



ERIE COUNTY WATER AUTHORITY
INTEROFFICE MEMORANDUM

To: Jerome D. Schad, Chair
Peggy A. LaGree, Vice Chair
Michele M. Iannello, Treasurer

From: Jennifer Hibit, Secretary to the Authority

Date: October 7, 2026

Subject: Amendment to Policy No. 13 Physical Standards for Selective Titles

The Office of the Secretary and the Human Resources Department conduct regular evaluations of the Authority's policies to verify that they maintain current standards and incorporate the most recent information. During a recent review, I noticed that essential information was inadvertently omitted from Policy No. 13 at the time of its adoption on September 20, 2023. While rectifying this oversight, the Policy underwent comprehensive review and revision, including the integration of Pre-Employment/Return to Work Screening Forms for each title grouping with their specific requirements. Job title changes were also addressed in this update.

A resolution to approve the amendment to Policy No. 13 Physical Standards for Selective Titles has been submitted to the Governance Committee and included in your Board Meeting packet for Monday, October 19, 2026.

Please feel free to contact me with any questions. Thank you.

JH:alh

ERIE COUNTY WATER AUTHORITY AUTHORIZATION FORM
For Approval/Execution of Board Meeting Documents

Requestor/Project Mgr.: Jennifer Hibit Project No.: _____

Document Name/Description: Policy No. 13 Amendment

Item Description: Choose one: Amendment

Other: _____

Action Requested: Choose one: Board Approval

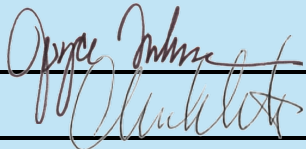
Other: _____



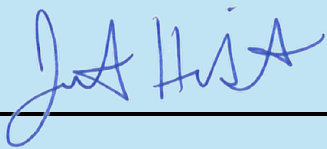
If Applicable, the MPO Amendment Form has been submitted to Central Purchasing.

APPROVED AS TO CONTENT:

✓ Required Approvals:

☒	Chief Financial Officer	<u></u>	Date: <u>10/08/2026</u>
☒	Chief Operating Officer	<u></u>	Date: <u>10/08/2026</u>
☐	Claims Rep. – Risk Manager	_____	Date: _____
☐	Comptroller	_____	Date: _____
☐	Director of Administration	_____	Date: _____
☐	Director of Distribution	_____	Date: _____
☐	Director of Human Resources	_____	Date: _____
☐	Director of Cybersecurity & IT	_____	Date: _____
☐	Director of Planning & WS	_____	Date: _____
☐	Director of Production	_____	Date: _____
☐	Director of Water Quality	_____	Date: _____
☐	Executive Engineer	_____	Date: _____
☒	General Counsel (Legal)	<u></u>	Date: <u>10/8/2026</u>
☐	Sr. Director of Operations & Infra.	_____	Date: _____
☐	Other:	_____	Date: _____

APPROVED FOR BOARD RESOLUTION

Secretary to the Authority  Date: 10/8/2026

Remarks: _____

Resolution Date: _____ Item No: _____

**ERIE COUNTY WATER AUTHORITY
HR Policies/Procedures**

Re: PHYSICAL STANDARDS For SELECTIVE TITLES		Policy No. 13	
Application:	All Employees	Adopted:	07/17/2007
		Amended:	11/15/2007
			03/20/2008
			06/12/2008
			08/21/2008
			10/02/2008
			11/24/2008
			01/28/2009
			06/18/2009
			01/26/2012
			10/20/2022¹
			09/20/2023
			10/19/2026

SEE ATTACHED POLICY

¹ This Physical Standards for Selective Titles Policy, restates & replaces H.R. Policy No. 13.0 (Physical Standards and Requirements Policy) and is intended to be consistent with the terms and conditions agreed upon by the respective collective bargaining units for White-Collar and Blue-Collar employees.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Analytical Chemist (Water Quality),
Senior Analytical Chemist (Water Quality), and
Laboratory Technician (Environmental
Chemistry)

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0-145°
Elbow Extension			0°
Wrist Flexion			0-80°
Wrist Extension			0-90°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0-120°
Hip Abduction			0-45°
Knee Flexion			0-135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0-65°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0-120°
Extension:	0-60°	Rotation (L):	Symm (B)	Extension:	0-25°
Rotation:	0-80°			Side bending	0-40°
Side bending:	0-45°	Symm = symmetrical		Rotation	0-80°

Special Tests	Normals (R/L)	Current Status
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
<u>Sitting</u>	<u>Prolonged without complaint</u>	
<u>Standing</u>	<u>Prolonged without complaint</u>	
<u>Push/Pull</u>	<u>30 lbs. for 3 ft., 10 reps</u>	
<u>Squat</u>	<u>30 sec</u>	
<u>Stairs</u>	<u>20 steps</u>	
<u>Dexterity</u>		
<u>Finger key pinch</u>	<u>At least 10 lbs.</u>	
<u>Lifting Assessment</u>	<u>Required</u>	
<u>Bilateral lifting floor to waist</u>	<u>10 lbs., 10 reps</u>	
<u>Bilateral lifting floor to waist</u>	<u>20 lbs., 5 reps</u>	
<u>Carrying Assessment</u>	<u>Required</u>	
<u>Bilateral Carry</u>	<u>10 lbs., 100 ft.</u>	
<u>Bilateral Carry</u>	<u>20 lbs., 50 ft.</u>	
<u>Six Minute Walk Test</u>	<u>Required</u>	
<u>Distance walked</u>	<u>50-85% age referenced norm</u>	

Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Job Analysis/Physical Requirements Job Description
Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician
(Environmental Chemistry)

Job Titles: Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician (Environmental Chemistry)

Physical Activities

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Rarely |
| • Stand | Frequently |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Never |
| • Stoop | Rarely |
| • Squat | Rarely |
| • Twisting | Rarely |
| • Kneeling | Rarely |
| • Climbing | Rarely |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Occasionally |
| • Lift 20-30 pounds | Never |
| • Lift 30-40 pounds | Never |
| • Lift 40-50 pounds | Never |
| • Lift over 50 lbs. | Never |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Occasionally |
| • Carry 20-30 pounds | Never |
| • Carry 30-40 pounds | Never |
| • Carry 40-50 pounds | Never |
| • Carry over 50 lbs. | Never |
| • Push/Pull under ten pounds | Occasionally |
| • Push/Pull 10-20 pounds | Rarely |
| • Push/Pull 20-30 pounds | Rarely |
| • Push/Pull 30-40 pounds | Rarely |
| • Push/Pull 40-50 pounds | Never |
| • Push/Pull over 50 lbs. | Never |
| • Reach above shoulder | Rarely |
| • Reach at shoulder | Rarely |
| • Reach below shoulder | Occasionally |
| • Rotation of head | Occasionally |
| • Walk on uneven surfaces | Rarely |

Erie County Water Authority
Job Analysis/Physical Requirements Job Description
Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician
(Environmental Chemistry)

Environmental Work Conditions

- Exposure to foul odors (Ether, Bleach)
- Exposure to toxic chemicals (Ether, Acetone, Bleach)
- Exposure to electric shock hazard.
- Exposure to biological hazards. (Ether, Acetone, Bleach)
- Exposure to all weather conditions (i.e., during field sample collection)
- Exposure to walking on uneven work surfaces (i.e., during field sample collection)
- Exposure to standing and running water (i.e., during field sample collection)
- Exposure to loud noise of machinery (Pump room during field sample collection)
- Exposure to slipping hazards walking on wet surfaces (i.e., during field sample collection)

Safety Equipment

- Latex gloves
- Safety glasses
- Lab Coat

Job Summary

The physical demand level of the Water Quality Analytical Chemist job family [job classifications: Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician (Environmental Chemistry)] would be classified as **Light** based upon requirements for exerting “a negligible amount of force” (i.e., under 10 pounds) continuously and 10-20 lbs. of force occasionally, as well as, a requirement of walking and standing to a significant degree (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991).

(Note: the Senior Analytical Chemist is primarily the responsibility for supervising the work of the Water Quality Analytical Chemist job family, however the Senior Analytical Chemist may be called upon to perform the essential function work tasks described herein, including essential function physical requirements, performed by the Analytical Chemist and the Lab Technician).

The Water Quality Analytical Chemist job family primarily engages in three major categories of work activities: (1) **Laboratory Work**, (2) **Maintaining Records and Data Entry** and (3) **Field Work**. These work activity categories and their essential function physical requirements are described below.

1) **Laboratory work** entails testing water samples and calculating and interpreting lab values and test results to detect possible hazards or abnormalities in the water. Performs analytical tests, which include tests for chloroforms and by-products of Chlorine, compounds and halo acetic acid. Utilizes test equipment including Gas chromatography-mass spectroscopy (GC-MS), Organic Carbon Analyzer and Vortex Genie machine. (Shaker). The Lab Technician is responsible for reporting abnormalities to the Senior Analytical Chemist and following policies and procedures based on the abnormal readings.

Stands at Lab workbenches for extended periods of time to perform lab testing of water samples.

Mixes small amounts of water samples with reagents in test tubes, sample bottles, beakers and Petri dishes using droppers and pipettes. Visually observes and records changes to samples.

**Erie County Water Authority
Job Analysis/Physical Requirements Job Description
Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician
(Environmental Chemistry)**

Places small amounts of water samples in analyzer machines, to perform automated testing. Observes and records equipment digital (display) readings.

Walks through Lab (a total area of approximately 8,000 square feet) and reaches at, above, or below shoulder level to access and restock supply cupboards. Supplies typically weigh 5 lbs or less (e.g., test tubes, reagents, trays, paper towels, etc.).

Approximately once every 2-3 months tanks of helium or compressed nitrogen in the lab need to be replaced. The replacement tank, which weighs approximately 100 pounds and is stored in the lab, is rolled on end into place a short distance of approximately 2-3 feet.

Physical Requirements: Standing for extended periods of time while conducting lab tests at workbench, **Walking** (through Lab to stock and access supplies), **Reaching at, above, and below shoulder level** (to perform lab tests, access supplies), **Fine finger grasping, gripping and manipulation** (Including manipulation of small items (e.g. test tubes, droppers, etc.), **Visual acuity and color discrimination** (e.g., to visualize and interpret changes to water samples after addition of reagents and reading of test instrument displays) **Pulling and pushing exerting up to 30 pounds of force rarely** (to roll replacement helium or nitrogen tanks into place- done approximately once every 2 -3 months).

- 2) **Maintaining records.** (This activity comprises approximately 50 percent of an 8 hour shift.) Manually records test results by writing in logbook or entering test results data into computer. Visually observes changes to samples, indicating test results and records results in logbook or computer data bank. Obtains sample analysis data from computer programs.

Physical Requirements: Writing, entry of data into computer, Visual acuity for use of computer monitor. **Walking, standing, sitting, gross and fine hand motor skills including: keystrokes to operate computer. Cognitive requirements include reading computer screen, reading printed and written data and material, interpreting data.**

- 3) **Field Work** occurs approximately 4 hours per shift, once a week for the Analytical Chemist and the Lab Technician and 4 hours per month for the Senior Analytical Chemist and involves driving to various sites including commercial customer sites and Water Authority pump stations to collect water samples for random testing.

Lifts and carries sample tool bag, including test equipment, and cooler of sample containers (test tube sized) from car to sample collection site or pumping station. The cooler and tool bag each weigh **no more than 10 pounds**.

Opens gates and door to enter pump stations (using force of no more than 10 pounds) Works at or below waist level to access faucet to collect water samples.

Cleans faucets with bleach prior to collecting samples to prevent contamination of samples. Turns on faucets and collects water samples in sample containers for testing.

Performs field tests at table or at floor level including tests for chlorine, temperature, PH and turbidity. Manually performs tests or tests samples using automated test equipment (turbidimeter and colorimeter).

**Erie County Water Authority
Job Analysis/Physical Requirements Job Description
Analytical Chemist (Water Quality), Senior Analytical Chemist (Water Quality), Lab Technician
(Environmental Chemistry)**

For manual testing of samples, adds reagents to filled sample containers, using a dropper. Visually observes and records changes to samples, indicating test results, in logbook.

For automated testing, places filled sample container in test equipment fixture. Observes and records equipment digital (display) reading in log book.

Manually documents findings in log and labels sample bottles.

Following field collection and testing at sample collection sites, drives to return to Lab. Carries the cooler, full of filled sample containers, weighing no more than 10 pounds from the car to the lab, an approximate distance of 60 – 100ft.

Physical Requirements: Standing, Walking, Lifting up to 10 lbs. (i.e., cooler, full of filled sample containers), **Pulling and pushing exerting up to 10 pounds of force** (opening gates and doors of pump stations), **Working at or below waist level** (to access faucet to collect water samples), **Crouching and stooping** (to perform field tests at floor level), **Grasping, gripping, wrist torque, fine motor manipulation** (e.g., opening sample bottles, cleaning faucet), **Visual acuity and color discrimination** (e.g., to observe and record test results), **Sitting, eye-hand, foot coordination** (e.g., for driving), **Climbing of stairs** (required to access test sites at some pumping stations).

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Water Quality Analytical Chemist job family are **Light** in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by exerting “a negligible amount of force” (i.e., under 10 pounds) continuously and 10-20 lbs. of force occasionally, and requirement of walking and standing to a significant degree. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

There is, however, a single job task whose physical requirements exceed the **Light** category. This job task involves the replacement once every 2-3 months of 100 pound tanks of helium or compressed nitrogen in the lab which requires pulling and pushing exerting up to 30 pounds of force, to roll replacement the tanks into place. This task, since it occurs only every 2-3 months, could be handled by another employee, if necessary, to accommodate an individual with lifting restrictions preventing work beyond the **Light** physical demand category.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Automotive Mechanic Helper,
Automotive Mechanic, and Automotive Mechanic
Crew Chief

Date of Screen:
Evaluator:

<u>Vital Statistics</u>		
<u>DOB:</u>	<u>Height:</u>	<u>Weight:</u>

<u>Range of Motion</u>			
<u>Upper Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Shoulder Flexion</u>			<u>0-170°</u>
<u>Shoulder Abduction</u>			<u>0-170°</u>
<u>Shoulder IR</u>			<u>0-80°</u>
<u>Shoulder ER</u>			<u>0-80°</u>
<u>Elbow Flexion</u>			<u>0-145°</u>
<u>Elbow Extension</u>			<u>0°</u>
<u>Wrist Flexion</u>			<u>0-80°</u>
<u>Wrist Extension</u>			<u>0-90°</u>
<u>Finger Flexion</u>			<u>Full Fist</u>
<u>Finger Extension</u>			<u>Flat Hand</u>
<u>Lower Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Hip Flexion</u>			<u>0-120°</u>
<u>Hip Abduction</u>			<u>0-45°</u>
<u>Knee Flexion</u>			<u>0-135°</u>
<u>Knee Extension</u>			<u>0°</u>
<u>Ankle Dorsiflexion</u>			<u>0-15°</u>
<u>Ankle Plantarflexion</u>			<u>0-65°</u>

<u>Range of Motion</u>					
<u>Cervical:</u>	<u>Normal</u>	<u>Thoracic:</u>	<u>Normal</u>	<u>Lumbar:</u>	<u>Normal</u>
<u>Flexion:</u>	<u>0-45°</u>	<u>Rotation (R):</u>	<u>Symm (B)</u>	<u>Flexion:</u>	<u>0-120°</u>
<u>Extension:</u>	<u>0-60°</u>	<u>Rotation (L):</u>	<u>Symm (B)</u>	<u>Extension:</u>	<u>0-25°</u>
<u>Rotation:</u>	<u>0-80°</u>			<u>Side bending</u>	<u>0-40°</u>
<u>Side bending:</u>	<u>0-45°</u>	<u>Symm = symmetrical</u>		<u>Rotation</u>	<u>0-80°</u>

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Special Tests</u>	<u>Normals (R/L)</u>	<u>Current Status</u>
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Push/Pull	60 lbs. for 5 ft. on surface, 10 reps	
Kneeling	30 seconds each knee	
Unilateral balance	30 seconds each leg	
Twisting	20x each side	
Prolonged bending	5 minutes	
Squatting	20x	
<u>Fine Motor/Dexterity</u>	<u>Required</u>	
Fingertip pinch	At least 20 lbs.	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to waist	20 lbs., 20 reps	
Bilateral lifting floor to waist	30 lbs., 15 reps	
Bilateral lifting floor to waist	50 lbs., 2 reps	
<u>Carrying Assessment</u>	<u>Required</u>	
Bilateral Carry	50 lbs., 100 ft.	
Unilateral Carry	30 lbs., 20 ft., 10 reps	
<u>Six Minute Walk Test</u>	<u>Required</u>	
Distance walked	50-85% age referenced norm	

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Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Automotive Mechanic Helper, Automotive Mechanic, Automotive Mechanic Crew Chief

Physical Activities

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Continuously |
| • Stand | Continuously |
| • Sit | Frequently |
| • Walk | Continuously |
| • Balance | Frequently |
| • Stoop | Continuously |
| • Squat | Frequently |
| • Twisting | Frequently |
| • Kneeling | Frequently |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Frequently |
| • Lift 20-30 pounds | Occasionally |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Occasionally |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Frequently |
| • Carry 20-30 pounds | Occasionally |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Occasionally |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Frequently |
| • Push/Pull 20-30 pounds | Occasionally |
| • Push/Pull 30-40 pounds | Occasionally |
| • Push/Pull 40-50 pounds | Occasionally |
| • Push/Pull over 50 lbs. | Occasionally |
| • Reach above shoulder | Frequently |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Frequently |
| • Rotation of head | Frequently |
| • Walk on uneven surfaces | Continuously |

**Erie County Water Authority
Physical Requirements Job Description**

Automotive Mechanic Helper, Automotive Mechanic, Automotive Mechanic Crew Chief

Environmental Work Conditions

- Exposure to uneven work surfaces
- Exposure to standing and running water (Working on leaks)
- Exposure to loud noise of machinery (welder and grinder, air powered tools)
- Exposure to foul odors (diesel gas, paint, paint thinner)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (Paint Thinner)
- Exposure to electric shock hazard (working on electrical systems)
- Exposure to mechanical moving parts hazard
- Exposure to ergonomic factors (e.g. holding body in awkward positions for extended periods of time to access and repair engine parts, heavy lifting)
- Exposure to all weather conditions. (e.g., during performance of field repairs on vehicles and equipment)
- Exposure to vibration (during operation of power and pneumatic tools)
- Exposure to dust

Safety Equipment

- Steel toed safety shoes
- Gloves
- Safety glasses
- Hearing protection with welding and grinding
- Welding mask with welding and grinding
- Hard hats
- Rain gear

Job Summary

The job classifications of Automotive Mechanic Helper / Automotive Mechanic / Automotive Mechanic Crew Chief are **Medium - Heavy** based upon requirements for exerting over 50 lbs. of force occasionally and/or up to 10 lbs. of force frequently (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991).

(Note that although the Crew Chief is primarily responsible for supervising the work of the Automotive Mechanic family, the Crew Chief may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Automotive Mechanics).

The Automotive Mechanic / Automotive Mechanic Crew Chief primarily engages in two major categories of work activities: (1) **Office Work** and (2) **Hands On Automotive Mechanic Work**.

- 1) **Office Work is performed exclusively by the Crew Chief.** This entails tracking and ordering supplies to replenish supply inventory, preparing appropriate documentation to set up vendor accounts.

The Crew Chief also supervises and organizes the work of Automotive Mechanics in areas such as: assignment of work, use and maintenance of tools and equipment and safety procedures.

**Erie County Water Authority
Physical Requirements Job Description**

Automotive Mechanic Helper, Automotive Mechanic, Automotive Mechanic Crew Chief

Physical Requirements include: Periods of standing and walking, reaching at or below waist level, reaching at or above shoulder level; Fine motor skills to include writing and typing on a computer keyboard. Visual acuity to read computer monitor. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation.

- 2) **Hands on Automotive Mechanic Work** entails repairs and routine maintenance of a fleet of 130 vehicles including: cars, trucks, vans, and heavy equipment. Repairs include: performing major engine repairs, transmission work, repair of brake systems and vehicle's electrical systems. Routine maintenance includes changing fluids (e.g., oil, coolant, hydraulic fluid) and tire change and repair.

Automotive Mechanics use a variety of tools in the performance of maintenance and repair of vehicles and equipment, including: power tools such as pneumatic wrenches to remove bolts quickly, the use of a sledgehammer weighing approximately 20 pounds for body work and fabrication, machine tools such as lathes and grinding machines to rebuild brakes and other parts; welding equipment for fabrication of bumpers, truck steps and other parts; common hand tools such as screwdrivers, pliers, and wrenches to work on small parts and get at hard-to-reach places; and jacks and hoists to lift and move large parts. The mechanic may also use a variety of diagnostic testing equipment, including multimeters when working on electrical systems and electronic components; and tachometers, dynamometers, and engine analyzers to locate engine malfunctions.

Work is carried out in a noisy, dusty indoor environment. The environment temperature varies as garage doors are continuously being opened and closed. Exposure to noise, dust and fumes is constant. Environment is hazardous due to patchy wet floors and materials lying on the floor including tools and extension cords.

Physical Requirements include: Constant standing and walking including standing in one place for an extended period of time (e.g., while performing a specific maintenance or repair task.) Bending, stooping crouching and holding the body in awkward positions sometimes for extended periods of time, in order to gain access to hard to reach vehicle or equipment parts requiring repair or replacement. Climbing (e.g., in and out of truck cabs, onto equipment to reach areas to repair). Reaching at or below waist level and at or above shoulder level. Upper body strength (e.g., use of sledgehammer for body work) the application of torque and fine manipulation (use of wrenches, screwdrivers, and other hand tools to remove bolts and disassemble parts and mechanisms) are part of the position's physical requirements.

The Automotive Mechanic may be required to lift and carry up to 50 lbs. alone or with the assistance of another Mechanic Handling and movement of very heavy parts and equipment such as removing engines and transmissions weighing up to 500 pounds is accomplished using a manually operated portable crane or jack. The crane or jack must be wheeled into place, chains need to be connected to the part or equipment to be lifted or moved and the crane or jack is operated through repetitive pumping (jack) or cranking (crane).

The Automotive Mechanic may be called out for on-the-spot, field based repairs of disabled vehicles. These calls occur an average of two to three times a week and their frequency increases during the winter months. During the performance of field based repairs, the Mechanic may be exposed to ambient weather conditions (e.g., cold, rain, snow, etc.).

Erie County Water Authority
Physical Requirements Job Description

Automotive Mechanic Helper, Automotive Mechanic, Automotive Mechanic Crew Chief

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Automotive Mechanic Worker job family are “**Medium - Heavy**” in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by requirements for exerting over 50 lbs. of force occasionally and /or up to 10 lbs. of force frequently. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Pump Maintenance Worker, Pump
Maintenance/Control Operator Crew Chief

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0-145°
Elbow Extension			0°
Wrist Flexion			0-80°
Wrist Extension			0-90°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0-120°
Hip Abduction			0-45°
Knee Flexion			0-135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0-65°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0-120°
Extension:	0-60°	Rotation (L):	Symm (B)	Extension:	0-25°
Rotation:	0-80°			Side bending	0-40°
Side bending:	0-45°	Symm = symmetrical		Rotation	0-80°

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Special Tests</u>	<u>Normals (R/L)</u>	<u>Current Status</u>
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Pushing dolly	200 lbs. for 15 ft.	
Turning overhead valves with wrench	10 reps	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to waist	30 lbs., 10 reps	
<u>Carrying Assessment</u>	<u>Required</u>	
Carry on stairs	30 lbs. on 4 stairs, 10 reps	
Unilateral Carry	30 lbs., 20 ft., 10 reps	
<u>Six Minute Walk Test</u>	<u>Required</u>	
Distance walked	50-85% age referenced norm	

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Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

**Erie County Water Authority
Physical Requirements Job Description**

~~Control Operator~~**Pump Maintenance Worker, and Pump Maintenance/Control Operator Crew Chief**

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Frequently |
| • Stand | Frequently |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Frequently |
| • Stoop | Frequently |
| • Squat | Frequently |
| • Twisting | Frequently |
| • Kneeling | Frequently |
| • Use of Hands (simple grasp) | Frequently |
| • Use of Hands (gripping) | Frequently |
| • Use of Hands (fine motor manipulation) | Frequently |
| • Lift under ten pounds | Frequently |
| • Lift 10-20 pounds | Occasionally |
| • Lift 20-30 pounds | Occasionally |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Occasionally |
| • Carry under ten pounds | Frequently |
| • Carry 10-20 pounds | Occasionally |
| • Carry 20-30 pounds | Occasionally |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Occasionally |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Occasionally |
| • Push/Pull 20-30 pounds | Occasionally |
| • Push/Pull 30-40 pounds | Occasionally |
| • Push/Pull 40-50 pounds | Occasionally |
| • Push/Pull over 50 lbs. | Occasionally |
| • Reach above shoulder | Occasionally |
| • Reach at shoulder | Occasionally |
| • Reach below shoulder | Frequently |
| • Rotation of head | Frequently |
| • Walk on uneven surfaces | Frequently |

Erie County Water Authority
Physical Requirements Job Description
~~Control Operator~~Pump Maintenance Worker, and Pump Maintenance/Control Operator Crew
Chief

Environmental Work Conditions

- Exposure to all weather conditions
- Exposure to uneven work surfaces
- Exposure to standing and running water
- Exposure to loud noise of machinery (Pump Room)
- Exposure to foul odors (Bleach)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (Bleach)
- Exposure to confined spaces.
- Exposure to electric shock hazard.
- Exposure to mechanical moving parts hazard
- Exposure to biological hazards.(Bleach)
- Exposure to ergonomic factors (e.g heavy lifting, work in awkward positions.)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Safety glasses / eye protection
- Hearing protection
- Dust mask (when sweeping)
- Chemical respirator (For Chlorine)
- Hard hats
- Rain gear

Job Summary

The physical demand level of the ~~Control Operations~~Control Operator job family (job classifications: ~~Control Pump Maintenance Worker~~Operator, Pump Maintenance/Control Crew Chief,) would be classified as **Medium - Heavy** based upon requirements for exerting over 50 lbs. of force occasionally and /or up to 10 lbs. of force frequently (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991).

(Note that although the Crew Chief is primarily responsible for supervising the work of the Pump Maintenance Worker~~Control Operator~~ job family, the Crew Chief may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Pump Maintenance Worker~~Control Operators~~.

The ~~Control Operator~~Operations job family primarily engages in three major categories of work activities: (1) **Control Board Operation** (2) **Pump Station Maintenance and Repair** and (3) **General Pump Station Housekeeping and Maintenance**. These work activity categories and their attendant essential function physical requirements are described below.

Erie County Water Authority
Physical Requirements Job Description
Pump Maintenance WorkerControl-Operator, and Pump Maintenance/Control Operator Crew
Chief

- (1) **Control Board Operator:** This category of work is performed by the Pump Maintenance WorkerControl-Operator an average of one shift (~~work-day~~workday) per week. The Pump Maintenance WorkerControl-Operator monitors several computers located at the Union Road Service Center, which control system operations (e.g., water flow) for pumping stations and water tanks located throughout Erie County. The Pump Maintenance WorkerControl-Operator inputs and retrieves data regarding the water system's operations through keyboard entry. The Pump Maintenance WorkerControl-Operator identifies the location and nature of water system malfunctions through reading, analyzing, and interpreting data including computer screen displays and printed reports.

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Pump Maintenance WorkerControl-Operators also monitor and respond immediately to system alarms, indicating equipment or process malfunctions at specific points in the water distribution system, which could affect the system's overall operation. Pump Maintenance WorkerControl-Operator response to alarms includes reading and interpreting computer screens and data and inputting data or commands into the computer to diagnose or correct the malfunction.

Pump Maintenance WorkerControl-Operators also monitor security equipment including security cameras and alarms, located throughout the water distribution system, to monitor entry and exit to water system facilities (e.g., pumping stations) and insure system security.

Pump Maintenance WorkerControl-Operators also monitor the location of ECWA vehicles and personnel, and communicate with personnel, through the use of the telephone and radio, for security reasons and to determine the availability of personnel needed to perform system maintenance, repairs, and related tasks.

Physical Requirements: Extended periods of sitting, fine motor movements to include typing on computer keyboard, use of computer mouse, operating controls, including switches and push buttons. **Visual acuity** to view or read computer monitor and security monitors. Ability to read and interpret data per established standards. Ability to follow established emergency procedures. Ability to exercise judgment in responding to and reporting emergency situations.

- (2) **Pump Station Maintenance and Repair:** This category of work is performed by the Pump Maintenance WorkerControl-Operator an average of 3-5 shifts (work days) per week.

Pump Maintenance WorkerControl-Operators participate in maintenance and repair activities of equipment and machinery at numerous pump stations as assigned. Maintenance and repair includes both routine and scheduled maintenance as well as emergency equipment repairs.

Loads power and hand tools weighing up to 50 lbs.(e.g., Impact Wrench) into ECWA transport vehicles, to transport to work ~~sites~~sites.

Work in two person teams to dismantle for transport, load onto ECWA vehicle, and reassemble Gantry Crane at work site, as required. Lifts, carries, and assembles steel I beam crane components weighing up to 50 lbs. Uses hand tools and spring loaded steel locking pins to assemble and adjust crane height.

Drives ECWA ~~vehiele~~vehicles to pump station sites.

Erie County Water Authority
Physical Requirements Job Description

Pump Maintenance Worker~~Control Operator~~, and **Pump Maintenance**~~Control Operator~~ Crew
Chief

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Disassembles, inspects and repairs pumps and motors up to 1500HP, Electric Check Valves, Altitude Valves and other pump station equipment as assigned.

Uses wrenches to remove large bolts from valve lids. Lifts and removes valve lids weighing up to 100 lbs. with the assistance of a co-worker. Visually checks seals on valve pistons for leaks or erosion. Uses hand tools to replace motor, pump and valve parts and perform on-site repairs.

May use chain falls or Gantry Crane to lift and/or move pump motors or valves weighing up to 15 tons, for disassembly or transport for off-site repairs.

Cleans and paints pump station tanks and equipment as directed. Uses ladders and stepladders to access tanks for painting or cleaning, carrying paint bucket weighing approximately 10 lbs.

Physical Requirements: Manually lifts and carries tools, equipment and parts weighing up to 50 lbs. (e.g., Gantry Crane components, impact wrenches, etc.) alone and up to 100 lbs (e.g., valve lids) with the assistance of a co-worker. Pushes, pulls and exerts force to manually operate chain falls and Gantry Crane to lift and move heavy parts and equipment weighing 5 – 15 tons (Note: lifting and moving of heavy objects using cranes is accomplished with 2 person teams). Frequently works at, below or above waist level, crouches and stoops and is required to work in awkward positions, sometimes for extended periods of time, to perform equipment maintenance and repairs. Climbs stairs and step ladders to access tanks for cleaning and painting. Grasping, gripping, wrist torque, fine motor manipulation using small hand tools.

- (3) **General Pump Station Housekeeping and Maintenance:** These tasks involve the operator snow plowing and shoveling all Pump Stations and Tank sites, working with and directing summer help in cleaning, painting and miscellaneous maintenance. Assisting contractors and utility personnel, performing landscaping maintenance such as tree, brush, and grass cutting that has not been performed by other personnel.

Routine maintenance also involves tasks such as: snow removal on sidewalks with snow blower and shovel, and driving and operating plow for driveways and parking lots; salt application during the winter months as needed. ~~Pump Maintenance Worker~~**Operators** may operate backhoe to accomplish certain maintenance tasks, requiring driving and repetitive use of hands and feet to operate controls.

Routine maintenance also involves tasks such as: snow removal on sidewalks with snow blower and shovel, and driving and operating plow for driveways and parking lots; salt application during the winter months as needed. ~~Pump Maintenance Worker~~**Operators** may operate backhoe to accomplish certain maintenance tasks, requiring driving and repetitive use of hands and feet to operate controls.

Physical Requirements: Operation of EWCA vehicle to plow snow. Use of various gardening tools such as lawn movers, shears and tree trimmers. **Working at heights and climbing ladders** for tree work and painting. **Fine motor movements of hands** (e.g. grasping, gripping, and turning) are required for using tools and operating vehicles. **Exposure to loud (machine) noises**, e.g. lawn mowers; **Use of vibrating machinery** including: snow blowers.

Potential Accommodations

A considerable portion of the ~~Pump Maintenance Worker~~~~Control Operator~~ job duties involve maintenance and repair activities which require routine lifting of up to 50 lbs. individually or in 2 person teams. These duties and their attendant physical requirements cannot be modified without altering a fundamental component of the job's function and purpose.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Diesel Mechanic, Pump Mechanic,
Assistant Pump Mechanic Crew Chief and Pump
Mechanic Crew Chief

Date of Screen:
Evaluator:

<u>Vital Statistics</u>		
<u>DOB:</u>	<u>Height:</u>	<u>Weight:</u>

<u>Range of Motion</u>			
<u>Upper Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Shoulder Flexion</u>			<u>0-170°</u>
<u>Shoulder Abduction</u>			<u>0-170°</u>
<u>Shoulder IR</u>			<u>0-80°</u>
<u>Shoulder ER</u>			<u>0-80°</u>
<u>Elbow Flexion</u>			<u>0-145°</u>
<u>Elbow Extension</u>			<u>0°</u>
<u>Wrist Flexion</u>			<u>0-80°</u>
<u>Wrist Extension</u>			<u>0-90°</u>
<u>Finger Flexion</u>			<u>Full Fist</u>
<u>Finger Extension</u>			<u>Flat Hand</u>
<u>Lower Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Hip Flexion</u>			<u>0-120°</u>
<u>Hip Abduction</u>			<u>0-45°</u>
<u>Knee Flexion</u>			<u>0-135°</u>
<u>Knee Extension</u>			<u>0°</u>
<u>Ankle Dorsiflexion</u>			<u>0-15°</u>
<u>Ankle Plantarflexion</u>			<u>0-65°</u>

<u>Range of Motion</u>					
<u>Cervical:</u>	<u>Normal</u>	<u>Thoracic:</u>	<u>Normal</u>	<u>Lumbar:</u>	<u>Normal</u>
<u>Flexion:</u>	<u>0-45°</u>	<u>Rotation (R):</u>	<u>Symm (B)</u>	<u>Flexion:</u>	<u>0-120°</u>
<u>Extension:</u>	<u>0-60°</u>	<u>Rotation (L):</u>	<u>Symm (B)</u>	<u>Extension:</u>	<u>0-25°</u>
<u>Rotation:</u>	<u>0-80°</u>			<u>Side bending</u>	<u>0-40°</u>
<u>Side bending:</u>	<u>0-45°</u>	<u>Symm = symmetrical</u>		<u>Rotation</u>	<u>0-80°</u>

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Special Tests</u>	<u>Normals (R/L)</u>	<u>Current Status</u>
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Push/Pull	60 lbs. for 5 ft. on surface, 10 reps	
Kneeling	30 seconds each knee	
Unilateral Balance	30 seconds each leg	
Twisting	20x each side	
Prolonged Bending	5 minutes	
Squatting	20x	
<u>Fine Motor/Dexterity</u>		
Fingertip pinch	At least 20 lbs.	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to waist	20 lbs., 20 reps	
Bilateral lifting floor to waist	30 lbs., 15 reps	
Bilateral lifting floor to waist	50 lbs., 2 reps	
Bilateral lifting floor to waist	70 lbs., 1 rep	
<u>Carrying Assessment</u>	<u>Required</u>	
Bilateral Carry	50 lbs., 100 ft.	
Unilateral Carry	30 lbs., 20 ft., 10 reps	
<u>Push/Pull</u>		
Push/Pull 30 lbs. on level surface	10x	
<u>Six Minute Walk Test</u>	<u>Required</u>	
Distance walked	50-85% age referenced norm	

Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Diesel Mechanic, Pump Mechanic, Assistant Pump Mechanic Crew Chief, and Pump Mechanic
Crew Chief

Job Titles: Diesel Mechanic, Pump Mechanic, Diesel/Pump Mechanic Crew Chief.

Education/Certification: All Pump/Diesel Mechanics require Class A CDL license.

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Continuously |
| • Stand | Continuously |
| • Sit | Occasionally |
| • Walk | Frequently |
| • Balance | Occasionally |
| • Stoop | Occasionally |
| • Squat | Frequently |
| • Twisting | Occasionally |
| • Kneeling | Frequently |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Frequently |
| • Lift 20-30 pounds | Frequently |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Rarely |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Frequently |
| • Carry 20-30 pounds | Frequently |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Rarely |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Frequently |
| • Push/Pull 20-30 pounds | Frequently |
| • Push/Pull 30-40 pounds | Occasionally |
| • Push/Pull 40-50 pounds | Occasionally |
| • Push/Pull over 50 lbs. | Rarely |
| • Reach above shoulder | Frequently |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Frequently |
| • Rotation of head | Frequently |
| • Walk on uneven surfaces | Continuously |

**Erie County Water Authority
Physical Requirements Job Description
Diesel Mechanic, Pump Mechanic, Assistant Pump Mechanic Crew Chief, and Pump Mechanic
Crew Chief**

Environmental Work Conditions

- Exposure to uneven work surfaces
- Exposure to standing and running water (Working in pump stations)
- Exposure to loud noise of machinery (welder and grinder, air powered tools)
- Exposure to foul odors (diesel gas, paint)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (Spray paint)
- Exposure to electric shock hazard (working on generators, pumps)
- Exposure to mechanical moving parts hazard
- Exposure to ergonomic factors (e.g. holding body in awkward positions for extended periods of time to access and repair pumps, heavy lifting)
- Exposure to all weather conditions. (e.g. during performance of field repairs on pump stations and pipe lines)
- Exposure to vibration (during operation of power and pneumatic tools)
- Exposure to dust
- Exposure to heights (working on water tanks)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Safety glasses
- Hearing protection with welding and grinding
- Welding mask with welding and grinding
- Hard hats
- Rain gear
- Dust masks
- Safety harness when working at heights

Job Summary

The job classifications of Diesel Mechanic / Pump Mechanic, Diesel/Pump Mechanic Crew Chief are **Medium – Heavy** based upon requirements for exerting up to 75 lbs. rarely, 20 – 50 lbs. of force occasionally and /or up to 10 - 25 lbs. of force frequently (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991)

(Note that although the Crew Chief is primarily responsible for supervising the work of the Diesel/Pump Mechanic family, the Crew Chief may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Diesel/Pump Mechanics)

The Diesel/Pump Mechanic, Assistant Pump Mechanic Crew Chief, and Pump Mechanic Crew Chiefs primarily engage in three major categories of work activities: (1) **Office Work** (2) **Hands on Pump Mechanic Work** and (3) **Hands on Diesel Mechanic Work**.

Erie County Water Authority
Physical Requirements Job Description
Diesel Mechanic, Pump Mechanic, Assistant Pump Mechanic Crew Chief, and Pump Mechanic Crew Chief

- (1) **Office Work is performed exclusively by the Crew Chief.** This entails planning and ordering supplies to complete job tasks, preparing appropriate documentation to set up vendor accounts, ~~coordinate~~coordinating bids on supplies and working closely with state contract vendors. Drives to pick up supplies required for job assignments.

The Crew Chief also supervises and organizes the work of Diesel/Pump Mechanics in areas such as: assignment of work, use and maintenance of tools and equipment and safety procedures.

Physical Requirements include: Periods of standing and walking, ~~Reaching~~reaching at or below waist level and at or above shoulder level (e.g., while accessing and purchasing supplies from vendor stock.) Fine motor skills to include writing and typing on a computer keyboard. Visual acuity to read computer monitor. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation. Eye, hand, foot coordination (e.g., required for driving) Periods of sitting while driving to and from job site and supply vendors.

- (2) **Hands on Pump Mechanic Work** entails repairs and routine maintenance of 2 water treatment plants and 24 pump stations. Repairs include: performing pump repairs, pipe work, pipe and pump replacement, repair of pump station building and structures including roofing and exterior building repairs.

Diesel/Pump Mechanics use a variety of tools in the performance of maintenance and repair of pumps and equipment, including: power tools such as pneumatic wrenches to remove bolts quickly, the use of a sledgehammer weighing 16 pounds for pipe fitting, machine tools such as welders and grinding machines to repair bricks and other parts; welding equipment for fabrication of pipe fittings, step rails and other parts; common hand tools such as screwdrivers, pliers, and wrenches to work on small parts and get at hard-to-reach places; cranes, backhoes and Bobcats to lift and move large parts

Work in two person teams to dismantle for transport, load onto ECWA vehicle, and reassemble Gantry Crane at work site, as required. Lifts, carries, and assembles steel I beam crane components weighing up to 50 lbs. Uses hand tools and spring loaded steel locking pins to assemble and adjust crane height.

Work is carried out either in a noisy, indoor environment such as pump stations or outside exposed to the elements (e.g., cold, rain, snow, etc.). Exposure to noise, dust and fumes. Environment at the pump stations are hazardous due to patchy wet floors and materials lying on the floor including tools and extension cords.

Physical Requirements include: Constant standing and walking including standing in one place for an extended period of time (e.g., while performing a specific maintenance or repair task.) Bending, stooping crouching and holding the body in awkward positions sometimes for extended periods of time, in order to gain access to hard to reach pump or pipe parts requiring repair or replacement. Climbing (e.g., in and out of truck cabs, onto roofs and water tanks to reach areas to repair or replace, sometimes at heights requiring the use of a safety harness). Reaching at or below waist level and at or above shoulder level. Upper body strength (e.g., use of sledgehammer or hammer and chisel for repair work), use of shovels while laying pipe lines, the application of torque and fine finger manipulation (use of wrenches, screwdrivers, and other hand tools to remove bolts and disassemble parts and mechanisms) are part of the position's physical requirements.

Erie County Water Authority
Physical Requirements Job Description
Diesel Mechanic, Pump Mechanic, Assistant Pump Mechanic Crew Chief, and Pump Mechanic
Crew Chief

The Pump Mechanic may be required to lift and carry up to 50 lbs. (e.g., crane I beam components) alone or with the assistance of another Mechanic. Handling and movement of very heavy parts and equipment such as removing pumps and pipes weighing up to maximum 10,000 pounds (Pump Motor) is accomplished using a manually operated portable crane, chain falls or Bobcat. The crane must be wheeled into place, chains need to be connected to the part or equipment to be lifted or moved and the crane is operated through repetitive manual cranking.

- (3) **Hands on Diesel Mechanic Work.** These duties are performed exclusively by the Diesel Mechanic however the Diesel Mechanic may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Pump Mechanics. This work entails repair and maintenance of 11 mobile and stationary (power) generators including routine maintenance includes changing fluids (e.g., oil, air filters etc). The Diesel Mechanic may be required to drive a pickup truck or tractor/trailer to move generators to various pump stations and treatment plant locations, when they are required to generate back-up power.

Physical Requirements include: Constant standing and walking including standing in one place for an extended period of time (e.g., while performing a specific maintenance or repair task.) Bending, stooping crouching and holding the body in awkward positions sometimes for extended periods of time, in order to gain access too hard to reach generator or parts requiring repair or replacement. Climbing (e.g., in and out of truck cabs, onto trailers to gain access to generators) Reaching at or below waist level and at or above shoulder level. Upper body strength (e.g. lifting and pulling generators cables weighing up to 75 pounds) the application of torque and fine finger manipulation (use of wrenches, screwdrivers, and other hand tools to remove bolts and disassemble parts and mechanisms) are part of the position's physical requirements. Eye, hand, foot coordination and periods of sitting while driving to and from off site locations as well as delivering generators to pump stations as required.

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Diesel Mechanic/Pump Mechanic job family are “**Medium -Heavy**” in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by requirements for exerting up to 75 pounds of force rarely, 20 – 50 lbs. of force occasionally and /or up to 10 - 25 lbs. of force frequently. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

**Erie County Water Authority
Physical Requirements Job Description
File Clerk**

Job Titles: File Clerk

Hours of Work: Monday through Friday 8:00am – 4.30pm

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Frequently |
| • Stand | Frequently |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Occasionally |
| • Stoop | Rarely |
| • Squat | Occasionally |
| • Twisting | Rarely |
| • Kneeling | Occasionally |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Frequently |
| • Lift 10-20 pounds | Occasionally |
| • Lift 20-30 pounds | Rarely |
| • Lift 30-40 pounds | Never |
| • Lift 40-50 pounds | Never |
| • Lift over 50 lbs. | Never |
| • Carry under ten pounds | Frequently |
| • Carry 10-20 pounds | Occasionally |
| • Carry 20-30 pounds | Rarely |
| • Carry 30-40 pounds | Never |
| • Carry 40-50 pounds | Never |
| • Carry over 50 lbs. | Never |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Frequently |
| • Push/Pull 20-30 pounds | Rarely |
| • Push/Pull 30-40 pounds | Never |
| • Push/Pull 40-50 pounds | Never |
| • Push/Pull over 50 lbs. | Never |
| • Reach above shoulder | Frequently |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Frequently |
| • Rotation of head | Occasionally |
| • Walk on uneven surfaces | Never |

**Erie County Water Authority
Physical Requirements Job Description
File Clerk**

Environmental Work Conditions

- Exposure to ergonomic factors (e.g. Bending and reaching while filing)
- Exposure to trip and fall hazards (e.g. tripping over boxes and pallets)

Safety Equipment

- Rubber Gloves while handling old files

Job Summary

The job classification of File Clerk is **Light** based upon requirements for exerting up to 20 lbs. of force occasionally (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991).

The File Clerk primarily engages in three major categories of work activities: (1) **Computer Work** (2) **Filing** and (3) **Scanning**.

- (1) **Computer Work:** Use of computer on a daily basis to assign cross reference file numbers and track project files.

Receives incoming project documentation and project files and assigns cross reference file number for filing and retrieval of all documentation related to specific project. Enters project number and corresponding file number into computer database.

Maintains and updates computer database regarding contents and location of file cabinets and banker's boxes.

Retrieves, records and tracks files borrowed or removed from the file room by Authority personnel.

Physical Requirements include: Fine motor skills to include writing and typing on a computer keyboard. Visual acuity to read computer monitor. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation. Periods of sitting while at the computer. Cognitive requirements include ability to interpret and analyze data.

- (2) **Filing:** Entails receiving, storing, filing and maintaining files used by Authority employees.

Receives and examines incoming project documentation, including project narrative, drawings and project related correspondence to identify the specific project and project number. Looks up the cross reference file number and file location for the specific project, by accessing the cross reference file number database. Walks to the specific location of the file (file cabinet or banker's box) to place the documentation in the appropriate file.

May be required to lift and move banker's boxes containing older files, weighing up to 20 lbs. May transport banker's boxes containing files, using a two wheeled dolly, to various locations within the 19,000 square foot Union Road facility.

Occasionally uses a small step stool for climbing to reach files on top of the filing cabinets.

**Erie County Water Authority
Physical Requirements Job Description
File Clerk**

Work is carried out in an indoor environment in the filing room, ~~Environment-environment~~ is temperature controlled. Environment in the filing area is potentially hazardous for trips and falls due to materials lying on the floor including pallets and boxes.

Physical Requirements include: Frequent standing and walking (e.g. retrieving and storing files.) frequent bending, in order to retrieve and store files in metal filing cabinets or shelves. Climbing (e.g. using small step stool, to retrieve files on top of the filing cabinets) requiring Reaching at or below waist level and at or above shoulder level. Upper body strength (e.g. lifting full bankers boxes, 10" x 12" x 15", weighing up to 20 pounds), Periods of sitting while driving to and from Post Office to deliver mail (Union Road location only). Squatting and kneeling to reach bottom draws of filing cabinets.

The File Clerk may be required to lift and carry up to 20 lbs. (full bankers boxes) alone ~~or~~ and also with the use of a 2 wheeled dolly.

- (3) **Scanning** entails using a scanner to produce digital images of documents for storage in computer databases. Documents scanned include: contractor invoices, contractor certificates of insurance, maps (Union Road location only) and postcards for meter reads.

Receives contractor documents including invoices and certificates of insurance and postcards with meter read information completed by customers. Reviews contractor documents to determine associated project number and accesses computer database to determine cross reference file number.

Places documents in scanner and operates scanner to produce digital image of document. Files contractor documentation in appropriate project file.

Receives maps of projects and water line locations. Examines map to determine project number or file number. Determines cross reference file number by accessing computer database. Places map in scanner and operates scanner to produce digital image of document. Files maps in dedicated file cabinet. (Note this duty is performed by File Clerks at the Union Road Service Center location only)

Physical Requirements include: Fine motor skills to operate the scanner. Visual acuity to read scanner display screen. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation. Periods of sitting while at the scanner. Bending, in order to store files in filing cabinets. Squatting and kneeling to reach bottom draws of filing cabinets. Frequent standing and walking (e.g. walking in and around building to retrieve and deliver items to be scanned.)

Potential Accommodations

A significant portion of the File Clerk job's physical demands involve activities such as bending, stooping, and reaching at or above shoulder level which are necessary to perform the job's essential functions (i.e., accessing, storing and retrieving files) and cannot, therefore, be modified without changing the essential function and nature of the position.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Assistant Instrumentation, Electrical & Electronics Technician, Instrument Electrical & Electronics Technician, Electronics Technician, Instrument Electrical & Electronics Chief, and Electrical Engineer

Date of Screen:
Evaluator:

<u>Vital Statistics</u>		
<u>DOB:</u>	<u>Height:</u>	<u>Weight:</u>

<u>Range of Motion</u>			
<u>Upper Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Shoulder Flexion</u>			<u>0-170°</u>
<u>Shoulder Abduction</u>			<u>0-170°</u>
<u>Shoulder IR</u>			<u>0-80°</u>
<u>Shoulder ER</u>			<u>0-80°</u>
<u>Elbow Flexion</u>			<u>0-145°</u>
<u>Elbow Extension</u>			<u>0°</u>
<u>Wrist Flexion</u>			<u>0-80°</u>
<u>Wrist Extension</u>			<u>0-90°</u>
<u>Finger Flexion</u>			<u>Full Fist</u>
<u>Finger Extension</u>			<u>Flat Hand</u>
<u>Lower Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Hip Flexion</u>			<u>0-120°</u>
<u>Hip Abduction</u>			<u>0-45°</u>
<u>Knee Flexion</u>			<u>0-135°</u>
<u>Knee Extension</u>			<u>0°</u>
<u>Ankle Dorsiflexion</u>			<u>0-15°</u>
<u>Ankle Plantarflexion</u>			<u>0-65°</u>

<u>Range of Motion</u>					
<u>Cervical:</u>	<u>Normal</u>	<u>Thoracic:</u>	<u>Normal</u>	<u>Lumbar:</u>	<u>Normal</u>
<u>Flexion:</u>	<u>0-45°</u>	<u>Rotation (R):</u>	<u>Symm (B)</u>	<u>Flexion:</u>	<u>0-120°</u>
<u>Extension:</u>	<u>0-60°</u>	<u>Rotation (L):</u>	<u>Symm (B)</u>	<u>Extension:</u>	<u>0-25°</u>
<u>Rotation:</u>	<u>0-80°</u>			<u>Side bending</u>	<u>0-40°</u>
<u>Side bending:</u>	<u>0-45°</u>	<u>Symm = symmetrical</u>		<u>Rotation</u>	<u>0-80°</u>

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Special Tests</u>	<u>Normals (R/L)</u>	<u>Current Status</u>
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Sitting	Prolonged without complaint	
Standing	Prolonged without complaint	
Push/Pull	30 lbs. for 3 ft., 10 reps	
Squat	30 sec, 10 reps	
Stairs	20 steps	
Twisting	20x each	
Kneeling	30 seconds each knee	
Single leg balance	30 seconds each leg	
Bending	10 reps	
<u>Dexterity</u>		
Finger key pinch	At least 10 lbs.	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to waist	10 lbs., 10 reps	
Bilateral lifting floor to waist	30 lbs., 5 reps	
Bilateral lifting floor to waist	50 lbs., 5 reps	
<u>Carrying Assessment</u>	<u>Required</u>	
Unilateral Carry	30 lbs., 100 ft.	
Bilateral Carry	50 lbs., 50 ft.	
<u>Push/Pull</u>		
Push/Pull 30 lbs. on level surface	10x	
<u>Six Minute Walk Test</u>	<u>Required</u>	
Distance walked	50-85% age referenced norm	

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Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Assistant Instrumentation, Electrical and Electronics Technician / Instrument Electrical and
Electronics Technician / Electronics Technician / Instrument Electrical and Electronics Chief
Technician / Electrical Engineer

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Continuously |
| • Stand | Continuously |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Occasionally |
| • Stoop | Occasionally |
| • Squat | Occasionally |
| • Twisting | Frequently |
| • Kneeling | Occasionally |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Occasionally |
| • Lift 20-30 pounds | Occasionally |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Rarely |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Occasionally |
| • Carry 20-30 pounds | Occasionally |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Rarely |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Frequently |
| • Push/Pull 20-30 pounds | Frequently |
| • Push/Pull 30-40 pounds | Rarely |
| • Push/Pull 40-50 pounds | Rarely |
| • Push/Pull over 50 lbs. | Rarely |
| • Reach above shoulder | Frequently |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Frequently |
| • Rotation of head | Continuously |
| • Walk on uneven surfaces | Occasionally |

Erie County Water Authority
Physical Requirements Job Description
Assistant Instrumentation, Electrical and Electronics Technician / Instrument Electrical and Electronics Technician / Electronics Technician / Instrument Electrical and Electronics Chief Technician / Electrical Engineer

Environmental Work Conditions

- Exposure to uneven work surfaces
- Exposure to standing and running water (Working in pump stations)
- Exposure to loud noise of machinery (Working in pump room)
- Exposure to foul odors (Chlorine)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (Fluoride, Caustic Soda)
- Exposure to electric shock hazard (working on control panels)
- Exposure to ergonomic factors (e.g. holding body in awkward positions for extended periods of time to access and repair instruments on pumps)
- Exposure to all weather conditions. (e.g. during performance of field repairs at pump stations)
- Exposure to heights (working on water tanks)
- Exposure to confined spaces (working in pits)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Safety glasses
- Hearing protection
- Hard hats
- Rain gear
- Air Samplers (used in confined spaces such as the pits)

Job Summary

The job classifications of Assistant Instrumentation, Electrical and Electronics Technician, Instrument Electrical and Electronics Technician, Electronics Technician, Instrument Electrical and Electronics Chief Technician, Electrical Engineer are **Medium** based upon requirements for exerting up to 20-50 lbs of force occasionally (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991)

(Note that although the Electrical Engineer is primarily responsible for supervising the work of the Instrumentation Technician job family, the Electrical Engineer may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by the Instrumentation Technician)

The Assistant Instrumentation, Electrical and Electronics Technician, Instrument Electrical and Electronics Technician, Electronics Technician, Instrument Electrical and Electronics Chief Technician, Electrical Engineer primarily engage in two major categories of work activities: (1) **Computer Work** (2) **Hands on Instrumentation Technician/Electrical Engineer work.**

Erie County Water Authority
Physical Requirements Job Description
Assistant Instrumentation, Electrical and Electronics Technician / Instrument Electrical and
Electronics Technician / Electronics Technician / Instrument Electrical and Electronics Chief
Technician / Electrical Engineer

- (1) **Computer Work is performed on a daily basis** and entails use of computer software for circuit design and programming of programmable logic controllers (PLC's) and programmable (software) interfaces. The job family also performs on-site reading and calibration of instrumentation such as water level transmitters, as well as flow and pressure transmitters.

Instrumentation Technicians and Electrical Engineers travel to 60 Pump stations and 2 water treatment plants to perform on-site reading and calibration of instruments and programming of PLC's. The job family also utilizes computer software (e.g., AutoCAD) to design piping and PLC layouts and Motor Control Circuits, and to program PLC's (Programmable Logic Controllers) and programmable interfaces (Software)

The Electrical Engineer is exclusively responsible for paying invoices and managing purchase orders.

Physical Requirements include: Periods of standing and walking, ~~Reaching~~reaching at or below waist level (to read control panels and calibrate instruments), using the computer in the field. Fine motor skills to include writing and typing on a computer keyboard. Visual acuity to read computer monitor. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation. Periods of sitting while at the computer, and while driving to various work sites.. Eye, hand, foot coordination (for driving to various work sites) Cognitive requirements include ability to interpret and analyze data.

- (2) **Hands on instrumentation Technician/Electrical Engineer work** ~~entail~~entails performance of on-site repairs and routine maintenance of instrumentation at 2 water treatment plants and 60 pump stations.

Instrumentation Technicians and Electrical Engineers use a variety of tools in the performance of maintenance and repair of instruments, including: common hand tools such as screwdrivers, pliers, and wrenches to work on small parts and get at hard-to-reach places. Voltage and current meters are also used to trouble shoot and repair control panels and instruments.

The Instrumentation Technician and Electrical Engineer may be required to lift and carry parts up to 50 lbs. (Batteries, Motor Starters) alone or with the assistance of another Technician. Handling and movement of very heavy parts and equipment such as batteries and Motor Control Cabinets weighing up to maximum 150 pounds is accomplished by 2 individuals with the ~~aid~~aid of a forklift. Periods of sitting are required while driving to and from off site locations. Carries tool box (weighing 30 – 40 lbs) and test equipment to job site.

Work is carried out either in a noisy, indoor environment such as pump stations or outside exposed to the elements (e.g., cold, rain, snow, etc.). Environment at the pump stations ~~are~~is hazardous due to patchy wet floors and materials lying on the floor including tools and extension cords.

Erie County Water Authority
Physical Requirements Job Description
Assistant Instrumentation, Electrical and Electronics Technician / Instrument Electrical and
Electronics Technician / Electronics Technician / Instrument Electrical and Electronics Chief
Technician / Electrical Engineer

Physical Requirements include: Constant standing and walking including standing in one place for an extended period of time (e.g., while performing a specific maintenance or repair task.) Lifting, pushing, pulling carrying up to 50-75 lbs. Bending, stooping crouching and holding the body in awkward positions sometimes for extended periods of time, in order to gain access to hard to reach control panels requiring repair or maintenance. Climbing (e.g., in and out of truck cabs, down ladders into pits and to reach areas to repair or maintain, sometimes at heights requiring the use of a ladder). Reaching at or below waist level and at or above shoulder level (for repairs and to calibrate instruments). Upper body strength (e.g., lifting batteries or wire conduits), the application of torque and fine hand and finger manipulation (use of wrenches, screwdrivers, and other hand tools to remove bolts and disassemble control panels) are part of the position's physical requirements. Periods of sitting while driving to various work sites. Eye, hand, foot coordination (driving to work sites and operating forklift). Cognitive requirements include ability to interpret and analyze data, problem solving, reading meters, linear and abstract reasoning.

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Instrument Technician and Electrical Engineer job family are **Medium** in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by exerting 20 – 50 lbs. of force occasionally (up to 1/3 of the work day). It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Water Meter Repair Worker I, Water
Meter Repair Worker II, Meter Service Worker,
Senior Meter Service Worker, and Meter Service
Crew Chief

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0- 130 145°
Elbow Extension			0°
Wrist Flexion			0- 75 80°
Wrist Extension			0- 85 90°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0- 115 120°
Hip Abduction			0-4045°
Knee Flexion			0- 120 135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0- 40 65°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0- 61 20°
Extension:	0- 60 40°	Rotation (L):	Symm (B)	Extension:	0- 30 25°
Rotation:	0- 75 80°			Sideglide (R):	Symm (B)
Side bending Bend:	0-45°	Symm = symmetrical		Sideglide (L):	Symm (B)
Retraction:				Side Bend:	0-40°
				Rotation:	0-80°

Special Tests	Normals (R/L)	Current Status
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Pulling at chest height for 3 ft. and lower to ground	40 lbs., 10 reps	
Turning valve on/off with wrench	10 reps	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to shoulder	30 lbs., 10 reps	
<u>Carrying Assessment</u>	<u>Required</u>	
Carry on 4 stairs	40 lbs. on 4 stairs, 10 reps	
Unilateral Carry	40 lbs. for 20 ft., 10 reps	
<u>Six Minute Walk Test</u>	<u>Required</u>	
Distance walked	50-85% age referenced norm	

<u>Posture Assessment</u>		
Protruded Head:	Thoracic Kyphosis:	Lumbar Lordosis:
Rounded Shoulders:	Sitting Posture:	Lateral Shift:
Cervical Lordosis:		

<u>Strength Assessment</u>							
<u>Upper Ext.</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>	<u>Lower Ext.</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
Shoulder Flex			5/5	Hip Flex			5/5
Shoulder Abd			5/5	Hip Abd			5/5
Shoulder ER			5/5	Knee Flex			5/5
Shoulder IR			5/5	Knee Ext			5/5
Elbow Flex			5/5	Ankle DF			5/5
Elbow Ext			5/5	Ankle PF			5/5
Wrist Flex			5/5				
Wrist Ext			5/5				

<u>Maximum Grip Strength Test</u>		
Handle Position 2	Left: _____ lbs.	Right: _____ lbs.
<u>5 Position Hand Grip Test</u>		
1.	Left: _____ lbs.	Right: _____ lbs.
2.	Left: _____ lbs.	Right: _____ lbs.
3.	Left: _____ lbs.	Right: _____ lbs.
4.	Left: _____ lbs.	Right: _____ lbs.
5.	Left: _____ lbs.	Right: _____ lbs.

Other Tests	
Neer's Impingement	PROM R/L Shoulder Employee reports -
Tinel's Sign/Phalen's Test	Employee reports -

Maximal Voluntary Isometric Strength (in lbs.)					
Test	Lift 1	Lift 2	Lift 3	Criteria	Met/Not Met
Floor Lift				40 lbs.	
Leg Lift				40 lbs.	
High Near Lift				40 lbs.	
Push				40 lbs.	
Pull				40 lbs.	

Job Specific Functional Tests				
Distance:	Min. Acceptable Weight	BPM	Met/Not Met	
Lifting:				
Lift 30 lbs. floor to shoulder (meter)	30 lbs. — 10 reps			
Turning:				
Turn valves on/off with wrench	10 reps			
Carry:				
Carry 40 lbs. 20 feet with one hand (tools/meter)	40 lbs. — 10 reps			
Carry 40 lbs. 4 steps (carry tools up/down stairs)	40 reps			

Treadmill Endurance Test		Aerobic Fitness Score	
Walking Speed (> 2mph)	Heart Rate (BPM)	Predicted VO 2 max	PDC Equivalent

Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Water Meter Repair Worker I, Water Meter Repair Worker II, Meter Service Worker, Senior
Meter Service Worker, and Meter Service Crew Chief

<u>Key:</u>	<u>Rarely -</u>	<u>Less than one percent of the workday</u>
	<u>Occasionally -</u>	<u>Up to 1/3 of the workday</u>
	<u>Frequently -</u>	<u>1/3 to 2/3 of the workday</u>
	<u>Continuously -</u>	<u>Over 2/3 of the workday</u>

• <u>Bend</u>	<u>Occasionally</u>
• <u>Stand</u>	<u>Frequently</u>
• <u>Sit</u>	<u>Frequently</u>
• <u>Walk</u>	<u>Frequently</u>
• <u>Balance</u>	<u>Occasionally</u>
• <u>Stoop</u>	<u>Occasionally</u>
• <u>Squat</u>	<u>Occasionally</u>
• <u>Twisting</u>	<u>Occasionally</u>
• <u>Kneeling</u>	<u>Occasionally</u>
• <u>Use of Hands (simple grasp)</u>	<u>Frequently</u>
• <u>Use of Hands (gripping)</u>	<u>Frequently</u>
• <u>Use of Hands (fine motor manipulation)</u>	<u>Frequently</u>
• <u>Lift under ten pounds</u>	<u>Frequently</u>
• <u>Lift 10-20 pounds</u>	<u>Occasionally</u>
• <u>Lift 20-30 pounds</u>	<u>Occasionally</u>
• <u>Lift 30-40 pounds</u>	<u>Occasionally</u>
• <u>Lift 40-50 pounds</u>	<u>Rarely</u>
• <u>Lift over 50 lbs.</u>	<u>Rarely</u>
• <u>Carry under ten pounds</u>	<u>Continuously</u>
• <u>Carry 10-20 pounds</u>	<u>Continuously</u>
• <u>Carry 20-30 pounds</u>	<u>Occasionally</u>
• <u>Carry 30-40 pounds</u>	<u>Occasionally</u>
• <u>Carry 40-50 pounds</u>	<u>Rarely</u>
• <u>Carry over 50 lbs.</u>	<u>Rarely</u>
• <u>Push/Pull under ten pounds</u>	<u>Continuously</u>
• <u>Push/Pull 10-20 pounds</u>	<u>Frequently</u>
• <u>Push/Pull 20-30 pounds</u>	<u>Frequently</u>
• <u>Push/Pull 30-40 pounds</u>	<u>Occasionally</u>
• <u>Push/Pull 40-50 pounds</u>	<u>Rarely</u>
• <u>Push/Pull over 50 lbs.</u>	<u>Rarely</u>
• <u>Reach above shoulder</u>	<u>Frequently</u>
• <u>Reach at shoulder</u>	<u>Frequently</u>
• <u>Reach below shoulder</u>	<u>Frequently</u>
• <u>Rotation of head</u>	<u>Continuously</u>
• <u>Walk on uneven surfaces</u>	<u>Occasionally</u>
• <u>Stair Climbing</u>	<u>Occasionally</u>

Erie County Water Authority
Physical Requirements Job Description
Water Meter Repair Worker I, Water Meter Repair Worker II, Meter Service Worker, Senior
Meter Service Worker, and Meter Service Crew Chief

Environmental Work Conditions

- Exposure to all weather conditions
- Exposure to uneven work surfaces
- Exposure to standing and running water
- Exposure to slipping hazards walking on wet surfaces
- Exposure to confined spaces (commercial meters only)
- Exposure to electric shock hazard
- Exposure to mechanical moving parts hazard (commercial meters only)
- Exposure to ergonomic factors (e.g., installing commercial meters >72 lbs. using large wrenches weighing up to 45 lbs. to apply torque)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Hard Hats
- Rain Gear

Job Summary

The physical demand level of the Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker would be classified as Medium based on lifting 30-50 lbs. occasionally and exerting 10-25 lbs. of force occasionally as when pipe wrenches are used. (Source: U.S. Department of Labor, Dictionary of Occupational Titles, Vol. II, 4th Edition Rev. 1991)

(Note that although the Senior Meter Service Worker and Meter Service Crew Chief are primarily responsible for supervising work from Water Authority Headquarters, they may be called upon to perform essential function work tasks described herein upon rare occasions).

The Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker engages in five major categories of work activities: (1) **Installing new and replacing old water meters;** (2) **turning on and shutting off water service;** (3) **reading water meters;** (4) **processing new requests for water service;** (5) and **trouble-shooting customer complaints** for water bills of unusual amounts.

Trouble shooting customer complaints requires on-site visit to customer address. The Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker perform a walking tour of the home to inspect all water fixtures to identify faulty (e.g., leaking) fixtures. The customer is then advised to repair the fixture.

Processing new requests for water service and reading water meters involve on-site visits by the Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker to customer residences to collect the requested documentation from the customer and read and record usage from the water meter. These are accomplished at the homeowner's front door and at the household water meter respectively.

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Erie County Water Authority
Physical Requirements Job Description
Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker,
Senior Meter Service Worker, and Meter Service Crew Chief

Physical requirements for the above work categories include: Standing, walking, driving (to and from Service Center to customer residences), climbing (stairs), bending, stooping (e.g., to read meters, examine fixtures for leaks) reading (meters), writing (record keeping)

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Turning on and off water services requires an on-site visit to customer address. The shut-off valve is located in a box at ground level (yard, sidewalk, or street) outside the home. The housing top is removed by hand, and a T-bar steel wrench, approximately three feet long weighing approximately 15 lb., is guided onto the valve and wrist torque applied to turn on or off water supply to the house as appropriate. Housing cover is replaced when shut off accomplished.

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The installation of water meters requires the most physical activity among all five categories of work activity.

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Installation of Residential Meters: Upon arrival at the customer's address, the worker locates the existing water meter, usually located in the basement of the home. Once in the basement the water meter can be located anywhere from floor to ceiling level, however most often it will be found at waist level or lower to the floor. The worker carries hand tools weighing approximately 10 lbs. and a new 1 1/2 inch standard residential meter weighing 31 lbs., in a bucket. He climbs down the stairs. Using hand tools, water service is shut off. The old meter is removed by loosening screws with hand tools and lifting the meter off the pipe. Residual water is emptied into the bucket. The new meter is then placed in the water line and hand tools are used to fasten it in place. Depending upon the position of the meter, replacement may require bending, stooping, or kneeling. If the meter is located above waist level, the worker may be required to reach at or above shoulder level. Having completed installation, the worker climbs back up the basement stairs carrying the bucket of hand tools and the old meter.

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Physical requirements include: Driving motor vehicles, walking (smooth and uneven surfaces), standing, stair climbing, lifting and carrying up to 40 lbs. (meters and tools), stooping, kneeling, twisting at waist, reaching at, below, and above waist and shoulder level, depending upon the location of the meter being serviced, pushing, pulling and application of torque. Fine finger manipulation, use of hand tools.

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Installation of Commercial Meters: Commercial water meters, weighing between 72 and 900 lb., are installed by two or more Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Workers. Meters this size are manipulated by power cranes mounted on the trucks which the workers operate with electronic controls (push buttons and levers). Meters are positioned and lowered into place for installation using the crane. Meters are fastened onto water lines using hand tools, including large wrenches weighing up to 45 lbs., to fasten bolts on the meter housing onto the water line.

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Physical requirements include: Driving motor vehicles, walking (smooth and uneven surfaces), standing, lifting and carrying up to 45 lbs. (large wrenches), pushing and pulling (to guide large meters lowered by crane, into place), stooping, kneeling, twisting at waist, reaching at, below, and above waist and shoulder level, gross (upper extremity) and fine finger application of torque. Fine finger manipulation, use of hand tools.

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Erie County Water Authority
Physical Requirements Job Description
Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker,
Senior Meter Service Worker, and Meter Service Crew Chief

Potential Accommodations

Virtually all major categories of work within the Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker job family require frequent standing and walking (up to two thirds of the work day) and stair climbing (up to one third of the work day). These essential function physical requirements can, therefore, not be modified without altering the fundamental purpose of the job.

The medium duty aspects of the job (i.e., lifting 30-50 lbs. and frequent bending, twisting, and overhead reaching) are contained in two significant work categories (installation of residential and commercial meters) of the Water Meter Repair Worker I, Water Meter Repair Worker II, and Meter Service Worker job, which also cannot be modified without altering the fundamental purpose of the job.

Modification of either of the two above described essential function physical job requirements would also require the hiring or assignment of additional staff to perform the modified functions, which would be prohibitive due to staffing and budgetary constraints.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Microbiologist (Water Quality), Senior
Microbiologist (Water Quality), and Laboratory
Technician (Environmental Microbiology)

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0-145°
Elbow Extension			0°
Wrist Flexion			0-80°
Wrist Extension			0-90°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0-120°
Hip Abduction			0-45°
Knee Flexion			0-135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0-65°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0-120°
Extension:	0-60°	Rotation (L):	Symm (B)	Extension:	0-25°
Rotation:	0-80°			Sideglide (R):	Symm (B)
Side bending:	0-45°	Symm = symmetrical		Sideglide (L):	Symm (B)
				Side bending	0-40°
				Rotation	0-80°

Special Tests	Normals (R/L)	Current Status
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
<u>Sitting</u>	<u>Prolonged without complaint</u>	
<u>Standing</u>	<u>Prolonged without complaint</u>	
<u>Push/Pull</u>	<u>30 lbs. for 3 ft., 10 reps</u>	
<u>Squat</u>	<u>30 sec</u>	
<u>Stairs</u>	<u>20 steps</u>	
<u>Dexterity</u>		
<u>Finger key pinch</u>	<u>At least 10 lbs.</u>	
<u>Lifting Assessment</u>	<u>Required</u>	
<u>Bilateral lifting floor to waist</u>	<u>10 lbs., 10 reps</u>	
<u>Bilateral lifting floor to waist</u>	<u>20 lbs., 5 reps</u>	
<u>Carrying Assessment</u>	<u>Required</u>	
<u>Bilateral Carry</u>	<u>10 lbs., 100 ft.</u>	
<u>Bilateral Carry</u>	<u>20 lbs., 50 ft.</u>	
<u>Six Minute Walk Test</u>	<u>Required</u>	
<u>Distance walked</u>	<u>50-85% age referenced norm</u>	

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Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

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**Erie County Water Authority
Physical Requirements Job Description
Microbiologist (Water Quality), Senior Microbiologist (Water Quality)
and Lab Technician (Environmental Microbiology)**

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Occasionally |
| • Stand | Frequently |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Never |
| • Stoop | Occasionally |
| • Squat | Occasionally |
| • Twisting | Rarely |
| • Kneeling | Rarely |
| • Climbing | Rarely |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Frequently |
| • Lift 20-30 pounds | Rarely |
| • Lift 30-40 pounds | Rarely |
| • Lift 40-50 pounds | Rarely |
| • Lift over 50 lbs. | Never |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Frequently |
| • Carry 20-30 pounds | Rarely |
| • Carry 30-40 pounds | Rarely |
| • Carry 40-50 pounds | Rarely |
| • Carry over 50 lbs. | Never |
| • Push/Pull under ten pounds | Occasionally |
| • Push/Pull 10-20 pounds | Rarely |
| • Push/Pull 20-30 pounds | Never |
| • Push/Pull 30-40 pounds | Never |
| • Push/Pull 40-50 pounds | Never |
| • Push/Pull over 50 lbs. | Never |
| • Reach above shoulder | Rarely |
| • Reach at shoulder | Occasionally |
| • Reach below shoulder | Frequently |
| • Rotation of head | Frequently |
| • Walk on uneven surfaces | Occasionally |

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**Erie County Water Authority
Physical Requirements Job Description
Microbiologist (Water Quality), Senior Microbiologist (Water Quality) and Lab Technician
(Environmental Microbiology)**

Environmental Work Conditions

- Exposure to all weather conditions (i.e., during field sample collection)
- Exposure to walking on uneven work surfaces
- Exposure to standing and running water
- Exposure to loud noise of machinery (Pump room)
- Exposure to foul odors (bleach)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (bleach)
- Exposure to electric shock hazard.
- Exposure to biological hazards. (bleach)

Safety Equipment

- Steel toed safety shoes
- Latex gloves
- Safety glasses
- Hearing protection
- Dust Mask
- Rain Gear
- Lab Coat

Job Summary

The physical demand level of the Water Quality Microbiologist family (job classifications: Microbiologist – Water Quality, Senior Microbiologist – Water Quality, Lab Technician – Environmental Microbiology) would be classified as **Light** based upon requirements for exerting up to 10 lbs. of force Frequently and /or 10-20 lbs. of force Occasionally (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991)

(Note: the Senior Microbiologist is primarily the responsibility for supervising the work of the Water Quality job family; however the Senior Microbiologist may be called upon to perform the essential function work tasks described herein, including essential function physical requirements, performed by the Microbiologist and the Lab Technician)

The Water Quality job family primarily engages in two major categories of work activities: (1) **Field Work** and (2) **Laboratory Work**. These work activity categories and their essential function physical requirements are described below.

- (1) **Field Work** entails approximately 4 hours per shift and involves driving to various sites including commercial customer sites and Water Authority pump stations to collect water samples for random testing.

Lifts and carries sample tool bag, including test equipment, and cooler of sample containers (test tube sized) from car to sample collection site or pumping station. The cooler and tool bag each weigh **no more than 10 pounds** [Once a quarter, field samples gathered for testing require larger samples (gallon sized containers) with use of a larger cooler **weighing no more than 40 pounds**.]

**Erie County Water Authority
Physical Requirements Job Description
Microbiologist (Water Quality), Senior Microbiologist (Water Quality) and Lab Technician
(Environmental Microbiology)**

Opens gates and door to enter pump stations (using force of no more than 10 pounds) Works at or below waist level to access faucet to collect water samples.

Cleans faucets with bleach prior to collecting samples to prevent contamination of samples. Turns on faucets and collects water samples in sample containers for testing.

Performs field tests at table or at floor level including tests for chlorine, temperature, PH and turbidity. Manually performs tests or tests samples using automated test equipment (turbidometer and colorimeter)

For manual testing of samples, adds reagents to filled sample containers, using a dropper. Visually observes and records changes to samples, indicating test results, in log book.

For automated testing, places filled sample container in test equipment fixture. Observes and records equipment digital (display) reading in log book.

Manually documents findings in log and labels sample bottles.

Following field collection and testing at sample collection sites, drives to return to Lab.
Carries the cooler, full of filled sample containers, weighing no more than 10 pounds from the car to the lab, an approximate distance of 60 – 100ft.

Physical Requirements: Standing, Walking, Lifting and carrying up to 40 lbs [10 lbs. frequently (i.e., on a daily basis) and 40 lbs. once a quarter (every 3 months)] Pulling and pushing exerting up to 10 pounds of force (opening gates and doors of pump stations), **Working at or below waist level** (to access faucet to collect water samples), **Crouching and stooping** (to perform field tests at table or at floor level), **Grasping, gripping, wrist torque, fine motor manipulation** (e.g., opening sample bottles, cleaning faucet), **Visual acuity and color discrimination** (e.g., to observe and record test results), **Sitting, eye-hand, foot coordination** (e.g., for driving), **Climbing of stairs** (required to access test sites at some pumping stations)

- (2) **Laboratory work** entails testing water samples and calculating and interpreting lab values and test results to detect possible hazards or abnormalities in the water. Performs microbiological tests, which include tests for bacteria, chloroforms and use of bright field, phase contrast and ipifluorescence techniques. The Technician is responsible for reporting abnormalities to the Senior Microbiologist and following policies and procedures based on the abnormal readings.

Stands at Lab workbenches for extended periods of time to perform lab testing of water samples.

Mixes small amounts of water samples with reagents in test tubes and Petri dishes using droppers and pipettes. Visually observes and records changes to samples, indicating test results and records results in log book.

Visually inspects water samples using magnifying devices, fluorescent and UV devices to identify presence of bacteria.

Places small amounts of water samples in analyzer machines, to perform automated testing. Observes and records equipment digital (display) readings and records results in log book.

**Erie County Water Authority
Physical Requirements Job Description
Microbiologist (Water Quality), Senior Microbiologist (Water Quality) and Lab Technician
(Environmental Microbiology)**

Manually records test results by writing in log book or entering test results data into computer.

Walks through Lab and reaches at, above, or below shoulder level to access and restock supply cupboards. Supplies typically weigh 5 lbs or less (e.g., test tubes, trays, paper towels, etc.).

Physical Requirements: **Standing for extended periods of time** while conducting lab tests at workbench, Walking (through Lab to stock and access supplies), **Reaching at, above, and below shoulder level** (to perform lab tests, access supplies), **Fine finger grasping, gripping and manipulation** [Including manipulation of small items (e.g., test tubes, droppers, etc.)], **Writing, entry of data into computer, Visual acuity and Color discrimination** (e.g., to interpret lab test results involving color changes of water samples, read instrument displays, and utilization of magnification equipment).

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Water Quality job family are **Light** in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by frequent exertion of force under 10 lbs. and occasional exertion of force (e.g., lifting, carrying) of 10 – 20 lbs. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

There is, however, a single job task whose physical requirements exceed the **Light** category. This job task involves the once a quarter field collection of large (approximately 1 gallon) samples leading to the requirement of lifting and carrying a 40 lb cooler. This task, since it occurs only once a quarter, could be handled by another employee if necessary to accommodate an individual with lifting restrictions preventing work beyond the **Light** physical demand category.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Stores Clerk, Senior Stores Clerk,
 Administrative Assistant – Stores, Warehouse
 Supervisor, Water Utility Worker - Stores

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0-145°
Elbow Extension			0°
Wrist Flexion			0-80°
Wrist Extension			0-90°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0-120°
Hip Abduction			0-45°
Knee Flexion			0-135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0-65°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0-120°
Extension:	0-60°	Rotation (L):	Symm (B)	Extension:	0-25°
Rotation:	0-80°			Side bending:	0-40°
Side bending:	0-45°	Symm = symmetrical		Rotation:	0-80°

Special Tests	Normals (R/L)	Current Status
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test v	#	

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Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
<u>Push dolly</u>	<u>50 lbs., 100 ft.</u>	
<u>Pull dolly</u>	<u>50 lbs., 100 ft.</u>	
<u>Lifting Assessment</u>	<u>Required</u>	
<u>Bilateral lifting floor to waist</u>	<u>30 lbs., 10 reps</u>	
<u>Bilateral lifting floor to waist</u>	<u>40 lbs., 5 reps</u>	
<u>Bilateral lifting floor to waist</u>	<u>55 lbs., 1 rep</u>	
<u>Carrying Assessment</u>		
<u>Carry on 4 stairs</u>	<u>10 lbs. on 4 stairs, 5 reps</u>	
<u>Unilateral Carry</u>	<u>10 lbs. for 20 ft., 2 reps</u>	
<u>Six Minute Walk Test</u>		
<u>Distance walked</u>	<u>50-85% age referenced norm</u>	

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Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

**Erie County Water Authority
Physical Requirements Job Description
Stores Clerk, Senior Stores Clerk,**

Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Occasionally |
| • Stand | Frequently |
| • Sit | Occasionally |
| • Walk | Continuously |
| • Balance | Rarely |
| • Stoop | Rarely |
| • Squat | Occasionally |
| • Twisting | Rarely |
| • Kneeling | Rarely |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Continuously |
| • Lift under ten pounds | Frequently |
| • Lift 10-20 pounds | Frequently |
| • Lift 20-30 pounds | Frequently |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Rarely |
| • Carry under ten pounds | Frequently |
| • Carry 10-20 pounds | Frequently |
| • Carry 20-30 pounds | Frequently |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Rarely |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Occasionally |
| • Push/Pull 20-30 pounds | Frequently |
| • Push/Pull 30-40 pounds | Occasionally |
| • Push/Pull 40-50 pounds | Occasionally |
| • Push/Pull over 50 lbs. | Rarely |
| • Reach above shoulder | Occasionally |
| • Reach at shoulder | Occasionally |
| • Reach below shoulder | Occasionally |
| • Rotation of head | Frequently |
| • Walk on uneven surfaces | Frequently |

**Erie County Water Authority
Physical Requirements Job Description
Stores Clerk, Senior Stores Clerk,
Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores**

Environmental Work Conditions

- Exposure to uneven work surfaces
- Exposure to standing and running water (in garage and stores area)
- Exposure to loud noise of machinery (When laborers are at work repairing station pumps etc)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to mechanical moving parts hazard (Tow Motors / Forklift)
- Exposure to ergonomic factors (e.g. Reaching for supplies)
- Exposure to all weather conditions. (Accessing to the outside storage barn pump and reading outside meters)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Rain gear

Job Summary

The job classifications of Stores Clerk, Senior Stores Clerk, Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker – Stores are **Medium** based upon requirements for exerting up to 30 lbs. of force frequently (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991)

(Note that although the Administrative Assistant – Stores is primarily responsible for supervising the work of the Stores family, the Administrative Assistant may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by the Stores Clerk and Water Utility Worker)

The Stores Clerk, Senior Stores Clerk, Administrative Assistant – Stores, Warehouse Supervisor, Water Utility Worker – Stores primarily engage in three major categories of work activities: (1) **Computer Work** (not performed by the Laborer) (2) **Storing and Issuing supplies** (3) **General Maintenance**

- (1) **Computer Work is performed on a daily basis.** (*Note this category of work is not performed by the Stores-Laborer.*) This entails using the computer to prepare requisitions and bids for materials to be purchased, maintaining records on stock, preparing and printing inventory daily logs, ordering supplies, monitoring and handling of State and County contractor bids.

The Administrative Assistant is exclusively responsible for monitoring and ordering Gas/Diesel fuel (for ECWA vehicle use), stone (for repairs and patches) and rock salt (for hazardous weather conditions).

Physical Requirements include: Fine motor skills to include writing and typing on a computer keyboard. Visual acuity to read computer monitor. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation. Extended periods of sitting while at the computer. Cognitive requirements include ability to interpret and analyze data.

**Erie County Water Authority
Physical Requirements Job Description
Stores Clerk, Senior Stores Clerk,
Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores**

- (2) **Storing and issuing supplies** entails receiving, storing, issuing supplies and equipment to other ECWA employees

Stores Clerk, Senior Stores Clerk, Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores issue a variety of tools and equipment, including: common hand tools such as screwdrivers, chisels, and wrenches, personal equipment such as belts, gloves, hard hats and rain gear.

Works at receiving window requiring extensive standing and walking. Receives and reviews requisitions for supplies. Retrieves requested supplies, requiring extensive walking to reach storage areas. Pulls supplies from storage areas and shelves requiring reaching at or below waist level and at or above shoulder level, bending to reach supplies on lower shelves or pallets, use of a wheeled stepladder for climbing to reach supplies on upper shelves. May be required to lift and carry parts and supplies weighing up to 55 lbs. alone or with the assistance of another Stores Clerk or Water Utility Worker.

Receives supply deliveries and may be required to assist with unloading trucks.

Uses forklift and power assisted pallet jacks to receive and move loaded pallets and heavy supplies and equipment, such as valves weighing up to 100 lbs. Uses 2-wheeled and 4-wheeled carts for moving supplies such as Bell joint valve and valve joints weighing 55 pounds apiece. May be required to move multiple units.

Work is carried out in an indoor environment in the store room, Environment is temperature controlled but is exposed to rapid changes in temperature due to the bay doors being open to receive supplies. The Stores Clerk, Senior Stores Clerk, Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores are required to walk outdoors to reach the storage barn and are therefore exposed to the elements (e.g., cold, rain, snow, etc.). Environment in the stores department is hazardous due to patchy wet floors and materials lying on the floor including tools and supplies.

Drives ECWA vehicles to deliver mail to various ECWA sites.

Physical Requirements include: Frequent standing and walking (e.g. retrieving, issuing and storing supplies.) Occasional Bending, in order to retrieve supplies from lower shelves. Climbing (e.g., on and off forklift and using step ladders, to retrieve supplies); Reaching at or below waist level and at or above shoulder level. Upper body strength to lift and carry up to 55 lbs. (e.g., lifting bell valves) and push/pull loaded carts and hand trucks. Periods of sitting while driving forklifts and ECWA vehicles to and from ECWA sites to deliver mail. Eye, hand foot coordination to drive forklifts and ECWA vehicles.

The Stores Clerk, Senior Stores Clerk, Administrative Assistant – Stores, Warehouse Supervisor, and ~~Laborer~~ Water Utility Worker - Stores may be required to lift and carry up to 55 lbs. (valves, bell joints) alone or with the assistance of another Stores Clerk job family member and also with the use of hand carts. Handling and movement of very heavy parts and equipment such as heavier valves and joints weighing up to maximum 100 pounds are accomplished using a forklift.

- (3) **General maintenance** entails general light maintenance duties at the Union Road location.

(Note that although the Water Utility Worker – Stores is primarily responsible for general maintenance duties of the Stores family, the Administrative Assistant/ Warehouse Supervisor/Store Clerk/ Senior Store Clerk may be called upon to perform essential function work tasks described herein)

Erie County Water Authority
Physical Requirements Job Description
Stores Clerk, Senior Stores Clerk,
Administrative Assistant – Stores, Warehouse Supervisor, and Water Utility Worker - Stores

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The maintenance duties include changing light bulbs, repairing and replacing windows, screens and doors.

Physical Requirements include: Frequent standing and walking (e.g. walking in and around building to perform repairs). Carrying a loaded tool box weighing approximately 10 lbs. Occasional bending and reaching at, above, or below waist level and at or above shoulder level to accomplish maintenance tasks. Use of hand tools requiring gross upper extremity and hand movements and fine finger manipulation, grasping, gripping, and application of torque. Occasional climbing (e.g., 6 ft. ladders, to replace light bulbs).

Potential Accommodations:

Virtually all of the essential function job tasks characterizing the Stores family are “**Medium**” in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by exerting 20 – 30 lbs. of force frequently. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Water Utility Worker
 Line Maintenance Operator
 Crew Chief
 General Crew Chief

Date of Screen:
Evaluator:

Vital Statistics		
DOB:	Height:	Weight:

Range of Motion			
Upper Extremity	Left	Right	Normal
Shoulder Flexion			0-170°
Shoulder Abduction			0-170°
Shoulder IR			0-80°
Shoulder ER			0-80°
Elbow Flexion			0-131450°
Elbow Extension			0°
Wrist Flexion			0-7580°
Wrist Extension			0-8590°
Finger Flexion			Full Fist
Finger Extension			Flat Hand
Lower Extremity	Left	Right	Normal
Hip Flexion			0-115120°
Hip Abduction			0-4045°
Knee Flexion			0-120135°
Knee Extension			0°
Ankle Dorsiflexion			0-15°
Ankle Plantarflexion			0-4065°

Range of Motion					
Cervical:	Normal	Thoracic:	Normal	Lumbar:	Normal
Flexion:	0-45°	Rotation (R):	Symm (B)	Flexion:	0-60120°
Extension:	0-4060°	Rotation (L):	Symm (B)	Extension:	0-3025°
Rotation:	0-7580°			Sideglide (R):	Symm (B)
Side bending:	0-4540°	Symm = symmetrical		Sideglide (L):	Symm (B)
Retraction:				Rotation:	0-80°
				Side bending:	0-40°

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Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Special Tests	Normals (R/L)	Current Status
Hawkins-Kennedy (R/L)	Negative	
Phalen's Test (R/L)	Negative	
SLR (R/L)	90	
Dynamometer grip test (R/L)	#	

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Functional Testing	Normals	Met/Not Met
Pulling at chest height for 3 ft. and lower to ground	40 lbs., 10 reps	
Turning valve on/off	10 reps	
Turn key in valve at shoulder height	160 lbs. force, 10 reps	
Turn small key/hydrant wrench	10 reps.	
Lifting Assessment	Required	
Bilateral lifting floor to chests	40 lbs., 10 reps	
Carrying Assessment		
Carry on 4 stairs	30 lbs. on 4 stairs, 10 reps	
Unilateral Carry	30 lbs. for 20 ft., 10 reps	
Six Minute Walk Test		
Distance walked	50-85% age referenced norm	

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Posture Assessment		
Protruded Head:	Thoracic Kyphosis:	Lumbar Lordosis:
Rounded Shoulders:	Sitting Posture:	Lateral Shift:
Cervical Lordosis:		

Strength Assessment							
Upper Ext.	Left	Right	Normal	Lower Ext.	Left	Right	Normal
Shoulder Flex			5/5	Hip Flex			5/5
Shoulder Abd			5/5	Hip Abd			5/5
Shoulder ER			5/5	Knee Flex			5/5
Shoulder IR			5/5	Knee Ext			5/5
Elbow Flex			5/5	Ankle DF			5/5
Elbow Ext			5/5	Ankle PF			5/5
Wrist Flex			5/5				
Wrist Ext			5/5				

Maximum Grip Strength Test

Handle Position 2	Left: _____ lbs.	Right: _____ lbs.
5-Position Hand Grip Test		
1.	Left: _____ lbs.	Right: _____ lbs.
2.	Left: _____ lbs.	Right: _____ lbs.
3.	Left: _____ lbs.	Right: _____ lbs.
4.	Left: _____ lbs.	Right: _____ lbs.
5.	Left: _____ lbs.	Right: _____ lbs.

Other Tests	
Neer's Impingement	PROM R/L Shoulder
	Employee reports -
Tinel's Sign/Phalen's Test	Employee reports -

Maximal Voluntary Isometric Strength (in lbs.)					
Test	Lift 1	Lift 2	Lift 3	Criteria	Met/Not Met
Floor Lift				40 lbs.	
Leg Lift				40 lbs.	
High Near Lift				40 lbs.	
Push				40 lbs.	
Pull				40 lbs.	

Job Specific Functional Tests				
Distance:	Min. Acceptable Weight	BPM	Met/Not Met	
Lifting:				
Lift 40 lbs. floor to chest	40 lbs. —10 reps			
Turning:				
Valve Assembly Turn on/off	10 reps			
Turn Key in Valve at Shoulder Height	160 lbs. force 10 reps			
Turn Small Key — Hydrant Wrench	24 # turns 10 sets			
Push/Pull:				
Pull weight at chest height 3 ft. and lower to ground (simulating taking pump on/off truck)	40 lbs. 10 reps.			
Carry:				
Carry 30 lbs. 20 feet with one hand (saw)	30 lbs. —10 reps			
Carry 30 lbs. 4 steps (carry tools into hole)	10 reps			

Treadmill Endurance Test		Aerobic Fitness Score	
Walking Speed (>2mph)	Heart Rate (BPM)	Predicted VO 2 max	PDC Equivalent

Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Water Utility Worker, Line Maintenance Operator, Crew Chief & General Crew Chief

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Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Frequently |
| • Stand | Continuously |
| • Sit | Occasionally |
| • Walk | Occasionally |
| • Balance | Occasionally |
| • Stoop | Occasionally |
| • Squat | Occasionally |
| • Twisting | Frequently |
| • Kneeling | Rarely |
| • Use of Hands (simple grasp) | Continuously |
| • Use of Hands (gripping) | Continuously |
| • Use of Hands (fine motor manipulation) | Occasionally |
| • Lift under ten pounds | Continuously |
| • Lift 10-20 pounds | Continuously |
| • Lift 20-30 pounds | Frequently |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Rarely |
| • Lift over 50 lbs. | Occasionally |
| • Carry under ten pounds | Continuously |
| • Carry 10-20 pounds | Continuously |
| • Carry 20-30 pounds | Occasionally |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Rarely |
| • Carry over 50 lbs. | Occasionally |
| • Push/Pull under ten pounds | Continuously |
| • Push/Pull 10-20 pounds | Continuously |
| • Push/Pull 20-30 pounds | Continuously |
| • Push/Pull 30-40 pounds | Continuously |
| • Push/Pull 40-50 pounds | Occasionally |
| • Reach above shoulder | Occasionally |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Occasionally |
| • Rotation of head | Continuously |
| • Walk on uneven surfaces | Frequently |

**Erie County Water Authority
Physical Requirements Job Description
Water Utility Worker, Line Maintenance Operator, Crew Chief & General Crew Chief**

Environmental Work Conditions

- Exposure to all weather conditions
- Exposure to uneven work surfaces
- Exposure to standing and running water
- Exposure to loud noise
- Exposure to vibration (jackhammers, power tools)
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (asbestos in older water pipes)
- Exposure to soil/mudslides, falling rock at excavated sites

Safety Equipment

- Safety toe (steel or composite) safety boots (at least 6" high)
- Gloves
- Hard Hat
- Safety Vest
- Safety Glasses
- Hearing Protection
- Safety Harnesses (working in confined spaces)
- Gas monitors (entering and working in confined spaces)
- Rain gear
- Respirator
- Face shield (when cutting pipe)

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Job Summary

The job classifications Water Utility Worker, Line Maintenance Operator, and Crew Chief are **Heavy** based upon requirements for exerting 25-50 lbs. of force frequently and /or 10-20 lbs. of force constantly. (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991)

(Note that although the Crew Chief is primarily responsible for supervising the work of Water Utility Workers and Line Maintenance Operators, the Crew Chief may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Water Utility Workers and Line Maintenance Operators.)

Water Utility Worker, Line Maintenance Operators, and Crew Chief primarily engage in three major categories of work activities: (1) **hydrant repair**, (2) **valve box repair**, and (3) **water main leak repair**.

Hydrant servicing and repair is usually accomplished with 2 person crews. Workers disassemble, repair and reassemble hydrants using hand held power tools and hand tools. Hand tools include pipe wrenches weighing up to 40 lbs. and requiring considerable force to push/pull or apply torque, as well as, 12 lb sledge hammers which workers use to loosen the hydrant head.

Workers may be required to lift and carry up to 75 lbs. (hydrant stem) short distances, as part of disassembly and repair of hydrants.

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**Erie County Water Authority
Physical Requirements Job Description
Water Utility Worker, Line Maintenance Operator, Crew Chief & General Crew Chief**

Depending upon the hydrant's location, utility worker may be on smooth sidewalk or street, or may work at the roadside some feet above or below street level on uneven ground. Hydrant servicing and repair is performed year round in prevailing weather conditions. Workers are constantly exposed to standing and running water.

Water main break and valve box repairs are usually performed in work crews composed of 4 individuals and require excavation (digging) at work sites to reach the water main or valve box requiring repair. Workers operate heavy equipment including backhoes and bobcats to excavate repair sites, requiring continuous use of hands and feet to operate controls. Workers may also use jackhammers weighing 70 lbs. and concrete saws to break small areas of concrete as part of the excavation. Use of the above equipment exposes workers to loud noise and vibration.

Most soil in the excavation is removed with backhoes or bobcats, but, once the excavation nears the break or valve box requiring repair, workers use shovels and spades to remove the remaining soil. Workers may shovel continuously for up to 10 minutes at a time throwing an average of 15 lbs. of dirt per shovelful.

As part of repair activities, workers climb 10 foot ladders to enter and exit the work area (trench) and may carry tools and equipment weighing up to 35 lbs. up and down ladders. To accomplish repairs workers use hand and power tools to cut and repair pipe.

Depending on the extent of repair required, workers may work in the excavated trench for up to an entire shift, lasting several hours. Work in the trench may involve extended exposure to standing or running water.

Water main and valve box repairs occur outdoors in all seasons and are especially common in winter. Workers are therefore routinely exposed to ambient temperatures and inclement weather conditions.

Water Utility Workers are organized in two, three, and four worker teams depending upon the project. Work is performed ~~outdoors~~~~out of doors~~, exposing workers to prevailing weather conditions year round. Much work is performed off smooth street/sidewalk surfaces and often in excavations as much as six feet deep, depending upon the location of the water main.

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Water Utility Worker job family are **Heavy** in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by frequent exertion of force of 25-50 lbs. and constant exertion of force (e.g., lifting, carrying) of 10-20 lbs. It, therefore, does not appear to be practicable to modify these job essential function physical requirements without fundamentally altering the function and purpose of the job family.

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

Employee Name:
Job Title: Water Plant Helper, Water Treatment Plant
Operator Trainee, Water Treatment Plant Operator,
Senior Water Treatment Plant Operator, Water Treatment
Plant Operator Crew Chief, Water Treatment Plant
Operator Superintendent

Date of Screen:
Evaluator:

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<u>Vital Statistics</u>		
<u>DOB:</u>	<u>Height:</u>	<u>Weight:</u>

<u>Range of Motion</u>			
<u>Upper Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Shoulder Flexion</u>			<u>0-170°</u>
<u>Shoulder Abduction</u>			<u>0-170°</u>
<u>Shoulder IR</u>			<u>0-80°</u>
<u>Shoulder ER</u>			<u>0-80°</u>
<u>Elbow Flexion</u>			<u>0-145°</u>
<u>Elbow Extension</u>			<u>0°</u>
<u>Wrist Flexion</u>			<u>0-80°</u>
<u>Wrist Extension</u>			<u>0-90°</u>
<u>Finger Flexion</u>			<u>Full Fist</u>
<u>Finger Extension</u>			<u>Flat Hand</u>
<u>Lower Extremity</u>	<u>Left</u>	<u>Right</u>	<u>Normal</u>
<u>Hip Flexion</u>			<u>0-120°</u>
<u>Hip Abduction</u>			<u>0-45°</u>
<u>Knee Flexion</u>			<u>0-135°</u>
<u>Knee Extension</u>			<u>0°</u>
<u>Ankle Dorsiflexion</u>			<u>0-15°</u>
<u>Ankle Plantarflexion</u>			<u>0-65°</u>

<u>Range of Motion</u>					
<u>Cervical:</u>	<u>Normal</u>	<u>Thoracic:</u>	<u>Normal</u>	<u>Lumbar:</u>	<u>Normal</u>
<u>Flexion:</u>	<u>0-45°</u>	<u>Rotation (R):</u>	<u>Symm (B)</u>	<u>Flexion:</u>	<u>0-120°</u>
<u>Extension:</u>	<u>0-40°</u>	<u>Rotation (L):</u>	<u>Symm (B)</u>	<u>Extension:</u>	<u>0-25°</u>
<u>Rotation:</u>	<u>0-75°</u>			<u>Side Bending:</u>	<u>0-40°</u>
<u>Side bending:</u>	<u>0-45°</u>	<u>Symm = symmetrical</u>		<u>Rotation:</u>	<u>0-80°</u>

Healthworks
Pre-Employment/Return to Work Screening
Erie County Water Authority

<u>Special Tests</u>	<u>Normals (R/L)</u>	<u>Current Status</u>
Hawkins-Kennedy (R/L)	<u>Negative</u>	
Phalen's Test (R/L)	<u>Negative</u>	
SLR (R/L)	90	
Dynamometer grip test (R/L)	#	

<u>Functional Testing</u>	<u>Normals</u>	<u>Met/Not Met</u>
Push Dolly	200 lbs., 15 ft., 5 reps	
Turn overhead valves on/off with wrench	10 reps	
<u>Lifting Assessment</u>	<u>Required</u>	
Bilateral lifting floor to waist	30 lbs., 10 reps	
<u>Carrying Assessment</u>		
Carry on 4 stairs	30 lbs. on 4 stairs, 10 reps	
Unilateral Carry	30 lbs. for 20 ft., 10 reps	
<u>Six Minute Walk Test</u>		
Distance walked	50-85% age referenced norm	

Comments: Employee instructed in proper lifting techniques and body mechanics.

Physical Therapist Signature: _____ **Date:** _____

Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and Water Treatment Plant Operator Superintendent

Key:	Rarely -	Less than one percent of the workday
	Occasionally -	Up to 1/3 of the workday
	Frequently -	1/3 to 2/3 of the workday
	Continuously -	Over 2/3 of the workday

- | | |
|--|--------------|
| • Bend | Frequently |
| • Stand | Continuously |
| • Sit | Frequently |
| • Walk | Frequently |
| • Balance | Occasionally |
| • Stoop | Occasionally |
| • Squat | Occasionally |
| • Twisting | Occasionally |
| • Kneeling | Occasionally |
| • Use of Hands (simple grasp) | Frequently |
| • Use of Hands (gripping) | Frequently |
| • Use of Hands (fine motor manipulation) | Frequently |
| • Lift under ten pounds | Occasionally |
| • Lift 10-20 pounds | Frequently |
| • Lift 20-30 pounds | Occasionally |
| • Lift 30-40 pounds | Occasionally |
| • Lift 40-50 pounds | Occasionally |
| • Lift over 50 lbs. | Occasionally |
| • Carry under ten pounds | Frequently |
| • Carry 10-20 pounds | Occasionally |
| • Carry 20-30 pounds | Occasionally |
| • Carry 30-40 pounds | Occasionally |
| • Carry 40-50 pounds | Occasionally |
| • Carry over 50 lbs. | Occasionally |
| • Push/Pull under ten pounds | Frequently |
| • Push/Pull 10-20 pounds | Occasionally |
| • Push/Pull 20-30 pounds | Occasionally |
| • Push/Pull 30-40 pounds | Occasionally |
| • Push/Pull 40-50 pounds | Occasionally |
| • Push/Pull over 50 pounds | Occasionally |
| • Reach above shoulder | Occasionally |
| • Reach at shoulder | Frequently |
| • Reach below shoulder | Occasionally |
| • Rotation of head | Continuously |
| • Walk on uneven surfaces | Occasionally |

**Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant
Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and
Water Treatment Plant Operator Superintendent**

Environmental Work Conditions

- Exposure to all weather conditions
- Exposure to uneven work surfaces
- Exposure to standing and running water
- Exposure to loud noise of machinery (basin room and chlorine room)
- Exposure to foul odor
- Exposure to slipping hazards walking on wet surfaces
- Exposure to toxic chemicals (chlorine)
- Exposure to confined spaces.
- Exposure to electric shock hazard.
- Exposure to mechanical moving parts hazard
- Exposure to heights as well as depths
- Exposure to biological hazards.
- Exposure to ergonomic factors (heavy lifting e.g.)

Safety Equipment

- Steel toed safety shoes
- Gloves
- Safety glasses
- Hearing protection
- Safety Harnesses
- Escape Mask
- Self-Contained Breathing Apparatus (SCBA) (Requires respirator fit testing)

Job Summary

The physical demand level of the Water Treatment Plant Crew Chief, Senior Water Treatment Plant Operator, Water Treatment Plant Operator, Water Treatment Plant Relief Operator, Water Treatment Plant Helper would be classified as **Medium - Heavy** based upon requirements for exerting over 50 lbs. of force occasionally and /or 10-20 lbs. of force frequently (Source: U.S. Department of Labor, Dictionary of Occupational Titles Vol. II, 4th Edition Rev. 1991).

(Note that although the Water Treatment Plant Crew Chief is primarily responsible for supervising the work of the Operator job family, the Crew Chief may be called upon to perform essential function work tasks described herein, including essential function physical requirements, performed by Senior Water Treatment Plant Operator and Plant Operators.

In addition to the range of work activities and task assignments characteristic of the Water Treatment Plant Operator job family described herein, the Senior Water Treatment Plant Operator is also responsible for specific task assignments the Plant Operators do not perform, including calibration of plant equipment and maintenance and repair/replacement of specific pumps, e.g. Fluoride pump.)

**Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant
Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and
Water Treatment Plant Operator Superintendent**

The Water Treatment Plant Operator job family primarily engages in four major categories of work activities: (1) **Laboratory Work** (2) **Operation of the Control Room** (3) **Maintenance and Repair** and (4) **Chlorine Delivery and Chlorine change**. These work activity categories and their attendant essential function physical requirements are described below.

Overall, the Water Treatment Plant job family is characterized by the requirement for continuous standing and frequent walking and climbing stairs (3 floors) to perform work tasks including recording of data from equipment and the performance of scheduled and emergency equipment maintenance in various locations throughout the plant. Members of the job family typically walk between 2 and 4 miles to perform their work assignments during a given shift.

The tasks described below are accomplished by a minimum of two Operators per shift. Relief Operators provide coverage for Operators out sick or on vacation. Relief Operators work 1st shift Monday through Friday if no relief coverage is needed.

- (1) **Laboratory work** is accomplished with 1 operator per shift, unless a trainee is working the same shift. The Plant Operator is responsible for testing water samples and calculating and interpreting lab values and test results to detect possible hazards or abnormalities in the water. Testing for bacteria, turbidity, alkalinity, fluoride, titration, chlorine and use of spectrophotometer to test for organic material are done once per shift. Fifty water samples are drawn from various stages of the treatment process per shift to test for abnormalities. The Operator is responsible for reporting abnormalities to the supervisor and following policies and procedures based on the abnormal readings.

Physical requirements include: Extended periods of standing to perform routine lab testing. Gross and fine motor movements of the upper extremities to include grip, grasp and fine hand and finger manipulation, as well as reaching below, at and above waist level are required to perform various lab tests intermittently for a duration of 4 – 5 hours per shift; Visual acuity and visual color discrimination are required in order to read gauges and digital results, and for visual interpretation of lab tests involving color changes.

The Operator must perform a chemical inventory twice per shift which requires walking throughout the main treatment plant, including climbing stairs to access all 3 plant levels, in order to record data from the actual gauges, in addition to tracking these measurements by computer monitoring. During these chemical inventory checks, the Operator is also required to visually inspect equipment and containment areas to insure proper functioning and detect any problems.

- (2) **Control Room:** The same Operator that covers the lab may also work in the Control Room. Duties include addressing alarms as they occur, investigating alarms, manual computer adjustments based on interpretation of data, observing security monitors, opening and closing the entrance gate electronically, reporting occurrences to the appropriate supervisor, and addition of chemicals to the treatment process.

Operators working in the Control Room must respond immediately to alarms which may occur anywhere in the plant, since an alarm may indicate equipment or process malfunctions which could affect overall plant operation and/or public safety (i.e., safety of the water supply, chemical leaks). Response to alarms includes reading and interpreting computer screens and data and inputting data or commands into the computer. The Operator may be required to physically walk and climb stairs to reach the problem area, which could be anywhere in the plant, to visually inspect and respond to the emergency situation.

Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and Water Treatment Plant Operator Superintendent

Operators working in the Control Room are also required to periodically replace depleted Potassium Manganese jugs and Poly Aluminum Chloride chemical jugs.

The Poly Aluminum Chloride jugs are replaced **once per shift**. The Operator is required to lift each of four jugs weighing 60 pounds each from a floor palette onto a cart ("gurney") weighing approximately 30 lbs. The Operator must then push the loaded cart approximately 25 feet to the area where the jugs are replaced (the cart rolls easily over the smooth floor surface). Due to a lip at the edge of each grate in the filter house, which impedes movement of the gurney, the Operator must lift and carry each jug an additional 15 feet to the receptacle.

The Potassium Manganese jugs are replaced **once every other shift**. The Operator is required to lift a single jug weighing 50 pounds from a floor palette and carry it approximately 3 feet to the location where he replaces the depleted jug with the filled jug.

Physical Requirements: Extended periods of sitting, fine motor movements to include typing on computer keyboard, operating controls. Bending and stooping, lifting and carrying up to 60 lbs. and push pull (loaded rolling cart) up to 270 lbs (chemical jug replacement). Potential for extended walking and stair climbing (physically responding to alarms throughout the plant). Visual acuity to view or read computer monitor and security monitors. Ability to read and interpret data per established standards. Ability to follow established emergency procedures. Ability to exercise judgment in responding to and reporting emergency situations. Exposure to loud noises when alarm sounds.

- (3) **Maintenance and Repair:** Operators and Plant Helpers participate in maintenance and repair activities of equipment and machinery throughout the plant, as assigned.

Maintenance and repair includes both routine and scheduled maintenance as well as, emergency equipment repairs. Scheduled maintenance includes oil changes for various pumps (e.g., filter pumps, well pumps, sludge pumps) throughout the plant, as well as, air filter replacements in the ventilation systems, located on plant roof tops (48 total, filters weighing approximately 5 lbs each).

Equipment repair and maintenance includes activities ranging from repair or replacement of small mechanical parts, using standard hand tools (e.g. wrenches, screwdriver, etc.) to large pump repairs and screen changes involving parts weighing 75-150 pounds. Repairs involving large or heavy parts are accomplished by teams of 2 Operators. Movement of large parts is accomplished through 2 man lifts and/or use of 5 or 10 ton chain falls. (Chain falls are operated manually, usually by 2 Operators, requiring 20-30 pounds of exertion of force per person)

Some repair work involves descent into repair area where the Operator is required to climb 10 foot ladders and wear safety harnesses. In addition Operators may be required to accomplish repairs in confined or tight spaces requiring working in awkward positions, crouching, stooping, and maneuvering around large pipes.

Routine maintenance also involves tasks such as: buffing floors, snow removal on sidewalks with snow blower and shovel, and plow for driveways and parking lots; salt application during the winter months as needed; changing light bulbs, some 25 feet high, with use of ladder and extension pole, basin cleanings twice a year involving climbing 10 foot ladder, to descend into work area and use of 1 ½ inch fire hose, use of fire extinguisher weighing 50 pounds. Operators may operate backhoe to accomplish certain maintenance tasks, requiring driving and repetitive use of hands and feet to operate controls.

Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and Water Treatment Plant Operator Superintendent

Physical Requirements: Lifting, carrying, pulling and pushing weights anywhere from 5 – 150 lbs, (Note: lifting and moving of objects weighing over 75 lbs is accomplished with 2 person teams and/or through use of chain falls). Working at, below or above waist level. Shoveling water waste and snow. Use of vibrating machinery including: snow blower, floor buffer and backhoe. Climbing stairs and ladders. Working in confined spaces including crouching, stooping, maneuvering around large pipes, working in awkward positions, upper extremity hyperextension. Use of 1 ½ to 3 inch fire hose (weighing 30 – 50 lbs). Exposure to loud (machine) noises. Grasping, gripping, wrist torque, fine motor manipulation using small hand tools. Use of manually operated chain falls involving exertion of 20-30 lbs of force to move heavy objects.

- (4) **Chlorine delivery and chlorine change:** These tasks are performed every two weeks or as needed, and are accomplished with 2 Operators, at least one of whom must be a Licensed Operator. Operators and Plant Helpers wear an escape mask while performing these tasks. There are also SCBA's (Self Contained Breathing Apparatus) available, which must be donned by staff performing this function if a chlorine leak is suspected. (Operators and Plant Helpers are required to be respirator fit tested in order to work in the plant.) Chlorine change and delivery is only done on 1st shift.

Chlorine Delivery: The cylinders are delivered by outside contractor and must be moved to the contained area. Each cylinder, when full weighs 1500-2000 pounds. Delivery involves 10 cylinders per delivery or less if needed. The cylinders are rolled off the delivery truck by vendor personnel and moved by Operators to the confined area, using a 5 ton crane with push button controls. Operators maneuver the cylinders being moved by the crane into place using chains, requiring the exertion of up to 75 pounds of force per person.

Chlorine Change: Involves use of 5 ton crane to move empty cylinders and replace with full cylinders, 5 per change or less as needed. Operators and helpers wear Escape Masks during performance of these tasks. For a partial cylinder change, Operator disconnects the halogen valve and removes the yellow box, applies cap and covers with end plate. Operators use crane to move the empty cylinder to the empty side. The crane is then used to move a full closed cylinder to the empty space and the operator performs the tasks described above in reverse. For a full cylinder change, the washer and filter in the valve are also changed. Ammonia is used to test for the presence of chlorine gas and is negative if cloud is clear.

Physical Requirements: Operation of push button operated overhead crane to move large heavy objects. Exertion of up to 75 pounds of force, using chains, is required to maneuver cylinders being moved by crane into place. Escape masks are required due to exposure to hazardous gases. May be required to don SCBA (self- contained breathing apparatus) if chlorine leak is suspected. Bending at the waist. Visual acuity to read gauges. Fine motor movements of hands (e.g. grasping, gripping, and turning) are required for turning knobs, disconnecting removing and reassembling caps and end plates to containers. Exposure to loud (machine) noises.

All treatment plant operators are not allowed to leave the plant for any reason during their shift. A large lunch room is provided with many amenities to accommodate this rule.

**Erie County Water Authority
Physical Requirements Job Description
Water Treatment Plant Helper, Water Treatment Plant Operator Trainee, Water Treatment Plant
Operator, Senior Water Treatment Plant Operator, Water Treatment Plant Operator Crew Chief and
Water Treatment Plant Operator Superintendent**

Potential Accommodations

Virtually all of the essential function job tasks characterizing the Water Utility Worker job family are **Medium - Heavy** in nature, as per the US Department of Labor Dictionary of Occupational Titles definition (see above), in that they are characterized by occasional exertion of force of 10 - 60 lbs. and frequent exertion of force (e.g., lifting, carrying) of 10-20 lbs.

Although Operators work in teams to accomplish some heavy tasks, Operators often work individually on different essential function tasks in different parts of the plant. Accommodation in the form of help from other employees to accomplish essential function tasks involving heavy lifting (e.g. Chemical jug replacement) may not be available due to the staff limitations cited above.

Work in teams may also require each of two individual Operators to exert up to 75 lbs. of force (Chlorine Cylinder changes) to accomplish the task.