



WASTEWATER TREATMENT SAFETY GUIDANCE

PERSONAL PROTECTIVE EQUIPMENT (PPE) GUIDELINES

The following guidelines were derived from the Center for Disease Control (CDC) recommendations for workers handling wastewater. OSHA (Occupational Health and Safety Administration) and NIOSH (National Institute of Occupational Safety and Health) materials were also incorporated. This bulletin identifies basic hygiene guidelines, proper personal protective equipment (PPE), training on putting PPE on properly and taking PPE off properly, and information on vaccinations recommended for workers. It is imperative that the safest processes and procedures are followed to prevent any individual(s) from becoming ill from waterborne diseases. **CAUTION: Extreme care should be used when working with wastewater. Construction and installation procedures, equipment, tools, materials and personnel should always comply with applicable federal, state, and local safety regulations and codes.**

According to the CDC guidelines, workers handling wastewater should use basic hygiene practices, utilize the proper PPE, demonstrate competency using PPE, and know the location of hand washing facilities.

BASIC HYGIENE PRACTICES

Individuals who work with wastewater may be at an increased risk of becoming ill from waterborne diseases. Individuals must protect against the exposure to illness by following the basic hygiene practices below:

1. Wash hands immediately with soap and water after working in the field or with potential contaminants.
2. Do not touch face, mouth, nose, cuts or broken skin while working.
3. Wash your hands with soap and water before eating or drinking.
4. Wash your hands with soap and water before and after using the toilet.
5. Avoid smoking, chewing tobacco or gum while working near potential contaminants on the work site.
6. Insure cuts, wounds and broken skin are covered with dry and clean bandages.
7. Utilize waterproof gloves to prevent cuts from coming in contact with wastewater.
8. Wear boots at work site and if transporting wastewater.
9. Clean contaminated work apparel as much as possible before leaving work site.
10. Remove boots, PPE and work clothes before leaving the work site and before eating.
11. Eat in areas specified as safe from wastewater handling areas.
12. Flush eyes gently with safe/clean water if wastewater makes contact with eyes.

HAND HYGIENE

Hand hygiene is critical in reducing the risk of contracting a waterborne illness. For the most effective hand washing, follow these steps recommended by the CDC:

1. Wet hands with clean, running water and apply soap.
2. Lather your hands, making sure to wash the fronts and backs of your hands, under your nails, your fingertips and between your fingers for at least 20 seconds.
3. Rinse your hands well under clean, running water.
4. Dry your hands using a clean towel or air dry them.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is important to determine the most effective PPE to use in each job duty and to monitor for necessary modifications. The following is a list of recommended PPE to use:

1. Goggles: to prevent splashes of wastewater from entering the eyes.
2. Protective face mask or plastic splash-proof face shield: to protect nose and mouth from splashes of wastewater.
3. Waterproof gloves: to protect against exposure to wastewater.



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4. Liquid repellent coveralls or water resistant smock: to keep wastewater off clothing.
5. Rubber boots: to eliminate exposure to wastewater.

TRAINING FOR WORKERS

To maintain high safety standards, PPE equipment must accompany effective training. Workers should be trained when it is necessary to use PPE and the proper care, maintenance and useful life of the equipment. Maximizing effectiveness of PPE can prevent or minimize occupational exposure. Any individual who may be in contact with wastewater should receive training and demonstrate competency in the following areas:

1. Basic hygiene practices.
2. Proper use and disposal of PPE.
3. Seek medical attention if displaying signs of illness.
4. Reporting potential symptoms or illnesses which may be due to work-related activities to supervisor as soon as possible.

IMPORTANT PPE ITEMS TO REMEMBER

1. PPE must be put on correctly before entering the work site with potential contaminants.
2. PPE must remain in place and worn correctly for the entire duration of work.
3. Avoid adjusting PPE whenever possible at the work site.
4. PPE must be removed carefully and deliberately in a proper sequence that prevents self-contamination.
5. Consistently utilize the agreed upon putting on and taking off methods determined by your organization.
6. Insure proper method to discard disposable and sanitize reusable PPE is followed before taking off the PPE.



PUTTING ON THE PPE PROPERLY

More than one method may be acceptable. This is one example of putting on PPE properly:

1. Identify and prepare the proper PPE before entering the site area containing potential contaminants.
2. Clean hands with sanitizer or washing.
3. Put on liquid-repellant coveralls.
4. Put on goggles.
5. Put on protective face mask or plastic splash-proof face shield.
6. Perform hand hygiene again.
7. Put on waterproof gloves.

NOTE: It is very important that gloves are properly sized.

TAKING OFF THE PPE PROPERLY

More than one method may be acceptable. This is one example of taking off PPE properly:

1. Insure appropriate discarding methods for disposable and reusable PPE are identified and approved.
2. Remove gloves.
3. Remove liquid-repellant coveralls.
4. Exit the immediate site area containing potential contaminants.
5. Perform hand hygiene.
6. Remove protective mask or plastic splash-proof face shield.
7. Remove goggles.
8. Properly discard the disposable and reusable PPE separately following the guidelines agreed upon.
9. Perform hand hygiene again.

VACCINATION RECOMMENDATIONS

Per the CDC guidelines, recommendations for vaccinations for individuals exposed to wastewater should be developed with local health authorities. The following should be considered:

1. Tetanus vaccinations must be current.
2. Health and safety risks are likely to vary among different locations, so consult an authorized professional to provide recommendations for the site.
3. Evaluate the necessity for polio, typhoid fever, Hepatitis A and Hepatitis B vaccinations.

For more information on PPE, go to: www.cdc.gov.

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