

# City of Portland

## Watershed Specialist

FLSA Status: Covered  
Bargaining Unit: District Council of Trade Unions (DCTU)

### General Summary

Positions in this broad class perform a variety of duties in the maintenance and repair of facilities and infrastructure located in and/or associated with the Bull Run watershed.

### Watershed Specialist I - 30000149

#### Distinguishing Characteristics

The journey level of this class has broad responsibility in watershed stewardship for the maintenance of rights-of-way, waterways, and forestry fire fighting, and related activities.

#### Typical Duties/Examples of Work

1. Maintains watershed access; brushes roadways, rights-of-way, and maintains culverts to prevent erosion.
2. Reads and interprets maps indicating roads, trails, and infrastructure located in the Bull Run watershed.
3. Operates boat to remove debris and obstacles from lake.
4. Fells trees, under direction from the Watershed Specialist II, from around microwave communication towers, rights-of-way and other locations where trees endanger normal movement and safe operation in the Bull Run watershed; repairs wooden fences and guardrails; carries, pushes, pulls and/or drags limbs weighing up to 100 pounds for up to 100 yards; operates brush chipper and hand held power equipment such as brush cutters and chainsaws in all weather conditions in rough terrain for up to 2 hours without a break.
5. Performs fire prevention and fire fighting in conjunction with the Forest Service and Oregon Department of Forestry throughout watershed; sets up various fire pumps on fire lines; lifts, carries and otherwise positions hoses, pumps and related equipment weighing up to 100 pounds, this could include dragging fire hoses over rough terrain for distances of up to 100 yards.
6. Installs and repairs wooden and steel log booms at lakes located in watershed (typically performed from boats, barges, or other platforms); installs, repairs, and maintains culverts; repairs and installs gates.

## City of Portland

7. Identifies and responds to incidents that have the potential to impact water quality and environmental conditions in the Bull Run watershed.
8. Assists Operating Engineer, Carpenter, and Water Operations Mechanic with watershed, conduit, and facilities maintenance and repairs as needed.
9. Performs related duties as assigned.
10. Assists with and learns the essential duties of a Watershed Specialist II and/or III.

### **Required Knowledge, Skills and Abilities**

Knowledge of: watershed policies, practices and procedures; forestry safety and control; safe operation of watercrafts; variety of equipment used in watershed stewardship including but not limited to brush cutters, chainsaws, brush chippers, forklift trucks, power washers, etc.

Skill in: safe and effective use of various power tools and equipment used in the maintenance of infrastructure located in the Bull Run watershed.

Ability to: work effectively with co-workers in a diverse workforce; work effectively as member of a team and/or independently; learn and use safe working practices; read and interpret maps.

### **Special Requirements**

Valid driver's license; some positions may require additional certifications or licenses;

Ability to successfully:

- Complete wildland fire fighting training.
- Pass a Physical Capacity Test demonstrating the following: Ability to lift, carry and otherwise move equipment and objects weighing up to 100 pounds.
- Traverse steps associated with dams.
- Enter and crawl through confined spaces such as inside conduits.
- Operate power hand tools out of doors in a variety of weather conditions and in rough terrain.

### **Classification History:**

Adopted: 2-03-99:

Class created as a result of DCTU Classification and Compensation Study 1998-99. This class is composed of the following classes:

## City of Portland

1218 Utility Worker Revised: 11-21-78; 07-20-82, 11-01-92 (Class consolidation, 1310 Automotive Equipment Operator I and 1218 Utility Worker, as a result of contract negotiations 1992)

Revised: 10-31-03: Clarified physical capacity requirements and added required testing for physical capacity.

Revised: 01-14-04: Additional class added to series. Duties for journey class clarified.

Revised: 09-02-09 Changed title from 'Watershed Specialist' and updated spec

## Watershed Specialist II 30000151

### **Distinguishing Characteristics**

This class provides lead direction and training to the Watershed Specialist I class, fells trees, operates specialized equipment including boats, snowcat, Wildland fire fighting truck, and four-wheel drive all-terrain utility vehicle (e.g. Polaris Ranger). This class also operates equipment requiring a Class A Commercial Drivers License (CDL) and performs the work of a Watershed Specialist I.

### **Typical Duties/Examples of Work**

1. Operates vehicles requiring a Class A Commercial Drivers License.
2. Provides direction to Watershed Specialist I staff as formally assigned, including coordinating, and overseeing the completion of a variety of work; trains other employees.
3. Performs work of a Watershed Specialist I.
4. Oversees felling of large trees.
5. Operates boats, Snowcat, Wildland fire fighting truck, and four-wheel drive all-terrain utility vehicle (e.g. Polaris Ranger).
6. Performs other duties as assigned.
7. Assists with and learns the essential duties of a Watershed Specialist III.

### **Required Knowledge, Skills and Abilities**

Knowledge of: watershed policies, practices and procedures; forestry safety and control; safe operation of watercrafts; variety of equipment used in watershed stewardship; operation of vehicles that require a Class A Commercial Drivers license, including wild land fire response truck, large and small dump trucks, flatbed crane trucks, and loaders.

## City of Portland

Skill in: safe and effective use of hand tools and hand held power equipment.

Ability to: provide oversight and direction to crew; work effectively with co-workers in a diverse workforce; work effectively as member of a team and/or independently; learn and use safe working practices.

### **Special Requirements**

Valid Class A Commercial Driver's License; some positions require additional endorsements, certifications, and/or licenses. Requires the same physical capacity requirements and testing as that of a Watershed Specialist I.

### **Classification History:**

Adopted: 2-03-99: Class created as a result of DCTU Classification and Compensation Study 1998-99.

Revised: 10-31-03: Specified physical capacity requirements.

Revised: 01-14-04: Removed dam operation duties, which are done by mechanic. Additional class added to series.

Revised: 09-02-09 changed title from 'Sr. Watershed Specialist' and updated spec

## **Watershed Specialist III      30001308**

### **Distinguishing Characteristics**

The Watershed Specialist III level of this class assists an Operating Engineer in monitoring the Bull Run Supply conduits and conduit interties; locates and inspects the conduits and conduit interties; performs operations associated with diverting water at conduit interties including Larson's, and Hudson Road; performs de-chlorination and water quality monitoring in accordance with NPDES requirements at permitted conduit outfalls; performs the work of a Watershed Specialist I; additionally, the Watershed Specialist III level of this class operates and performs preventative maintenance on equipment and monitoring facilities associated with dams and outlet works in the Bull Run watershed.

### **Typical Duties/Examples of Work**

1. Provides direction to Watershed Specialist I staff as formally assigned, including coordinating, and overseeing the completion of a variety of work; trains other employees.
2. Identifies the location of the three main conduits from Bull Run Watershed to Portland; assists the Operating Engineer in monitoring and inspecting the

## City of Portland

conduits for leaks, damage, encroachment, development, construction or other changes that could damage the pipelines.

3. Performs monitoring and inspection duties within the Bull Run Watershed and supply system in conjunction with the Water Bureau Security program, this includes monitoring and inspection of trestles, exposed conduits, conduit interties, and other critical conduit supply facilities.
4. Assists with and learns to conduct preventive and general maintenance on a variety of small and large equipment and specialized instrumentation such as valves, valve operators, pumps, chlorine residual analyzers, pH meters, turbidimeters, generators, fuel systems, and conduit pipelines.
5. Assists with and performs conduit maintenance; insulates air valves and exposed blowoffs for winter; maintains and cleans inside and around conduits; walks/hikes distances of up to 5 miles over rough terrain in all weather conditions, crawls inside of pipes as small as 48 inches in diameter, enters confined spaces wearing appropriate Personal Protective Equipment as required.
6. Coordinates conduit shutdowns and repairs to conduits, operates conduit interties at Larson's and Hudson Road, air valves, blow offs, rectifiers and other facilities related to supply conduits, this work is conducted in accordance with the Water Bureau's Lock Out Tag Out policies and procedures.
7. Assists with planning, organizing orders, and purchasing materials, and coordinates, job activities with other crafts and trade personnel.
8. Assists with reviewing, analyzing, and evaluating project plans, confers with engineers, design professionals and inspectors on suggested changes or modifications.
9. Provides customer services for pressure, flow, supply and water quality problems.
10. Coordinates work with other sections of the Bureau; provides information about operation of the water supply and distribution system to others including employees, regulators, and the public; works as a team with instrument technicians, treatment personnel, and other staff.
11. Assists with and learns to collect water quality bacteriological samples and analyze for appropriate physical and chemical constituents; assists with and learns to calculate chemical doses to meet NPDES regulations and DEQ standards for de-chlorination and adjust appropriately; conducts distribution

## City of Portland

system water quality control tests, such as free and total chlorine residual, turbidity, pH, and water temperature readings.

12. Coordinates conduit and conduit intertie operations under normal operational scenarios, and emergency response conditions, to maintain compliance with applicable sections of the Oregon Administrative Rules for Public Water Systems.
13. Reads water service and water district meters, and reports quarterly and monthly respectively.
14. Assists and covers for the Operating Engineer in their absence.
15. Maintains equipment and monitoring facilities associated with dams and outlet works in the Bull Run watershed; calibrates and validates calibrations for on-line monitoring equipment located at dams, dam intake towers, outlet works, conduit interties, and associated facilities.
16. Reads, records data, and maintains piezometer wells at various dams and critical locations; reads and records data from pressure gauges and performs calculations using data collected to report to Federal Energy Regulatory Commission (FERC).
17. Exercises, cleans, and performs preventative maintenance on equipment and monitoring facilities associated with dams and outlet works in the Bull Run watershed (e.g. valves, valve operators, standby generators, etc.) to FERC standards, and maintains associated documentation.
18. Assists with and learns to monitor conduits and supply system through electronic and computerized systems including the Bureau's SCADA system and local Human Machine Interface (HMI) control systems.
19. Performs preventative maintenance and minor repair on Bull Run supply system equipment at locations including Bull Run Lake, Dam 1, Dam 2 Headworks, Larson's intertie, Hudson Road intertie, and conduit interties on 162<sup>nd</sup> (overhaul and major repair on this equipment would primarily fall under other job classification's responsibilities.)
20. Performs other duties as assigned.

### **Required Knowledge, Skills and Abilities**

Knowledge of: conduit operational procedures, conduit locations and rights-of-way; air valves, blowoffs, and rectifiers; watershed policies, practices and procedures; forestry safety and control; methods, practices, care, maintenance and

## City of Portland

use of precision measuring instruments, tools, and materials used in mechanical and electrical equipment maintenance; safe operation of watercrafts; variety of equipment used in watershed stewardship; and Federal Energy Regulatory Commission (FERC) standards.

Skill in: reading and interpreting meters and charts accurately, and in maintaining neat and accurate records of readings; reading and understanding technical manuals; writing legibly and accurately to record information and complete basic reports; understanding and following oral and written instructions; establishing and maintaining effective working relationships with other employees; safe and effective use of hand tools and hand held power equipment; water sampling and water quality analysis (e.g., temperature, pH, chlorine residual, and turbidity).

Ability to: Work effectively with co-workers in a diverse workforce; work effectively as a member of a team and/or independently; learn and use safe working practices; identify occupational hazards and necessary safety precautions applicable to machinery operation and maintenance; work independently and make operational decisions within appropriate scope; work with computers and related equipment; mechanical systems; water systems and operational systems; organize and use time effectively; learn water system functions and operations; perform accurate mathematical calculations; diagnose and correct equipment problems; arrange and apply proper traffic safety signs and flagging.

### **Special Requirements**

Water Distribution II certification from the State of Oregon; some positions require additional endorsements, certifications, and/or licenses. Requires same physical capacity requirements and testing as that of a Watershed Specialist I.

### **Classification History:**

Adopted: 09-02-09

## **Working Conditions**

Work in this class is typically performed in a field environment. Incumbent is typically required to negotiate rough terrain; to lift and drag up to 100 pounds; to work outdoors in all weather conditions; to be called back to work during emergencies. To work in and around traffic, work site equipment, machinery or confined spaces; to be exposed to hazardous materials; to wear protective gear.