

Emergency Telephone Numbers

Eco Waterway Services

Reference Address to Project:

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On Site Managers

Owen Bulls - 262-337-0083

Benjamin Karczewski - 262-510-6786

Jordan Christensen - 715-412-1450

Alternate Managers

(Located at Eco Office in Waukesha, WI)

Patricia Dalman - 262-468-6510

Kelly Csizmadia - 262-337-4630

Emergency Telephone Numbers

Fire Department – 911

Police Department – 911

Paramedics/Ambulance – 911

Poison Control – WI Poison Control Center – 800-222-1222
800-815-8855

Gas Company – WE Energies – 800-261-5325

Electric Company – WE Energies – 800-662-4797

Project Overview

- Upper Nemahbin Dredging Project
- Oconomowoc, WI
- 7/17/2023
- 10/15/2023

Objectives

- To ensure the safety and well-being of all personnel involved in the construction project.
- To prevent accidents, injuries, and potential hazards during construction operations.
- To comply with all relevant safety regulations and standards.

Management Commitment

- Eco Waterway Services is committed to maintaining a safe working environment for all employees and subcontractors.
- The project management team will actively participate in promoting and enforcing safety protocols throughout the project.

Hazard Identification and Risk Assessment

Potential hazards specific to the Upper Nemahbin Dredging project, include but not limited to:

- Drowning and Submersion: Workers may be at risk of falling into the water during dredging operations, leading to drowning or submersion accidents.
- Entanglement in Dredge Equipment: Workers operating and maintaining dredging equipment may be at risk of entanglement in conveyor belts, winches, or other moving parts.
- Struck-by and Caught-between Accidents: Workers can be struck by falling objects or caught between heavy equipment and structures during dredging operations.
- Electrical Hazards: Electrical equipment used near water can pose electrical shock risks to workers.
- Fires and Explosions: Dredging activities near flammable materials or in proximity to gas pipelines can lead to fire or explosion hazards.
- Contact with Hazardous Materials: Dredged materials may contain contaminants or hazardous substances, which can pose health risks if not properly handled and disposed of.
- Inclement Weather: Adverse weather conditions, such as storms, high winds, or heavy rainfall, can create additional safety risks for workers on dredging sites.
- Navigation Hazards: Dredging equipment and pipelines may create navigational hazards for nearby vessels and boats.
- Equipment Malfunction or Failure: Mechanical failures or equipment malfunctions can result in accidents or injuries to workers.
- Fatigue and Overexertion: The physical demands of dredging work can lead to fatigue and overexertion, increasing the risk of accidents.
- Lack of Visibility: Poor visibility, especially in turbid waters, can increase the risk of collisions or other accidents.

- Falls and Slippery Surfaces: Slippery decks or structures on dredging vessels can cause slips, trips, and falls.

All staff on site will be required to complete a project walk-through with management prior to working on site to review and assess all potential hazards and risks associated with the project.

Safety Procedures and Guidelines

Personal Protective Equipment (PPE):

- All personnel involved in dredging operations must wear appropriate PPE during certain operations of the dredge. Life vests should be on the dredge at all times. All personnel are expected to wear hard hats and safety glasses when moving the dredge cables. Additional PPE may also include steel toed boots, high-visibility vests, high-visibility fleeces, wet suits, and raincoats and waders.

Safe Work Zones and Signage:

- Safe work zones will be established and clearly marked to prevent unauthorized personnel from entering hazardous areas.

Vessel Safety:

- Dredging vessels will be adequately maintained, inspected, and equipped with essential safety equipment, including life-saving appliances and firefighting equipment.

Equipment Operation:

- Only trained and authorized personnel should operate dredging equipment.
- Dredge must be turned off whenever not in use. The dredge also must be off when the operator is cleaning the cutterhead.
- Conduct pre-operation inspections to verify that equipment is in proper working condition before use.

Safety Procedures – Dredge Operation

1. **Conduct a Safety Assessment:** Before moving the dredge, assess the water conditions, including currents, tides, and any potential hazards. Check for any obstacles or debris in the water that could interfere with the dredge's movement.
2. **Verify Equipment Readiness:** Ensure that all parts of the dredge, including the cable system, winches, and other machinery, are in proper working condition. Perform routine maintenance and inspections to avoid any unexpected malfunctions during the operation.

3. **Establish Communication:** Maintain clear communication between the dredge operator, crew members, and any personnel involved in the operation. Use hand signals or radios to convey instructions and warnings effectively.
4. **Assign Trained Personnel:** Only allow trained and experienced personnel to operate the dredge. They should be familiar with its controls, safety protocols, and emergency procedures.
5. **Cleaning the Cutterhead:** Dredge must be turned off when performing routine maintenance and cleaning of the cutterhead.
6. **Plan the Path:** Determine the desired path and route for the dredge before moving it. Avoid areas with restricted navigation, shallow waters, or hazardous underwater obstacles.
7. **Secure the Dredge:** Before moving, ensure the dredge is securely anchored or moored to prevent any unintended movement while preparing for transportation.
8. **Coordinate Cable Handling:** Coordinate with the crew responsible for handling the cables. Ensure that the cables are correctly tensioned and aligned to avoid snags or entanglements during movement.
9. **Slow and Controlled Movement:** Move the dredge at a slow and controlled pace to maintain stability and avoid sudden shifts or instability in the water. Abrupt movements can lead to accidents or equipment damage.
10. **Monitor Weather Conditions:** Keep a close eye on weather forecasts and any changes in weather conditions during the operation. Sudden storms or strong winds can pose risks to the dredge's stability.
11. **Emergency Procedures:** Ensure that all crew members are familiar with emergency procedures, including how to stop or halt the dredge's movement immediately in case of any issues.
12. **Follow Local Regulations:** Comply with all relevant maritime regulations and guidelines in the area where the dredge is operating. This may include navigation rules, environmental protections, and safety requirements.
13. **Regular Inspections:** Throughout the operation, regularly inspect the dredge and its components to identify any potential issues early on.

Safety Procedures – Anchoring and Winch System

1. **Risk Assessment and Planning:** a. Conduct a comprehensive risk assessment of the shoreline area where the cable anchor system needs to be moved. Identify potential hazards, such as uneven terrain, obstructions, water currents, weather conditions, and nearby structures or utilities. b. Develop a detailed plan for moving the cable anchor system, including the route, equipment needed, personnel involved, communication procedures, and contingency measures.
2. **Qualified Personnel:** a. Only assign trained and experienced personnel to handle the cable anchor system. Ensure that they are familiar with the equipment and safety protocols. b. Designate a responsible person to supervise the operation and make decisions regarding safety.

3. **Communication:** a. Establish clear communication protocols among all involved personnel. Use hand signals or radios to ensure everyone can communicate effectively during the operation. b. Set up an emergency communication channel to immediately convey important information if needed.
4. **Personal Protective Equipment (PPE):** a. Ensure that all personnel wear appropriate PPE, including safety helmets, sturdy footwear, gloves, and life jackets if working near water. b. Provide additional PPE as necessary based on the specific hazards identified in the risk assessment.
5. **Equipment Inspection and Maintenance:** a. Thoroughly inspect all equipment involved in moving the cable anchor system, including winches, cables, pulleys, and anchoring points. b. Perform routine maintenance to ensure that all equipment is in proper working condition before starting the operation.
6. **Secure the Work Area:** a. Cordon off the work area with safety barriers or signs to prevent unauthorized access and keep the public and non-essential personnel away from potential danger zones. b. Ensure that there is adequate lighting if the operation extends into low-light conditions.
7. **Winch Inspection and Maintenance:** a. Regularly inspect the winch to ensure it is in good working condition. Check for any signs of wear, damage, or malfunction. b. Perform routine maintenance and lubrication according to the manufacturer's guidelines.
8. **Load Capacity:** a. Determine the weight of the cable and the load it will be pulling. Ensure that the winch's capacity exceeds the total weight of the cable and load to prevent overloading.
9. **Anchor Points and Rigging:** a. Verify that the anchor points for the winch and the cable are secure and capable of handling the pulling force. b. Use proper rigging techniques, such as shackles and slings, to ensure a secure connection between the cable and the load.
10. **Inspect Batteries:** a. Before using batteries outdoors, inspect them for any signs of damage, leakage, or corrosion. b. Do not use batteries that appear damaged or show any abnormalities.
11. **Proper Storage:** a. Store batteries in a cool, dry place, away from direct sunlight and extreme temperatures. b. Use a battery container or case to prevent short circuits or accidental contact with metal objects.
12. **Weather Protection:** a. Keep batteries away from rain, snow, or any other water sources. Use waterproof enclosures if necessary. b. In extreme weather conditions, provide additional protection such as insulation from freezing temperatures.
13. **Battery Handling:** a. Handle batteries with care, avoiding rough handling, dropping, or crushing them. b. Do not expose batteries to open flames or heat sources.
14. **Proper Lifting and Rigging:** a. Use appropriate lifting and rigging techniques to move the cable anchor system safely. Avoid sudden movements or jerks that could cause equipment failure or accidents. b. Check the load capacity of lifting equipment and ensure it exceeds the weight of the cable anchor system.

15. **Environmental Considerations:** a. Minimize the impact on the environment during the operation. Avoid disturbing sensitive habitats, wildlife, or vegetation. b. Comply with local environmental regulations and obtain any necessary permits for the operation.
16. **Emergency Response Plan:** a. Establish a comprehensive emergency response plan and ensure all personnel are aware of their roles in case of an emergency or accident. b. Provide first aid kits and make sure personnel are trained in basic first aid.
17. **Training and Briefings:** a. Conduct pre-operation safety briefings to review the safety procedures, potential risks, and emergency response plan with all involved personnel. b. Periodically conduct safety refresher training for personnel to reinforce safe practices.
18. **Post-Operation Inspection:** a. After completing the cable anchor system move, conduct a thorough inspection of all equipment and the work area to identify any damage or potential hazards.

Material Handling and Heavy Lifting:

1. **Assess the Load:**
 - Before attempting to lift a heavy object, assess its weight and size. If you believe the load is too heavy for you to lift alone, do not hesitate to seek assistance or use mechanical lifting aids.
2. **Position Yourself Correctly:**
 - Stand with your feet shoulder-width apart and one foot slightly forward to maintain a stable base.
 - Keep your back straight and avoid bending at the waist or rounding your back during the lift.
3. **Bend Your Knees:**
 - To lift the object, bend your knees and squat down while keeping your back straight. Engage your leg muscles to do the lifting, not your back.
4. **Get a Firm Grip:**
 - Use both hands to grip the object securely. If the object has handles or gripping points, utilize them to enhance your hold.
5. **Keep the Load Close:**
 - Hold the object as close to your body as possible while lifting and carrying. This reduces the strain on your back and increases your stability.
6. **Lift with Smooth Movements:**
 - Lift the object using slow and smooth movements, avoiding any jerking or sudden motions.

7. Avoid Twisting or Rotating:

- While lifting and carrying the object, avoid twisting your body. Instead, pivot with your feet if you need to change direction.

8. Know Your Limits:

- Be aware of your physical capabilities and never lift an object that exceeds your lifting capacity. If in doubt, ask for assistance.

9. Take Breaks:

- If your job involves frequent lifting of heavy objects, take short breaks to rest and recover your muscles.

10. Use Mechanical Aids:

- Whenever available, use mechanical lifting aids such as dollies, carts, forklifts, or hand trucks to lift heavy objects safely.

11. Proper Communication:

- When working in teams, communicate clearly and coordinate the lifting process to ensure smooth and safe handling of heavy objects.

12. Proper Footwear:

- Wear appropriate closed-toe shoes with good traction to prevent slips during lifting tasks.

Emergency Evacuation Plan (From Dredge or Anchor Boat)

1. Preparation and Communication:

- Before embarking on any water vessel, ensure that everyone on board is aware of the locations of safety equipment, emergency exits, life jackets, and other essential safety items.
- Conduct a safety briefing before departure, explaining the evacuation procedures, emergency signals, and how to use safety equipment properly.

2. Designate Assembly Points:

- Identify specific assembly points on the boat where passengers and crew should gather in case of an emergency. These areas should be easily accessible and clearly marked.

3. Assign Roles:

- Designate specific roles to crew members to ensure a smooth and organized evacuation process. Responsibilities may include guiding passengers to the assembly points, checking cabins, or operating life-saving equipment.

4. Life Jackets and Personal Flotation Devices (PFDs):

- Ensure that there are enough life jackets and PFDs for everyone on board, and that they are in good condition and readily accessible.
 - Instruct passengers on how to properly wear and secure their life jackets.
5. **Emergency Signaling:**
- Make sure the boat is equipped with appropriate emergency signaling devices, such as flares, distress signals, or emergency beacons.
6. **Communication Devices:**
- Ensure that the boat is equipped with reliable communication devices, such as marine radios or satellite phones, to call for help in case of an emergency.
7. **Emergency Drills:**
- Conduct regular emergency drills to familiarize everyone on board with the evacuation procedures. Practice different scenarios, including fire, flooding, or capsizing.
8. **Plan for Different Scenarios:**
- Anticipate potential emergency situations that could occur on the boat and plan for specific evacuation procedures for each scenario.
9. **Stay Calm and Inform Passengers:**
- In case of an emergency, remain calm and composed. Provide clear instructions to passengers and encourage them to stay calm as well.
10. **Abandon Ship Procedures:**
- If abandoning the boat becomes necessary, make sure all passengers are wearing life vests prior to entering the water.
11. **Account for Everyone:**
- Once at the assembly points or in the lifeboats, conduct a headcount to ensure that all passengers and crew members are accounted for.
12. **Wait for Assistance:**
- Stay a safe distance from the dredge until emergency responders arrive on site.

Environmental Protection:

- Adhere to environmental regulations and best practices to minimize impacts on aquatic life, water quality, and ecosystems.
- Implement measures to prevent the release of sediment or contaminants into the water.

Weather and Sea State Monitoring:

- Monitor weather conditions and sea states to assess risks and determine when it is safe to conduct dredging operations.
- Suspend operations during adverse weather conditions, as appropriate.

Safe Dredge Pipeline Management:

- Regularly inspect dredge pipelines for wear, damage, and leaks.
- Establish protocols for pipeline connections and disconnections.

Safety Training and Education:

- Provide comprehensive safety training to all personnel involved in the dredging project, covering relevant safety procedures and hazards.
- Conduct regular safety meetings to reinforce safety practices and discuss any new risks or concerns.

Contractor and Subcontractor Safety Management

- Subcontractors must adhere to the same safety standards and requirements as Eco Waterway Services employees.
- Regularly communicate and collaborate with subcontractors to ensure unified safety efforts.

Continuous Improvement and Review

- Regularly review and update the safety plan as necessary to address new hazards and incorporate lessons learned from incidents.
- Conduct safety audits and inspections to monitor compliance and identify areas for improvement.

Documentation and Recordkeeping

- Maintain detailed records of safety training, inspections, incident reports, and safety meetings.
- Use data to identify trends and make data-driven safety improvements.