Job Task Analysis

Employer:	Stanislaus County
Occupation:	Environmental Technician
Company Contact:	Risk Management 1010 10 <sup>th</sup> Street Modesto, California 95354 (209) 525-5770
Date:	April 2011; August 2013; Updated October 2024
Analysis Provided By:	Lyle Andersen, PT, CWCE Andersen Physical Therapy, Inc. 1917 Coffee Road Modesto, California 95355 (209) 549-4626

# INTRODUCTION:

A complete job description is available through Stanislaus County Human Resources. The environmental factors, physical and functional demands for this Job Task Analysis were documented by Andersen Physical Therapy, Inc. The methodology for documentation consisted of on-site visits, using various measuring devices such as dynamometers and scales, as well as observation and interviews with employees and managers. A detailed record was made of the physical and functional demands of the job in terms of force pounds, weight, frequency, height, distance, anthropometric measurements, stamina, and degrees of range of motion. The determination of the frequencies of functional activities is based on standards provided by the National Institute for Occupational Safety and Health (NIOSH) and the Work Practice Guide for Manual Lifting (U.S. Department of Commerce, National Technical Information Service).

The Job Task Analysis is organized as follows: General work description; safety requirements; equipment; environmental factors; and physical/functional demands.

#### **GENERAL WORK DESCRIPTION:**

The frequency of the following activities may vary according to the physical requirements of the specific job tasks that the employee may be required to perform at random intervals.

Under the general supervision of their perspective division managers, the Environmental Technician position is assigned to the Hazardous Materials and Solid Waste divisions, within the Department of Environmental Resources. The positions assigned to the Hazardous Material Division will work in the Hazardous Material Farm Disclosure Program and the Household Hazardous Waste Program. The Farm Disclosure Program is responsible for inventorying chemicals, ensuring appropriate signs are posted, and adequate training plans are being implemented and maintained. The Household Hazardous Waste (HHW) Program includes educating the public about the potential hazards when handling and improperly disposing of household chemicals. The HHW program also provides a safe and convenient collection option for the public to discard hazardous and electronic waste. The Environmental Technicians assigned to each division perform separate duties altogether. Solid Waste Environmental Technicians collect confidential documents and recyclable materials from various county facilities as an inter-departmental service. Another core duty the Solid Waste Technicians are tasked with is responding to illegal garbage disposal complaints submitted by residents in the unincorporated areas of Stanislaus County. Solid Waste Technicians also contribute to various outreach efforts and perform other duties as assigned.

#### **SPECIFIC DUTIES:** Available through the Human Resources Department at the County of Stanislaus.

#### https://www.governmentjobs.com/careers/stanislaus/classspecs

<u>Safety Requirements</u>: All employees are required to observe company safety procedures and standards to insure individual and collective safety, in addition to avoiding unnecessary risk to oneself, co-workers, customers, and property.

#### Equipment:

- 1. 96-gallon curbside collection carts
- 2. Air compressors
- 3. Air tanks
- 4. Back belt
- 5. Battery tester
- 6. Box cutter
- 7. Broom
- 8. Glass test tubes
- 9. Chemical cleaners
- 10. Computers
- 11. Cubic yard boxes
- 12. Drum dolly
- 13. Drums
- 14. Dustpan
- 15. Eye protection
- 16. Forklift
- 17. Generator
- 18. Protective gloves
- 19. Hard hats
- 20. Hearing protection
- 21. Knives
- 22. Liftgate
- 23. Liquid waste containers

- 24. Miscellaneous hand tools
- 25. Mop
- 26. Pallet jack
- 27. Pallets
- 28. Pneumatic diaphragm pump
- 29. Portable transfer hoses/valves
- 30. Propane torch
- 31. Rakes
- 32. Recycling containers
- 33. Respiratory protection
- 34. Rubber boots
- 35. Shop sweep
- 36. Shovel
- 37. Solid waste containers
- 38. Steel drum opener
- 39. Trailer
- 40. Truck
- 41. Tyvek suit
- 42. Vehicle
- 43. Waders
- 4. Wheelbe
- 44. Wheelbarrow
- 45. Oil filter crusher

All employees within the **Environmental Technician** position are required to provide physical assistance for all weight and frequency requirement needs of all job tasks in order to maintain a safe work environment. Employees must be physically capable of working in any of the job tasks within the **Environmental Technician** position.

### **ENVIRONMENTAL FACTORS**

\* \* \* \* \* \* \*

# The following percentages are given in terms of an eight-hour workday:

**Seldom** = 1% - 2% **Occasional** = 3% - 33% Frequent =34% - 66%Constant =67% - 100%

	ENVIRONMENTAL FACTORS	MAXIMUM FREQUENCY
1.	Unprotected heights: Docks	Occasional
2.	Being around moving machinery: Traffic, forklift, loader	Frequent
3.	Exposure to marked changes in temperature and humidity: outside temperatures may seasonally vary between 28-110 degrees:	Not Applicable
4.	Exposure to dust, fumes, smoke, gases, or other irritating substances (specify): solvent, paint, oil, garbage. <i>Dust mask or respirator is available</i> .	Frequent
5.	Driving: Vehicle	Frequent
6.	Exposure to excessive noise: Hearing protection is available.	Occasional
7.	Exposure to radiant or electrical energy:	Not Applicable
8.	Exposure to solvents or chemicals: Refer to MSDS document.	Frequent
9.	Exposure to slippery or uneven walking surfaces: Land fill, mud, ice, undeveloped ground slope	Occasional
10.	Working below ground:	Not Applicable
11.	Unusual fatigue factors:	Not Applicable
12.	Working with explosives:	Not Applicable
13.	Excessive vibration:	Not Applicable
14.	Working with hands in water or other substance:	Seldom
15.	Working proximity:Alone: Closely with others:	Occasional Constant
16.	Working inside:	Frequent
17.	Working outside:	Frequent

# **FUNCTIONAL ACTIVITIES**

# $\bullet \bullet \bullet \bullet \bullet \bullet \bullet$

The frequency of the following activities may vary according to the physical requirements of the specific job tasks the employee may be required to perform at random intervals.

#### PHYSICAL AND FUNCTIONAL REQUIREMENTS

FREQUENCY DEFINITIONS	<u>SELDOM</u>	OCCASIONAL	<b>FREQUENT</b>	CONSTANT
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

1.) **PUSH:** Pushing activities may require use of the back in conjunction with leg and arm musculature.

MAXIMUM REQUIREMENT			
0-10 pounds:	Frequent		
11-25 pounds:	Occasional		
26-35 pounds:	Occasional		
36-50 pounds:	Occasional		
51-100 pounds:	Not Required	Maximum Force:	<u>50</u> Pounds

Assistive Devices: 2 and 4-Wheeled Cart, hand truck, pallet jack, wheelbarrow and a forklift. An additional person's assistance is available with forces greater than 50 pounds.

**Comments:** Pushing is utilized when retrieving, returning, storing, and transporting, recyclable material, refuse, and miscellaneous wastes (e.g. carts, dollies). The employee exerts up to 50 pounds of force in a horizontal plane from waist to shoulder height of a distance up to 200+ feet when performing job tasks (e.g. pushing up to 50 pounds of force moving carts with miscellaneous reclaimed and/or recycled refuse/waste; tilt up to 50-gallon drum; travel with 95-gallon 2-wheeled dumpster cart). Solid waste division employees push/pull 2-wheel dumpster carts up to a frequent occurrence requiring up to 50 pounds of force.

2.) **PULL:** Pulling activities may require use of the back in conjunction with leg and arm musculature.

MAXIMUM REQUIREMENT			
0-10 pounds:	Occasional		
11-25 pounds:	Occasional		
26-35 pounds:	Seldom		
36-50 pounds:	Seldom		
51-100 pounds:	Not Required	Maximum Force:	<u>50</u> Pounds

*Assistive Devices:* 2 and 4-Wheeled Cart, hand truck, pallet jack, wheelbarrow, a forklift and its various attachments. An additional person's assistance is made available with forces greater than 50 pounds.

**Comments:** Pulling is utilized with activities such as retrieving, returning, storing, dragging transporting, recyclable material, confidential documents, and miscellaneous wastes, equipment, and supplies (e.g. carts, dollies). The employee exerts up to 50 pounds; tie down pounds of force in a horizontal plane from waist to shoulder height of a distance up to 5 feet when performing job tasks (e.g. pull up to 50 pounds of force moving carts with miscellaneous reclaimed and/or recycled refuse, waste; tilt up to 50-gallon drum; travel with 95-gallon 2-wheeled dumpster cart). Solid waste division employees push/pull 2-wheel dumpster carts up to a frequent occurrence requiring up to 50 pounds of force. Pushing is the preferred method of moving carts.

#### 3.) **<u>STAND-UP LIFT</u>**: Lifting weighted objects between floor and waist height.

MAXIMUM REQUIREMENT			
0-10 pounds:	Frequent		
11-25 pounds:	Frequent		
26-35 pounds:	Occasional		
36-50 pounds:	Occasional		
51-100 pounds:	Not Required	Maximum Force:	<u>50</u> Pounds

*Assistive Devices:* Forklift, liftgate. An additional person's assistance is available with weights greater than 50 pounds. *Comments:* A forklift is utilized for retrieving, returning, storing, adjusting, moving, and transporting miscellaneous waste, equipment, and various supplies (e.g. miscellaneous recycled items, reclamation of waste). The employee lifts items weighing between <1 pounds and 50 pounds from/to the floor or to/from pallets 5 inches in height when performing job tasks (e.g. lift up to 50-pound barrels of miscellaneous recycled items; paper, corrugated fiber, batteries, scrap metal, cans; miscellaneous known and unknown hazardous material containers; sharps disposal containers). *Safe lifting is performed by utilizing a posture of partial squatting and a straight back. Solid waste division employees occasionally lift up to 200 pounds with one person assistance available for weights greater than 100 pounds.* 

# 4.) **LEVEL LIFT:** Lifting weighted objects from between waist and chest height level for a maximum horizontal distance of up to four feet.

MAXIMUM REQUIREMENT			
0-10 pounds:	Frequent		
11-25 pounds:	Frequent		
26-35 pounds:	Frequent		
36-50 pounds:	Occasional		
51-100 pounds:	Not Required	Maximum Force:	<u>50</u> Pounds

*Assistive Devices:* Forklift, 2 and 4-Wheeled Cart, Hand Truck. An additional person's assistance is available with weights greater than 50 pounds.

*Comments:* A forklift is utilized for activities such as retrieving, returning, storing, adjusting, moving, and transporting recyclable material, wastes, equipment, and supplies (e.g. miscellaneous recycled items and waste). The employee lifts items weighing between <1 pounds and 50 pounds when performing job tasks (e.g. lift up to 50 pound barrels of miscellaneous recycled items; paper, corrugated fiber, batteries, scrap metal, cans; miscellaneous known and unknown hazardous materials containers; sharps disposal containers). *Solid waste division employees occasionally lift up to 200 pounds with one person assistance available for weights greater than 100 pounds*.

#### 5.) **WEIGHT CARRY**: Carrying weighted objects between waist and chest height beyond a distance of four feet.

MAXIMUM REQUIREMENT			
0-10 pounds:	Frequent		
11-25 pounds:	Frequent		
26-35 pounds:	Occasional		
36-50 pounds:	Occasional		
51-100 pounds:	Not Required	Maximum Force:	50 Pounds

*Assistive Devices:* Forklift, 4-wheeled cart, hand truck. An additional person's assistance is available with weights greater than 50 pounds.

*Comments:* Weight carry is utilized when retrieving, returning, storing, adjusting, moving, and transporting recyclable material, miscellaneous waste, various equipment, and supplies (e.g. carry miscellaneous recycled items, collecting waste). The employee lifts items weighing between <1 pounds and 50 pounds when performing job tasks (e.g. carry up to 50-pound barrels of miscellaneous recycled items; paper, corrugated fiber; batteries; furniture; scrap metal, cans; miscellaneous known and unknown hazardous containers; sharps disposal containers).

# 6.) **<u>OVERHEAD LIFT/PULL DOWN</u>**: Lifting weighted object from/to chest and overhead height level.

MAXIMUM REQUIREMENT			
0-10 pounds:	Occasional		
11-25 pounds:	Seldom		
26-35 pounds:	Seldom		
36-100 pounds:	Not Required	Maximum Force:	30 Pounds

Assistive Devices: A vertical ladder, step ladder or step stool to bring items to eye or shoulder level.

*Comments:* Overhead lift/pull down required to perform job tasks (e.g. stack miscellaneous items; throw/place refuse into tall dumpster). *Variables to overhead reaching will be the employee's height and anthropometric reach.* 

#### 7.) OVERHEAD REACH:

MAXIMUM FREQUENCY: Occasional

**Comments:** Overhead reach is performed to a maximum height of 72 inches when retrieving, returning, storing, stacking and transporting equipment and supplies (e.g. stacking miscellaneous solid waste; examining stacked loads). A ladder (appropriate height) or step stool may be utilized to bring items to eye or shoulder level. Variables to overhead reaching will be the employee's height and anthropometric reach.

#### 8.) FORWARD REACH:

MAXIMUM FREQUENCY: Frequent

*Comments:* Forward reach is performed to a distance of 32 inches when retrieving, returning, storing, adjusting, moving, and transporting equipment and supplies (e.g. lateral and forward reaching to assist with lifting miscellaneous items; push/pull; driving vehicle; desktop work; lifting to/from truck/trailer; facility inspection; tying down loads). *The degree of elbow extension required for reaching will vary according to the employee's anthropometric reach.* 

#### 9.) <u>STOOP</u>:

#### MAXIMUM FREQUENCY: Occasional

**Comments:** Stooping is performed when retrieving, returning, storing, adjusting, moving, and transporting equipment and supplies (e.g. stoop to reach below waist height for lateral and forward reaching to assist with lifting miscellaneous items; facility inspections). Variable to stooping will be the employee's height. Stooping of the head, trunk and knees can be minimized or avoided by substituting alternate positions of squatting, kneeling or bending when performing job tasks.

#### 10.) SOUAT: (Unloaded)

MAXIMUM FREQUENCY: Not Required

*Comments:* Squatting is not required to perform job tasks. *Squatting may be minimized or avoided by substituting alternate positions of bending, sitting or kneeling. Partial squatting is a preferred lifting posture.* 

#### 11.) FORWARD BEND:

MAXIMUM FREQUENCY: Frequent

**Comments:** Bending forward at the waist is performed when retrieving, returning, storing, adjusting, moving, and transporting recyclable materials, miscellaneous waste, equipment and supplies (e.g. bend to reach near or far below waist height for lateral and forward reaching to assist with lifting miscellaneous items; lift to/from truck/trailer; conducting facility inspection; tie-down loads). The maximum forward trunk flexion required is 60 degrees. *Employee may avoid excessive forward bending of the trunk up to 80 degrees by using alternate positions of bending at the hips, kneeling, half kneeling, stooping, sitting or squatting.* 

#### 12.) **TWIST**:

MAXIMUM FREQUENCY: Frequent

*Comments:* Twisting at the waist is performed when retrieving, returning, storing, adjusting, moving, and transporting recyclable materials, miscellaneous wastes, equipment, and supplies (e.g. twist for lateral and forward reaching when lifting miscellaneous items; driving vehicles; operating forklift; worksite inspection; facility inspection). *Twisting at the waist may be minimized by turning the whole body, including the feet.* 

#### 13.) <u>**TURN**</u>:

MAXIMUM FREQUENCY: Frequent

*Comments:* Turning is performed when retrieving, returning, storing, adjusting, moving, and transporting recyclable materials, waste, equipment, and supplies (e.g. lateral and forward reaching when lifting miscellaneous reclaimed and recycled items; facility inspection).

#### 14.) KNEEL:

#### MAXIMUM FREQUENCY: Not Required

*Comments:* Kneeling is not required. *Kneeling may be minimized or avoided by substituting alternate positions of bending, squatting, sitting, or half kneeling.* 

#### 15.) CRAWL:

MAXIMUM FREQUENCY: Not Required

Comments: Crawling is not required.

#### 16.) STAIR CLIMB:

MAXIMUM FREQUENCY: Seldom

*Comments:* Stair climb is required when performing job tasks (e.g. to/from private business or industries where elevators are not available). Maximum number of 21 steps is climbed.

#### 17.) LADDER CLIMB:

MAXIMUM FREQUENCY: Seldom

**Comments:** Ladder climbing is performed onto/off safety ladders or steps to access recyclable materials and confidential documents, equipment and supplies (e.g. leaking valves, containers leaks, roof-tops) located 12 feet above floor level (e.g. responding to an emergency response, general plant inspection). Variables to overhead climbing will vary according to the employee's height and anthropometric reach.

#### 18.) <u>WALK</u>:

MAXIMUM FREQUENCY: Frequent

*Comments:* Walking is performed when retrieving, returning, storing, adjusting, moving, and transporting recyclable materials, refuse, miscellaneous wastes, equipment, and supplies (e.g. walking to/from work sites; push/pull carts; surveillance; site visit, inspections, investigations, instruction; customer service). Walking length varies between 3 feet and 200+ feet depending on the job task. *Solid waste division employees are required to walk up to 1000+ feet depending on the job task.* 

#### 19.) <u>SIT</u>:

MAXIMUM FREQUENCY: Frequent

*Comments:* Sitting is performed for a maximum of 120-minute intervals for office work (e.g. sitting for deskwork; driving vehicles; trucks; operate forklift; meetings).

#### 20.) **<u>STAND</u>:** (*Static*)

#### MAXIMUM FREQUENCY: Occasional

*Comments:* Static standing is performed for a maximum of 30-minute intervals when retrieving, returning, storing, adjusting, and observing recyclable material, refuse and miscellaneous hazardous wastes (e.g. stand for work site inspection; site visits, surveillance; analyzing work sites and/or refuse at customer locations; consultation with collaborating agencies, customer and colleagues).

#### 21.) **BALANCE:**

MAXIMUM FREQUENCY: Constant

*Comments:* Good balance is required for safe walking, standing, climbing, reaching and lifting.

#### 22.) HAND/FOOT CONTROL:

# MAXIMUM REQUIREMENT

Occasional
Occasional
Not Required
Not Required
Occasional
Occasional
Not Required
Not Required

*Comments:* Hand controls are utilized to operate equipment (e.g. vehicle, forklift) when adjusting, controls (e.g. drive vehicle; operate forklift). Foot controls are utilized to operate equipment (e.g. forklift, manual pallet jack, vehicle, material handling devices).

## 23.) UPPER AND LOWER EXTREMITY COORDINATION:

MAXIMUM REQUIREMENT	
Simple Grasp:	Frequent
Firm Grasp:	Frequent
Fine Manipulation:	Occasional
<b>Eye/Hand Coordination:</b>	Frequent
Hand/Foot Coordination:	Occasional

*Comments:* Grasping and coordination activities are performed when retrieving, returning, storing, adjusting, utilizing, moving, and transporting refuse, miscellaneous waste, equipment, controls and supplies (e.g. push/pull, lift, carry, operate equipment; desktop work).

**Simple grasping** is utilized to perform job tasks (e.g. lift and/or manipulate objects weighing less than 5 pounds; push/pull; pry, hammer, wrench; drive vehicle; break down corrugated fiber; open/close cans/bottles/jugs; operate forklift).

**Firm grasping** is utilized to perform job tasks (e.g. lift and handle objects weighing 5 pounds or greater; push/pull; pry, hammer, wrench; break down corrugated fiber; open/close cans/bottles/jugs; operate forklift).

Fine manipulation is utilized to perform job tasks (e.g. keyboard, mouse, handwrite, page turn).

**Eye/hand coordination** is utilized to perform job tasks (e.g. keyboard, mouse, handwrite, page turn; drive vehicle; operate forklift).

Hand/foot coordination is utilized to perform job tasks (e.g. drive vehicle; operate forklift).

Depending on individual hand dominance, one hand may be used more frequently than the other when performing job tasks. These job tasks responding to illegal dumps and collection of office confidential and disposed paper waste may drive on a frequent basis.

#### 24.) CERVICAL (NECK) MOVEMENT:

1	<u>MAXIMUM REQUIREMENT</u>
Static Neutral Position:	Frequent
Flexing:	Frequent
Rotating:	Occasional
Extending:	Seldom

*Comments:* Neck movement is required when performing job tasks (e.g. desktop work; drive vehicle; operate forklift, work site inspection; surveillance; analyze substances; lift/push/pull/carry; customer service). *Observation of work environment to ensure safe working conditions.* A full cervical range of motion is required to perform job tasks safely.



# Stanislaus County

# JOB TASK ANALYSIS SUMMARY

FREQUENCY DEFINITIONS	<u>SELDOM</u>	<b>OCCASIONAL</b>	<b>FREQUENT</b>	CONSTANT
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

The following is a summary of the physical demands of the Job Task Analysis that were obtained for the position of:

Functional Activities	Maximum Requirements	Functional Activities	Maximum Requirements
<b>Push</b> (Force) <sup>1</sup>	50 pounds	Stair Climb <sup>1</sup>	Seldom
<b>Pull</b> (Force) $^1$	50 pounds	Ladder Climb <sup>1</sup>	Seldom
Stand Up Lift <sup>1</sup>	50 pounds	Walk <sup>1</sup>	Frequent
Level Lift <sup>1</sup>	50 pounds	Sit <sup>1</sup>	Frequent
Weight Carry <sup>1</sup>	50 pounds	Stand (Static) <sup>1</sup>	Occasional
Overhead Lift/Pull Down	30 pounds	<i>Balance</i> <sup>1</sup>	Constant
<b>Overhead Reach</b> <sup>1</sup>	Occasional	Hand Control <sup>1</sup>	Occasional
Forward Reach <sup>1</sup>	Frequent	Foot Control <sup>1</sup>	Occasional
$Stoop^1$	Occasional	Simple Grasp <sup>1</sup>	Frequent
Squat (Unloaded)	Not Required	Firm Grasp <sup>1</sup>	Frequent
Forward Bend <sup>1</sup>	Frequent	Fine Manipulation <sup>1</sup>	Occasional
Twist <sup>1</sup>	Frequent	Eye/Hand Coordination <sup>1</sup>	Frequent
<i>Turn</i> <sup>1</sup>	Frequent	Hand/Foot Coordination <sup>1</sup>	Occasional
Kneel	Not Required	Cervical (neck) Movement <sup>1</sup>	Frequent
Crawl	Not Required		

ENVIRONMENTAL TECHNICIAN

<sup>1</sup> The critical demands of the job.

Lyle andersen, PT

Date:

Lyle Andersen, PT, CWCE Preparer Signature

mas Title

Contact Person Title

Title

Date: 12-31-24 Enviromental Tech Date: 12-31-24 Contact Person

Date:

LA/gm