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Alternative Management Standards for Treated Wood Waste

Prepared by:

Department of Toxic Substances Control

Fall LEA Round Table “Tail-Gate” Training Series

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Xiaoying Zhou

Hazardous Substance Engineer
Department of Toxic Substances Control



Outline

- Introduction and identification of treated wood waste (TWW)
 - Environmental and human health concerns
 - Types and identification

- How to manage TWW (Alternative Management Standards)
 - Receiving TWW facilities
 - Storage
 - Shipment
 - Prohibited activities
 - Recordkeeping and reporting
 - Employee training
 - Cost
 - Recycling

- 2011 TWW report highlights
 - Trend of TWW management and disposal tracked
 - Compliance issues

- Take home message – recapture TWW facilities' responsibilities
- Q&A



Part I Introduction

- Concerns
- Definition
- Identification

What is Treated Wood?

- Wood treated with a registered chemical preservative pursuant to FIFRA to protect it from insects and other organisms that cause decay.
- Preservatives include:
 - Chromated Copper Arsenate (CCA)
 - Creosote
 - Pentachlorophenol
 - Copper-based
 - Borates
 - Others
- Does not include lead-based paint, fire retardants, or formaldehyde

Environmental and Human Health Concerns

- Most preservative chemicals are toxic or carcinogenic
- Exposure depending on the concentration, the time spent on the wood structure, the usage history of products, etc.
- Human health effects: skin irritation, reduced nerve function, cancer
- Environmental contamination: soil, water, air
- Most chemicals are approved only for restricted non-residential application

TWW Health Risks

- Chemicals are toxic and carcinogenic
 - Arsenic: known carcinogen (lungs, bladder, liver, kidney, and prostate)
 - Chromium : known carcinogen (lungs)
 - Copper: toxic to human and aquatic life
 - Creosote: probable carcinogen (skin)
 - Pentachlorophenol: probable carcinogen (liver, adrenal gland, and nasal tumors)
- Agency for Toxic Substances and Disease Registry at www.atsdr.cdc.gov

When is it Treated Wood Waste?

Defined by HSC 25150.7

- Treated wood is wood treated with a FIFRA-approved chemical preservative.
- TWW is a non-RCRA hazardous waste due to the FIFRA preservative.
- TWW can not be a RCRA regulated hazardous waste.
- Utility service exemption – not TWW.

Facilities Receive TWW From:

- Homeowners
- Contractors
- Harbors and Ports
- Parks
- Caltrans
- Railroads
- Government
- Agricultural Growers



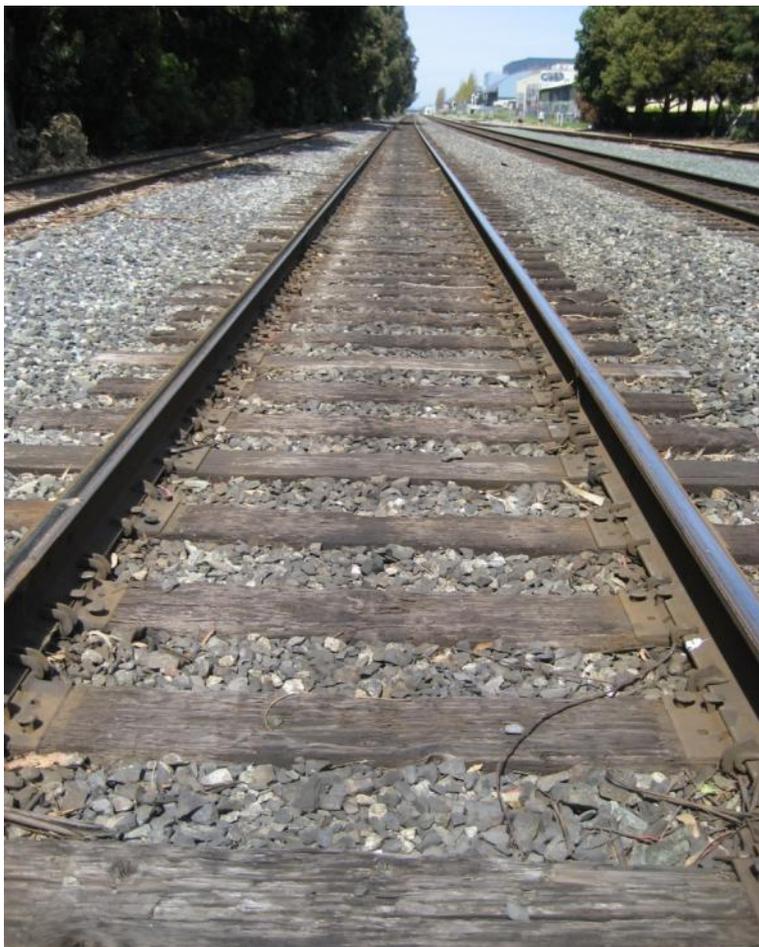
Used in Landscaping, Construction...



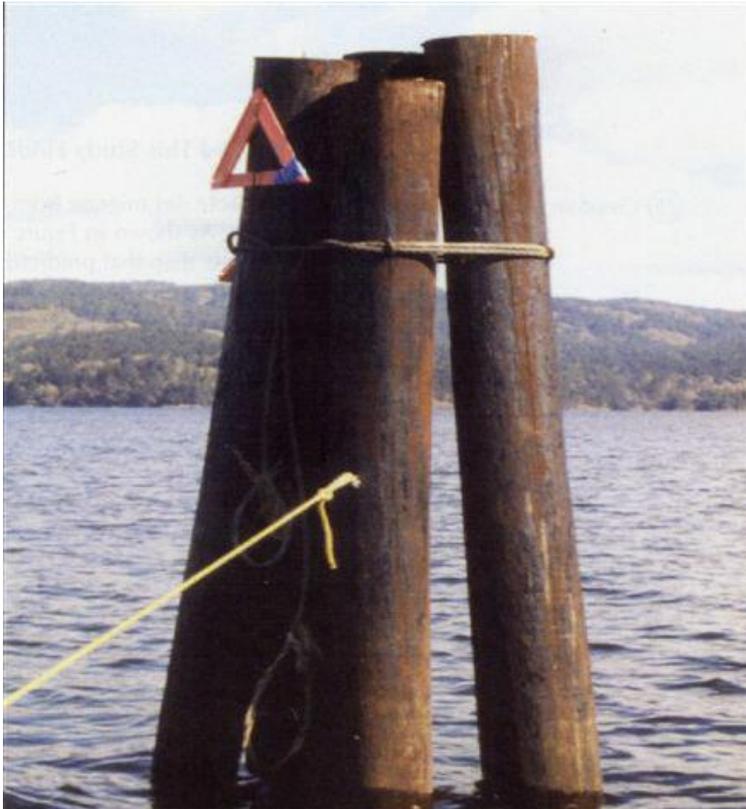
Grape Stakes and Trellises



Railroads



Pilings and Deck



Identification of TWW

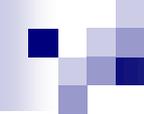
- End Tags indicate type of chemical and level of treatment
- Laboratory or field testing
- Generator knowledge
- Appearance
 - TWW with copper appears green
 - Color fades to gray and becomes undistinguishable
 - Incisions look like staple marks
- Conservative approach is to assume TWW, if analytical sampling is not done.



Sort and Segregate

- No change to existing load check requirements.
- Generators' responsibility to determine hazardous waste.
- Load checked TWW is eligible for alternative management standards.





Part II Management of TWW

- Alternative Management Standards (AMS) and overview of responsibilities
- What are TWW facilities?
- Specific requirements applicable to TWW facilities

How to Manage TWW - Alternative Management Standards

- TWW is a hazardous waste
- The TWW regulations are an alternative to full hazardous waste requirements
- The generator has the choice of complying with full hazardous waste requirements or the alternative management standards
- TWW regulations do not change existing load check requirements, EPA ID and generator fee requirements, hazardous waste classification, and recycling requirements

TWW Responsibility Overview

Generators	Transporters	Storage	Disposal
<p>Caltrans, Fencing Vineyards, Docks Railroads, Parks</p> 	<p>Hauled in Safe and Protective manner Remote Consolidation</p> <p>HW Hauler HW Manifest</p> 	<p>Block and Tarp (90d) Containment Pad (180d) Container (1 yr) Storage Building (1 yr)</p> <p>Composting & Transformation</p> 	<p>Hazardous Waste LF (3) Composite Lined SWLFs w/ RWQCB approval (49)</p> 
<p>CUPA/DTSC HW</p>	<p>DTSC HW</p>	<p>DTSC HW</p>	<p>LEA/CalRecycle/ RWQCB/DTSC Non HW</p>

What is a TWW Facility?

- Landfills
 - Solid waste composite-lined with RWQCB approved WDRs
 - Class 1 Landfill
(Comply with AMS; monitor releases; comply with Cal OSHA)
- Solid Waste Transfer Stations and Load Operations
(Transfer Stations)



TWW Landfill Listing

- RWQCB has updated a listing of approved (WDR for TWW) composite-lined solid waste landfills (49)
- DTSC has provided a listing to the public of approved TWW landfills that is also willing to accept TWW (44)

<http://www.dtsc.ca.gov/HazardousWaste/upload/lanfillapr11PDATED1.pdf>

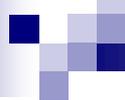
- Survey the reasons of not willing to accept TWW although eligible (5~10 landfills) / not reporting to DTSC to receive TWW (15 landfills) - low response rate

Solid Waste Transfer Stations and Load Operations

- Transfer Station
- Gasification Facility
- Small Volume Construction & Demolition
- Limited Volume Transfer Operation
- Does not include
 - Composting
 - Transformation

Labeling §67386.5

- Requires that each unit and/or area designated for accumulation of TWW be labeled.
- Specifies the language to be included on the label.
- Grants exemptions for specified household accumulation and transport.



Labeling §67386.5

TREATED WOOD WASTE – Do not burn
or scavenge

TWW Handler Name and Address:

Accumulation Date:

Accumulation \$67386.6



block & tarp (90 days)



**containerize
(1 year or 90 days after being filled)**



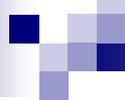
storage building (1 year)



**containment pad
(180 days)**

Offsite Shipments §67386.7

- TWW may only be shipped offsite to an approved TWW facility
- Generators are responsible for ensuring that the receiving facility will accept the TWW
- A hazardous waste manifest and transporter is not required
- Access to and release from TWW shall be prevented during transport
- Remote accumulation is authorized



Prohibited Activities §67386.3

- Prohibits
burning; scavenging; commingling;
ground contact storage; unspecified
recycling; treatment; and disposal outside of
TWW landfill
- No removal of label prior to disposal in a
landfill
- Attempts to clarify reuse/recycling options

Tracking §67386.8

- In lieu of hazardous waste manifests, TWW will be tracked by a combination of reporting and recordkeeping requirements
- TWW facilities: required to maintain records of receipt of TWW shipments (3 years)
 - Record shall include: name and address of the originating TWW generator from whom the TWW was sent
 - Weight of TWW (scale ticket from TWW facility or estimate [with assumptions recorded] is acceptable)
 - Date of TWW shipment

Tracking §67386.8

- DTSC requires that **TWW facilities** submit a semi-annual report in an electronic format
- Due date: Jan. 30 and July 30
- <http://www.dtsc.ca.gov/database/tww/Index.cfm>

Treatment §67386.10

These regulations do not remove the general requirements for the treatment of hazardous waste (permitting)

Two treatments are authorized under these alternative standards:

- resizing to facilitate transport, and
- sorting and segregating.

Training §67386.12

Requires employers managing TWW to provide training to employees that includes:

- Cal OSHA requirements,
- procedures for identifying and segregating TWW,
- safe handling practices,
- requirements of the alternative standards,
- proper disposal methods.

Cal/OSHA California Code of Regulations, Title 8

- §5194. Hazard Communication
- §5214. Inorganic Arsenic
- §5192. Hazardous Waste Operations and Emergency Response, Subsection (p)
 - ❑ Safety and Health
 - ❑ Hazard Communication
 - ❑ Medical Surveillance
 - ❑ Decontamination
 - ❑ New Technology
 - ❑ Material Handling
 - ❑ Training Program
 - ❑ Emergency Response
- Contact: Deborah Gold (510) 286-7000

Information to Pass On To Generators (§67386.9)

Any handler that generates more than 10,000 lbs. of TWW in a calendar year must:

- Obtain and maintain an Identification Number (EPA ID#)
- Notify DTSC in writing within 30 days
- What to submit: [TWW Notification Form](#)

What Fees Apply to TWW

- TWW is hazardous waste and is, therefore, subject to hazardous waste generator fee.
- Generators of 10,000 lbs. of TWW at any one site or location in a calendar year:
 - EPA ID
 - Notification
 - BOE registration
- HSC §25150.8 states that TWW “accepted by a solid waste landfill...” and disposed appropriately is deemed to be a solid waste at the entry of the solid waste landfill. Solid wastes are not subject to hazardous waste disposal fee. Generators pay tipping fee at the gate of TWW receiving facilities.
- Other costs (e.g. gate/tipping fee, transportation cost, handling cost, training)

TWW Recycling

- Two key questions to be answered:
 - What is the preservative with which the TWW has been treated?
 - What is going to happen to it?
- AMS (CCR § 67386.3 (c)) allows for onsite reuse consistent with a FIFRA-approved use of the preservative
- Other recycling activities need to be handled in compliance with all applicable requirements in full hazardous waste laws (HSC § 25143.2) and related regulations



Part III 2011 TWW Report

- Tracking disposal and management
- Trends
- Compliance issues

2011 TWW Report is currently available at DTSC website:

http://www.dtsc.ca.gov/HazardousWaste/upload/TWW_Final.pdf

Treated Wood Waste Online Tracking System (TWWTS)

Generator

- Contacts TWW facility to ensure waste acceptable
- Creates a shipping record (log, invoice, bill of lading) and sends a copy with the TWW shipment to landfill
- Keeps record for 3 years



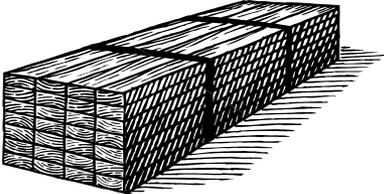
Transporter

- No H.W. hauler required
- Transports only: no signatures required
- Not required to keep a copy
- Gives the copy to TWW Facility



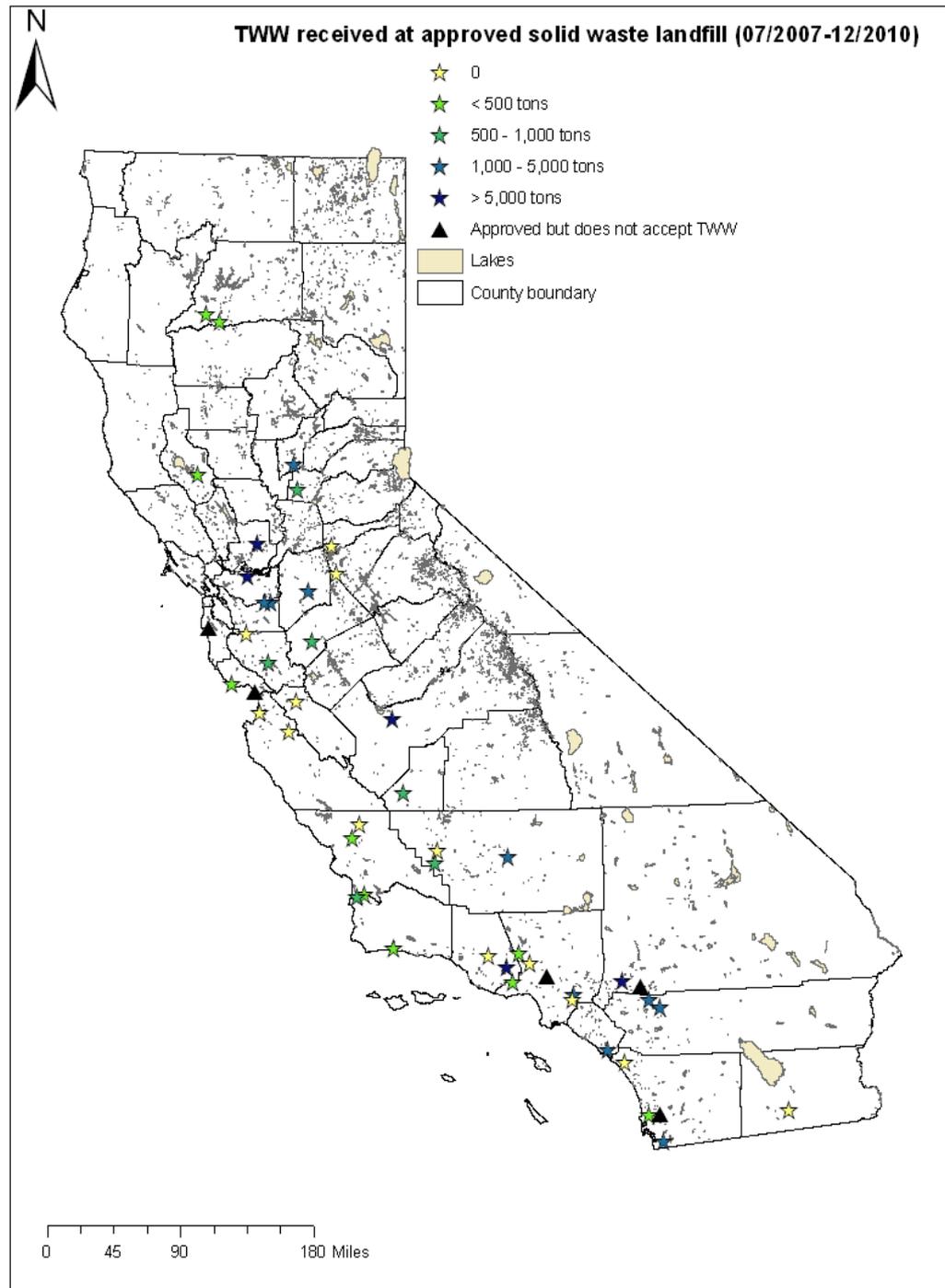
TWW Facility

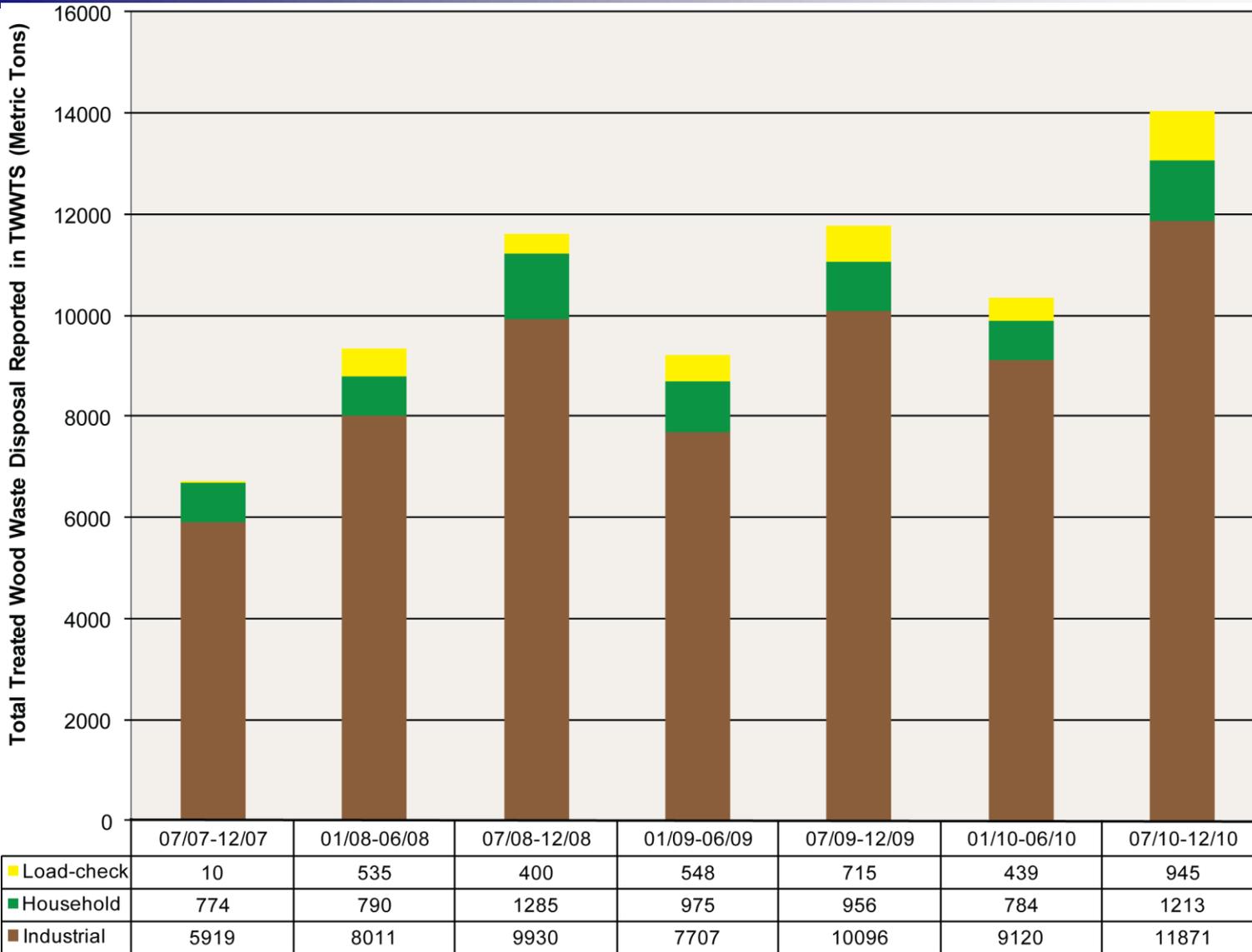
- Obtains generator information (Not Households)
- Keeps records for 3 years
- Online system must be used
- Submits semi-annual report online to DTSC



TWWTS

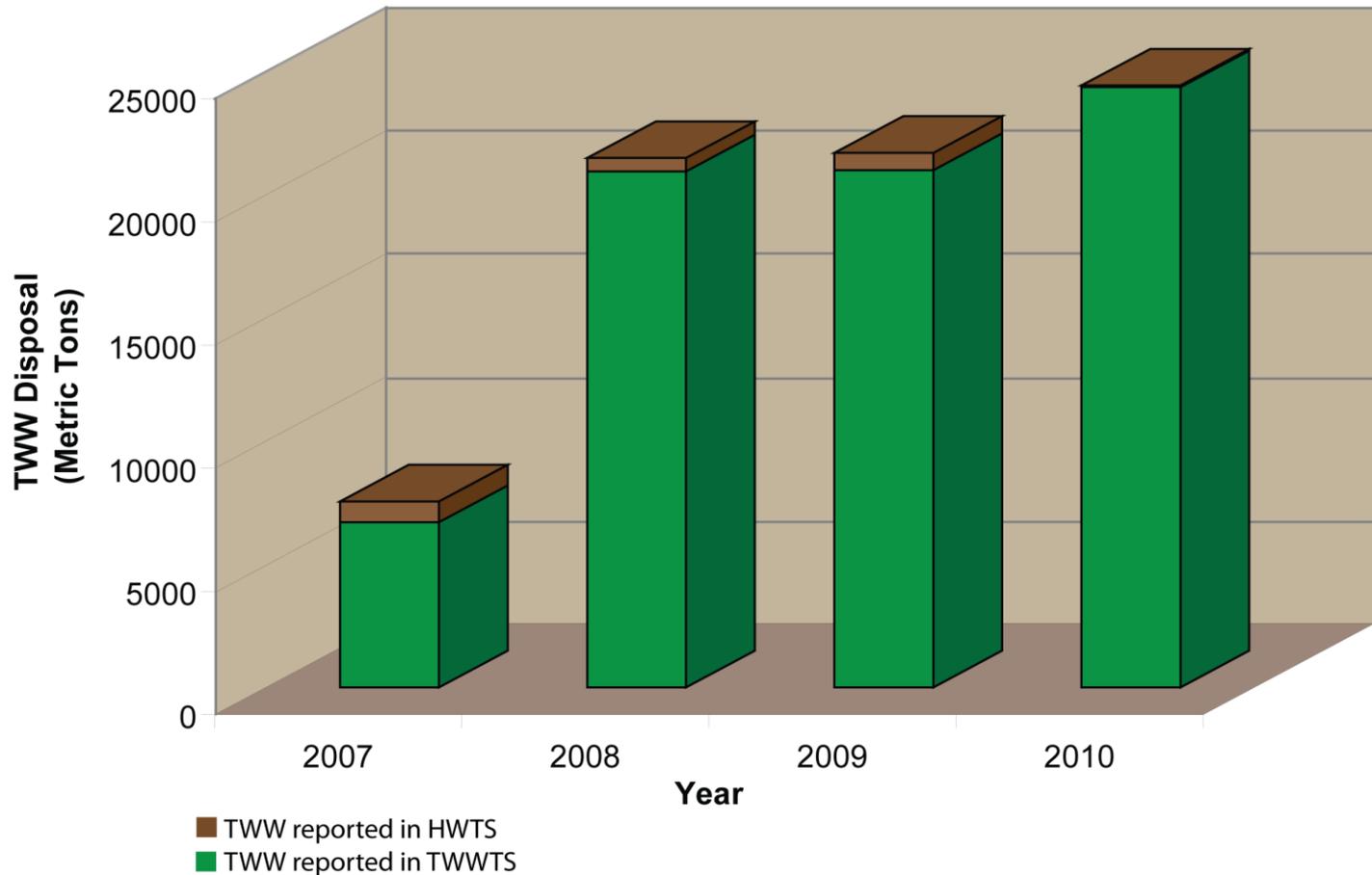
TWW received at approved TWW solid waste landfills (source: TWWTS, July 1, 2007-December 31, 2010)





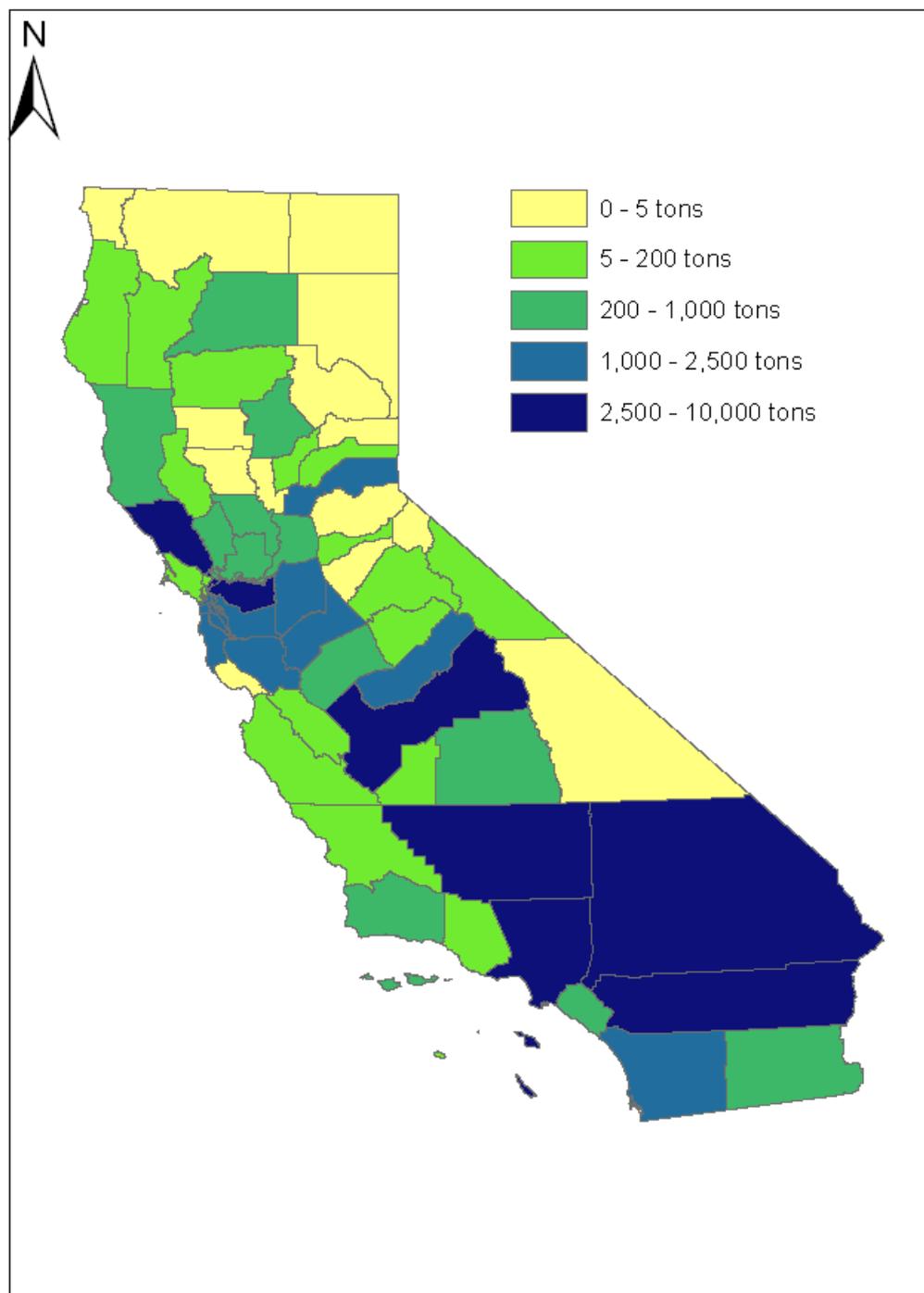
Reported Volume of TWW Disposed in California to TWWTS

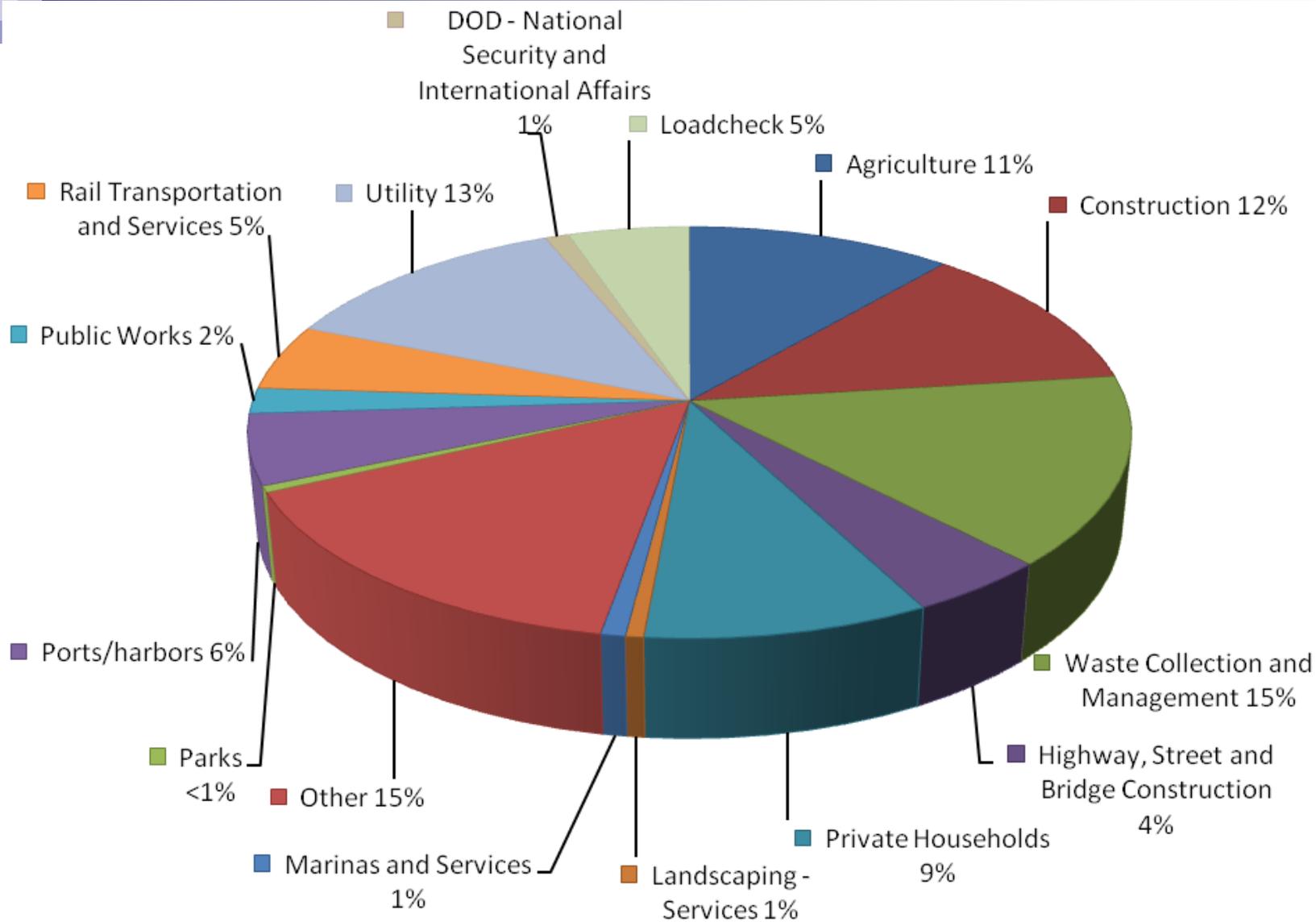
Tracking TWW disposal in California diverted from hazardous waste landfill disposal and out of state disposal



Comparison of TWW Disposal at Hazardous Waste Landfills and Out-of-State Landfills versus Non-Hazardous Waste Landfills

Aggregated
Industrial Generation
of TWW by County,
Source: TWWTS,
July 1, 2007 –
December 31, 2010





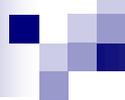
Aggregated TWW Generation Trend by Sector, July 1, 2007 – December 31, 2010

Violation and Compliance Issues

- Facilities: low rate of compliance with employee hazardous waste training requirement
 - Referred to Cal OSHA
- Generators: low rate of compliance with training, storage, labeling, treatment, notification requirement
 - Initiated formal enforcement process

Recommendations

- Low rate of compliance with employee hazardous waste training requirement
 - Refer questions and violations to [Cal/OSHA](#)
- Questions about California's long-term landfill capacity for TWW
 - encourage authorized solid waste landfills not currently accepting TWW to do so
 - encourage unauthorized but eligible composite-lined landfills to be authorized to accept TWW
- Report and data quality
 - pay attention to the facility's TWW reporting and recordkeeping processes and recordkeeping process



Part IV Summary

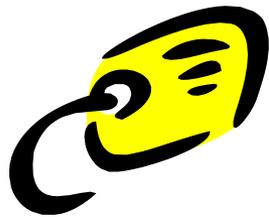
- Facilities' responsibilities review
- Contact
- Q&A

Facility Responsibilities

Labeling

Clearly marked for inspection:

Treated Wood Waste-Do not burn or scavenge.
Name, Address
Accumulation
Date



Accumulation

Block & Tarp (90d)
Containment Pad (180d)
Container (1 yr)
Storage Building (1 yr)



Shipping

~~HW Hauler~~
~~HW Manifest~~



Recordkeeping

Keep for 3 years:
Generator Name,
Address, TWW weight,
Date shipment received



Training



Reporting

Obtain Generator's ID
Number or Generator's
(Not Households)

Name, Address,
Contact Name Mailing
Address, Contact
Telephone

Date of Shipments
Weight of Shipment



DTSC Contacts

- DTSC TWW website:

http://www.dtsc.ca.gov/HazardousWaste/Treated_Wood_Waste.cfm

- TWW Listserv (email-list):

<http://www.calepa.ca.gov/Listservs/dtsc/>

- DTSC TWW Staff tww_help@dtsc.ca.gov

Xiaoying Zhou (916) 323-3527

Li Tang (916) 322-2505

Andre Algazi (supervisor) (916) 324-3114

Questions?



Picture Credit:
Florida Center for Solid and Hazardous Waste Management