



JOB TASK ANALYSIS

Employer:	Stanislaus County
Occupation:	Environmental Technician
Company Contact:	CEO-Recruitment Unit
Date:	April 2011; /Revised August 2013

Analysis Provided By: Lyle Andersen, PT, CWCE
Andersen Physical Therapy, Inc.
3500 Coffee Road, Suite 3
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.

Chief Executive Office – Recruitment Unit
P.O. Box 3404, Modesto, CA 95354 Phone (209) 525-6341 Fax (209) 525-4056

Chief Executive Office – Risk Management Division
1010 10th Street, Suite 5900, Modesto, CA 95354 Phone (209) 525-5710 Fax (209) 525-5779

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 the department manager, some positions are assigned to the Hazardous Material Division and will work in the Hazardous Material Farm Disclosure Program and the Household Hazardous Waste Program. The Farm Disclosure Program is responsible for inventorying chemicals on farms and ensuring appropriate safety signs and training are maintained. The Household Hazardous Waste Program is responsible for educating the public about household chemical use and providing for the collection and disposal of waste household chemicals. Solid waste division employees retrieve confidential and non-confidential paper and cardboard refuse throughout many county owned offices and dispose as required.

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

<http://www.co.stanislaus.ca.us/HR/PDF/JobSpecifications.pdf>

Safety Requirements: 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. 95-gallon wheeled garbage can | 23. Lift gate |
| 2. Air compressors | 24. Liquid waste containers |
| 3. Air tanks | 25. Miscellaneous hand tools |
| 4. Back belt | 26. Mop |
| 5. Battery tester | 27. Pallet jack |
| 6. Box cutters | 28. Pallets |
| 7. Broom | 29. Pneumatic Diaphragm Oil Pump |
| 8. Ceramic test tubes | 30. Portable transfer hoses/valves |
| 9. Chemical cleaners | 31. Propane torch |
| 10. Computers | 32. Rakes |
| 11. Cubic yard boxes | 33. Recycling containers |
| 12. Drum dolly | 34. Respiratory protection |
| 13. Drums | 35. Rubber boots |
| 14. Dust pan | 36. Shop sweep |
| 15. Eye protection | 37. Shovel |
| 16. Forklift | 38. Solid waste containers |
| 17. Generator | 39. Steel drum opener |
| 18. Hand wear protection | 40. Trailer |
| 19. Hard hats | 41. Truck |
| 20. Hearing protection | 42. Tyvek suit |
| 21. Hydrometer | 43. Vehicle |
| 22. Knives | 44. Waders |
| | 45. Wheelbarrow |

*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%	Frequent =	34% - 66%
Occasional =	3% - 33%	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:..... <i>Hearing protection is available.</i>	Occasional
7.	Exposure to radiant or electrical energy:.....	Not Applicable
8.	Exposure to solvents or chemicals:..... <i>Refer to MSDS document.</i>	Frequent
9.	Exposure to slippery or uneven walking surfaces: land fill.....	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:..... <i>Hand protection is available</i>	Seldom
15.	Working proximity:..... Alone: Closely with others:	Occasional Constant
16.	Working inside:.....	Frequent
17.	Working outside:.....	Frequent

FUNCTIONAL ACTIVITIES



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

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
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.*

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

Assistive Devices: 2 and 4-Wheeled Cart, hand truck, pallet jack, wheelbarrow. Additionally, one person assistance is available with forces greater than 50 pounds.

Comments: Pushing is utilized with activities such as retrieving, returning, storing, transporting, recycled refuse, waste, equipment and supplies (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. push 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.*

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

Assistive Devices: 2 and 4-Wheeled Cart, hand truck, pallet jack, wheelbarrow. Additionally, one person assistance is available with forces greater than 50 pounds.

Comments: Pulling is utilized with activities such as retrieving, returning, storing, dragging transporting, recycled refuse, waste, 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.) **STAND-UP LIFT:** *Lifting weighted objects between floor and waist height.*

<u>MAXIMUM REQUIREMENT</u>	
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, liftgate. One person assistance is available with weights greater than 50 pounds.

Comments: A stand-up lift is utilized with activities such as retrieving, returning, storing, adjusting, moving, and / or transporting recycled refuse, waste, equipment, and 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; miscellaneous boxes, paper, corrugated fiber, batteries, furniture, scrap steel, cans, jars; miscellaneous known and unknown hazardous 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.*

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

Assistive Devices: Forklift, 2 and 4-Wheeled Cart, Hand Truck. Additionally, one person assistance is available with weights greater than 50 pounds.

Comments: A level lift is utilized with activities such as retrieving, returning, storing, adjusting, moving, and / or transporting recycled refuse, waste, equipment, and supplies (e.g. miscellaneous recycled items, reclamation of 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; miscellaneous boxes, paper, corrugated fiber, batteries, furniture, scrap steel, cans, jars; miscellaneous known and unknown hazardous 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. Additionally, one person assistance is available with weights greater than 50 pounds.

Comments: Weight carry is utilized with activities such as retrieving, returning, storing, adjusting, moving, and/or transporting recycled refuse, waste, equipment, and supplies (e.g. carry miscellaneous recycled items, reclamation of 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; miscellaneous boxes, paper budgets, paper corrugated fiber; batteries; furniture; scrap steel, cans, jars; miscellaneous known and unknown hazardous containers; sharps disposal containers).

6.) **OVERHEAD LIFT/PULL DOWN:** *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 is available 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/or transporting equipment and supplies (e.g. stacking miscellaneous solid waste; examining customers solid waste from 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/or transporting equipment, and supplies (e.g. lateral and forward reaching to assist with lifting miscellaneous reclaimed and recycled items; push/pull; drive vehicle; desktop work; lift to/from truck/trailer; reclaimed refuse inspection; tie-down loads). *The degree of elbow extension required for reaching will vary according to the employee's anthropometric reach.*

9.) **STOOP:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Stooping is performed when retrieving, returning, storing, adjusting, moving, and/or transporting equipment, and supplies (e.g. stoop to reach below waist height for lateral and forward reaching to assist with lifting miscellaneous reclaimed and recycled items; plant and reclaimed refuge inspection). *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.) **SQUAT:** (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/or transporting refuge, 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 reclaimed and recycled items; lift to/from truck/trailer; reclaimed refuge inspection; tie-down loads). 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/or transporting refuge, waste, equipment, and supplies (e.g. twist for lateral and forward reaching to assist with lifting miscellaneous reclaimed and recycled items; drive vehicle; operate forklift; worksite inspection; plant and reclaimed refuge inspection). *Twisting at the waist may be minimized by turning the whole body, including the feet.*

13.) **TURN:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Turning is performed when retrieving, returning, storing, adjusting, moving, and/or transporting refuge, waste, equipment, and supplies (e.g. lateral and forward reaching to assist with lifting miscellaneous reclaimed and recycled items; plant and reclaimed refuge 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 in order to go to/from the private businesses or industry 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 of safety ladders or steps to access reclaimed items, equipment and/or supplies (e.g. leaking valves, container 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.) **WALK:**

**MAXIMUM
FREQUENCY:** Frequent

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

19.) **SIT:**

**MAXIMUM
FREQUENCY:** Frequent

Comments: Sitting is performed for a maximum of 120-minute intervals for office work (e.g. sit for deskwork; drive vehicle; truck; operate forklift; meetings).

20.) **STAND:** (*Static*)

**MAXIMUM
FREQUENCY:** Occasional

Comments: Static standing is performed for a maximum of 30-minute intervals when retrieving, returning, storing, adjusting, and/or observing reclaimed refuge and recycled items (e.g. stand for work site inspection; site visits, surveillance; analyzing work sites and/or refuge at customer locations; consultation with collaborating agency, customer and/or colleague).

21.) **BALANCE:**

**MAXIMUM
FREQUENCY:** Constant

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

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

	<u>MAXIMUM REQUIREMENT</u>
HAND:	
Right:	Occasional
Left:	Occasional
Both:	Not Required
Either:	Not Required
FOOT:	
Right:	Occasional
Left:	Occasional
Both:	Not Required
Either:	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:

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

Comments: Grasping and coordination activities are performed when retrieving, returning, storing, adjusting, utilizing, moving, and/or transporting refuge, 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.

24.) CERVICAL (NECK) MOVEMENT:

<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). *Participating in observation of work environment allowing for safe working conditions. Full cervical range of motion is required to safely perform the job tasks.*

{End of Report}



Stanislaus County

JOB TASK ANALYSIS SUMMARY

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
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:

ENVIRONMENTAL TECHNICIAN

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

¹ The critical demands of the job.

Lyle Andersen, PT

Lyle Andersen, PT, CWCE
Preparer Signature

Date: _____

Date: _____

Contact Person
Title

Contact Person
Title

HM Manager

Date: *2/6/14*

Date: _____

Contact Person
Title

LA/au