

# **Creighton University**

## **Comprehensive Universal Waste and Environmental Program**

### **I. Purpose**

Creighton University establishes this policy to identify general goals and strategies for a commitment to environmental responsibility. Through enacting and implementing the vision of this policy, Creighton University will be a positive example and play a part in the advancement of environmental stewardship on the campus and in the local community.

### **II. Scope**

This policy and procedure pertains to all students, staff, faculty and administration of the University.

### **III. Policy**

To maintain the campus effectively while also working to preserve the rights of future generations, the University affirms its commitment to environmental excellence and to actively promote the right to a healthy, quality environment.

Creighton University will work toward the goal of balancing fiscal and environmental responsibility in making decisions and in general University practices. The university acknowledges its role and responsibility to provide educational, social, and financial leadership to achieve the goals of the policy.

### **IV. Goals and Strategies**

#### **A. Commitment to Environmental Education.**

The University recognizes ongoing education for all members of the University Community about the importance of environmental responsibility and the provisions of the Comprehensive Environmental Program.

1. The University commits to assuring that the University Community is aware of the Comprehensive Environmental Program and understands its roles in the Plan's implementation.
2. The University recognizes its academic role in fostering leadership by educating the University Community about environmental responsibility.

#### **B. Environmentally Responsible Purchasing Policies.**

The university recognizes that one of the primary methods of exercising its commitment to environmental responsibility is through its purchasing choices. The university will strive to obtain maximum value for its expenditures and will work towards obtaining the "best value" by balancing short and long-term costs, maintenance, life cycle, and environmental costs in purchasing goods and services.

1. The University acknowledges that environmentally responsible purchasing choices will help create and sustain markets for environmentally responsible product offerings and products containing recycled materials.

2. The University commits to the goal of making environmentally and fiscally responsible purchasing choices that consider life cycle costs, long-term implications, and relative environmental harm of products.
3. Purchasing policies will encourage obtaining products that minimize waste production, have high-recycled content, use environmental production methods, demonstrate maximum durability or biodegradability, reparability, energy-efficiency, non-toxicity, and recycleability.

**C. Efficient Use and Conservation of Energy, Water and Other Resources.**

The university recognizes the importance of conservation efforts and efficient use of resources as the primary method to be used to reduce resource consumption.

1. The University commits to minimizing the consumption of energy, water, and other resources by eliminating wasteful practices and promoting efficient use.
2. The University strives to maximize energy efficiency in existing buildings, renovations, and new construction.
3. The University commits to exploring and implementing well-considered and feasible conservation measures in existing buildings, renovations, and new construction.
4. The university will explore the application of developing technologies for energy systems and use of resources, as well as the potential use of renewable energy resources.

**D. Minimize Solid Waste Production.**

The university recognizes the importance of minimizing solid waste generation by the community. The University will establish policies and processes that will reduce solid waste generation; first through reduction, secondarily through reuse, and finally through recycling.

1. The University commits to waste source reduction, especially at the point of purchase.
2. The university supports reuse of materials to maximize fiscal, environmental, and energy efficiency.
3. The university commits to a comprehensive recycling program as the final step in solid waste reduction and as a means to transform waste into a resource.

**E. Minimize Hazardous Waste and Toxic materials on Campus.**

The university acknowledges the importance of safe management of hazardous and toxic materials and will continue to establish policies and processes to maintain efficient use, tracking, storage and disposal of hazardous and toxic materials.

1. The University commits to keeping the presence of toxic material on campus and the generation of hazardous waste within the University community at reasonable levels for work and research on campus.
2. The University supports environmentally responsible disposal of hazardous waste.
3. The University commits to keeping the presence of radioactive materials used on campus at reasonable levels as needed for research. It supports environmentally responsible disposal of radioactive waste from within the University Community.

**F. Environmentally Responsible Campus Design and Planning Principles.**

The University recognizes the importance of environmentally responsible practices in developing the physical characteristics of its community. The university will consider environmental implications in the development, construction and operation of campus infrastructure, grounds, and buildings.

1. The University will strive to balance sound fiscal practices and environmental responsibility in the maintenance and further development of the planning and building of campus facilities.
2. The University will work toward the goals of providing landscaping and grounds maintenance practices that use vegetation compatible with the local environment and that use integrated pest management techniques.
3. The university has an ongoing commitment to facilitating pedestrian travel, bicycle use, and other modes of transportation that minimize environmental impact.

## V. Definitions

- A. **Battery** means a device consisting of one or more electrically connected electrochemical cells, which is designed to receive, store and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed. It does not include electrical generators but only includes devices that can store electrical power.
- B. **Code of Federal Regulations (CFR)**
- C. **Destination facility** means a facility that treats, disposes of, or recycles a particular category of universal waste. A facility at which a particular category of universal waste is only accumulated is not a destination facility for purposes of managing that category of universal waste.
- D. **Electronic Item** means electronic equipment that contains one or more electronic circuit boards or other complex circuitry, including but not limited to computer monitors, televisions, central processing units (CPUs), laptop computers, printers, terminals, keyboards, mainframes, stereo equipment, telephones, and recording/playback devices. "Electronic item" does not include discarded household appliances. As of January 2005, Nebraska is one of the few states to consider electronic items as universal waste.
- E. **Environmental Protection Agency (EPA)**
- F. **Generator** means any person, by site; whose act or process procedure hazardous waste or whose act first causes a hazardous waste to become subject to regulation.
- G. **Lamp** (also referred to as "universal waste lamp") means the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infrared regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.
- H. **Large Quantity Handler of Universal Waste** means a universal waste handler who accumulates 5,000 kilograms or more total of universal waste at any time. This designation as a large quantity handler of universal waste is retained through the end

of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated.

- I. ***Mercury-containing item*** means any electrical, mechanical, or medical product or component (excluding batteries and lamps) which contains elemental mercury and the elemental mercury is necessary for its operation where the mercury acts as a conductor of temperature, pressure, or electricity, or acts as a weight damper. The mercury must be housed within an outer metal, glass or plastic casing. Mercury-containing devices include but are not limited to: barometers, sphygmomanometers, electrical switches and relays, gauges and flow regulators, manometers, bow stabilizers, thermometers, thermocouples, and mercury-filled pumps.
- J. ***On-site*** means the same or geographically contiguous property, which may be divided by public or private right-of-way, if the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right of way.
- K. ***Pesticide*** means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant. It does not include new animal drugs or feeds that contain animal drugs.
- L. ***Recycled*** means a material is used, reused, or reclaimed.
- M. ***RCRA Empty*** – while the aerosol can may have all its contents removed using practices commonly employed to remove materials from that type of container, the generator must demonstrate that the aerosol can also have no more than one inch of residue or no more than 3% by weight of the total capacity remaining.
- N. ***Resource Conservation and Recovery Act (RCRA)***
- O. ***Small Quantity Handler of Universal Waste*** means a universal waste handler who does not accumulate more than 5,000 kilograms total of universal waste, on the contiguous property of the facility, at any time.
- P. ***Universal Waste*** – in April of 1995, the first “Universal Waste” rule was issued by the EPA and codified in 40 CFR part 273. The rule currently applies to batteries, pesticides, thermostats, and fluorescent lamps. The main focus of the rule is to provide generators of these hazardous wastes more freedom in transporting, collecting, and handling wastes. The Universal Waste Rule encourages recycling by streamlining the requirements related to notification, labeling, marking, prohibitions, accumulation time limits, employee training, responses to releases, offsite shipments, tracking, exports, and transportation.
- Q. ***Universal Waste Handler*** means the owner or operator of a facility that generates or receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination. It does not include the treatment, disposal, recycling or transportation of universal waste.
- R. ***Universal Waste Transfer Facility*** means any transportation-related facility where shipments of universal waste are held during the formal course of transportation for ten days or less.
- S. ***Universal Waste Transporter*** means a person engaged in the off-site transportation of universal waste by air, highway, or water under the requirements of this part.

## VI. Aerosol Can Collection

It should be noted that aerosol cans are not Universal Waste, but they are collected and handled with the Universal Waste items.

- A. Aerosol cans, even when empty, can be considered hazardous waste due to the reactivity of the can itself and not the characteristics of the substance the can once contained. The can is capable of detonation or explosive reaction if it is subject to a strong initiation source or it is heated under confinement.
- B. Therefore, **all** unwanted aerosol cans must be disposed via Facilities Management and **must not** be thrown in the garbage. This includes everything that comes in an aerosol can (*e.g.*, paints, hairspray, deodorizer, cleaners, *etc.*).
- C. Following these simple rules will ensure compliance with applicable regulations:
  - 1. Do not discard aerosol cans in the garbage, even when they appear to be empty of propellant.
  - 2. If you use a lot of aerosol cans, contact Facilities Management so that you can be set up with a collection drum in your immediate work area.
  - 3. If you only use a few aerosol cans, you can place your unwanted aerosol cans in a common-use drum supplied for your building. If you do not know the specific location of the common-use drum for your building, contact Facilities Management.
  - 4. The aerosol collection container/drum will be labeled as “Aerosol Cans.”
  - 5. Ensure that the lid on the collection drum remains closed at all times.
  - 6. Should your container/drum become full contact Facilities Management immediately so it can be picked up.
  - 7. Whenever possible, avoid using products that come in aerosol cans. If you can avoid the use of aerosol cans, the University can avoid some costly regulatory requirements.
- D. Facilities Management Disposal Procedures
  - 1. Facilities Management collects aerosol cans and punctures them in a can-puncturing apparatus; this renders the cans as non-hazardous.
  - 2. The punctured and emptied cans are disposed of as scrap metal. Therefore, these cans are excluded from being hazardous waste. This does not include cans that contained P-listed chemicals or pesticides; these sorts of cans must still be handled as hazardous waste.
- E. A separate Aerosol Can Policy lists further responsibilities that are Creighton-specific.

## VII. Universal Waste

Universal waste is hazardous waste that is common among all industries. EPA considers batteries, pesticides, mercury-containing thermostats, and lamps as universal waste. However, NDEQ is somewhat stricter and consider the following as universal waste: Batteries, pesticides, mercury-containing items, lamps, and electronic items. NDEQ’s regulations can be found in Title 128, Chapter 25.

### A. Labeling

The universal waste or the container in which the universal waste is placed in must be labeled or marked clearly with words appropriate to the type of waste. These include “Universal Waste – (blank)” or “Waste (blank)” or “Used (blank)” where (blank) is

Battery(ies), Mercury-containing Items, Lamps, Pesticides or Electronic Items. Note that used pesticides are not universal waste and therefore “used pesticides” would not be a proper label. Additionally, the name of the actual item may be substituted in the case of an electronic item, *e.g.* “Waste Monitor” or “Universal Waste – CPU”.

**B. Accumulation Time Limits**

1. A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler. It is permissible to accumulate waste longer than one year from the date the universal waste is generated if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, written approval must be gained from NDEQ prior to the one year accumulation time limit if the limit is to be exceeded.
2. However, the generator bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal. The handler must be able to demonstrate the length of time that the universal waste has been accumulated from the date it became a waste. This may be done by labeling each individual item with the date it became a waste, labeling the container with the earliest date that any waste was placed in the container, maintaining an inventory system that identifies the date each universal waste item became waste, maintaining an inventory system on-site that identifies the earliest date a group of containers of universal waste became waste, or any other method that clearly demonstrates the length of time that the universal waste has been accumulated.

**B. Employee Training**

All employees who handle or have responsibility for managing waste will be informed of procedures for proper handling and emergency procedures appropriate to the types of universal waste handled at the facility. This especially pertains to Facilities Management employees.

**C. Spills**

The handler must immediately contain all releases of universal wastes and other residues from universal wastes. It must be determined whether any material resulting from the release is hazardous waste, and if so, it must manage the hazardous waste in compliance with the regular hazardous waste regulations.

**D. Off-Site Shipments**

1. A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
2. If a small quantity handler of universal waste self-transport universal waste off-site, the handler becomes a universal waste transporter and must comply with the transporter requirements and DOT regulations.

3. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49CFR parts 171 through 180, a small quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable DOT regulations under 49 CFR parts 172 through 180.
4. Before shipping universal waste to another universal waste handler you must ensure that the receiving handler agrees to accept the shipment.
5. If the receiving handler or destination facility rejects the shipment, the originating handler must either receive the waste back or agree with the receiving handler on a new facility to which the shipment will be sent.
6. A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a receiving handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. They must agree to either send the shipment back to the originating handler or send the shipment to a new destination facility.
7. If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the NDEQ of the illegal shipment, and provide the name, address and phone number of the originating shipper. NDEQ will provide instructions for managing the hazardous waste.
8. If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler must manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

## **F. Tracking Shipments**

A small quantity handler of universal waste is not required to keep records of shipments of universal waste. The EPA assumes that the regular business documents used as part of the shipment will be sufficient to show that the material was managed correctly.

## **G. Batteries**

1. Batteries such as nickel-cadmium (Ni-Cd) and small sealed lead-acid batteries, which are found in many common items in the University setting, cannot be placed in the trash. Some examples of these items include electronic equipment, cellular telephones, pagers, laptop computers, calculators, *etc.*
2. A used battery becomes a waste on the date it is discarded (*e.g.* when sent for reclamation) and an unused battery becomes a waste on the date the handler decides to discard it.
3. Batteries must be disposed of in a way that prevents the release of any universal waste or component of a universal waste to the environment. Batteries that show evidence of leakage or damage must be stored in containers that are closed, structurally sound, and compatible with the contents of the battery.
4. As long as the casing of each individual battery cell is not breached and remains intact and closed, small quantity handlers of universal waste may conduct the following activities:
  - a. Sorting batteries by type;

- b. Mixing battery types in one container;
  - c. Discharging batteries so as to remove the electric charge;
  - d. Regenerating used batteries
  - e. Disassembling batteries or battery packs into individual batteries or cells;
  - f. Removing batteries from consumer products; or
  - g. Removing electrolyte from batteries
5. Anyone who removes electrolyte from batteries or who generates other waste associated with batteries (*e.g.* battery pack materials, discarded consumer products) must determine if this material is a regular hazardous waste.
  6. If the electrolyte and/or other solid waste are a hazardous waste, it is subject to all applicable requirements of regular hazardous waste. The handler is considered a generator of hazardous waste and must comply with all of the generator requirements. This includes EPA notification and strict limits on storage. If the electrolyte or other solid waste is not a hazardous waste, you may dispose of the material in a solid waste landfill.
  7. A separate Battery Policy lists further responsibilities that are Creighton-specific.

## **H. Pesticides**

1. Pesticides are generally managed under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Waste pesticides are usually generated due to a federal recall or from citizens cleaning out the garage. Universal waste pesticides include both recalled pesticide stocks of a suspended and cancelled pesticide that are part of a voluntary or mandatory recall and unused pesticide products that are collected and managed as part of a waste pesticide collection program.
2. Labeling – The container must be labeled with original label and the wording Universal Waste Pesticide(s). If the original label is not legible it must be labeled in accordance with either DOT requirements or have a label officially recognized by the state as part of a pesticide collection program.

## **I. Mercury-containing items**

A small quantity handler of universal waste must manage universal waste mercury-containing items in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

1. Must contain any universal waste mercury-containing items that show evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents, and must lack evidence of leakage, spillage, or damage that could cause leakage.
2. A small quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing items provided that the handler follows the procedure outlined in Title 128, Chapter 25, Section 012.03B of the NDEQ regulations. It is not recommended that Creighton personnel remove mercury from these items themselves. The regulations require a containment device, a mercury clean-up system at the ready, an appropriate container for any spills, and proper ventilation and monitoring of the area where the removal will be



performed. A determination must be made of whether the mercury is hazardous waste, and if so it must be handled as such.

3. Similar regulations apply to draining mercury out of open-ended mercury-containing items.

## **J. Lamps**

A small quantity handler of universal waste must manage universal waste lamps in a way that prevents releases of universal waste or component of a universal waste to the environment.

1. The lamps must be contained in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. The containers must stay closed and must lack evidence of leakage, spillage, or damage that could cause leakage.
2. Any lamp that is broken or shows signs of breakage or leaking must be immediately cleaned up and placed in the appropriate container, as described above.
3. A Creighton-specific Lamp Procedure is available and should be followed.

## **K. Electronic Recycling**

### **1. General Information**

- a. Electronic waste is any item with a circuit board or other complex circuitry, including such items as unwanted computers, monitors, televisions, audio equipment, printers, and other electronic devices.
  - b. Besides taking up space in empty cubicles and storerooms, end-of-life electronics pose several issues regarding proper disposal and potential environmental consequences.
    - i. Discarded electronics contain hazardous or toxic substances. Some electronic products (notably those with cathode ray tubes or CRTs, circuit boards, batteries, and mercury switches) contain hazardous or toxic materials such as lead, mercury, cadmium, chromium, and some types of flame-retardants, and do so in amounts that may cause them to test hazardous under federal law.
    - ii. In particular, the glass screens, or CRTs, in computer monitors and televisions can contain as much as 27% lead.
2. *Donations are an alternative:* Be aware that organizations that accept donations want newer technology. If your computer donation is not relatively new and in good working order, you are simply passing on the cost of recycling to organizations that have more important uses for their money.

### **B. Procedure**

1. Contact the Technology Buyer in Purchasing first at 280-3043. Purchasing will make the determination whether the item(s) can be reused or must be disposed of.
2. If the items are to be disposed of the University has an agreement with a local electronic recycler to dispose of them properly. There is a cost to the University for this service.
3. Purchasing has developed a Creighton-specific policy for handling electronic equipment, especially computers and their peripherals.