Date purchased: _ (attach receipt for	records)				

Job Title Company **Summary and Purpose of Analysis Job Description Positive Aspects of the Job** 1. 2. 3. 4. 5. **Risk Factor** Please see attached checklist for Risk Factors. The following are suggestions I feel will reduce the worksite risks for cumulative trauma injury for this job: **Risk Factor** Solution Product

Ergonomic Analysis for:

Appendix D-2 to §1910.900: VDT Workstation Checklist

Using this checklist is one, but not the only, way an employer can comply with the requirement to identify, analyze and control MSD hazards in VDT tasks. This checklist does not require that employees assume specific working postures in order for the employer to be in compliance. Rather, employers will be judged to be in compliance with paragraph (k) and (m) of OSHA's standard if they provide the employee with a VDT workstation is arranged or designed in a way that would pass this checklist.

If employee exposure does not meet the levels indicated by the Basic Screening Tool, you may STOP HERE.

WORKING CONDITIONS The workstation is designed or arranged for doing VDT tasks so it allows the employee's	Y	N
A. Head and neck to be about upright (not bent down/back).		
B. Head, neck and trunk to face forward (not twisted).		
C. Trunk to be about perpendicular to floor (not leaning forward/backward).		
D. Shoulders and upper arms to be about perpendicular to floor (not stretched forward) and relaxed (not elevated).		
E. Upper arms and elbows to be close to body (not extended outward).		
F. Forearms, wrists, and hands to be straight and parallel to floor (not pointing up/down).		
G. Wrists and hands to be straight (not bent up/down or sideways toward little finger).		
H. Thighs to be about parallel to floor and lower legs to be about perpendicular to floor.		
I. Feet to rest flat on floor or be supported by a stable footrest.		
J. VDT tasks to be organized in a way that allows employee to vary VDT tasks with other work activities, or to take micro-breaks or recovery pauses while at the VDT workstation.		
SEATING	Y	N
The chair		
1. Backrest provides support for employee's lower back (lumbar area).		
2. Seat width and depth accommodate specific employee (seatpan not too big/small).		
3. Seat front does not press against the back of employee's knees and lower legs (seatpan not too long).		
4. Seat has cushioning and is rounded/ has "waterfall" front (no sharp edge).		
5. Armrests support both forearms while employee performs VDT tasks and do not interfere with movement.		
KEYBOARD/INPUT DEVICE	Y	N
The keyboard/input device is designed or arranged for doing VDT tasks so that	<u> </u>	
6. Keyboard/input device platform(s) is stable and large enough to hold keyboard and input device.		
7. Input device (mouse or trackball) is located right next to keyboard so it can be		

operated without reaching.		
8. Input device is easy to activate and shape/size fits hand of specific employee (not too big/small).		
9. Wrists and hands do not rest on sharp or hard edge.		
MONITOR	Y	N
The monitor is designed or arranged for VDT tasks so that	<u> </u>	
10. Top line of screen is at or below eye level so employee is able to read it without bending head or neck down/back. (For employees with bifocals/trifocals, see next item.)		
11. Employee with bifocals/trifocals is able to read screen without bending head or neck backward.		
12. Monitor distance allows employee to read screen without leaning head, neck or trunk forward/backward.		
13. Monitor position is directly in front of employee so employee does not have to twist head or neck.		
14. No glare (e.g., from windows, lights) is present on the screen which might cause employee to assume an awkward posture to read screen.		
WORK AREA	Y	N
The work area is designed or arranged for doing VDT tasks so that		
15. Thighs have clearance space between chair and VDT table/keyboard platform (thighs not trapped).		
16. Legs and feet have clearance space under VDT table so employee is able to get close enough to keyboard/input device.		
ACCESSORIES	Y	N
17. Document holder , if provided, is stable and large enough to hold documents that are used.		
18. Document holder , if provided, is placed at about the same height and distance as monitor screen so there is little head movement when employee looks from document to screen.		
19. Wrist rest, if provided, is padded and free of sharp and square edges.		
20. Wrist rest , if provided, allows employee to keep forearms, wrists and hands straight and parallel to ground when using keyboard/input device.		
21. Telephone can be used with head upright (not bent) and shoulders relaxed (not elevated) if employee does VDT tasks at the same time.		
GENERAL	Y	N
22. Workstation and equipment have sufficient adjustability so that the employee is able to be in a safe working posture and to make occasional changes in posture while performing VDT tasks.		
23. VDT Workstation, equipment and accessories are maintained in serviceable condition and function properly.		
PASSING SCORE = "YES" answer on all "working postures" items (A-J) and no ne than two "NO" answers on remainder of checklist (1-23).	10re	.

Table W-1 – Basic Screening Tool

You need only review risk factors for those areas of the body affected by the MSD Incident.

		Body	Part Ass MSD Ir	sociated '	With
Risk Factors This Standard Covers	Performing job or task that involve:	Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ Knee/ Ankle
Repetition	(1) Repeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.	√	✓	✓	✓
	(2) Using an input device, such as a keyboard and/or mouse, in a steady manner for more than 4 hours total in a workday.	✓	√		
Force	(3) Lifting more than 75 pounds at any one time; more than 55 pounds more than 10 times per day; or more than 25 pounds below the knees, above the shoulders, or at arm's length more than 25 times per day;	√	√	√	<
	(4) Pushing/pulling with more than 20 pounds of initial force (e.g., equivalent to pushing a 65 pound box across a tile floor or pushing a shopping cart with five 40 poundbags of dog food) for more than 2 hours total per day;	√	√	√	✓
	(5) Pinching an unsupported object weighing 2 or more pounds per hand, or use of an equivalent pinching force (e.g., holding a small binder clip open) for more than 2 hours total per day;		√		
	(6) Gripping an unsupported object weighing 10 pounds or more per hand, or use of an equivalent gripping force (e.g., crushing the sides of an aluminum soda can with one hand), for more than 2 hours total per day.		✓		

Table W-1 – Basic Screening Tool (continued)

		Body	Part Ass MSD In		With
Risk Factors This Standard Covers	Performing job or task that involve:	Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ Knee/ Ankle
Awkward Postures	(7) Repeatedly raising or working with the hand(s) above the head or the elbow(s) above the shoulder(s) for more than 2 hours total per day;	√	√	✓	
	(8) Kneeling or squatting for more than 2 hours total per day;			√	✓
	(9) Working with the back, neck or wrists bent or twisted for more than 2 hours total per day (see figures:)	✓	✓	✓	
Contact Stress	(10) Using the hand or knee as a hammer more than 10 times per hour for more than 2 hours total per day;		\checkmark		√
Vibration	(11) Using vibrating tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools, riveting or chipping hammers) for more than 30 minutes total per day;	✓	√	√	
	(12) Using tools or equipment that typically have moderate vibration levels (such as jig saws, grinders, or sanders) for more than 2 hours total per day.	√	✓		

For each "caution zone job" find any physical risk factors that apply. Reading across the page, determine if all of the conditions are present in the work activities. If they are, a WMSD hazard exists and must be reduced below the hazard level or to the degree technologically and economically feasible (see WAC 296-62-05130(4), specific performance approach).

Awkward Posture				
Body Part	Physical Risk Factor	Duration	Visual Aid	here if this is a WMSD hazard
Shoulders	Working with the hand(s) above the head or the elbow(s) above the shoulder(s)	More than 4 hours total per day		
	Repetitively raising the hand(s) above the head or the elbow(s) above the shoulder(s) more than once per minute	More than 4 hours total per day		
Neck	Working with the neck bent more than 45° (without support or the ability to vary posture)	More than 4 hours total per day	15"	
Back	Working with the back bent forward more than 30° (without support, or the ability to vary posture)	More than 4 hours total per day	30 ^u	
	Working with the back bent forward more than 45° (without support or the ability to vary posture)	More than 2 hours total per day	45"	

Awkward Posture (continued)				
Body Part	Physical Risk Factor	Duration	Visual Aid	here if this is a WMSD hazard
Knees	Squatting	More than 4 hours total per day		
			(ch)	
	Kneeling	More than 4 hours total per day	alta	

High Hand Force					Check (✔)
Body Part	Physical Risk Factor	Combined with	Duration	Visual Aid	here if this is
Arms, wrists, hands	Pinching an unsupported object(s) weighing 2 or more	Highly repetitive motion	More than 3 hours total per day		hazard
	pounds per hand, or pinching with a force of 4 or more pounds per hand (comparable to pinching half a ream of paper)	Wrists bent in flexion 30° or more, or in extension 45° or more, or in ulnar deviation 30° or more	More than 3 hours total per day	Flexion A5° Extension Ulnar deviation	
		No other risk factors	More than 4 hours total per day		
Arms, wrists, hands	Gripping an unsupported object(s) weighing 10 or more pounds per hand, or gripping with a force of	Highly repetitive motion	More than 3 hours total per day		
	10 pounds or more per hand (comparable to clamping light duty automotive jumper cables onto a battery)	Wrists bent in flexion 30° or more, or in extension 45° or more, or in ulnar deviation 30° or more	More than 3 hours total per day	Extension 45° Ulnar deviation	
		No other risk factors	More than 4 hours total per day		

Highly Repetitive Motion				
Body Part	Physical Risk Factor	Combined with	Duration	Check (✓) here if this is
Neck, shoulders, elbows, wrists, hands	Using the same motion with little or no variation every few seconds (excluding keying activities)	No other risk factors	More than 6 hours total per day	a WMSD hazard
Harius	Using the same motion with little or no variation every few seconds (excluding keying activities)	Wrists bent in flexion 30° or more, or in extension 45° or more, or in ulnar deviation 30° or more	More than 2 hours total per day	
		High, forceful exertions with the hand(s)		
	Intensive keying	Awkward posture, including wrists bent in flexion 30° or more, or in extension 45° or more, or in ulnar deviation 30° or more	More than 4 hours total per day	
		No other risk factors	More than 7 hours total per day	

Repeated Impact					
Body Part	Physical Risk Factor	Duration	Visual Aid	Check (✓) here if this is	
Hands	Using the hand (heel/base of palm) as a hammer more than once per minute	More than 2 hours total per day		a WMSD hazard	
Knees	Using the knee as a hammer more than once per minute	More than 2 hours total per day			

Heavy, Frequent or Awkward Lifting

This analysis only pertains if you have "caution zone jobs" where employees lift 10 lbs. or more (see WAC 296-62-05105, Heavy, Frequent, or Awkward Lifting) and you have chosen the specific performance approach.

Step 3

Find the Limit Reduction Modifier. Find out ho

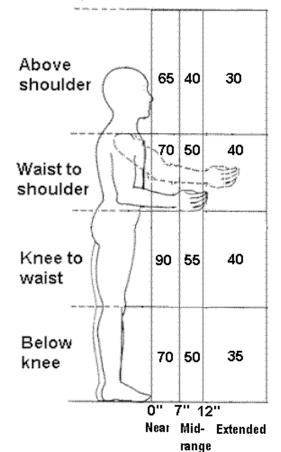
Step 1

Find out the actual weight of objects that the employee lifts.

Actual Weight = _____ lbs.

Step 2

Determine the Unadjusted Weight Limit. Where are the employee's hands when they begin to lift or lower the object? Mark that spot on the diagram below. The number in that box is the Unadjusted Weight Limit in pounds.



Unadjusted Weight Limit: _____ lbs.

Find the Limit Reduction Modifier. Find out how many times the employee lifts per minute and the total number of hours per day spent lifting. Use this information to look up the Limit Reduction Modifier in the table below.

How many lifts	For how many hours per day?			
per minute?	1 hr or less	1 hr to 2 hrs	2 hrs or more	
1 lift every 2-5 mins.	1.0	0.95	0.85	
1 lift every min	0.95	0.9	0.75	
2-3 lifts every min	0.9	0.85	0.65	
4-5 lifts every min	0.85	0.7	0.45	
6-7 lifts every min	0.75	0.5	0.25	
8-9 lifts every min	0.6	0.35	0.15	
10+ lifts every min	0.3	0.2	0.0	

Note: For lifting done less than once every five minutes, use 1.0

Limit Reduction Modifier: ____.

Step 4

Calculate the Weight Limit. Start by copying the Unadjusted Weight Limit from Step 2.

Unadjusted Weight Limit: = lbs.

If the employee twists more than 45 degrees while lifting, reduce the Unadjusted Weight Limit by multiplying by 0.85. Otherwise, use the Unadjusted Weight Limit

Twisting Adjustment: = ____.__.

Adjusted Weight Limit: = _____ lbs.

Multiply the Adjusted Weight Limit by the Limit Reduction Modifier from Step 3 to get the Weight Limit.

Limit Reduction Modifier: ____.__

Weight Limit: = ____ lbs.

Step 5

Is this a hazard? Compare the Weight Limit calculated in Step 4 with the Actual Weight lifted from Step 1. If the Actual Weight lifted is greater than the Weight Limit calculated, then the lifting is a WMSD hazard and must be reduced below the hazard level or to the degree technologically and economically feasible.

Note: If the job involves lifts of objects with a number of different weights and/or from a number of different locations, use Steps 1 through 5 above to:

- 1. Analyze the two worst case lifts -- the heaviest object lifted and the lift done in the most awkward posture.
- 2. Analyze the most commonly performed lift. In Step 3, use the frequency and duration for <u>all</u> of the lifting done in a typical workday.

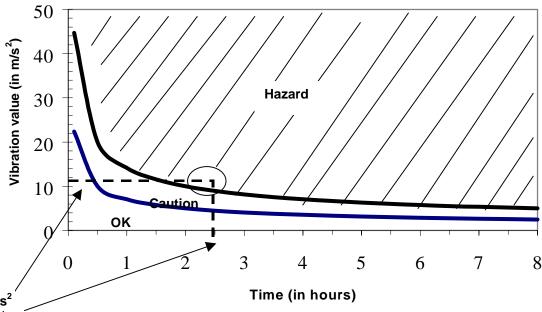
Hand-Arm Vibration

Use the instructions below to determine if a hand-arm vibration hazard exists.

Step 1. Find the vibration value for the tool. (Get it from the manufacturer, look it up at this web site: http://umetech.niwl.se/vibration/HAVHome.html, or you may measure the vibration yourself). The vibration value will be in units of meters per second squared (m/s²). On the graph below find the point on the left side that is equal to the vibration value.

Note: You can also link to this web site through the L&I WISHA Services Ergonomics web site: http://www.lni.wa.gov/wisha/ergo

- Step 2. Find out how many total hours per day the employee is using the tool and find that point on the bottom of the graph.
- Step 3. Trace a line in from each of these two points until they cross.
- Step 4. If that point lies in the crosshatched "Hazard" area above the upper curve, then the vibration hazard must be reduced below the hazard level or to the degree technologically and economically feasible. If the point lies between the two curves in the "Caution" area, then the job remains as a "Caution Zone Job." If it falls in the "OK" area below the bottom curve, then no further steps are required.



Example:

An impact wrench with a vibration value of 12 m/s² is used for 2½ hours total per day. The exposure level is in the Hazard area. The vibration must be reduced below the hazard level or to the degree technologically and economically feasible.

Note: The caution limit curve (bottom) is based on an 8-hour energy-equivalent frequency-weighted acceleration value of 2.5 m/s². The hazard limit curve (top) is based on an 8-hour energy-equivalent frequency- weighted acceleration value of 5 m/s².

WORKSITE ERGONOMIC ANALYSIS REPORT OFFICE/INDUSTRIAL/HEALTHCARE

Na	me	worksnop City	Date				
ID	IDENTIFY						
1.	POSITIVE ASPECTS OF JOB						
2.	RISK FACTORS OF JOB						
3.	RISK MODIFICATION OR CO	NTROL					
4.	OTHER IDEAS						