



# CT DEEP Solid Waste Facility Operator Certification - Module 4

"Specific Waste/Materials & SWF  
Management Conditions"



# Specific Waste and Materials Management



# Specific Waste/Materials

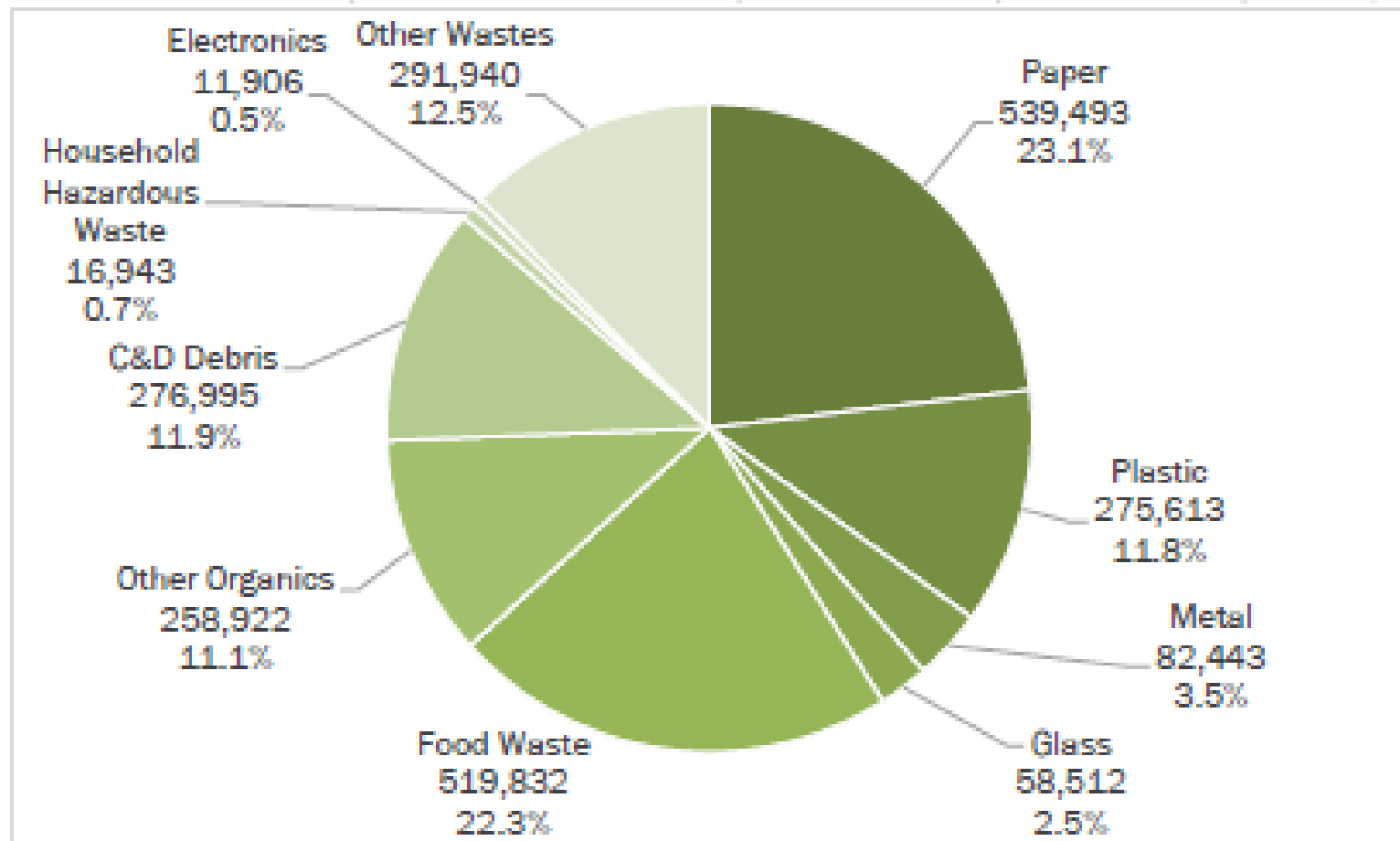
- Municipal Solid Waste (MSW)
  - Residential, Commercial, Industrial and Institutional Sources
  - 60% of all Solid Waste is considered MSW
  - Most of it can be either Recycled and Composted \*
  - Connecticut's Current Statewide Source Reduction/Diversion/Recycling Percentage is only about 35%
  - Our CMMS goal for 2024 is 60%



# Specific Waste/Materials

- Municipal Solid Waste (MSW)
- 2015 Statewide Waste Characterization Study

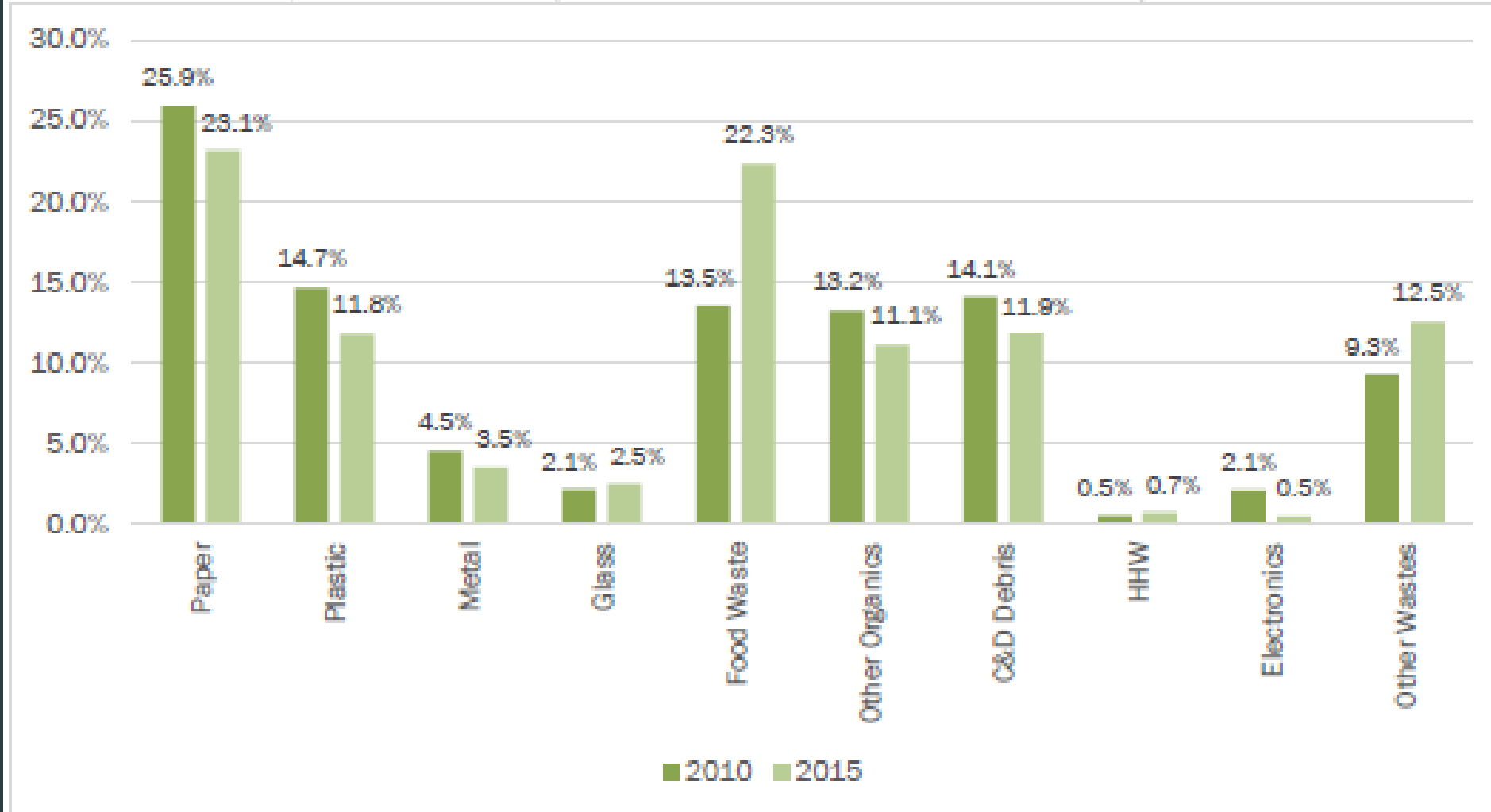
Figure ES 2-1 Municipal Solid Waste Composition and Quantities Disposed (tons)



# Specific Waste/Materials

## ➤ Municipal Solid Waste (MSW)

Figure ES 2-2 Comparison of 2010 and 2015 MSW Composition





**GARBAGE  
MUST BE IN  
PORTLAND  
PAY PER  
BAGS**



# Specific Waste/Materials

- Municipal Solid Waste (MSW)
- Collected curbside or brought to a Transfer Station
- Some VRFs are permitted to receive MSW but it must be kept separated from the C&D and no manual or mechanical sorting is allowed
- MTS Storage Limit: 500 cy !
- Most MSW is combusted for energy at RRFs
- CMMS goals - Reduce MSW disposal by Unit-Based Pricing (SMART) and increase recycling & composting



# Specific Waste/Materials

- Recyclable Fiber/Paper - Cardboard, Mixed Paper, Magazines, Newspaper, Boxboard, Office Paper
- All Fiber/Paper must be clean & dry for proper recycling
- Some contaminated Fiber/Paper can be diverted to composting/Anaerobic Digesters for processing
- Single Stream Recycling has caused the most contamination of Fiber/Paper items





# **SINGLE STREAM RECYCLING**

## **ACCEPTED MATERIALS**

 **MIXED PAPER**

 **FLATTENED  
CARDBOARD**

 **METAL CANS**

 **GLASS BOTTLES  
AND JARS**

 **PLASTIC  
CONTAINERS**

R530F

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# Specific Waste/Materials

- Recyclables - Glass Bottles, Metal Cans & Plastic Containers - "Food/Beverage Containers" but also include plastic soap, laundry, shampoo containers



- PET/PETE
- HDPE













# Specific Waste/Materials

- Connecticut's Bottle Bill Law began January 1, 1980
- The bottle bill applies to the following beverages: beer, carbonated soft drinks (including mineral waters and soda waters) and noncarbonated beverages (which means water, including flavored water, nutritionally enhanced water, etc.

- Connecticut Bottle Bill





Your bottle and can donations  
**ARE APPRECIATED**

PROCEEDS ARE USED TO SUPPORT THE LOCAL  
**AMERICAN LEGION**  
YOUTH PROGRAMS AND OTHER LOCAL ACTIVITIES

*Thank You For Your Support!*  
**IBELL-JACOBSON-SMITH POST 61**  
Deep River, Ct.

03.07.2012 12:54



# QUIZ - TRUE or FALSE?

1) MSW is generated only by residential sources

2) If CT diverts more food scraps to composting and AD facilities, we may reach our CMMS 60% goal

3) The majority of redeemable bottles and cans are returned for its deposit

4) Fiber/Paper are kept the cleanest when collected by single stream recycling

5) Glass bottles could be collected separately for recycling in the future



# ANSWERS

1) False - MSW is generated by residential, commercial, industrial and institutional sources

2) True - Diverting more food scraps is one of the ways CT may reach its 2024 CMMS goal

3) False - 50% or more of the redeemable bottles and cans are trashed - never returned for its deposit

4) False - single stream collection has caused more contamination to fiber/paper

5) True - in order to increase the recyclability of glass, the State may recommend or require glass to be collected separately



# Specific Waste/Materials

- Food Scraps/Source Separated Organic Materials (SSOM)
- One of the main goals of the CMMS is to capture the wasted food here in CT - up to 40% of food is thrown away every day!
- Includes fruits/vegetables and expired items from grocery stores, as well as food scraps from commercial, industrial, institutional and residential sources







# Specific Waste/Materials

- Food Scraps/Source Separated Organic Materials (SSOM)
- Currently in CT, there are two large and one small Composting Facilities and only one Operating Anaerobic Digester \* able to accept and process SSOM
- Soon, DEEP expects to revise current General Permits and/or develop new General Permits to allow leaf and other composting facilities to accept and process SSOM



# Specific Waste/Materials

- Food Scraps/Source Separated Organic Materials (SSOM)
- All MTS are authorized to accept SSOM - however, only a few at this time do so
- SSOM Requirements include:
  - Only source separated from residential or commercial sources may be accepted
  - SSOM must be removed to an authorized facility within 48 hours of receipt - unless held in a refrigerated container



# Specific Waste/Materials

- Food Scraps/Source Separated Organic Materials (SSOM)
- Continuation of SSOM Requirements include:
  - SSOM must be placed immediately in storage container upon receipt
  - Storage container must be leakproof, vector-proof and kept always covered except when being filled
  - Signage indicating which items are acceptable and which items are prohibited
  - MTS Storage Limit for SSOM: 80cy! \*



# Specific Waste/Materials

- Leaves/Grass Clippings
- Both MTS and CGP facilities may accept, store and transfer leaves and grass clippings - no composting is allowed on-site
- All leaves/Grass must be received either loose, in paper bags or compostable bags which meet the ASTM Standard D 6400 for compostability and have been approved for use by the processing facility - no plastic bags \*



# Specific Waste/Materials

- Leaves/Grass Clippings
- Storage is limited to piles on the ground in a designated area with a 3-5% slope to prevent ponding and no stormwater runoff into any storm water system or surface water body; or stored in containers - Maximum storage is 200 cy and leaves/grass must be transferred off-site weekly \*





# Specific Waste/Materials

- Antifreeze
- Toxic/Poisonous - must be received, stored and transferred off-site in a manner that prevents leaks, spills and discharges to the ground
- Antifreeze must be managed separately and never mixed with other liquids/materials
- MTS Storage Limit: 500 gallons
- CGP Storage Limit: 1,000 gallons





# Specific Waste/Materials

- Antifreeze
- Drop-off containers from residents must be placed immediately under cover, away from rain/snow, in an area with secondary containment in the amount of 110% of the total storage volume
- Antifreeze must be poured into storage tank/container by the end of each operational day only by a Certified Operator





OIL

Safe-T-Tank Corp.  
25 Powers Drive, Meriden, CT 06451  
203.237.4220 FAX 203.238-2748  
www.safe-tank.com



USED OIL



WASTE  
ANTIFREEZE

NOTICE:  
CHECK SIGHT GLASS  
INDICATOR BELOW  
PERIODICALLY

02 07 2012 11:40



# Specific Waste/Materials

- Antifreeze
- Storage Tanks/Containers must be leak-proof, structurally sound (no corrosion), located above ground, with secondary containment of 110% of the total volume or by a double walled tank
- Tank/Container must be in a structure with a minimum of three walls and a roof, an impervious base treated with a compatible sealant in case of any accidental spill or leak



# Specific Waste/Materials

- Antifreeze
- Storage Tanks/Containers must be closed at all times except when being filled or drained and locked at the end of each operational day; "Used Antifreeze" Label
- Any leaks or spills must be cleaned up immediately; clean-up materials and equipment must be readily available on-site at all times and must be reported to DEEP Emergency Response and Spill Division at 1-866-377-7745



# Specific Waste/Materials

- Architectural Paint
- PaintCare (EPR) Program



# Specific Waste/Materials

- Architectural Paint
- Both MTS and CGP facilities may receive, store and transfer Architectural Paint and are authorized to process/consolidate paint into larger containers before transferring off-site
- MTS & CGP Storage Limit: 1,300 gallons
  - At MTS & CGP incoming paint must be in non-leaking, original containers with the maximum capacity of 5 gallons or less



## Specific Waste/Materials

- Architectural Paint may be accepted only from residential sources, any approved municipal or commercial haulers, or any approved Conditionally Exempt Small Quantity Generator (CESQG)
- Incoming Paint must be placed in designated area(s), stored at least 50 feet from any heat source and to be situated to prevent any downgradient catch basins, wetlands and watercourses from spills



# Specific Waste/Materials

- Architectural Paint
- Management area must be enclosed, weatherproof and have secondary containment of 110% of total storage volume
- Aerosol paint cans from residential sources only must be punctured within 30 days of receipt in a manner that minimizes the release of propellants and paint must be drained directly into storage container
- If paint is accepted from CESQGs, amounts must not exceed 275 gallons at any one time





# Specific Waste/Materials

- Architectural Paint
- Incoming Paint from CESQGs must be pre-approved by submission of a CESQG Paint Approval Form for review and approval
- No Paint from unapproved CESQGs must be accepted - No Paint may be accepted from Small Quantity Generators (SQGs) or Large Quantity Generators (LQGs)
- The status of the generator as a CESQG must be verified using EPA Notifier Database



# Specific Waste/Materials

- Architectural Paint
- The CESQG must be alerted to any unsafe conditions, actions or omissions that may cause a hazard - issues with packaging, labeling, segregation, transportation or management
- If Paint is rejected from acceptance, the Facility must complete a Rejection of Architectural Paint Form; obtain waste transporter's signature \* and provide a copy to the CESQG and to DEEP; maintain copy on-site



# Specific Waste/Materials

- Architectural Paint Consolidation Area must have storage containers elevated above spill containment area, grounded during consolidation, labeled "Waste Latex Paint", "Waste Oil-Based Paint" etc.
- Original containers of paint must be fully emptied and placed in a weather-proof, leak-proof container, under cover until transferred to an authorized facility\*



# Specific Waste/Materials

- Transfer of accumulated, consolidated Paint
- Containers must be marked, dated and labeled, packed and shipped in accordance with transportation requirements for Hazardous Waste; Transferred from facility within one year from the date the first container is received and sent to an authorized market, recycling or disposal facility; and transported by a permitted Hazardous Waste Hauler; recorded on-site and reported to DEEP



# Specific Waste/Materials

- Architectural Paint
- Additional condition only at CGP facilities:
  - Paint can only be collected between April 1st and November 30th unless the management and storage areas are conducted entirely within a heated structure
- Additional condition only at MTS facilities:
  - MTS may establish an Architectural Paint Exchange Area for the public; area must be designed to accommodate the orderly distribution of paint in good condition, tight fitting lids and legible manufacturer's labels





4-CYCLE  
ENGINE OIL  
FUEL STABILIZER

KRYLON  
Interior Enamel

KRYLON  
Interior Enamel

MINWAX  
WOOD STAIN

ROSCO  
DEEP COLORS  
SCENIC PAINT

ROSCO  
DEEP COLORS  
SCENIC PAINT

ROSCO  
DEEP COLORS  
SCENIC PAINT

WHITE ↑

White

PRE-MIXED PAINT

SILVER ↑



# QUIZ -

# TRUE or FALSE?

1) Leaves/grass can be composted on-site at MTS and CGP facilities

2) Paint may be consolidated on-site into larger containers before transport

3) SSOM must be transported to an authorized facility within 48 hours unless it is refrigerated on-site

4) Residents may empty their antifreeze directly into the facility's tank/container

5) Paint from Small Quantity Generators (SQGs) may be accepted at MTS/CGP facilities with prior written approval



# ANSWERS

1) False - Leaves/grass must be removed weekly to an authorized composting site

2) True - Paint can be consolidated by trained staff

3) True - unrefrigerated SSOM should not be stored on-site for more 48 hours

4) False - Only the certified operator may empty antifreeze containers from residents

5) False - Only CESQGs are able to get approved - No SQGs or LQGs may drop off paint





# Specific Waste/Materials

## ➤ Used Motor Oil

Drop-off containers must be received, stored and transferred off-site in a manner that prevents leaks, spills and discharges to the ground

Used Oil must be managed separately and never mixed with other liquids/materials

Storage Limit: 1,000 gallons



# Specific Waste/Materials

## ➤ Used Motor Oil

Storage Tanks/Containers must be leak-proof, structurally sound (no corrosion), located above ground, with secondary containment of 110% of the total volume or by a double walled tank

Tank/Container must be in a structure with a minimum of three walls and a roof, an impervious base treated with a compatible sealant in case of any accidental spill or leak





## Specific Waste/Materials

### ➤ Used Motor Oil

Drop-off containers from residents must be placed immediately under cover, away from rain/snow, in an area with secondary containment in the amount of 110% of the total storage volume

Used Oil must be poured into storage tank/container by the end of each operational day only by a Certified Operator



# Specific Waste/Materials

## ➤ Used Motor Oil

Storage Tanks/Containers must be closed at all times except when being filled or drained and locked at the end of each operational day;

"Used Oil" Label \*

Any leaks or spills must be cleaned up immediately; clean-up materials and equipment must be readily available on-site at all times and must be reported to DEEP Emergency Response and Spill Division at 1-866-377-7745





# Specific Waste/Materials

- Used Motor Oil Filters
- Used Oil Filters must be handled to prevent contamination of the soil, surface water or groundwater
- Filters must be placed directly into storage containers designed to prevent and contain any spills or leaks; containers must be intact, structurally sound, not leaking or corroding and provided with 110% secondary containment \*



# Specific Waste/Materials

- Used Motor Oil Filters
- Used Oil Filters must be managed in compliance with Used Oil Management Standards \*
- MTS Storage Limit: 2 cy
- CGP Storage Limit: 4 cy





# Specific Waste/Materials

- Lead Acid Batteries
- Immediately placed in designated area; three walls/roof; impervious surface with sealant; 110% secondary containment; labeled "Used Batteries"; metal shelving must be grounded
- Area inspected weekly
- Removed within 1 year
- MTS Storage Limit: 100 units
- CGP Storage Limit: 500 units



# Specific Waste/Materials

- Textiles/Shoes
- No Scavenaging allowed

- Storage Limit: 80 cy



NEARLY **100%** OF DONATED TEXTILES ARE RECYCLED! They are separated into three grades:

**45%**



**20%**



**30%**



# Closing THE LOOP



The second hand clothing market provides AFFORDABLE CLOTHING to those in need and ENCOURAGES LOCAL BUSINESS.

Recycled denim helps save 50% water, 35% energy and create a smaller carbon footprint than other alternatives.



The average U.S. citizen throws away **70 lbs.** of clothing each year.

**95%** of textiles WORN OR TORN can be recycled



That amount is equal to **21 BILLION LBS.** or 260,000 trucks!



# Specific Waste/Materials

## ➤ Yellow Grease

Drop-off containers from residents must be placed immediately under cover, away from rain/snow, in an area with secondary containment in the amount of 110% of the total storage volume

Yellow Grease must be poured into storage tank/container by the end of each operational day only by a Certified Operator



# Specific Waste/Materials

## ➤ Yellow Grease

Storage Tanks/Containers must be leak-proof, structurally sound (no corrosion), located above ground, with secondary containment of 110% of the total volume or by a double walled tank; "Yellow Grease" Label

Tank/Container must be in a structure with a minimum of three walls and a roof, an impervious base treated with a compatible sealant in case of any accidental spill or leak



# Specific Waste/Materials

- Yellow Grease
- Storage Limit: (5) 55-gallon containers or the equivalent = 275 gallons maximum



# Specific Waste/Materials

- Universal Wastes: Mixed Batteries, Mercury-Containing Equipment, Mercury-Containing Lamps, Used Electronics \*
- General Requirements: Managed to prevent release of hazardous waste contents to the environment; maximum quantity 75 cy (5,000 kilograms or 11,000 pounds)
- Storage Containers, Pallets or Buildings must be clearly labeled with the date the first item was placed; secure/locked to prevent unauthorized access



# Specific Waste/Materials

- Universal Wastes (UW)
- Prohibitions: No disposal, dilution, treating, or disassembly allowed
- Containers of broken, damaged or leaking wastes must be kept closed, labeled "Broken Lamps" or "Broken Batteries" etc.
- UW which are improperly managed or intentionally damaged are subject to the full requirements for Hazardous Waste in RCSA Section 22a-449(c)-100 through 119





# UNIVERSAL WASTE

FEDERAL AND CALIFORNIA LAW PROHIBITS IMPROPER DISPOSAL  
THE FOLLOWING MATERIALS ARE REGULATED AS  
UNIVERSAL WASTE IN ACCORDANCE WITH 40 CFR PART 273  
AND CALIFORNIA TITLE 22, CHAPTER 23, ARTICLE 3.

- UNIVERSAL WASTE - ELECTRONIC DEVICES (TV/MONITOR)
- UNIVERSAL WASTE - ELECTRONIC DEVICES
- UNIVERSAL WASTE - LAMPS
- UNIVERSAL WASTE - BATTERIES
- UNIVERSAL WASTE - CRTs
- UNIVERSAL WASTE - MERCURY CONTAINING EQUIPMENT
- UNIVERSAL WASTE - \_\_\_\_\_

PU#: \_\_\_\_\_

ACCUMULATION START DATE: \_\_\_\_\_

## HANDLE WITH CARE!



## Specific Waste/Materials

- Collection areas for UW must always have a mercury spill kit on-site and the UW must be removed for appropriate disposal within 1 year from the date of first receipt to an authorized facility - staff trained in cleanup procedures
- If UW meet the definition of hazardous materials under DOT Regulations\* - must package, label, mark and placard the shipment and prepare proper shipping papers; track/record logs kept at least 3 years - destinations/quantities etc.



# Specific Waste/Materials

- UW Inspections by Certified Operator
- All areas used to accept and store UW must be inspected weekly
- Written log including date, time, names, observations made, date and description of any repairs performed; must inspect the condition of the UW, the containers and the storage area; must inspect markings and labels to ensure compliance
- Inspection log must be kept on-site for at least 3 years



# Specific Waste/Materials

- Universal Wastes: Mixed Batteries
- Label as either: "Universal Waste - Batteries" or "Waste Batteries, or "Used Batteries"
- Common household alkaline batteries are not required to be handled as Mixed Batteries
- Mixed Batteries include Nickel-Cadmium (NiCad) metal hydride, mercury-oxide, silver-oxide, lithium, zinc-air, zinc-carbon, and small sealed lead-acid batteries





# Specific Waste/Materials

- Universal Wastes: Mixed Batteries
- Mixed Batteries must be placed into containers immediately; batteries may be sorted by type or mixed; batteries can be removed from consumer products
- Any damaged batteries must be placed into plastic sealable bags before being placed into a dedicated storage container with the label "Broken Batteries"



# Specific Waste/Materials

- Universal Wastes: Mercury-Containing Equipment (MCE)
- Label as either: "Universal Waste - Mercury-Containing Equipment" or "Waste Mercury-Containing Equipment", or "Used Mercury-Containing Equipment"
- MCE must be handled directed to Certified Operator for immediate placement into storage container - maximum 5-gallons, lined with plastic bag and kept covered, secure with secondary containment







# Specific Waste/Materials

- Universal Wastes: Mercury-Containing Lamps (MCL)
- Label as either: "Universal Waste - Lamps" or "Waste Lamps, or "Used Lamps"
- MCL include fluorescent, compact fluorescent, low-pressure sodium and metal halide lamps\*



# Specific Waste/Materials

- Universal Wastes: Used Electronics
- Label as either: "Universal Waste - used electronics" or "Waste Used Electronics, or "Used Electronics" (UEs)
- Used Electronics include any item not defined as a "Covered Electronic Device" or "CED" - UEs contain one or more circuit boards or cathode ray tubes (CRTs)
- Simply, it's any UE device that a Certified Electronic Recycler cannot "back charge" the manufacturer for recycling it



# Specific Waste/Materials

- Covered Electronic Devices (CEDs) \*
- CT E-waste Law - residents will have convenient and free opportunities to recycle their **computers, printers, televisions and monitors**; *and* manufacturers will finance the transportation and recycling of them
- Manufacturers are charged by the Certified Electronic Recyclers "CERs" for the transport, the disassembly and the recycling of their products



# Specific Waste/Materials

- Covered Electronic Devices (CEDs)
- MTS Storage Limit: 150 cy (10,000 kilograms or 22,000 pounds)
- CGP Storage Limit - CEDs are included in the UW Storage Limit of 75 cy (5,000 kilograms)
- CEDs are from residential sources only
- CEDs are labeled as: "CEDs" or "Residential CEDs"
- Full Containers of CEDs must be transferred off-site within 2 business days





USED ELECTRONICS

USED ELECTRONICS  
Televisions  
USED ELECTRONICS

Monitors  
USED ELECTRONICS

NEW SMITH  
COMPANY

03.07.2012 10:27



# Specific Waste/Materials

- Asphalt Roofing Shingles (ARS)
- Only accepted and stored at CGP facilities or Individually Permitted VRFs
- Storage Limit at CGP: 120 cy \*
- ARS must be placed in dedicated container or indoor storage area; outdoor containers must have impervious covered
- No mechanical processing is allowed
- Full containers removed within 48 hours
- Partially full containers - stored for less than 1 year





# Specific Waste/Materials

## ➤ Gypsum Wallboard

- Only accepted and stored at CGP facilities or Individually Permitted VRFs

Storage Limit at CGP: 120 cy \*

- Gypsum Wallboard must be placed in dedicated container or indoor storage area; outdoor containers must have impervious covered

- No mechanical processing is allowed

- Full containers removed within 48 hours

- Partially full containers - stored for less than 1 year







GYPSUM WALLBOARD ONLY  
NO TRASH NO DEBRIS

YESO EN EL PANEL SOLO  
NINGUNA BASURA NO ESCOMBROS

G

Y

P

S

U

M

RECYCLING

PHONE # 866-9

AMERICA

GYPSUM



# Specific Waste/Materials

- Unacceptable Items:
  - Any Waste/Material not listed in your DEEP Permit/Authorization
  - Hazardous Waste/HHW
  - Special Waste - Asbestos, Biomedical Waste, Contaminated Soil/Sludges, Sewage Sludge/Ash
  - Dead Animals
  - Hot Ashes
  - Non-Processable Wastes







# Specific Waste/Materials

## ➤ Household Hazardous Waste (HHW)







# QUIZ -

# TRUE or FALSE?

1) Certified operators must inspect Universal Waste Storage areas on a monthly basis

2) Used motor oil has been contaminated with PCBs and other hazardous chemicals

3) Covered Electronic Devices (CEDs) include only computers, printers, televisions and monitors

4) MTS facilities may receive, and store Asphalt Roofing Shingles (ARS) for reuse/recycling

5) Most SWFs are allowed up to 40 cy of unauthorized or unacceptable waste/materials on-site at any time.





# ANSWERS

1) False - Inspections are required weekly at UW storage areas

2) True - contamination has occurred, and it is very expensive to remediate

3) True - all other electronics are defined as "Used Electronics" and are managed as UW

4) False - only individually permitted VRFs and some CGP facilities may accept ARS

5) True - However, this quantity is quite large and should be reconsidered in future permits/authorizations



**You have Completed Module 4 !**

**"Specific Waste & SWF  
Management Conditions"**



Congratulations

