Personal Protective Equipment COVID-19

The Department of Safety and Professional Services
Solid Waste & Wastewater Workers Focused
March 25, 2020
Objectives

- Train the Trainer – use the Notes view to see the included commentary
- COVID-19 as of March 10, 2020 CDC Guidance for Wastewater Workers Recommendations
- Provide information on the selection and use of PPE
Water Transmission and COVID-19
- Drinking Water, Recreational Water and Wastewater: What You Need to Know

OSHA Safety & Health Topics: COVID-19
- Solid Waste and Wastewater Management Workers and Employers
  - https://www.osha.gov/SLTC/covid-19/controlprevention.html#solidwaste

Wisconsin DHS COVID-19: Business & Employers
- https://www.dhs.wisconsin.gov/covid-19/employers.htm

Resources
Need to check daily for updates
• Risk of transmission of COVID-19 from feces of an infected person is expected to be **low** based on data from previous outbreaks of related coronaviruses.

• **No** reports of fecal-oral transmission of COVID-19 to date.
What is the most common cause of infection? *poor personal hygiene*

Three basic routes that may lead to infection:
- Ingestion through splashes, contaminated food, or cigarettes
- Inhalation of infectious agents or aerosols
- Infection due to an unprotected cut or abrasion

- **Ingestion** generally the major route of wastewater worker infection.
  - Hand-to-mouth habits

- **At highest risk:** workers who eat or smoke without washing their hands

- Personal hygiene practices including frequent washing of the hands will minimize these potential exposures

Wastewater Safe Practices

Follow routine practices to prevent exposure to wastewater
- Engineering & administrative controls
- Safe work practices
- PPE

No additional COVID-19 specific protections are recommended

Current disinfection methods are expected to be sufficient, such as:
- oxidation with hypochlorite (i.e., chlorine bleach)
- peracetic acid
- ultraviolet irradiation.
Basic Hygiene Practices

- Wash hands with soap and water
  - immediately after handling waste
  - before eating or drinking
  - before and after using the toilet

- Avoid touching face, mouth, eyes, nose, or open sores and cuts

- Before eating, removed soiled work clothes and eat in designated areas away from human waste and sewage-handling activities

- Do not smoke or chew tobacco or gum while handling human waste or sewage

- Keep open sores, cuts, and wounds covered with clean, dry bandages

- Remove rubber boots and work clothes

- Shower and change into clean clothes before leaving worksite

- Clean contaminated work clothing daily with 0.05% chlorine solution (1 part household bleach to 100 parts water)
Personal Protective Equipment (PPE)

Goggles: to protect eyes from splashes of human waste or sewage.

Protective face mask or splash-proof face shield: to protect nose and mouth and face from splashes of human waste or sewage.

Liquid-repellent coveralls/Apron: to keep human waste or sewage off clothing.

Waterproof gloves: to prevent exposure to human waste or sewage.

Rubber boots: to prevent exposure to human waste or sewage.
Factors Influencing PPE Selection

- Type of exposure anticipated
  - Splash/spray versus touch
  - Category of precaution, low risk versus high risk
- Durability and appropriateness of the PPE for the task
- Fit, will PPE create a different risk
Gloves

- Limited/no protection when heavily soiled, torn or have holes
- Avoid “touch contamination”
  - Don’t touch your face or adjust PPE with contaminated gloves
  - Don’t touch other surfaces except as necessary
- Change Gloves
  - During use if torn and when heavily soiled
- Clean/disinfect per manufacturers instructions- wear a disposable glove under reusable gloves
- Never re-use disposable gloves even if you think that they are clean
Coveralls

• Used to protect skin and/or clothing
Eye and Face Protection

**Eye**
- Goggles, should fit snuggly over and around eyes
  - Used for liquid splashes and/or particles
- Safety glasses, used for protection against particles

**Face**
- Face shields protect face, nose, mouth and eyes
- Should cover forehead, extend below chin and wrap around side of face
- Goggles or safety glasses need to be worn under a face shield
How to safely put on, use and remove PPE
Key Points About PPE

• Put on before exposure potential
• Use carefully – don’t spread contamination, e.g. touching surfaces with contaminated gloves
• Remove and discard carefully, contaminated PPE is a source of exposure to you
• Immediately wash your hands and/or body parts as applicable to your situation
Example Sequence for Putting on PPE

- Coveralls
- Goggles
- Face shield
- Gloves
Putting On Eye and Face Protection

**Eye**
- Position goggles or glasses over eyes and secure to your head using earpieces or headband

**Face Shield**
- Position face shield over face and secure on brow with headband
- Adjust to fit comfortably
Putting on Gloves

Put on gloves last
Select correct type and size
Insert hands into gloves
Extend gloves over arm protection cuff if present or under coverall arm sleeve
Contaminated and Clean Areas of PPE

**Contaminated – Outside Front**

- Areas of PPE that have or are likely to have been in contact with body sites, materials or environmental surfaces where the infectious organism may reside

**Clean - Inside**

- Areas of PPE that are not likely to have been in contact with the infectious organism
<table>
<thead>
<tr>
<th>PPE Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coveralls</td>
</tr>
<tr>
<td>Gloves</td>
</tr>
<tr>
<td>Face shield, goggles, safety glasses</td>
</tr>
</tbody>
</table>
Where to Remove PPE

Outside of area

Ensure that hand washing facilities are available at point of removal
Order of Removing PPE

1. Coveralls/Apron
2. Gloves
   Wash Hands
3. Face Shield/Eye Protection
   Wash Hands
Removing Gloves

- Grasp outside edge near wrist
- Peel away from hand, turning glove inside-out
- Hold in opposite gloved hand
Removing Gloves, cont.

Slide ungloved finger under the wrist of the remaining glove

Peel off from inside, creating a bag for both gloves

Discard gloves
Clean & Disinfect PPE

Clean

Clean PPE first
Note: If soiled clothes do go home, they should be washed separately from family clothes.

Disinfect

Disinfect PPE
- Use disinfectants available as EPA-certified formulations
- Use at recommended concentrations or dilutions
OSHA Safety & Health Topics/COVID-19, Solid and Wastewater Management Workers and Employers
   • https://www.osha.gov/SLTC/covid-19/controlprevention.html#solidwaste

Water Transmission and COVID-19

Memos Issued by Wisconsin Department of Health Services
   • https://www.dhs.wisconsin.gov/covid-19/providers.htm

Guidance for Reducing Health Risks to Workers Handling Human Waste or Sewage
   • https://www.cdc.gov/healthywater/global/sanitation/workers_handlingwaste.html
Questions?

DSPSSBHealtheandSafetyTech@wi.gov

Or contact your District Occupational Safety and Health Inspector:

Public Sector District Safety Inspectors