



# UNIVERSITY OF SOUTH FLORIDA

## Biomedical Waste Management Plan

USF Biomedical Waste Management Plan for: USF Knight Oceanographic  
Research Institute

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## POLICY

Biomedical waste is generated by research, instructional, and clinical activities at the University of South Florida (USF). The management of biomedical waste in the State of Florida is regulated by Chapter 64E-16, Florida Administrative Code (F.A.C.) and in section 381.0098, Florida Statutes. All areas within USF that generate biomedical waste are required to comply with the requirements of the USF Biomedical Waste Management Plan. Departments may choose to implement a more stringent, site-specific Biomedical Waste Management Plan that serves their operational needs and must comply with at least the minimum set forth by the USF Biomedical Waste Management Plan.

## PURPOSE

The purpose of the Biomedical Waste Management Plan is to provide the requirements for the proper management of biomedical waste. Facility/Site specific information in this document is presented in tabular format like in the following entry.

<b>The Facility/Site name:</b>	USF Knight Oceanographic Research Institute
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## RESPONSIBILITIES

- A. Environmental Health and Safety (EH&S) has the overall responsibility for the Biomedical Waste Program, including the following tasks:
  - **Contract Management:** Ensures that waste is picked up regularly in accordance with the Florida Administrative Code (FAC) 64E-16. This also includes maintenance of shipping manifests, invoices and other contract documents.
  - **Problem Resolution:** Resolves problems between the University and vendors. Complaints or requests for special services should be directed to EH&S who in turn coordinates with the vendors.
  - **Inspection Coordination:** Coordinates Department of Health biomedical waste inspections and provides assistance to the Health inspector. Prepares corrective action reports and forwards them to the Department of Health.
  - **Training:** Offers training sessions to USF faculty, staff, and students and manages applicable training records.
- B. Facility/Site Contacts are responsible for supervising biomedical waste practices in their respective areas. This includes:
  - Ensuring that all applicable parties have received biomedical waste training prior to commencement of duties related to biomedical waste and annually thereafter.
  - Ensuring that all biomedical waste is handled and disposed of in accordance with the requirements of the USF Biomedical Waste Management Plan.
  - Maintaining training documentation for all affected personnel. Contact EH&S for assistance in accessing digital training records.

## DEFINITIONS

1. For the purposes of this document a “Facility” is permitted by FDOH and a “Site” is a subunit of a Facility.
2. Biomedical waste – Any solid or liquid waste which may present a threat of infection to humans, including nonliquid tissue, body parts, blood, blood products, and body fluids from humans and other primates; laboratory and veterinary wastes which contain human disease-causing agents; and discarded sharps. The following are also included:
  - (a) Used, absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.
  - (b) Non-absorbent, disposable devices that have been contaminated with blood, body fluids or, secretions or excretions visibly contaminated with blood, but have not been treated by an approved method
3. Disinfection – the process of removing pathogenic microorganisms from objects or surfaces.
4. Sterilization – the process used to destroy of all microorganisms on a surface or object, thereby rendering biomedical waste non-infectious.
5. Cleaning – a process by which soap or detergent and water is applied to an area to remove dirt and organic matter from surfaces or objects. Cleaning may not kill microorganisms, but prepares the object or surface for a more effective disinfection.
6. Point of origin – the room or area where the biomedical waste is generated.
7. Puncture resistant - able to withstand punctures from contained sharps during normal usage and handling.
8. Sharps - Any object capable of puncturing, lacerating, or otherwise penetrating the skin.

<p><b>This Facility/Site produces the following items which are considered biomedical waste:</b></p>	<p>Sharps          Laboratory wastes which contain human disease-causing agents          Nonliquid tissue, body parts, blood, blood products, and body fluids from humans</p>
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## TRAINING

Biomedical waste training is required annually by paragraph 64E-16.003(2) (a), F.A.C. for all personnel that handle biomedical waste. EH&S provides biomedical waste training through the EH&S Biomedical Waste Training online, classroom-based, or via MS Teams. The main components of the training must cover:

- Definition and identification of biomedical waste
- Segregation
- Storage
- Labeling
- Transport
- Spill Clean-up procedures
- Contingency Plan for Emergency Transport
- Procedure for containment
- Treatment method

Each Facility/Site must maintain records of employee training. Training records must be kept for participants in all training sessions for a minimum of three (3) years and must be available for review by

Department of Health (DOH) inspectors. USF Environmental Health & Safety maintains digital records of training.

<b>Location of employee training records:</b>	Maintained by EH&S. Contact EH&S at 813-974-4036.
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## **SEGREGATION**

Biomedical waste must be separated from all other waste streams at the point of origin as per the requirements of 64E-16 of the Florida Administrative Code (FAC). Once separated, the waste must be placed in either a sharps container or a red bag. Each individual location is required to have an adequate number of sharps containers and approved red bags to dispose of the biomedical waste generated.

### ***Mixed chemical and biomedical waste***

Biomedical waste mixed with chemical waste, as defined in Chapter 62-730, F.A.C., must be managed as hazardous waste. Any biomedical waste that is mixed with chemical waste must be separated if possible. Any questions pertaining to mixed chemical and biological waste disposal should be directed to EH&S.

### ***Mixed radioactive and biomedical waste***

Biomedical waste mixed with radioactive waste must be managed in accordance with the provisions of Chapter 64E-16, F.A.C. Any questions pertaining to mixed radioactive and biological waste should be directed to Research Integrity and Compliance (RI&C).

Broken glass must be discarded into a plastic-lined container with the label “Broken Glass” unless it is contaminated with biological materials. Broken glass contaminated with biological materials must be discarded in a red sharps disposal container.

## **LABELING & PACKAGING**

All sealed biomedical red bags and sharps containers must be labeled with the following information:

- Facility/Site Name (e.g. USF)
- Facility/Site Address or department physical address
- Facility/Site Phone or department phone number
- Facility/Site Contact or responsible person

If a sealed red bag or sharps container is placed into a larger red bag prior to transport, labeling the exterior bag is sufficient. Outer containers are labeled by the biomedical waste transporter with their name, address, registration number, and 24-hour phone number.

## **TRANSPORT**

A transporter registered with Florida Department of Health removes biomedical waste from the Facility/Site. Storage of biomedical waste may not exceed 30 days (see also Storage & Containment). Pick-up times may vary by locations. The USF biomedical waste transporter and treatment facility is:

NEIE Medical Waste Services LLC  
1504 Sydney Road  
Plant City, FL, 33566

<b>Location of manifests of transport/transport log:</b>	Maintained on transporter website. Contact EH&S at 813-974-4036.
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## STORAGE & CONTAINMENT

Biomedical waste must not be stored for more than 30 days:

- after the first non-sharps item of biomedical waste is placed into a red bag,
- after the first non-sharps-item of biomedical waste is placed into a red sharps container, or
- after a red sharps container that contains only sharps is sealed.

Access to indoor biomedical waste storage areas must be restricted through the use of locks, signs, or location. Locate away from pedestrian traffic and maintain in a sanitary condition. The area should be constructed of smooth, easily cleanable materials that are impervious to liquids and vermin/insect free.

Outdoor storage areas also must be conspicuously marked with a six-inch international biological hazard symbol and must be secured from vandalism.

These minimum containment standards must be followed according to Chapter 64E-16, F.A.C:

- Generators of biomedical waste shall purchase **red** bags from vendors who certify that their bags meet the applicable standards and maintain a copy of the certification on file in their department.
- Sharps containers shall meet the requirements of FAC 64E-16. Generators of biomedical waste shall purchase sharps containers from vendors who meet the above standards.
- Place all contaminated sharps into red sharps containers at the point of origin. Non-infectious needles and needle-syringe units must be placed in sharps containers. Sharps containers must be sealed and labeled prior to disposal by the biomedical waste transporter.
- Sharps shall be discarded at the point of origin into single use or reusable sharps containers. Needles and scalpel blades shall not be placed directly into double-walled corrugated containers. Sharps containers must be sealed when filled to the line indicated on the container.
- Sharps containers are considered full when materials placed into it reach the designated fill line, or, if a fill line is not indicated, when additional materials cannot be placed into the container without cramming or when no additional materials are to be placed in the container.
- Red bags must be placed into an outer container at the point of origin prior to disposing of any biomedical waste. The outer container must be rigid, leak-resistant and puncture-resistant. Reusable outer containers shall be constructed of smooth, easily cleanable materials and shall be decontaminated after each use. Red bags must be sealed and labeled prior to disposal by the generator.
- Ruptured or leaking packages of biomedical waste must be placed into a larger container.

<b>Location of red bags:</b>	Laboratories, Shed in ground level storage area
<b>Location of sharps containers:</b>	Laboratories, Shed in ground level storage area
<b>Location of biomedical waste storage in the Facility/Site:</b>	Shed in ground level storage area
<b>Storage is secured in the following manner:</b> Locks, Signs, or Location	

## SPILLS

Surfaces contaminated with spilled or leaked biomedical waste must be decontaminated with a solution of industrial strength detergent to remove visible soil before being disinfected:

- Cover the spill with a hypochlorite solution containing 100 parts per million (ppm) available free chlorine and leave for at least ten minutes (note: one part bleach plus nine parts water equals 100 ppm).
- Employees cleaning spills of biomedical waste must wear appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection. Spills should be reported to EH&S at 813-974-4036.

<b>Location of bleach:</b>	Laboratories, Shed in ground level storage area
<b>Location of PPE:</b>	Laboratories, Shed in ground level storage area

## EMERGENCY CONTINGENCY PLAN

If the primary transporter is unable to remove waste from the Facility/Site, another registered biomedical waste transporter will be selected from the Florida Department of Health's Registered Biomedical Waste Transporter list.

## PRE-TREATMENT METHODS

Pre-treating infectious waste prior to disposal in the biomedical waste stream is recommended for BSL-2 labs, but required for BSL-3 labs. The following pre-treatment methods are used at USF prior to ultimate disposal:

- On-Site Steam Sterilization - autoclaves are used to reduce the infectious load of, or continued growth of organisms in, potentially infectious biomedical waste by steam prior to biomedical waste being containerized for ultimate disposal through USF's biomedical waste disposal vendor.
- Chemical Decontamination – a 10% bleach solution is primarily used for the decontamination of liquid biomedical waste prior to disposal down the sanitary drain. This bleach solution can also be used decontaminate surfaces and objects contaminated with biomedical waste. It is also permitted to use EPA registered chemical germicides for chemical decontamination of biomedical waste.

## TREATMENT METHODS

USF does not treat biomedical waste except for minimal chemical decontamination of liquids/semi-solids, which are disposed to the sanitary sewer (liquids) or biomedical waste containers (semi-solids) for ultimate disposal by USF's biomedical waste disposal vendor. The USF biomedical waste disposal vendor uses the following treatment methods to decontaminate biomedical waste at off-site locations in compliance with 64E-16, FDEP, and FDOT regulations.

- Steam Sterilization – generally used for clinical waste and BSL-2 and lower waste.
- Incineration – generally used for BSL-3 agents, infectious animal waste, and carcasses.

## **PENALTIES**

Violation of any provision of Chapter 64E-016, F.A.C., may result in denial, suspension or revocation of the university's biomedical waste permits or an administrative fine of up to \$2500 per day for each violation of this chapter or other enforcement action authorized by law.