ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

Rural Counties Environmental Services Joint Powers Authority

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
SHASTA, SIERRA, SISKIYOU, TEHAMA, TRINITY, TUOLUMNE

CHAIR – MICHAEL KOBSEFF, SISKIYOU COUNTY
VICE CHAIR – MARY RAWSON, ALPINE COUNTY
EXECUTIVE DIRECTOR – GREG NORTON

TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR – RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

Rural Counties' Environmental Services Joint Powers Authority
Board of Directors' & Technical Advisory Meeting
Agenda

1215 K Street, Suite 1650 Conference Room
Sacramento, CA

Thursday, March 16, 2017 9:00 a.m. – 3:00 p.m.

Only those items that indicate a specific time will be heard at the assigned time. All other items may be taken out of sequence to accommodate the Board, the staff, and the general public. Indicated time allocations are for planning purposes only and actual times will vary from those indicated.

I. Call to Order, Self-Introductions, and Determination of Quorum

II. Business Matters **Page 1**

Discussion and possible action related to the following:

A. Approval of Minutes from the Meeting of December 8, 2016 – Supervisor Kobseff, ESJPA Chair *(pp 3-8)*

B. Election of the 2017 ESJPA /TAG Chair and Vice Chair – Supervisor Kobseff *(page 9; 5 minutes)*

C. Administrative Matters – Mary Pitto, ESJPA Program Manager *(5 minutes)*
- 2017 Delegate and Alternate Roster *(page 11-14)*
- FPPC Form 700

III. Public Comment

Any person may address the Board on any matter relevant to the Authority's business, but not otherwise on the agenda.

IV. Legislative Update **Supplemental Packet**

(This item may be heard at any time during the meeting depending upon the availability of staff) Discussion of Legislation – Paul Smith, Vice President of Government Affairs *(15 minutes)*

A. Complete Text of Selected Bills *(Supplemental Packet pp 1-45)*

B. Summary Listing of All Solid Waste Related Bills *(Supplemental Packet pp 47-56)*

V. Presentations

Page 15

A. AB 901 Recycling and Disposal Facility Reporting Regulations – Robert Carlson, Senior Environmental Scientist and Elonka Zlatar, Environmental Scientist, CalRecycle *(pp 17-47; 20 minutes)*

B. Treated Wood Waste Handling at Solid Waste Facilities – Rick Brausch, Division Chief, Policy and Program Support Division, DTSC *(pp 49-63; 20 minutes)*

C. Six Decades in Solid Waste – Paul Molinelli, Sr., President and CEO, Aces Waste Services, Inc *(30 minutes)*

D. Report from CalRecycle – Joe Rasmussen, Supervisor, Materials Management and Local Assistance Program, CalRecycle *(10 minutes)*

VI. Member County Concerns/Comments

VII. Solid Waste/Regulatory Update

Page 65

Discussion and possible action related to the following:

A. Air Resources Board
- Cap and Trade Auction Proceeds – Staci Heaton, Regulatory Affairs Advocate *(page 67; 5 minutes)*
- Short-Lived Climate Pollutant Strategy and 2017 Climate Change Scoping Plan Update – Mary Pitto, *(pp 69-97; 5 minutes)*

B. CalRecycle
- AB 341 Mandatory Commercial Recycling – Mary Pitto *(pp 99-104; 5 minutes)*
- AB 1826 Mandatory Commercial Organics Recycling and AB 876 Organics Reporting Requirements – Mary Pitto *(pp 105-113; 5 minutes)*
- SB 1383 Regulatory Requirements – Mary Pitto *(pp 115-121; 5 minutes)*

C. State Water Resources Control Board (SWRCB)
- Storm Water Industrial General Permit – Larry Sweetser *(5 minutes)*
- Waste Discharge Water Quality Fee – Larry Sweetser *(pp 123-125; 5 minutes)*

D. Department of Toxic Substance Control
- Hazardous Waste Reduction Initiative – Larry Sweetser *(page 127; 5 minutes)*

E. Extended Producer Responsibility
- CA Product Stewardship Council Update – Heidi Sanborn/Christine Flowers, Product Stewardship Council *(pp 129-136; 10 minutes)*
- Carpet America Recovery Effort (CARE) Update – Lisa Mekis, CA Senior Associate, CARE *(pp 137-146; 5 minutes)*
- PaintCare Update – Daria Kent, Northern California Regional Coordinator *(5 minutes)*
- Mattress Recycling Council Update – Rodney Clara, Mattress Recycling Council *(pp 147-160; 10 minutes)*

F. Grant Program Update – Larry Sweetser *(page 161; 5 minutes)*

G. Highlights of December/January/February/ CalRecycle Meetings – Larry Sweetser *(pp 163-173; 5 minutes)*

H. Other Regulatory Announcements/Issues of Interest
- CVBT Article by Eric Miller – Product Stewardship Awakens in the Mattress Industry *(pp 175-178)*
- MSW Management Article – Future-Proof Your Solid Waste Career *(page 179)*
- Small Pails for Hg Thermostat Collection Now Available from TRC *(page 180)*
- CalRecycle E-Waste Updates *(pp 181-187)*
- Cal EPA CUPA Newsletters *(pp 189-211)*

VIII. Agenda Suggestions, Member County Presentation Volunteer, Workshop Topics for Next ESJPA Board Meeting Scheduled Thursday, June 22, 2017.

IX. Articles of Interest *(pp 213-258)* **Page 213**

X. Adjournment

12:00 PM Lunch

1:00 PM

Technical Advisory Group Breakout Session

This afternoon session will be conducted as an informal workshop.

- New ESJPA Website – Carolyn Holmes, Marketing Director, RCRC

The following topic is intended for robust discussion about the state of the Beverage Container Recycling Program and the needs of rural counties. You are invited to stay and encouraged to participate in this session.

Page 259

- How to fix the Beverage Container Recycling Program – Mary Pitto and Larry Sweetser *(pp 261-284)*

Meeting facilities are accessible to persons with disabilities. By request, alternative agenda document formats are available to persons with disabilities. To arrange an alternative agenda document format or to arrange aid or services to modify or accommodate persons with a disability to participate in a public meeting, please contact our offices at least 72 hours prior to the meeting by calling (916) 447-4806.

Agenda items will be taken as close as possible to the schedule indicated. Any member of the general public may comment on an agenda item at the time of discussion. In order to facilitate public comment, please let staff know if you would like to speak on a specific agenda item.

The final agenda for this meeting of the Board of Directors of the Rural Counties' Environmental Services Joint Powers Authority will be duly posted at its offices: 1215 K Street, 16th Floor, Sacramento, California at least 72 hours prior to the meeting.

Agenda Item II

BUSINESS MATTERS

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

Rural Counties Environmental Services Joint Powers Authority

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
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PROGRAM MANAGER – MARY PITTO

Minutes of the Rural Counties' Environmental Services Joint Powers Authority Board of Directors Meeting
1215 K Street, Suite 1650, Sacramento, CA

Thursday December 8, 2016

MEMBERS REPRESENTED

Mary Rawson, Supervisor	Alpine County
Jim McHargue, Director Solid Waste	Amador County
Eric Miller, Manager	Butte County
Steve Rodowick, Recycling Coordinator	Butte County
Richard Djonorh, Operations Supervisor	Calaveras County
Mike Azevedo, Assistant Director	Colusa County
Greg Stanton, Division Director	El Dorado County
Joe Bettencourt, Admin Services Analyst	Glenn County
Ed Delgado, Deputy Dir. PW	Imperial County
Paula Wesch, Program Coordinator	Lassen County
Lorenzo Nadora, Engineer	Madera County
Todd Storti, Manager	Mariposa County
Arthur Boyd, Community ED Spec.	Shasta County
Michael Kobseff, Supervisor	Siskiyou County
Rachel Ross, Agency Manager	Tehama County
Rich Buchanan, Recycling Coordinator	Tehama County
Karl Fisher, Supervisor	Trinity County
Diane Rader, Deputy Director Solid Waste	Trinity County
Belinda Barlow, Solid Waste Manager	Tuolumne County

STAFF IN ATTENDANCE:

Mary Pitto, ESJPA Program Manager	RCRC Governmental Affairs
Larry Sweetser, ESJPA Consultant	Sweetser and Associates, Inc.
Paul Smith, Senior Legislative Advocate	RCRC Governmental Affairs
Staci Heaton, Regulatory Advocate	RCRC Governmental Affairs
Randall Echevarria, Legislative Analyst	RCRC Governmental Affairs
Julie Lunn, RCRC Office Assistant	RCRC Staff

GUEST SPEAKERS:

Hank Brady, CalRecycle	Jason Smyth, CalRecycle
Christine Hironaka, CalRecycle	
Heidi Sanborn, CPSC	Lisa Mekis, CARE
Daria Kent, PaintCare	Liz Wagner, Mattress Recycling

OTHERS IN ATTENDANCE:

Paul Brainin, CalRecycle
Terry Brennen, CalRecycle
John Duke, CalRecycle
Jeff Hackett, CalRecycle
Daisy Kong, CalRecycle
Johnny Plasse, ACES Waste Svc
Curt Fujii, Fujii Civil Engineering
Joe Rasmussen, CalRecycle
Alex Souza, CalRecycle
Jeff Watson, CalRecycle
Kerry Wicker, CalRecycle
Stephanie Musso, Stanislaus County
John Pabst, ACES Waste Svc
Mark Urquhart, MJUPE

MEMBERS NOT REPRESENTED

Del Norte County, Inyo County, Modoc County, Mono County, Nevada County, Plumas County, Sierra County.

I. **Call to Order, Determination of Quorum and Self Introductions**
Chair Supervisor Kobseff, Siskiyou County called the meeting to order at 9:07 a.m. Self-introductions were made. A quorum was determined at that time.

II. **Business Matters**
A. Approval of Minutes October 20, 2016. Chair Supervisor Kobseff, Siskiyou County, called for the approval of the minutes from the October 20, 2016, Board of Directors Meeting. The motion to approve minutes was made by Supervisor Karl Fisher, Trinity County, and seconded by Jim McHargue, Amador County. The motion passed unanimously.

B. Review and Approval of the 2017 Budget. Lisa McCargar presented the budget. Jim McHargue had a question regarding the Community Relations item. Mary indicated it is for sponsorship of local events if needed. The motion to approve 2017 Budget was made by Supervisor Karl Fisher, Trinity County, and Seconded by Supervisor Rawson, Alpine County. Motion Passed unanimously.

C. Review and approval of the 2017 Contract Services Agreement between ESJPA and RCRC. Mary indicated there was a slight increase in amount. Contract is for Mary, Paul, Staci, Julie, and Larry's costs. The motion to approve the contract was made by Jim McHargue, Amador County, and seconded by Supervisor Fisher, Siskiyou County. The motion passed unanimously.

III. **Public Comment** None

IV. **Presentations**

A. Electronics Waste-Jason Smyth, CalRecycle
The proposed regulations are ready for approval and revise the standards for the use of Designated Collectors acting on behalf of an agency. There is also a change in the definition of a Local Government that can authorize the Designated Collector status. Notification to CalRecycle is to occur 30 days in advance pf the effective date. The timing of the regulations allows old arrangements to continue for six months. Jurisdictions will need to redo all current agreements. The certification is required to be signed by a representative of the Local Government "representative authorized to execute agreements or contracts related to waste management on behalf of the Local Government." Schools will no longer be authorized to sign the Proof of Designation. Jim McHargue requested that reminders be distributed and Jason agreed that they would send a notice. Jurisdictions can have multiple collectors designated. Jurisdictions can rescind designations.

B. Neal Road Recycling and Waste Facility-Eric Miller, Butte County
Eric Miller provided an overview of Butte County features and it's solid waste program. Neal Road landfill opened in 1965 as a burn dump. The landfill is owned and operated by County staff. It is a 190 acres site with several ponds for septage and leachate, a methane gas power plant, and accepts 600-1,000 tons per day. Future proposed features include another scale and a reuse area. The mattress recycling program is working well and accepts about 1,100 mattresses per month. An ongoing issue is educating the people on the various recycling requirements especially after program changes. Eric also presented the various landfill monitoring programs. All storm water is retained on site to minimize storm water compliance issues. There is a falconer that comes to the site for bird control.

C. Report from CalRecycle- Joe Rasmussen provided a handout of CalRecycle activities and various grant programs including the greenhouse gas reduction grants, which is available on the ESJPA website. CalRecycle is in the midst of the compliance review cycle for local jurisdictions.

D. Discussion of Senate Bill 1383 (Lara, 2016) Hank Brady, CalRecycle
Hank provided an update on CalRecycle's SB 1383, Sort Lived Climate Pollutants, efforts including the requirement for 50 percent reduction in organics to landfills by 2020, 75% reduction by 2025, and a 20 percent reduction in food disposal by 2025. CalRecycle is developing regulations in cooperation with the Air Resources Board. Regulations will take effect in 2022. Informal regulation workshops will occur in February. The required recovery of edible food will be challenging The bill provided flexibility and did not require individual jurisdiction to do 75% reductions. The bill also indicated the ability to revisit the program. The lack of infrastructure will likely result in the state not meeting the goal since facilities cannot be built that quickly. There is ability for penalties of up to $10,000 a day. Although many rural jurisdictions are eligible for the exemption, some are developing programs. Butte located a digester and is working out arrangements with the haulers. Alpine County is considering taking advantage of a food waste composting operation in Nevada. Eastern Placer County is also hauling to a Nevada facility. Imperial County is hauling green waste to Yuma Arizona. El Dorado County is developing Food Waste pilot program focusing on generators. The tree mortality impact will greatly impact programs. CalRecycle is looking at whose responsibility it is to handle enforcement.

E. Discussion of Bottle Bill Reform- Christina Hironaka
Christina provided an overview of the program history and the current status including the fiscal issues. This is also an opportunity to take a step back and look at the overall goals of the program including how to create more products People need to realize the cost of recycling. The state needs to step up and develop a program that is adaptable and responds to market conditions. There will be a proposal in the budget. CalRecycle is working with grocers regarding the potential penalties. Some programs, like the Local Conservation Crops, are exempt from the proportional reduction requirements.

V. Member County Concerns/Comments

Steve Rodowick announced that the County worked with Tehama County and the local News and Review to publish solid waste articles. Larry Sweetser reported that several counties are interested in additional options for vendors that remove hazardous waste from appliances.

VI. Legislative Update

Paul Smith provided an update on various bills of interest to the ESJPA. The 2017/2018 legislative session has started with new members. There have already been bills introduced.

The Legislature is in recess until January when it will start up again. This session will probably address the bottle bill and the solid waste tip fee. There will be a lot of focus on the relationship the state has with the federal government which will divert attention from solid waste issues to more public policy issues. Bottle bill reform will look at how to address the redemption issue. The administration is looking at major reform and likely will have some components in the budget bill. Paul and Mary have met with CalRecycle and other interested parties. There was a question on the fund impact from the closure of local redemption centers. Larry stated that a recent CalRecycle workshop indicated the impact was only about half a million dollars, a small part of the fund. The solid waste fee discussion is expected to take up where it left off with proposals to include the Water Board WDR fee, funding organic infrastructure, and likely a generator fee. The proposal will need to address the fee versus tax questions.

VII. Solid Waste/Regulatory Update

Discussion and possible action related to the following:

A. Air Resources Board

- Cap and Trade Auction Proceeds-Staci Heaton reported that the packet has a chart on the program. At the last meeting, there was mention that the Cap and Trade program did not take in much money. The system includes allowances from Quebec. The lack of funds resulted in legislative concerns on the viability of the program. It was reported that of the $2.4 billion available in the budget, about $40 million dollars went to CalRecycle for waste diversion programs, $25 million to CalFire for forest programs, about $15 million to wood stove replacement program and the rest went to urban and suburban areas. That left about $800 million placed in reserves, which is the amount anticipated from a lawsuit from industry alleging this was a tax. The governor wants to extend the program that is set to expire in 2020 but has been unsuccessful. In the November Auction, there was as rebound. It took in about $360 million dollars. The reason is not certain. RCRC will keep an eye on the program.

- Draft Short-Lived Climate Pollution Reduction Strategy-Mary Pitto reported that the ESJPA/RCRC with other local government groups and industry worked hard to get the legislature and ARB to back off the 2020 goal of 75% and the 2025 goal of 90%. This effort was successful with the passage of SB 1383 and was reflected in the draft plan released last week. The packet has copies of the proposal and letters. RCRC did not support the SB 1383, but expressed concerns. Workshops are proposed on the strategy and impact on landfills.

B. CalRecycle

- Beverage Container Recycling Reform – Mary Pitto reported that more information will be released on January 10th as part of the Governor's proposed 2017/18 Budget. At a recent workshop, CalRecycle reported that the proportional reductions are expected to occur on July 2017 and asked whether there was a preference to have smaller reductions begin in January of 2017 and then a smaller reduction again in July or have the full reduction in July? The consensus was that there would not be much difference and waiting until July was acceptable.

- AB901 Reporting Update-Larry Sweetser reported that there have been a number of changes and there is a workshop next week. The requirement for Household Hazardous Waste facilities to report has been removed. The definitions are still being revised.

There is an exemption to allow consolidated reporting for facilities that handle less than 100 tons per quarter.

- Emergency Regulations for Glass Processors-Larry Sweetser
  Larry reported that CalRecycle is adopting emergency regulations on facilities that process glass residuals from MRFs so that they will be required to get a Notification tier approval rather than a full solid waste facility permit.

C. Department of Toxic Substance Control

- Used Oil Filter Management Issues – Larry Sweetser reported that there was no new information. We are still waiting on DTSCs response on how to transport uncrushed filters. Steve Rodowick reported on the increased costs and time need to comply with the requirements. There is a concern that some retail location, like auto parts stores, may stop accepting filters due to these requirements. There was a fine on O'Reillys for illegal disposal but the funds will not go to local jurisdictions.

- Retail Waste Working Group – Larry Sweetser reported DTSC has formed this group to address the management of hazardous retail products. Larry is on the Steering Committee. A report to the legislature will be prepared. The retailers are represented by a number of attorneys.

- Proposed Regulations for Photovoltaic Modules – Larry Sweetser reported that DTSC has made no progress on adopting regulations that classify photovoltaic modules as hazardous universal waste. Until the regulations are adopted, Counties are advised not to accept the modules since full hazardous waste management is required.

D. State Water Resources Control Board (SWRCB)

- Stormwater Industrial General Permit Updates -Larry Sweetser reported there were no new developments on the current permit. The SWRCB has proposed to start working on the revised Industrial Permit next year. That may cover more facilities. The Level 1 reports are due at the end of the month.

E. Extended Producer Responsibility

- CA Product Stewardship Council Update –Heidi Sanborn provided a review of successes for the year. AB 45 failed. Many counties are passing ordinances on producer responsibility which is about 12 in the county. There are efforts to continue working on carpet, mattress, thermostat, and paint EPR programs. Pharmaceutical take-back programs are the number one priority. CPSC is working with industry on potential state-wide programs that allow existing local programs to continue. CPSC is looking at developing a model battery ordinance. Heidi also announced that Steve Rodowick has been appointed to the CPSC Board.

- Carpet America Recovery Effort (CARE) Update – Lisa Mekis
  There will be a presentation of this program in the afternoon.

- PaintCare Update –Daria Kent reported that PaintCare moved its main office. PaintCare presented its annual report to CalRecycle and it is available on their website. Reuse is up 84% due to the new reimbursement structure. PaintCare is using a new GIS system and most of the state is being served. PaintCare is still looking to provide services to underserved areas. Heidi asked about opportunities for getting recycled paint

back to jurisdictions and Daria mentioned several programs. Heidi indicated that there are discussions with tribes in rural areas to jointly work on programs.

- Mattress Recycling Council Update – Liz Wagner reported that the Mattress Recycling Council did participate in the tribal conference and is willing to discuss cobranding events. There is a new ad program in Sacramento. The program with ACES in Amador County is about to start. Recology is reviewing contracts with legal counsel that once complete with lead to programs in Colusa, Yuba, and Sutter. There was a collection event in Glenn County that went well. Even with the rain. Lassen County's program is preparing to start a program in February and a retail store in Susanville is nearly ready to join the program. The Modoc County program is nearly signed. Waste Management in Nevada County is making progress in developing more options. Shasta County added a retail location that accepts residential and commercial units. Tuolumne has started their program.

F. Grant Program Update – Larry Sweetser reported that the ESJPA is implementing the assigned grants. CalRecycle had a discussion on upcoming reductions to the amount of funds available under OPP in likely the 2018 cycle. The USDA grant funds are due at the end of the December. The Product Stewardship Institute received a grant for mercury thermostats, rechargeable batteries, pharmaceuticals, and paint and they are soliciting nine of our members to participate.

G. Highlights of July/August CalRecycle Meetings – Larry Sweetser reported CalRecycle presented new features for the waste characterization database. This database has a calculator that will provide the amount of different types of materials in your waste stream. How that calculator compares to reality is not clear. Organic grant criteria was adopted.. Members should let the ESJPA know of any projects in their areas that are submitting grants. CalRecycle issued a compliance order to the City of Wasco for failure to adequately implement their mandatory commercial recycling program even though they met their diversion numbers. What criteria there are for determining an adequate program is not clear.

H. Other Regulatory Announcements/Issues of Interest
- CalRecycle Fraud Prevention Efforts
- Cal EPA CUPA Newsletters
- Walgreens Newsroom –Safe Medicine Disposal Kiosks

VIII. **Resolution of Appreciation -** A Resolution was presented to Mary Rawson for her years of contribution as Vice Chair of the ESJPA.

IX. **Agenda Suggestions, Member County Presentation Volunteer, Workshop Topics for Next ESJPA Board Meeting Scheduled Thursday October 20, 2016** - Nominations for chair and vice chair will occur at the March meeting. There were no volunteers for member presentation. Mary proposed a trip to Butte County to see the falconer and other potential tours in the area.

IX. **Articles of Interest -** Mary Pitto directed Members to the Board packet.

X. **Adjournment-** was called at 12:50PM

Respectfully submitted,
Julie Lunn, Office Assistant/Receptionist

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

Rural Counties Environmental Services JOINT POWERS AUTHORITY

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
SHASTA, SIERRA, SISKIYOU, TEHAMA, TRINITY, TUOLUMNE

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TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR – RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

MEMORANDUM

To: **ESJPA Board of Directors**

From: **Mary Pitto**
Program Director

Date: **March 8, 2017**

RE: **Election of ESJPA and TAG Chair and Vice Chair**

The ESJPA Joint Exercise of Powers Agreement specifies that the Board shall elect its Chair and Vice Chair "from among its properly designate Delegates…who shall serve a term of one year or until their respective successor is elected." Our current Chair is Michael Kobseff, Siskiyou County, and the Vice Chair was Mary Rawson, Alpine County, who did not seek re-election to her Board making the seat currently vacant.

In December of each year, the RCRC Board elects its Officers and makes a recommendation for the Chair and Vice Chair to the ESJPA for consideration. At their December Board meeting, the RCRC Board recommended Michael Kobseff, Siskiyou County, as Chair of the ESJPA and Michael Ranalli, El Dorado County, as Vice Chair of the ESJPA.

In addition, each year the ESJPA Board elects a Technical Advisory Group (TAG) Chair and Vice Chair. The TAG is comprised of the Delegate's staff Alternates that may act on behalf of the Delegates in their absence. Our current Chair is Jim McHargue, Amador County, and the Vice Chair is Rachel Ross, Tehama County.

Staff Recommendations:
Staff recommends the Board of Directors take action to:

1. Elect the 2017 ESJPA Chair/Vice Chair.
2. Appoint the 2017 TAG Chair/Vice Chair.

ESJPA
2017 Delegate and Alternate Roster

County	Delegate	Alternate	2nd Alternate
Alpine	Supervisor David Griffith	SupervisorTerry Woodrow	
Amador	Supervisor Lynn Morgan	Jim McHargue	SupervisorBrian Oneto
Butte	Supervisor Doug Teeter	Bill Mannel	
Calaveras	Supervisor Jack Garamendi	SupervisorGary Tofanelli	
Colusa	Supervisor Kim Dolbow Vann	Mike Azevedo	
Del Norte	Supervisor Gerry Hemmingsen	SupervisorChris Howard	SupervisorRoger Gitlin
El Dorado	Supervisor Michael Ranalli	Greg Staton	Barbara Houghton
Glenn	Supervisor John Viegas	Matt Gomes	
Imperial	Supervisor Michael Kelley	TBD	TBD
Inyo	Supervisor Matt Kingsley	Rick Bensen	Scott Eagon
Lassen			
Madera			
Mariposa	Supervisor Kevin Cann	Public Works Director	Todd Stobbe
Modoc	Supervisor Geri Byrne	Kathie Rhoads	
Mono	Supervisor Stacy Corless	Supervisor John Peters	Tony Dublino
Nevada	Supervisor Dan Miller	Supervisor Ed Scofield	
Plumas	Supervisor Kevin Goss	Robert Perreault	Jeff Engel
Shasta	Supervisor Les Baugh		
Sierra	Supervisor Lee Adams	Supervisor Peter Huebner	Tim Beals
Siskiyou	Supervisor Michael Kobseff	Scott Waite	
Tehama	Supervisor Robert Williams	Rachel Ross	
Trinity	Supervisor John Fenley	Diane Rader	
Tuolumne			

RCRC
REPRESENTING CALIFORNIA'S
RURAL COUNTIES

To: RCRC Board of Directors
RCRC Alternates
RCRC CAO's
RCRC Clerks of the Board

From: Greg Norton
President & CEO

Date: November 18, 2016

Re: Designation of the 2017 ESJPA Delegates and Alternates - **ACTION REQUIRED**

The first ESJPA Board Meeting of 2017 will be held on **March 16th** in Sacramento. Please complete the attached designation form specifying the official Delegate and Alternate for your county.

Upon the official determination by the county, please provide confirmation of your county's election/appointment. Please forward the formal confirmation to RCRC as soon as possible. The confirmation can be sent via e-mail to mpitto@rcrcnet.org, faxed to (916) 431-0101 and/or mailed to:

Rural County Representatives of California
1215 K Street, Suite 1650
Sacramento, CA 95814
Attn: Mary Pitto

Please note that **the ESJPA bylaws require that a Supervisor be the Delegate. Alternates are generally a staff member who is in charge of solid waste/recycling programs for the county**. While there is no limit on the number of county staff who may attend the ESJPA meetings, only the officially designated Delegate or Alternate from each county will have voting rights.

Additionally, please note that all Delegates and Alternates will be required to comply with the ESJPA conflict of interest code and file a Form 700.

Please do not hesitate to contact me at gnorton@rcrcnet.org or Mary Pitto, ESJPA Program Manager, at mpitto@rcrcnet.org if you have any questions or require additional information. Thank you for your assistance in this matter.

Attachments

- ESJPA Designation Form

Designation of 2017 Delegate and Alternates for the

Rural Counties' Environmental Services Joint Powers Authority (ESJPA)

Board of Directors

Date: _____

County: _____

Delegate: **Supervisor** _____

1st Alternate: _____

2nd Alternate: _____

An Alternate is generally a staff member who is in charge of solid waste /recycling programs for the member county. While there is no limit on the number of county staff who may attend the ESJPA meetings, only the officially designated Delegate or Alternate will have voting rights. Please note that all Delegates and Alternates will be required to comply with the ESJPA's conflict of interest code and file a Form 700.

Authorization:

_____

Agenda Item V

PRESENTATIONS

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

CHAIR – MICHAEL KOBSEFF, SISKIYOU COUNTY
VICE CHAIR – MARY RAWSON, ALPINE COUNTY
EXECUTIVE DIRECTOR – GREG NORTON

Rural Counties Environmental Services JOINT POWERS AUTHORITY

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
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TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR –, RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

January 4, 2017

Department of Resources Recycling and Recovery
1001 I Street
PO Box 4025, MS 13A
Sacramento, CA 95812
Submitted via email: AB901.reporting@calrecycle.ca.gov

SUBJECT: Comments on AB 901 Proposed regulations

Dear Staff:

On behalf of the 23 rural county members, the Rural Counties' Environmental Services Joint Powers Authority (ESJPA) appreciates the opportunity to provide comments on the proposed regulations on AB 901 Reporting Requirements for Recyclers, Composters, and Disposal Facilities.

The workshops have been helpful to understanding the complexities of the proposal but there are still many changes needed for this methodology to be implemented without undue hardship and obtain the necessary information. The complexity of these expansive proposed regulations warrants time to address major issues during the informal period.

Given the concerns expressed at recent workshops and the indication that CalRecycle indicated there would be a number of significant changes to address those concern, another informal draft should be circulated for stakeholder comments to take full advantage of the informal process prior to starting the formal regulation process.

Thank you again for the opportunity to comment on the proposed regulations. Please contact me at (510) 703-0898 or lsweetser@rcrcnet.org with any questions.

Sincerely,

Larry Sweetser
ESJPA Consultant

Enclosure

cc: Members, Rural Counties' Environmental Services Joint Powers Authority
Mary Pitto, Program Manager, Rural Counties' ESJPA

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Section X.2 Definitions.
(41) "Reporting Entity"

At the recent CalRecycle workshop on December 12th CalRecycle staff indicated that household hazardous waste facilities would be considered a reporting entity and would need to submit reports on the amount of empty paint cans and other solid waste generated at the facility. That concept is incorrect and based on two key criteria. First, the fundamental activities of a household hazardous waste program are not included as a type of reporting entity as defined in statue nor do they qualify under any of the definitions of reporting entities in the proposed regulations. Secondly, any basis for including a household hazardous waste facility would also need to include any other hazardous waste facility including used oil collection centers and commercial hazardous waste facilities.

Household hazardous waste facilities do not qualify as a reporting entity
The fundamental function of a household hazardous waste (HHW) facility is to receive hazardous waste, not solid waste. California has excluded hazardous waste from the definition of solid waste (Public Resources Code 40191). This fundamental purpose of a HHW facility is not changed by the fact a HHW facility will generate some solid waste (e.g. empty paint cans) or that some materials are sent for recycling (e.g. cardboard boxes). AB 901 requires "reasonable accounting of solid wastes and recyclable materials that are handled, processed, or disposed".

The proposed regulations indicate the following activities are considered reporting entities:

- Haulers
- Transfer Stations and Material Recovery Facilities
- Recycling and Composting Facilities and Operations
- Disposal Facilities

Obviously, a household hazardous waste facility cannot be considered a hauler, composting, or disposal facility. Some of the activities at a household hazardous waste facility may appear similar to a transfer station, material recovery facility, or recycling facility but are fundamentally different. Again, a household hazardous waste facility accepts hazardous waste not solid waste.

The definition of transfer station (Public Resources Code 40200) is:

> (a) "Transfer or processing station" or "station" includes those facilities utilized to receive solid wastes, temporarily store, separate, convert, or otherwise process the materials in the solid wastes, or to transfer the solid wastes directly from smaller to larger vehicles for transport, and those facilities utilized for transformation.

A HHW facility's function is not to receive solid waste. The collected hazardous wastes are processed, but the hazardous wastes collected are not considered "in the solid waste".

The definition of recycle (Public Resources Code 40180) is

> "Recycle" or "recycling" means the process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace.

The collected HHW would not "otherwise become solid waste" if not collected. Any hazardous waste in solid waste would be considered illegal disposal. Hazardous wastes that are recycled are not considered solid waste.

A HHW facility is not a material recovery facility (MRF) since it does not handle "materials" as defined in the proposed regulations which indicate that:

> (30) "Material" means solid waste, recyclables, organics, or products derived therefrom.

The proposed definition of a MRF requires the use of a mechanized conveyance system.

> (31) "Material Recovery Facility" or "MRF" means a recycling facility which sorts and processes mixed waste materials for the purpose of recovery of organics and/or recyclable materials, by moving materials through a processing line which includes a mechanized conveyance system. Materials are separated or sorted from the line by machinery or by hand, in order to aggregate materials by type or grade, and produce materials for sale or transfer to various markets or End Users. The facility may or may not have a Solid Waste Facility Permit, and the incoming material may be commingled recyclables that have been segregated from solid waste, or solid waste that includes recyclable materials or organics.

<u>HHW facilities are not permitted as solid waste facilities</u>
If household hazardous waste facilities are required to report under these proposed regulations, CalRecycle is indicating that these facilities handle solid waste including recyclables, which implies that these household hazardous waste facilities should also need to be regulated and get permitted as a solid waste facility or recycling center. No HHW facilities have a solid waste permit. Household hazardous waste facilities are often co-located at a solid waste facility but are considered as separate and distinct activities within that boundary.

<u>Inclusion of HHW facilities would require inclusion of all other hazardous waste facilities</u>
If a household hazardous waste facility is considered a reporting entity because it handles waste and even generates empty paint cans and other solid waste some of which may get recycled, then all other hazardous waste facilities would also need to report under these proposed regulations. There is nothing unique in the operations of a HHW facility from other hazardous waste facilities.

Used oil collection facilities receive waste from off site generators. The oil gets poured off into the tank or drum and empty containers are handled as solid waste. Oil filters are received and the empty containers are handled as solid waste. This additional reporting requirement what served as a significant disincentive to host the used oil collection facility.

Commercial hazardous waste facilities would also need to report under these proposed regulations since they receive waste from off-site process it, and often results in generation of solid waste including recyclables.

This analysis should be sufficient to demonstrate why household hazardous waste facilities are not a reporting entity and are not subject to these proposed regulations. If CalRecycle disagrees with this analysis then please provide justification as to why household hazardous waste facilities are subject to these proposed regulations.

Section X.2 Definitions.

(46) "Self-Hauler" means a person who hauls solid waste, organics, or recyclable material they have generated to another person.

The proposed regulations do not clearly indicate that small self-haulers are exempt from reporting to CalRecycle. A majority of rural residents, and others, self-haul their own solid wastes to the local facility. A Self-Hauler is included in the definition of a Hauler.

" (28) "Hauler" means a person who collects solid waste, organics, or recyclable material from a Generator and delivers it to a Reporting Entity, End User, or outside of the state. "Hauler" includes public contract Haulers, jurisdictions, districts, private companies, Self-Haulers, and local governments who perform this function." **Section X.2 Definitions.**

Haulers must report to CalRecycle per **Section X.4 Reporting Requirements for Haulers** "(c) A Hauler shall provide in its Report to the Department the following information for tons hauled".

Here is an exemption that seems to exclude most Self-Haulers from filing a Report to CalRecycle per **Section X.3 Registration, Reporting and Exemptions.**

(b) Any person that sells, transfers, processes, or disposes material and meets one or more of the criteria below is a Reporting Entity and shall file a Report with the Department:
(1) 100 tons or more per reporting period of recyclable material, organics, and/or solid waste for recycling or disposal.

We are requesting that CalRecycle verify that Self-Haulers with less than 100 tons per reporting period are not required to report to CalRecycle.

Section X.3 Registration, Reporting and Exemptions.

(c) All reporting entities shall register with the Department and obtain a DDRS Number.

(1) For facilities engaged in multiple activities under the same ownership: (A) Multiple disposal facilities at the same site shall register for separate DDRS numbers and file separate reports.
(B) Transfer Stations, MRFs, and recycling or composting activities co-located at the same site may register for a single DDRS number and file a single report.
(C) Each disposal facility co-located with Transfer Stations, MRFs, and recycling or composting activities shall register for a separate DDRS number and file a separate report.

The proposed regulations require separate reporting for disposal facilities "co-located with Transfer Stations, MRFs, and recycling or composting activities". The reporting system will already require significant effort and requiring separate reporting under separate DDRS numbers will increase that effort. It would be simpler to allow one access with separate entries for disposal versus other activities. The need for separate entries has not been explained or justified.

Section X.5 Reporting Requirements for Transfer Stations and Material Recovery Facilities.
(b) A MRF that generates less than 100 tons of residuals sent for disposal per reporting period shall report as a recycling or composting operation, as outlined in section X.7 of this Article.

This provision seems to contradict the reporting exemption below:
Section X.3 Registration, Reporting and Exemptions.
(b) Any person that sells, transfers, processes, or disposes material and meets one or more of the criteria below is a Reporting Entity and shall file a Report with the Department:
(1) 100 tons or more per reporting period of recyclable material, organics, and/or solid waste for recycling or disposal.

A small MRF should be allowed the same exemption from reporting.

Section X.9 Reasonable Methods.

At the last series of workshops in December 2016, CalRecycle staff indicated the regulated community should propose other reasonable methods to include in this section.

One reasonable method to include is to allow the use of the quarterly disposal reporting system to continue, especially in rural areas where the customers and waste flows are mostly consistent. The required information for jurisdiction of origin and source sector could be collected during that period and extrapolated based upon total tonnage for the reporting period.

Several stakeholders have requested additional time to provide comments due to the holidays and this topic is extremely important enough to allow time to compile other reasonable methods to be included in the proposed regulations before starting the formal rulemaking process.

Section X.9 Reasonable Methods. (e)

Section (e) allows for volume to weight conversions "If the reporting facility does not have access to scales and does not handle more than 1,000 tons of material per reporting period". Current regulations (Title 14, Sections 18809.2 and 18810.2) allow for a facility in a rural area to not have a scale if it accepts an annual average of less than or equal to 200 tons per operating day or an annual average volume of less than or equal to 800 cubic yards of solid waste per day. The proposed 1,000 ton is a significant decrease over the previous exemptions.

Purchasing and maintaining a scale can be an expensive endeavor for rural areas and that is why there was this exemption approved. The proposed regulations should maintain the previous exemptions for purchasing a scale for rural areas.

Section X.10 Procedure for Imposing Civil Liabilities.

Several commenters have indicated that since the complexity of these proposed regulations will result in unintentional errors in providing correct information, there should be an opportunity for the party to remedy the incorrect information or provide clarification without CalRecycle issuing a violation or imposing penalties. CalRecycle staff has indicated agreement with this concept but the current proposed language clearly allows no opportunity to resolve information problems before issuing a violation or imposing penalties.

The current Disposal Reporting System has encountered many information issues that have been resolved readily once the issue is raised with the correct parties. THe new system should allow for that opportunity also.

A new subsection should be added prior to X.10 (a) that indicates: "prior to issuing a violation or imposing penalties, the Department will notify the person of the specific concern with incorrect or missing information and the person will be provided an opportunity to correct the information". Usually, the correction can occur with two weeks. Additional time might be needed if multiple parties are involved or the issue is complicated.

AB 901 Regulation Development
Third Draft of Reporting Regulations for Disposal, Diversion & Enforcement
February 10, 2017

Section 18815.1 Scope and Purpose.

(a) This Article implements the reporting system set forth in sections 41821.5 through 41821.8 of the Public Resources Code (PRC).

(b) Nothing in this Article shall prevent an agency, district, jurisdiction, or the Department from requiring a reporting entity to supply additional information on activities related to disposal, diversion, composting or recycling based upon their own authority.

(c) The Department shall maintain the confidentiality of recycling and composting information in reports submitted to the Department pursuant to the requirements of section 41821.5(b)(3) of the PRC, the California Public Records Act (Chapter 3.5 (commencing with section 6250) of Division 7 of Title 1 of the Government Code), and Title 14, California Code of Regulations, Division 7, Chapter 1, Article 4 (commencing with section 17041).

(d) The Department shall inform jurisdictions of the total tons disposed originating within their jurisdictions by facility for the purposes of compliance with section 41780 of the PRC.

(e) If a person is required to report based on the criteria in section 18815.3(b) of this Article, the person shall report using the reasonable methods outlined in section 18815.9 and comply with the applicable requirements for:

(1) Haulers in section 18815.4,

(2) Transfer/processors in section 18815.5,

(3) Disposal facilities in section 18815.6,

(4) Recyclers and composters, in section 18815.7, and/or

(5) Transporters and brokers in section 18815.8.

Section 18815.2 Definitions.

(a) For the purposes of this Article, the following terms have the meanings given below.

(1) "Alternative daily cover (ADC)" has the same meaning as in section 20690 of Title 27 of the California Code of Regulations (CCR).

(2) "Alternative intermediate cover (AIC)" has the same meaning as in section 20700 of Title 27 of the CCR.

(3) "Beneficial reuse" has the same meaning as in section 20686 of Title 27 of the CCR.

(4) "Bioproducts" means any product manufactured or refined from compostable material, including soil amendments such as compost, fertilizers, wood chips and biochar; fuels such as biogas and biodiesel; and other material-derived chemicals.

(5) "Broker" means a person who takes legal ownership of a material from a reporting entity in California, and who arranges, or facilitates, the sale, transfer, or exchange of the material.

(6) "Carpet" has the same meaning as defined in section 42971(d) of the PRC.

(7) "Chipping and grinding facility or operation" is an organics recycler, and has the same meaning as described in section 17862.1 of Title 14 of the CCR for composting-related operations, and as in section 17383.3 of Title 14 of the CCR for C&D-related operations.

(8) "Commercial Sector" means businesses, industries, institutions, public organizations, school districts and universities, and multifamily residences of five or more units.

(9) "Compost" has the same meaning as defined in section 17896.2(a)(4) of Title 14 of the CCR. For the purposes of this regulation, compost is considered a final product after it has achieved acceptable metal concentrations, pathogen reduction, and physical contamination levels under sections 17868.2, 17868.3, and 17868.3.1 of Title 14 of the CCR.

(10) "Compostable material" has the same meaning as in section 17852(a)(11) of Title 14 CCR.

(11) "Composting operation" or "composting facility" has the same meaning as "compostable material handling operation" or "composting facility" as defined in section 17852(a)(12) of Title 14 of the CCR, and includes in-vessel digestion as regulated in section 17896.

(12) "Construction and demolition/inert debris" or "CDI" means any combination of construction and demolition debris as defined in section 17381(e) and inert debris as defined in section 17381(k) of Title 14 of the CCR.

(13) "Contact information" means name, address, phone number, and e-mail address.

(14) "Contract-hauled" means material hauled by any person paid to collect and transport material from a Generator, including franchised Haulers and private contract Haulers.

(15) "Department" means the California Department of Resources Recycling and Recovery (CalRecycle).

(16) "Designated waste" has the same meaning as in section 13173 of the California Water Code.

(17) "Disaster debris" has the same meaning as in section 17210.1(d) in Title 14 of the CCR.

(18) "Disposal" has the same meaning as section 40192 of the PRC, but does not include land application of compostable materials or compost.

(19) "Disposal facility" means a facility where the disposal of solid waste occurs, including but not limited to:

(A) Landfills,

(B) Engineered municipal solid waste conversion facilities,

(C) Transformation facilities , and

(D) Inert debris and CDI disposal facilities as specified in sections 17388.4 and 17388.5 of Title 14 of the CCR.

(20) "District" means a community service district established in accordance with Government Code section 61000 et seq., which provides solid waste handling services or implements source reduction and recycling programs. "District" also includes a sanitary district or a public utility district that provides solid waste handling services or implements source reduction and recycling programs.

(21) "Diversion and disposal reporting system number" or "DDRS number" means the number assigned to a reporting entity upon registration with the Department's electronic reporting system.

(22) "End Product" means a product that has been processed to a level so that it:

(A) Replaces or substitutes a virgin material (such as plastic pellets, paper pulp, metal ingots, etc.),

(B) Is a bioproduct, or a biogenic product like digestate, biosolids and/or sludges, or

(C) Is suitable for direct land application or fill as a homogeneous mixture (such as aggregate or crushed miscellaneous base, or compostable material).

(D) Material that has only been baled, washed, or size reduced for ease of transportation or processing is not an end product.

(23) "End user" means a person who uses, processes, or manufactures with end products, within the following categories:
  (A) Finished product manufacturers. This includes an end user that takes material from a reporting entity and uses the material to produce a finished product, including a consumer product, industrial product, or packaging. It also includes an end user that takes finished compost from a reporting entity and blends, packages, bags or distributes it to consumers.
  (B) Energy consumers. This includes an end user that takes or uses material-derived energy, fuel or chemicals from a reporting entity.
  (C) Material consumers. This includes an end user that takes a material-derived product from a reporting entity and uses it as an ordinary consumer would.
  (D) Construction end users. This includes an end user that takes a material from a reporting entity and uses it in construction.
  (E) Fill and Land Application End Users. This includes an end user that takes a material from a reporting entity and uses it for land application (e.g. compostable material), or for fill (e.g. CDI).

(24) "Engineered solid waste conversion" or "EMSW conversion" has the same meaning as defined in section 40131.2 of the PRC.

(25) "Food" and "food waste" has the same meaning as "food material" defined in section 17852(a)(20), and excludes agricultural material and agricultural by-product as defined in section 17852(a)(4.5 and 5) of Title 14 of the CCR.

(26) "Furniture" means large, bulky objects used to enhance a residence, business, or other space for living or working, including but not limited to couches, chairs, dressers, tables, desks and bed frames. Furniture does not include mattresses (which are regulated in sections 18959 through 18971 of Title 14 CCR).

(27) "Generator" means a person whose activities result in the initial creation of solid waste, organics or recyclable material.

(28) "Glass" means a hard, brittle, usually transparent nonhazardous substance commonly made from sand heated with chemicals. This includes, but is not limited to, whole or crushed materials derived from: clear or colored containers with or without California Redemption Value, flat glass, and automotive glass.

(29) "Government entity" is an entity identified in section 40145 of the PRC or an entity formed pursuant to section 40976 of the PRC.

(30) "Hauler" means a person who collects a material from a generator and delivers it to a reporting entity, end user, or a destination outside of the state. "Hauler" includes public contract haulers, private contract haulers, and self-haulers. A person who transports a material from a reporting entity to another person is a transporter not a hauler.

(31) "Jurisdiction of origin" means the place where a material is generated. This may include a city, county, city and county, or regional agency with responsibility for waste management, formed pursuant to sections 40970 through 40975 of the PRC. For places located in states or territories of the United States other than the State of California, jurisdiction of origin means the state, territory, or tribal lands in which a material was generated. For places located in a country other than the United States of America, jurisdiction of origin means the country in which a material was generated.

(32)"Land application" means the application of compostable materials to the land in accordance to section 17852(a)(24.5) of Title 14 of the CCR.

(33) "Material(s)" means solid waste, recyclables, organics, or end products derived therefrom.

(34) "Metal" means iron, steel, tin, aluminum, copper, and other alloys, including products made of metal like containers, plumbing materials, and other scrap metal.

(35) "Organics" means compostable materials like food, green waste, landscape and pruning waste, nonhazardous lumber and dimensional wood, food-soiled paper or other compostable paper; by-products like digestates, biosolids and biogenic sludges; and bioproducts like compost, wood chips, biofuels and biogas.

(36) "Paper" means all types of paper products including pulp, corrugated cardboard, newspaper, office paper, magazines, catalogs and directories, and other composite paper products such as food and beverage cartons and containers.

(37) "Permitted Landfill" has the same meaning as defined in section 18720(a)(50) of Title 14 of the CCR.

(38) "Person" has the same meaning as defined in section 40170 of the PRC.

(39) "Plastic" means a synthetic material made from a wide range of carbon-containing polymers, which can be used to make rigid and flexible plastic products, including but not limited to: packaging (bags, bottles, caps, clamshells, containers, cups, films, and lids); household and bulky rigid items (buckets, crates, toys, and tubs); agricultural products (drip tape, film, and greenhouse covers); and other products (electronics housing, carpet fibers, and automobile plastics).

(40) "Recyclable material" means a material that has the potential to be recycled, and that is managed through recycling facilities and operations, and includes intermediate recycled materials.

(41) "Recycle" or "recycling" has the same meaning as defined in section 40180 of the PRC. Recycling does not include reuse. Recycling includes but is not limited to the processes below:

(A) For recyclable materials such as paper, glass, metal, and plastics, this includes but is not limited to sorting, baling, shredding, pulping, crushing, cullet making, smelting, flaking, and pelletizing.

(B) For organics that are not composted, recycling includes but is not limited to mulching, chipping and grinding.

(C) For construction and demolition debris, recycling includes but is not limited to crushing, grinding, shredding, sizing or other processing.

(D) For other products including furniture, carpet, white goods and textiles, this includes but is not limited to sorting, baling, crushing, cutting, shearing, deconstructing, and removing components from products for recycling (not resale or reuse).

(42) "Recycling Facility or Operation" means any facility or operation that accepts, separates, or processes materials for recycling and does not meet the requirements for a solid waste permit as described in section 17402.5(d) of Title 14 CCR. This includes chipping and grinding and construction and demolition/inert debris recycling centers as described in section 17381.1 of Title 14 of CCR.

(43) "Report" means the quarterly report submitted to the Department by a reporting entity.

(44) "Reporting Entity" means a person who is required to report pursuant to this Article, including the following categories:

(A) Haulers

(B) Transfer/processors

(C) Recycling and composting facilities and operations

(D) Disposal facilities

(E) Transporters and brokers

(45) "Reporting period" means the time period for which a report must be submitted to the Department. The four reporting periods in each calendar year are:

(A) Reporting Period 1 – January 1 to March 31

(B) Reporting Period 2 – April 1 to June 30

(C) Reporting Period 3 – July 1 to September 30
(D) Reporting Period 4 – October 1 to December 31

(46) "Residential sector" means single-family residences and residences of 2-4 units.

(47) "Residual" has the same meaning as defined in section 17402.5(b)(1) of Title 14 of the PRC.

(48) "Reuse" means using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material.

(49) "Self-Hauler" means a person who hauls solid waste, organics, or recyclable material they have generated to another person.

(A) A "Food waste self-hauler" is a person or entity that generates and transports, utilizing its own employees and equipment, more than one cubic yard per week of its own food waste to a location or facility that is not owned and operated by that person or entity. Food waste does not include agricultural material or agricultural by-products as defined in sections 17852(a)(4.5 and 5) of Title 14 of CCR. A person that self-hauls food waste but does not meet the criteria of a "food waste self-hauler" is a self-hauler.

(50) "Site" means the location of a facility or operation that has one address or assessor parcel number, or multiple adjacent addresses or parcel numbers.

(51) "Solid Waste" has the same meaning as defined in section 18720 (a)(40) of Title 14 of the CCR. This includes mixed residual material remaining after processing.

(52) "Source sector" means one of these three sources solid waste is generated:

(A) Contract-hauled single-family residential (e.g. houses),

(B) Contract-hauled commercial/multi-family residential (e.g. businesses and apartments), or

(C) Self-hauled (e.g. hauled by a generator).

(53) "Textiles" means items made of natural and/or synthetic thread, yarn, fabric, or cloth, including clothing, fabric trimmings, and draperies.

(54) "Tire-derived rubber" means rubber from the processing of waste tires as defined in section 42807 of the PRC.

(55) "Ton" also referred to as short ton or net ton, means 2,000 pounds (lbs.).

(56) "Transfer/processor" means:

(A) Both "transfer/processing facilities" and "transfer/processing operations," as defined in sections 17402(a)(30-31) of Title 14 of the CCR, including CDI processing operations and facilities as described in sections 17383.5 through 17383.8 of Title 14 of CCR, which receive, temporarily store, convert, process, and transfer materials for recycling, composting, or disposal;

(B) A facility or operation, with or without a permit, that meets the criteria outlined in section 17402.5(d) of Title 14 CCR.

(57) "Transformation Facility" has the same meaning as in section 40201 of the PRC.

(58) "Transporter" means a person who transports solid waste, organics, recyclable material, or end products from a Reporting Entity to another person in California, or who acts as an exporter. A person who transports a material from a generator to another person is a hauler, not a transporter.

(59) "Waste-derived material" means material sent to a facility for disposal, which the facility separates for another use.

(60) "White goods" means discarded major appliances of any color, including but not limited to washing machines, clothes dryers, water heaters, stoves, and refrigerators.

Section 18815.3 Registration, Reporting and Exemptions.

(a) The following are not required to register or report under this article, for their activities as:

(1) An end user,
(2) A generator who is not a food waste self-hauler,
(3) A person that generates, processes, and uses material all on the same site, and
(4) A person that primarily reuses material (e.g. thrift stores, auto dismantlers, building supply reclaimers and reusers).

(b) A person is a reporting entity, at each site they operate, if they meet both of the following criteria:
(1) The person sells, transfers, processes, or disposes the any of the following materials:
(A) Carpet
(B) Construction and demolition/inert debris
(C) Furniture excluding mattresses
(D) Glass excluding cathode ray tube glass
(E) Metal
(F) Organics
(G) Paper
(H) Plastic
(I) Solid waste
(J) Textiles
(K) Tire-derived rubber or fuels
(L) White goods
(2) The person manages an average of 100 tons or more per quarter (in any calendar year) of recyclable material, organics, and/or solid waste for disposal or recycling, including chipping and grinding. Reporting entities that have different thresholds are as follows:
(A) Those food waste self-haulers who haul 12 or more cubic yards of food waste per quarter.
(B) Those who deliver compostable material for direct land application in excess of 50 tons per quarter in accordance with section 17852(a)(24.5) of Title 14 of the CCR.
(C) Those who exclusively process CDI material in excess of 2,500 tons per quarter.
(D) Those who compost organics and are not excluded per section 17855 for composting operations or section 17896 for in-vessel digestion operations of Title 14 of the CCR.
(E) Those who are a wastewater treatment plant.

(c) A reporting entity shall register with the Department and obtain a DDRS number.
(1) For a facility engaged in multiple activities under the same ownership on the same site:
(A) Each disposal facility and transfer/processor on the site shall register for a separate DDRS number and file a separate report that provides information specific to each facility.
(B) All recycling and composting facilities or operations at the same site may register for a single DDRS number and file a single report that aggregates information on outflows from all recycling and composting activities.
(C) Each disposal facility or transfer/processor co-located with recycling/composting activities shall register for a separate DDRS number and file a separate report.

(d) A reporting entity operating on November 1, 2018 shall register by November 30, 2018.

(e) A reporting entity that begins operation after November 1, 2018 shall register within 30 days of being subject to these reporting requirements.

(f) A reporting entity that becomes inactive, closes, or no longer meets the reporting requirements outlined in 18815.3(b) of this Article shall notify the Department within 30 days.

(g) A reporting entity that is registered but has no reportable tonnages for a reporting period shall notify the Department that they have nothing to report for the reporting period.

(h) In its report, a reporting entity shall provide information on all materials composted, recycled, beneficially reused, disposed or sent to end user regardless of how or where they obtained the material.

(i) A reporting entity that transfers, sells or sends end products to an end user shall report on the materials and tonnages as follows:

(1) Provide contact information for each individual end user to whom material is supplied, or

(2) Provide information aggregated by end user category within each region.

(A) Regions shall be reported as:

(i) Counties within California;

(ii) States outside of California; or

(iii) Countries outside the United States.

(B) End User categories shall be reported as:

(i) Finished product manufacturers. This includes an end user that takes material from a reporting entity and uses the material to produce a finished product, including a consumer product, industrial product, or packaging. It also includes an end user that takes finished compost from a reporting entity and blends, packages, bags or distributes it to consumers.

(ii) Energy consumers. This includes an end user that takes or uses material-derived energy, fuel or chemicals from a reporting entity.

(iii) Material consumers. This includes an end user that takes a material-derived product from a reporting entity and uses it as an ordinary consumer would. All material picked up by material consumers from a reporting entity's site, may be aggregated and the region may reported as the county that the site is located within.

(iv) Construction end users. This includes an end user that takes a material from a reporting entity and uses it in construction.

(v) Fill and Land Application End Users. This includes an end user that takes a material from a reporting entity and uses it for land application (e.g. compostable material), or for fill (e.g. CDI).

(j) A reporting entity that transfers, sells or sends materials to another reporting entity shall provide information for each individual reporting entity, including DDRS number, contact information, materials and tonnages.

(k) If a reporting entity cannot determine whether a person receiving material is a reporting entity or an end user, the reporting entity shall:

(1) Report the individual tonnages and materials as if the receiver is a reporting entity, and

(2) Supply the Department with contact information for that person in their report.

(l) A registered reporting entity shall file a report for each reporting period using the Department's electronic reporting system, and ensure that the information they generate and are responsible for providing is accurate, complete, and entered electronically.

(1) A reporting entity shall use information available at the time the report is due. If the reporting entity has not received required information from a person, either directly or through DDRS, the reporting entity shall submit all available information in its report to the Department and identify the reporters who have not provided them with the required information.

(2) Each report to the Department shall include:

(A) The name, physical address, mailing address, phone number, electronic mail address, contact person name, and DDRS number of the person submitting the report;

(B) The name, physical address, mailing address, phone number, electronic mail address, contact person name, and DDRS number, if applicable, of each reporting entity receiving materials from the Reporting Entity, with the exception of material sent to end users that may be aggregated by category and region;

(C) The information required by sections 18815.4-18815.9 of this Article.

(m) A reporting entity shall designate a person who has signature authority to submit the report.

Section 18815.4 Reporting Requirements for Haulers.

(a) "Food waste self-haulers" shall report to the Department the tons of food waste sent to each person or end user category.

(b) A hauler shall provide the following information to a receiving reporting entity for all tons delivered to it, using the reasonable methods in section 18815.9 of this Article. A hauler shall provide the information at the time of delivery, unless both the hauler and receiving facility have agreed to periodic reports in lieu of providing information at the time of delivery. In all cases, the hauler shall provide the information to the receiving reporting entity within 30 days of the end of the reporting period.

(1) For solid waste, organics and/or recyclable material hauled:

(A) A hauler shall provide the jurisdiction of origin for all material delivered to each transfer/processor or disposal facility; and

(B) If requested by a transfer/processor or disposal facility, a hauler shall provide the source sector for all material delivered to each transfer/processor or disposal facility, in tons or by percentage using the methods provided in section 18815.9 of this Article.

(c) In its report to the Department, a hauler shall provide the following information for tons hauled, using the reasonable methods described in section 18815.9 of this Article:

(1) Directly from a generator to an end user inside or outside the state:

(A) The tons of each material type sent to each end user category by region pursuant to section 18815.3(i) of this Article.

(2) Directly from a generator to a person outside of the state:

(A) For solid waste, the total tons by jurisdiction of origin for all material sent to each person for disposal, and the person's contact information, and an estimate of the overall source sector tons or percentages for waste sent to each person.

(B) For organics and/or recyclable material sent to recycling or composting operations, the tons of each material type sent to each person, and the person's contact information.

(3) A hauler shall submit their report to the Department no later than 60 days after the end of the reporting period, and shall observe the following due dates for each reporting period:

(A) Reporting period 1 due May 31

(B) Reporting period 2 due August 31

(C) Reporting period 3 due November 30

(D) Reporting period 4 due February 28

(d) For the purposes of DDRS reporting, the Department shall not require a hauler to submit information on specific collection locations or customers when providing jurisdiction of origin, material type or source sector information to other reporting entities or to the Department as part of a quarterly report.

(1) This does not preclude a jurisdiction from requiring this information through franchise agreements, contracts, local ordinances, section 41821.5(g) of the PRC, or other authority.
(2) This does not preclude the Department from requiring this information in a request for information in lieu of an audit, or as part of an audit.

Section 18815.5 Reporting Requirements for Transfer/Processors.

(a) In its report to the Department, a transfer/processor shall provide the following information for all tons accepted, using the reasonable methods in section 18815.9 of this Article:
  (1) For materials accepted:
    (A) From another transfer/processor or disposal facility, the tons of material accepted from each facility and the delivering facility's contact information and DDRS number, if applicable.
    (B) From haulers, the total tons accepted from each jurisdiction of origin.
  (2) For materials sent for recycling or composting:
    (A) To a recycling or composting facility, the tons by material type sent to each facility and the receiving facility's contact information and DDRS number, if applicable.
    (B) To an end user, the tons of each material type sent to end user category by region pursuant to section 18815.3(i) of this Article.
  (3) For solid waste and/or residuals sent to a transfer/processor or disposal facility:
    (A) The total tons sent to each facility, and the facility's contact information and DDRS number, if applicable.
    (B) The tons attributed to each reporting entity that delivered material, and the total tons of materials hauled directly to the transfer/processor.
    (C) The jurisdiction of origin for the tons attributed by haulers. A transfer/processor shall base this determination on information provided by the haulers that delivered material for transfer or processing, but may adjust jurisdiction of origin information based on facility specific practices, such as:
      (i) Tracking and/or sorting individual loads,
      (ii) Segregating the flows from different jurisdictions, or
      (iii) Gathering other relevant information on the composition and recoverability of the materials from each jurisdiction.
    (D) An estimate of the aggregated tons, or overall percentage, from each source sector for the tons attributed to haulers, using methods described in section 18815.9(c).
  (4) For disaster debris, the total tons sent from each jurisdiction of origin.
  (5) For designated waste, the total tons sent from each jurisdiction of origin.
  (6) For CDI debris, the tons sent from each jurisdiction of origin.
  (7) For material sent for beneficial reuse to a disposal facility, the tons by material type and by jurisdiction of origin sent to each disposal facility.
(b) A transfer/processor shall submit their report to the Department no later than 60 days after the end of the reporting period, and shall observe the following due dates for each reporting period:
  (1) Reporting period 1 due May 31
  (2) Reporting period 2 due August 31
  (3) Reporting period 3 due November 30
  (4) Reporting period 4 due February 28
(c) For the purposes of DDRS reporting, the Department shall not require a transfer/processor to submit information on the identities of individual haulers (unless they fail to provide required

information), customers or end users (with the exception of other reporting entities) when providing jurisdiction of origin, material type or source sector information to the Department as part of a quarterly report.

(1) This does not preclude a jurisdiction from requiring this information through franchise agreements, contracts, local ordinances, section 41821.5(g) of the PRC, or other authority.

(2) This does not preclude the Department from requiring this information in a request for information in lieu of an audit, or as part of an audit.

Section 18815.6 Reporting Requirements for Disposal Facilities.

(a) In its report to the Department, a disposal facility shall provide the following information for all tons disposed, using the reasonable methods in section 18815.9 of this Article:

(1) For solid waste received for disposal from a transfer/processor: The tons of material disposed from each transfer/processor, and their contact information and DDRS number, if applicable.

(2) For solid waste received for disposal from Haulers:

(A) The total tons disposed from each jurisdiction of origin, and

(B) An estimate of the aggregated tons, or overall percentage, from each source sector, using methods described in section 18815.9(c).

(3) For disaster debris segregated prior to disposal, the total tons disposed from each jurisdiction of origin.

(4) For designated waste segregated prior to disposal, the total tons disposed from each jurisdiction of origin.

(5) For CDI debris segregated prior to disposal, the tons disposed from each jurisdiction of origin.

(b) In its report to the Department, a disposal facility shall provide the following information for all tons sent off site, using the reasonable methods in section 18815.9 of this Article:

(1) For materials generated on-site (such as ash) sent off-site to another disposal facility, the total tons sent to each facility and the facility's contact information and DDRS number, if applicable.

(2) For materials sent off-site for recycling or composting, the tons by material type sent to each facility and the receiving facility's contact information and DDRS number, if applicable.

(3) For materials sent to end users, the tons of each material type sent to end user category by region pursuant to section 18815.3(i) of this Article.

(4) For solid waste sent for disposal outside of California, the total tons by jurisdiction of origin and source sector for all material sent to each facility for disposal, and the receiving person's contact information.

(c) In its report to the Department, a disposal facility shall provide the following information for all tons accepted on-site for beneficial reuse, using the reasonable methods in section 18815.9 of this Article:

(1) For waste-derived material accepted for on-site beneficial reuse from a transfer/processor, the tons of each material used from each transfer/processor, and their contact information and DDRS number, if applicable.

(2) For solid waste accepted for on-site beneficial reuse from a hauler:

(A) The total tons of each material type accepted for use as ADC from each jurisdiction of origin,

(B) The total tons of each material type accepted for use as AIC from each jurisdiction of origin, and

(C) The total tons of each material type accepted for use as other beneficial reuse.

(3) For other beneficial reuse, an estimate of the tons by material type actually used for each of the following applications during the reporting period:
   (A) Cell construction: including final cover, foundation layer, liner operations layer, and leachate and landfill gas collection system
   (B) Other Construction: fill, road base, wet weather operations pads and access roads
   (C) Landscaping and erosion control: including soil amendments for erosion control, dust suppression and landscaping
(4) Material types to be reported for beneficial reuse include all materials approved by the Local Enforcement Agency, for example:
   (A) Processed green material,
   (B) Sludge and sludge-derived materials,
   (C) Ash and cement kiln dust materials,
   (D) Contaminated sediment, dredge spoils, foundry sands, energy resource exploration, and production wastes,
   (E) Compost materials,
   (F) Processed construction and demolition wastes and materials,
   (G) Treated auto shredder waste, and
   (H) Other material types approved for beneficial reuse by the LEA.

(d) A disposal facility shall submit their report to the Department no later than 90 days after the end of the reporting period, and shall observe the following due dates for each reporting period:
   (1) Reporting period 1 due June 30
   (2) Reporting period 2 due September 30
   (3) Reporting period 3 due December 31
   (4) Reporting period 4 due March 31

(e) For the purposes of DDRS reporting, the Department shall not require a disposal facility to submit information on the identities of individual haulers (unless they fail to provide required information), customers or end users (with the exception of other reporting entities) when providing jurisdiction of origin, material type or source sector information to the Department as part of a quarterly report.
   (1) This does not preclude a jurisdiction from requiring this information through franchise agreements, contracts, local ordinances, section 41821.5(g) of the PRC, or other authority.
   (2) This does not preclude the Department from requiring this information in a request for information in lieu of an audit, or as part of an audit.

Section 18815.7 Reporting Requirements for Recycling and Composting Facilities and Operations.

(a) In its report to the Department, a recycling or composting facility or operation shall provide the following information for all tons handled, using the reasonable methods described in section 18815.9 of this Article:
   (1) For materials sent for disposal to a transfer/processor or disposal facility inside or outside of the state, the total tons of each material type sent to each facility and the receiving facility's contact information and DDRS number, if applicable.
   (2) For materials sent for recycling or composting to another reporting entity, the tons of each material type sent to each facility and the receiving facility's contact information and DDRS number, if applicable.
   (3) For materials sent to end users, the tons of each material type sent to each end user category by region pursuant to section 18815.3(i) of this Article.

(b) A recycling or composting facility or operation shall submit their report to the Department no later than 60 days after the end of the reporting period, and shall observe the following due dates for each reporting period:
    (1) Reporting period 1 due May 31
    (2) Reporting period 2 due August 31
    (3) Reporting period 3 due November 30
    (4) Reporting period 4 due February 28

(c) For the purposes of DDRS reporting, the Department shall not require a recycling and composting facility or operation to submit information on the identities of individual suppliers, customers or end users (with the exception of other reporting entities) when providing material type information to the Department as part of a quarterly report.
    (1) This does not preclude a jurisdiction from requiring this information through franchise agreements, contracts, local ordinances, section 41821.5(g) of the PRC, or other authority.
    (2) This does not preclude the Department from requiring this information in a request for information in lieu of an audit, or as part of an audit.

Section 18815.8 Reporting Requirements for Transporters and Brokers.

(a) In its report to the Department, a transporter or broker shall provide the following information for all tons of material for which they take legal ownership, using the reasonable methods in section 18815.9 of this Article:
    (1) For solid waste that a transporter or broker moves from a transfer/processor or disposal facility within California to:
        (A) Another transfer/processor or disposal facility within California, the total tons by jurisdiction of origin for all material sent to each facility for disposal and the facility's contact information, and an estimate of the overall source sector percentages for waste sent to each person.
        (B) A person outside of California, the total tons by jurisdiction of origin for all material sent to each facility for disposal and the facility's contact information, and an estimate of the overall source sector percentages for waste sent to each person.
    (2) For materials that a transporter or broker moves from a composting or recycling reporting entity within California to:
        (A) Another reporting entity within California, the tons of each material type sent to each facility and the receiving facility's contact information and DDRS number, if applicable.
        (B) A person outside of California, the tons of each material type sent to each facility and the receiving facility's contact information.
        (C) An end user, the tons of each material type sent to each end user category by region pursuant to section 18815.3(i) of this Article.

(b) A transporter or broker that does not take legal ownership of a material and is just moving materials on behalf of a reporting entity shall inform the receiving reporting entity of the identity of the sending reporting entity at the time of delivery.

(c) A transporter or broker who transports material from one Reporting Entity to another Reporting Entity, who does not take legal ownership of the material, shall not report those flows to the Department.

(d) A transporter or broker shall submit their report to the Department no later than 60 days after the end of the reporting period, and shall observe the following due dates for each reporting period:
    (1) Reporting period 1 due May 31
    (2) Reporting period 2 due August 31
    (3) Reporting period 3 due November 30

(4) Reporting period 4 due February 28

(e) For the purposes of DDRS reporting, the Department shall not require a transporter or broker to submit information on the identities of customers or end users (with the exception of other reporting entities) when providing jurisdiction of origin, material type or source sector information to the Department as part of a quarterly report.

(1) This does not preclude a jurisdiction from requiring this information through franchise agreements, contracts, local ordinances, section 41821.5(g) of the PRC, or other authority.

(2) This does not preclude the Department from requiring this information in a request for information in lieu of an audit, or as part of an audit.

Section 18815.9 Reasonable Methods.

(a) When required by this Article, a reporting entity shall use the following methods to report material types:

(1) A reporting entity shall report residuals and mixed solid waste as solid waste. A reporting entity is not required to further sort or characterize this material.

(2) A reporting entity shall report recyclable materials, organics, and end products at the level of segregation of the material at the time it was sold or transferred, as follows:

(A) A reporting entity shall report a homogeneous material or individual grade of material as that individual material type (for example, HDPE, aluminum, concrete, mulch, etc.).

(B) A reporting entity shall report combinations of various materials within a single material category based on industry standards (for example, ferrous metals, mixed glass, mixed paper, rigid plastics, etc.). A reporting entity is not required to further sort or characterize this material.

(C) A reporting entity shall report mixed materials from several categories as mixed materials (such as comingled recyclables). A reporting entity is not required to further sort or characterize this material.

(b) When required by this Article, a reporting entity shall use the following methods to determine jurisdiction of origin:

(1) A hauler may generate a periodic report using any of the following sources of information to estimate the percentage of solid waste from each jurisdiction:

(A) Actual tons collected from each jurisdiction,

(B) Total volume of bins emptied from each jurisdiction,

(C) Billing records for customers in each jurisdiction, or

(D) Company dispatcher records of hauling routes and Generator locations.

(2) A transfer/processor:

(A) A transfer/processor shall use the information provided by haulers sending materials to them as the basis for determining the jurisdiction of origin for that portion of disposal. If a transfer/processor's activities change the proportions of solid waste or residuals sent for disposal from jurisdictions, the reporting entity may use reviewable information and reproducible methods to adjust the jurisdiction of origin tonnages based on facility specific practices, such as:

(i) Tracking and/or sorting individual loads,

(ii) Segregating the flows from different jurisdictions, or

(iii) Gathering other relevant information on the composition and recoverability of the materials from each jurisdiction.

(3) A transfer/processor or disposal facility:

(A) With an attendant shall ask all haulers of incoming loads for the jurisdiction of origin, unless they receive that information via periodic reports from haulers.

(B) Without an attendant may use billing or property records to determine jurisdiction of origin for that material. If billing or property records are not available or representative of material disposed, the reporting entity shall assign the solid waste to the jurisdiction where the reporting entity is located.

(C) That does not have sufficient staff to ask each incoming load, and is located in a rural city or county, as defined in sections 40183 and 40184 of the public Resources Code, may conduct origin surveys no less frequently than once per reporting period and for at least one week in duration. During the survey weeks, the reporting entity shall survey every load of solid waste to determine jurisdiction of origin.

(c) When required by this Article, a reporting entity shall use the following methods to estimate source sector:

(1) A transfer/processor or disposal facility shall estimate the overall tonnages or percentages from each source sector for disposal at a facility for the reporting period, using any of the following methods:

(A) Using truck type as a proxy for source sector, such as assigning:

(i) Small vehicles (autos, pickups and small trailers) and flat beds as "self-hauled."

(ii) Side loaders as "contract-hauled single-family residential."

(iii) Front loaders and rear loaders as "contract-hauled commercial/multi-family."

(B) Using billing records to determine source sector, such as assigning:

(i) Cash accounts as "self-hauled."

(ii) Accounts with jurisdictions or their haulers for residential routes as "contract-hauled single-family residential."

(iii) Accounts with jurisdictions or their haulers for commercial routes as "contract-hauled commercial/multi-family."

(C) Using periodic reports from contract haulers on the source sectors of their routes. A transfer/processor or disposal facility may request this aggregated information from a hauler but shall not specify the method for the hauler to use, or request the data the hauler uses to create the estimate.

(D) Asking all incoming loads if they are bringing waste from residential routes, commercial routes or as a self-hauler.

(E) Determining source sector based on billing or property records if no attendant is present and available.

(2) When required by this Article and if requested by a transfer/processor or a disposal facility, a contract-hauler shall use any of the following methods to generate a periodic report showing an estimate of the overall tonnages, or percentages, from each source sector for disposal sent to the requesting facility for the reporting period:

(A) Using truck type as a proxy for source sector, such as assigning:

(i) Side loaders as "contract-hauled single-family residential."

(ii) Front loaders and rear loaders as "contract-hauled commercial/multi-family."

(B) Using billing records to determine source sector, such as assigning:

(i) Accounts with jurisdictions for residential routes as "contract-hauled single-family residential."

(ii) Accounts with jurisdictions for commercial routes as "contract-hauled commercial/multi-family."

(iii) Accounts with businesses and apartments as "contract-hauled commercial/multi-family."

(C) Using dispatcher records of hauling routes, total bin volumes from each source sector, or total weights from each source sector.

(3) If a reporting entity is unable to estimate source sector using one of the methods in this section, the reporting entity shall submit to the Department a request to use an alternative method. The Department shall review proposals for alternative methods. After the Department determines that a proposal is complete, it will consider and either approve or disapprove of the method within 90 days.

(4) If an approved method in this section is used, then inaccuracies or errors in source sector reporting shall not be subject to penalties pursuant to section 18815.10 of this Article.

(d) When required by this Article, a reporting entity shall use the following methods to estimate weight:

(1) A reporting entity that measures a transaction by weight shall use that measurement, and not an estimate based on volume, when compiling and submitting its report to the Department.

(2) A reporting entity shall use scales to measure tons for all flows, except in the following situations:

(A) If a transfer/processor or disposal facility tracks self-haul loads by volume, then it may estimate disposal tonnages using volume to weight conversion factors.

(B) If a transfer/processor or disposal facility weighs total inbound contract-hauled tons and the total tons sent to disposal, it may use the difference in weight to estimate self-haul sector.

(C) If a transfer/processor or disposal facility does not have access to scales and does not receive more than 4,000 tons of material per year from contract-haulers, they may use volume to weight conversion factors to estimate tons.

(D) If a recycler (including CDI recyclers) or composter sells or transfers materials based on volume, they may use material-specific volume to weight conversion factors.

(3) A reporting entity shall retain documentation on the basis and usage of any volume to weight conversion factors and update the factors every three (3) years. If, after review, the Department determines that volumetric conversion factors are not satisfactory, the Department may require a reporting entity to revise the factors and reports.

(e) In its report to the Department, a reporting entity shall identify which methods they used in the preparation of the report.

Section 18815.10 Procedure for Imposing Civil Liabilities.

(a) The Department shall impose administrative civil penalties authorized by sections 41821.5 through 41821.8 of the PRC in accordance with the procedures set forth in this section.

(b) Prior to initiating any enforcement proceeding, the Department shall notify a Reporting Entity in writing of any potential failure to comply with this Article and its implementing statute. The notification will include all of the following:

(1) A description and dates of the potential compliance failures

(2) A compliance deadline that allows for reasonable time to remedy; and

(3) Any potential penalties that may be assessed if the compliance deadline is not met.

(c) Civil penalties may be imposed administratively in accordance with Penalty Table I and the following:

(1) Determination of the description of violation(s).

(2) Determination of the number of violations and number of offenses that have occurred.

(3) Total potential penalties will be calculated for each violation and multiplied by the number of days the business was in violation. For first offenses, the number of days the violation occurred

will begin one day after the compliance deadline the Department issued in its written notification of a potential failure to comply to the Reporting Entity.

Penalty Table I. All fines are per day the entity is in violation.

Authority	Description of Violation	1st Offense	2nd Offense	3rd and subsequent Offense
PRC 41821.5 (d)	Any person who fails to submit information as required by this Article on time.	$500	$1,000	$5,000
PRC 41821.5 (d)	Any person who refuses to submit information required by this Article.	$1,000 – $5,000	$1,000 - $5,000	$5,000
PRC 41821.5 (e)	Any person who knowingly or willfully files a false report or any person who alters, cancels, or obliterates entries in the records for the purpose of falsifying the records as required by this Article.	$500 - $10,000	$2,500 - $10,000	$5,000- $10,000
PRC 41821.5 (e)	Any person who refuses to allow the Department or any of its representatives to inspect or examine records as required by this Article.	$500- $2,500	$2,500- $5,000	$5,000
PRC 41821.5 (e)	Any person who fails to keep any records for inspection as required by this Article.	$500	$500 - $2500	$1,000 - $5,000

(d) Once a potential penalty amount is determined, the Department may take the following factors into consideration in determining the penalty amount to be requested in the accusations:
(1) Whether the violations or conditions giving rise to the violation were intentional.
(2) Whether the violations demonstrate a chronic pattern of noncompliance with the regulations adopted in this Article.
(3) Whether the violations or conditions giving rise to the violation were due to circumstances beyond the reasonable control of the violator or were unavoidable under the circumstances.
(4) Whether the violator acted in good faith to comply, including correcting the violations in a timely fashion.
(5) Whether the violations were voluntarily and promptly reported to appropriate authorities prior to the commencement of an investigation by the enforcement agency.
(6) The circumstances, extent, and gravity of any violation or any condition giving rise to the violation and the various remedies and penalties that are appropriate in the given circumstances.

(e) The accusation and all accompanying documents may be served on the respondent by the following means:
(1) Personal service.
(2) Substitute service by using the same service procedures as described in section 415.20 of the Code of Civil Procedure.

(3) Certified Mail: For respondents who are registered with the department's electronic DDRS system, the mailing address(es) provided at the time of registration will be used. Proof of service of the accusation shall be the certified mail receipts or registered mail receipts proving the accusation and accompanying materials were sent to respondent by certified mail or registered mail. For other respondents that have not provided addresses to the department, certified mail or registered mail pursuant to the procedures indicated in the Administrative Procedure Act at section 11505(c) of the Government Code applies.

(f) In any case in which it is determined that more than one reporting entity is responsible and liable for a violation, each such reporting entity may be held jointly and severally liable for an administrative civil penalty.

(g) Reports regarding jurisdiction of origin shall be based on the information provided to a reporting entity at the time the report is due. The Department shall not hold reporting entities liable for incomplete or inaccurate reports regarding jurisdiction of origin information provided by a hauler, if the reporting entity identifies the hauler that failed provide data or provided incorrect data, as required by section 18815.3(l) of this Article.

Section 18815.11 Record Retention Requirements for a Reporting Entity.

(a) A reporting entity shall retain a copy of all reports and supporting records at its place of business for five (5) years.

(b) Records to be retained include, but are not limited to:

(1) The specific generator locations of a load of solid waste to verify the jurisdiction of origin for disposed waste.

(2) Bills of lading, receipts, and monthly billing statements to any person transferring material, and contact information for those entities.

(3) Daily log entries prepared by the reporting entity detailing the acceptance, transport, or delivery of material, the associated amounts, sources, material types, jurisdictions of origin, and the associated dates.

(4) Weight tags for individual haulers, transfer or other loads that identify the hauler, vehicle, vehicle type, quantity and unit of measure, date, waste type, and jurisdiction of origin of material delivered, transported, or received.

(5) All base data, methods and calculations used to derive information in a report.

(c) A reporting entity shall maintain the documentation described in this section in a usable format, such as on electronic media (computer files) or paper copies.

Section 18815.12 Record Review Requirements for a Reporting Entity.

(a) A reporting entity shall provide access to the records required by this Article to any authorized representative of the Department upon request.

(b) If the Department requests copies of specific records either prior to, in lieu of, or after inspection, a reporting entity shall provide the copies within ten business days, unless additional time is necessary to search for, collect, and examine records to respond to the request. In no case shall the copies be delayed more than an additional 14 days, unless agreed to by the Department.

(c) A reporting entity shall provide records to the Department electronically if possible, and in a format that will allow effective review, such as portable document format (PDF), spreadsheet, or other searchable format.

(d) Pursuant to section 41821.5(g)(7), a reporting entity may redact the records subject to inspection or copying by the Department before inspection or submittal, to exclude confidential pricing information contained in the records, such as contract terms and conditions (including information on pricing, credit terms, volume discounts, and other proprietary business terms), if the redacted information is not information that is otherwise required to be reported to the Department.

(e) Pursuant to section 41821.5(g)(1) of the PRC, the records maintained by a reporting entity to support a Report shall be confidential and shall not be subject to disclosure by the Department under the California Public Records Act (Chapter 3.5 (commencing with section 6250) of Division 7 of Title 1 of the Government Code).

(f) Pursuant to section 41821.5(i) of the PRC, the records provided to the Department in accordance with this section may be exempt from disclosure as provided in PRC section 40062 and implementing regulations.

(g) For purposes of this Article, the following types of records shall be deemed to be confidential and not subject to disclosure without the need to follow the procedure set forth in section 17046(c):
  (1) Weight tickets
  (2) Customer lists
  (3) Prices or similar financial data

(h) Pursuant to section 41821.6 of the PRC, in order to ensure that records required pursuant to this Article are accurate and properly maintained, in addition to inspecting all relevant records, the Department may conduct audits, perform site inspections, observe facility operations, and otherwise investigate the recordkeeping and reporting of persons subject to the requirements of this Article. Any records, reports, notes, studies, drawings, schematics, photographs, or trade secrets, as defined in section 3426.1 of the Civil Code, obtained, produced, or created by the Department in connection with or arising from such audits, inspections, or observations are confidential and shall not be subject to disclosure under the California Public Records Act (Chapter 3.5 (commencing with section 6250) of Division 7 of Title 1 of the Government Code).

(i) Government entity requests for inspections or records shall be subject to the provisions of PRC section 41821.5(g) and shall not be subject to the Department's compliance procedures outlined in 18815.10, 18815.11 and 18815.12 of this Article.

Section 18815.13 Complaints Regarding Non-Compliance.

(a) Using an electronic reporting process established by the Department, a reporting entity shall inform the Department of specific allegations of non-compliance by another reporting entity who fails to provide it with the information required by this Article.

(b) The Department shall establish an electronic process so that affected or involved parties may report specific allegations of non-compliance by a reporting entity. The party reporting the alleged non-compliance shall provide sufficient information so the Department may investigate appropriately.

NOTE: FACILITY AND OPERATIONS STATE MINIMUM STANDARDS FOR RECORD KEEPING WILL NEED TO BE UP DATED TO INCLUDE NEW REPORTING AND RECORDING REQUIREMENTS. EXAMPLES OF SUCH SECTIONS NEEDING ADDITIONAL LANGUAGE WILL INCLUDE BUT ARE NOT LIMITED TO: • 27 CCR SECTION 18810 DISPOSAL REPORTING REQUIREMENTS FOR A LANDFILL •27CCR SECTION 18809. DISPOSAL REPORTING REQURIEMENTS FOR A STATION • 27 CCR SECTION 20510 (g) CIWMB-DISPOSAL SITE RECORDS • 27 CCR SECTION 20686 BENEFICAL REUSE (d) • 27 CCR SECTION 20690 CIWMB-ALTERNATIVE DAILY COVER • 14 CCR SECTION 17869 GENERAL RECORD KEEPING REQUIREMENTS (a) (d) • 14 CCR SECTION 17414 RECORD KEEPING REQUIREMENTS(a) (b) (c) (h) • 14 CCR SECTION 17379.0 GENERAL RECORD KEEPING REQUIREMENTS (e) • 14 CCR SECTION 17383.3 C&D WOOD DEBRIS CHIPPING AND GRINDING OPERATIONS AT FACLITIES(k) • 14 CCR SECTION 17383.4 SMALL VOLUME CONSTRUCTION AND DEMOLITION/INERT DEBRIS PROCESSING FACILITIES(i) • 14 CCR SECTION 17383.5 MEDIUM VOLUME

CONSTRUCTION AND DEMOLITION/INERT DEBRIS PROCESSING FACILITIES (I) • 14 CCR SECTION 17383.6 LARGE VOLUME CONSTRUCTION AND DEMOLITION/INTERT DEBRIS PROCESSING FACLITIES (j) • 14 CCR SECTION 17383.7 INERT DEBRIS TYPE A PROCESSING OPERATIONS (j) • 14 CCR SECTION 17383.8 INERT DEBRIS TYPE A AND TYPE B RPOCESSING FACILTIES(i).

UPDATED LANGUAGE WILL LOOK SIMILAR TO: EACH SITE SHALL MAINTAIN RECORDS FOR THE DDRS IN ACCORDANCE WITH TITLE 14, CALIFORNIA CODE OF REGULATONS, SECTION 18815.1 et. seq. THE RECORDS SHALL BE AVILABLE FOR INSPECTION AS AUTHORIZED BY THAT ARTICLE DURING NORMAL BUSINESS HOURS AND RETAINED IN THE OPERATING RECORD NEAR THE SITE OR IN AN ALTERNATIVE LOCATION APPROVED BY THE EA.

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

CHAIR – MICHAEL KOBSEFF, SISKIYOU COUNTY
VICE CHAIR – MARY RAWSON, ALPINE COUNTY
EXECUTIVE DIRECTOR – GREG NORTON

Rural Counties Environmental Services JOINT POWERS AUTHORITY

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
SHASTA, SIERRA, SISKIYOU, TEHAMA, TRINITY, TUOLUMNE

TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR –, RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

February 24, 2017

Department of Resources Recycling and Recovery
1001 I Street
PO Box 4025, MS 13A
Sacramento, CA 95812
Submitted via email: AB901.reporting@calrecycle.ca.gov

SUBJECT: Comments on AB 901 Proposed regulations

Dear Staff:

On behalf of the 23 rural county members, the Rural Counties' Environmental Services Joint Powers Authority (ESJPA) appreciates the opportunity to provide comments on the February 10, 2017 proposed regulations on AB 901 Reporting Requirements for Recyclers, Composters, and Disposal Facilities.

This version incorporates many significant changes from previous informal drafts and reflects a significant effort by CalRecycle staff to address concerns by stakeholders. However, we would like to see the attached additional comments addressed.

Thank you again for the opportunity to comment on the proposed regulations. Please contact me at (510) 703-0898 or lsweetser@rcrcnet.org with any questions.

Sincerely,

Larry Sweetser
ESJPA Consultant

Enclosure

cc: Members, Rural Counties' Environmental Services Joint Powers Authority
Mary Pitto, Program Manager, Rural Counties' ESJPA

Section 18815.1 Scope and Purpose
It is understandable that some stakeholders desire confidentiality for some of the customer data submitted to CalRecycle. There is a concern that if during a jurisdiction's review of disposal data attributed to their jurisdiction that could adversely impact their diversion or recycling rates, the confidentiality of that data could prevent the jurisdiction from determining the validity of the data. Since CalRecycle has custody of that data and CalRecycle is also responsible for reviewing a jurisdiction's compliance with diversion and recycling mandates, CalRecycle is in the best position to evaluate a jurisdiction's data concerns for adverse impacts.

Under the current system, jurisdiction's periodically get reports of tonnage attributed to that jurisdiction from facilities that are significantly distant or unlikely to receive that waste. Further review has invalidated that waste allocation. These proposed regulations should include a new provision for jurisdictions to request a review. A new section should be included in this section that indicates the following:

(d) The Department shall inform jurisdictions of the total tons disposed originating within their jurisdictions by facility for the purposes of compliance with section 41780 of the PRC. If requested by a jurisdiction, the Department shall review data attributed to that jurisdiction and reported by a Reporting Entity to determine the validity of that data. If it is determined that there is insufficient evidence to attribute that tonnage to the jurisdiction, the jurisdiction will not be assigned that tonnage.

Section 18815.2 Definitions.
Many of the definitions have been revised to refer to the same definition as in other regulations. These changes greatly benefit the proposed regulations by ensuring consistency with other requirements. A few of the proposed definitions are still significantly different than current definitions. All definitions used should be consistent.

The definitions of various materials, such as Furniture, Metal, and others, provide helpful examples but are not all inclusive. For example, a filing cabinet or other furniture items could also be classified as metal or organic (wood) depending upon construction. As long as a Reporting Entity is not penalized for the classification of an item, the definitions are helpful.

The elimination of the term "Material Recovery Facility" or "MRF" simplifies the proposal since it was difficult to distinguish between a MRF, a recycling center, and transfer processing facilities and operations.

(22) "End Product" – It should be clear that an "End Product" is derived from solid wastes, recyclables, and/or organic materials handled by a Reporting Entity and not created solely from virgin material.

(30) "Hauler" – The revised definition is "a person who collects a material from a generator and delivers it to a reporting entity, end user, or a destination outside of the state". As used in this definition, the term material is overly broad and does not uniquely link to the definition of "Material(s)" in (33). It could potentially include the collection of materials that are not solid waste, organics, or recyclables. The previous Hauler definition clarified that the person collects solid waste, organics, or recyclables which is now the definition of "Material(s)". The proposed definition of "Hauler" should be revised as follows:

"Hauler" means a person who collects a "~~m~~Material", as defined in Section 18815.2 (a)(33), from a generator and delivers it to a reporting entity, end user, or a destination outside of the state. "Hauler" includes public contract haulers, private contract haulers, and self-haulers. A person who transports a material from a reporting entity to another person is a transporter not a hauler.

(35) "Organics" - The proposed definition of "organics" in the AB 901 regulations is different than the "organics waste" used in the Mandatory Commercial Organics Recycling statutes in PRC 42649.8 (c), which states that "organic waste" means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste." The proposed AB 901 regulations' organics definition is "organics" means compostable materials like food, green waste, landscape and pruning waste, nonhazardous lumber and dimensional wood, food-soiled paper or other compostable paper; by-products like digestates, biosolids and biogenic sludges; and bioproducts like compost, wood chips, biofuels and biogas." We encourage CalRecycle to utilize consistent definitions.

(40) "Recyclable material" - The definition of "Recyclable material" means a material that has the potential to be recycled, and that is managed through recycling facilities and operations, and includes intermediate recycled materials" (Section 18815.2 (a)(40)). Everything has a "potential" to be recycled, so this definition may require a facility to count a material as "recyclable" even if it is too contaminated to be marketable. The term "potential" should be removed. In addition, there is no definition of the term "intermediate recycled materials". This term should be defined or removed.

(56) "Transfer/processor" (A) – The current definition of ""transfer/processing facilities" and "transfer/processing operations," as defined in sections 17402(a)(30-31) of Title 14 of the CCR" indicates they "receive, handle, separate, convert or otherwise process materials in solid waste". The proposed definition indicates they "receive, temporarily store, convert, process, and transfer materials for recycling, composting, or disposal". The referenced and proposed definitions are not consistent in that the proposed definition includes conversion and processing of materials for recycling and composting. The conversion and processing of organics is also the definition of "Compostable Material Handling Operation" or "Facility" in Title 14 Section 17852 (a)(12). A clearer distinction is needed between Transfer/Processors and Recycling/Compost Facilities and operations.

Section 18815.3 Registration, Reporting and Exemptions
The term "resale" is excluded from the definition of "Recycle" or "recycling" (41). Materials for reuse are also excluded. The term "resale" is not used elsewhere in the proposed regulations. Materials sent for resale should also be exempt from registration and reporting in Section 18815.3 similar to persons that reuse materials.

Section 18815.5 Reporting Requirements for Transfer/Processors. (a)(3)(A)
Solid waste and/or residuals sent to a transfer/processor or disposal facility are not required to identify jurisdiction of origin.

Section 18815.6 (b)(4), requires the disposal facility to report the total tons by jurisdiction of origin for solid waste sent out of state. However, the disposal facility only receives jurisdiction of origin for wastes delivered by directly by a Haulers or Transporter but jurisdiction of origin is not required for

Transfer/Processors. Solid waste sent from a Transfer/Processor will likely be hauled by a Transporter but the Transfer/Processor will need to inform the Transporter of the jurisdiction of origin.

Jurisdiction of origin should be included in Section 18815.5 (a)(3)(A).

Section 18815.6 Reporting Requirements for Disposal Facilities. (b)
Some disposal facilities have received certain materials that are then sent off site for disposal. There is no reporting requirement for these situations. These materials could be sent from the original disposal facility to another due to insufficient processing equipment, lack of space, or other reasons. Examples could include large dead animals, tree stumps, and soils suspected of containing petroleum or other materials classified as designated wastes. If these loads are rejected prior to unloading, they would not be considered as accepted but some items may be unloaded and later determined to need to be re-loaded and sent for disposal at another site. Section 18815.6 (b) could be modified to include reporting of tons and the facility contact information.

Section 18815.9 Reasonable Methods
Allowance for alternatives
There is no allowance for Reporting entities to propose and get approval for alternative Reasonable Methods. Given the complexity of these regulations, there should be a process.

Section 18815.9 (d)(2)(C)
Currently, transfer stations (18809.2) and landfills (18810.2) are required to have weigh scales if the facility or operation accepts more than 100 tons per day of solid waste (a facility or operation in a rural city or county has a 200 ton per day limit). Volumetric conversion can be used for all received. The proposed regulations (Section 18815.9 (d)) would reduce that exemption limit to 4,000 tons per year (333 tons per month) from "contract haulers" (Page 15, Section 18815.09(d)(2)(C)). This new limit is for all material and not just solid waste received which will offset some of the benefit of excluding self-haulers. "Contract-hauled" means material hauled by any person paid to collect and transport material from a Generator, including franchised Haulers and private contract Haulers.

The revision limiting the exemption to contract haulers is a significant benefit but the change from 200 tons per day of solid waste to 333 tons per month of all materials is significant for those facilities and operations that do not have scales but would be required to purchase them. Since scales costs can range from $60,000 to $100,000 to install, the financial impact of this provision is significant especially if the rural site has no power available to operate the scale.

CalRecycle should determine the number of facilities and operations that would be impacted by this requirement since it could significantly impact the economic analysis of these regulations.

Section 18815.10 Procedure for Imposing Civil Liabilities.

Section 18815.10 (b) allows an opportunity for a Reporting Entity to fix a issue prior to imposing a violation or penalty. This provision was strongly requested by stakeholders and is appreciated.

Regarding civil penalties in Section 18815.10 (c), when a "person" has multiple occurrences of the same violation in the same time period, it is not clear whether that counts as a first offense or multiple

offenses. Also, the penalties are assessed per "person" and not per facility, so if an organization has multiple problems over many facilities and even many counties it could be interpreted as one penalty.

WESTERN WOOD PRESERVERS INSTITUTE

Treated Wood Waste in California: What You Need to Know About Lawful Disposal

Treated wood is a commonly used material in construction, agriculture, transportation and aquatic applications where exposure to moisture, insects or other elements compromise the strength and useful life of various wood products. Wood products are treated with preservatives authorized by the U.S. Environmental Protection Agency. The wood preserving industry has been a leader in promoting the proper handling and proper disposal of treated wood waste.

Since 2005, California state law has provided management alternatives for disposing treated wood waste (TWW), which include properly separating, reporting and disposing TWW in a composite-lined landfill. *Disposing treated wood waste anywhere other than a composite-lined landfill or Class I hazardous waste landfill is prohibited by law.*

The law requires landfills and transfer stations to submit semi-annual reports on the TWW they receive. The Department of Toxic Substances Control (DTSC) launched a Treated Wood Waste Tracking System (TWWTS) in 2007 to better understand the amount of TWW received by approved facilities throughout California and improve compliance through outreach and education.

Enacted in 2015, SB 162 extended these provisions through 2020 and mandated a study to assess whether generators of TWW were following the law by separating, reporting and disposing TWW in composite-lined landfills. A TWW generator site is any location where treated wood is cut, sanded or drilled. Remnants from these activities, including the sawdust, are TWW. And, at the end of its service life, preserved wood is considered TWW for disposal purposes.

Typically, TWW generators include public works departments, landfills, parks, ports, railroads, transportation agencies, schools, universities, industrial facilities, manufacturers, construction companies, agricultural enterprises, private residences and other locations.

A 2011 report by DTSC indicated a 95% compliance rate with TWW disposal requirements. However, the study was criticized for its small sample size. Currently, DTSC is seeking to vastly expand the number of TWW generators they inspect to get a more comprehensive understanding of whether TWW generators and TWW facilities are complying with the law and regulations.

The TWW compliance study mandated by SB 162 was funded during the 2016 legislative session for $370,000 and included an extension for completing the study. The TWW compliance report must be presented to the Legislature no later than July 1, 2018.

The study of TWW compliance mandated by SB 162 is now underway. DTSC has started the process of hiring three full-time inspectors and a senior scientist to assess how and where businesses, government entities and private individuals dispose of treated wood.

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360-693-9958 • Toll Free 888-693-9958 • PreservedWood.org

In the spring of 2017, DTSC staff will initiate communication with generators of TWW and begin inspecting their facilities to determine whether generators are separating treated wood from untreated wood, disposing of TWW in composite-lined landfills and reporting the disposed TWW accordingly.

Western Wood Preservers Institute (WWPI) is a non-profit trade association founded in 1947 to serve the interests of the preserved wood industry in western North America. WWPI works with federal, state and local agencies, as well as designers, contractors and users over the entire preserved wood life cycle, ensuring that preserved wood is used in a safe, responsible and environmentally friendly manner.

WWPI is currently working with the Department of Toxic Substances Control and CalRecycle to monitor implementation of the study and educate California regulators on TWW and how to identify it.

For more information on treated wood waste and compliance, see:

PreservedWood.org Website (managed by WWPI)
http://wwpi.info/TWW_pubs

WWPI Treated Wood Guide Smartphone App
http://wwpi.info/TWGuide_app

CalRecycle Detailed Landfill Facility Search
http://www.calrecycle.ca.gov/FacIT/Facility/Search.aspx#LIST

DTSC Treated Wood Waste Information and Fact Sheets
http://www.dtsc.ca.gov/PollutionPrevention/ToxicsInProducts/TWW_information.cfm

DTSC Approved TWW Landfills
http://www.dtsc.ca.gov/HazardousWaste/upload/lanfillapr11PDATED1.pdf

DTSC Treated Wood Waste Regulations
http://www.dtsc.ca.gov/PollutionPrevention/ToxicsInProducts/TWW_Regulations.cfm

DTSC Treated Wood Waste Training
http://www.dtsc.ca.gov/PollutionPrevention/ToxicsInProducts/TWW_Training.cfm

WWPI – March 2017

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Treated Wood Waste Disposal in California

Prepared by Western Wood Preservers Institute

Western Wood Preservers Institute

- Represents preservative treated wood producers, chemical manufacturers and others serving the industry throughout western North America
- Mission
  Increase awareness of the proper use and disposal of preserved wood products by providing information to:
  - Homeowners
  - Builders
  - Architects, Specifiers
  - Bldg. Material Dealers
  - Code Officials
  - Ports and Marinas

Learning Objectives

- Develop an understanding of preserved wood products
- Learn how to identify pressure treated wood products
- Learn where pressure treated wood waste is generated
- Review current requirements for disposing treated wood waste lawfully in California (SB 162)
- Learn about the Western Wood Preservers Institute efforts regarding the use of preserved wood in California and a list of resources where they can find more information

Why We Preserve Wood

Preserved wood products are sustainable

Inputs
- Seed
- Soil
- Water
- Sun
- CO_2

30-80 years of forest management

Outputs
- Oxygen
- Habitat
- Stored Carbon
- Mature Forest
- Wood Products

By the time your preserved wood has served its life, a new one will be grown and ready to replace it

Wood destroying insects

Wood Boring Beetles

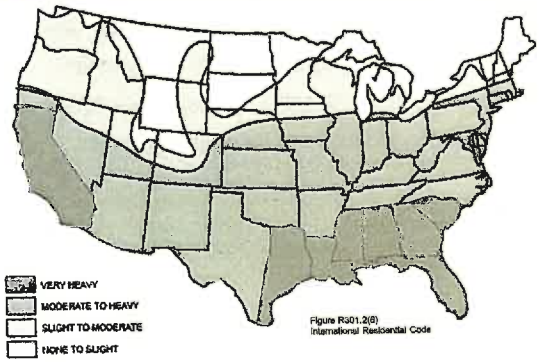
Carpenter Ants

Formosan Termite

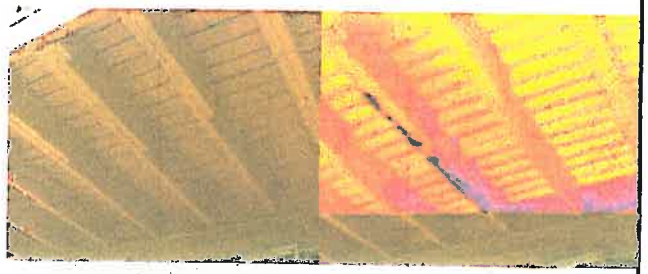
Problem

Wood durability is threatened by:
- Carpenter ants
- Wood boring beetles
- Termites
- Decay fungi, rot
- Fire

Termite infestation probability



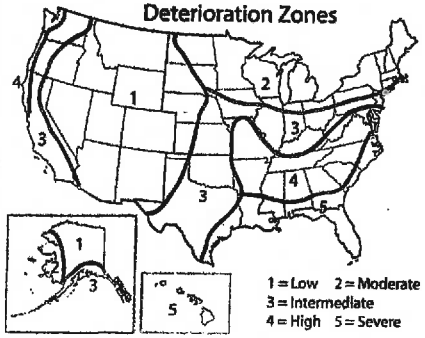
Hidden dangers of decay, rot



Solution

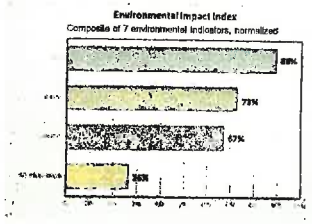
- Treat outer shell of wood with preservatives
- Extends service life of wood to decades
- Maintains reliable physical, mechanical properties
- Readily available, safe to work with, cost effective

More moisture, more potential problems



LCA conclusions

- Preserved wood products have significantly lower impacts than alternatives
- Wood uses less energy, water and fossil fuels with lower environmental impacts



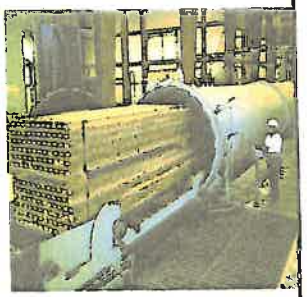
Preserved Wood Production

Who determines how much preservative to use?

- American Wood Protection Association determines if a preservative is effective and can be listed in the standards
- Established how much preservative is needed (retention) depending on exposure, use
- Industry seeking to minimize chemical use through lower retentions

Who determines if preservatives are safe?

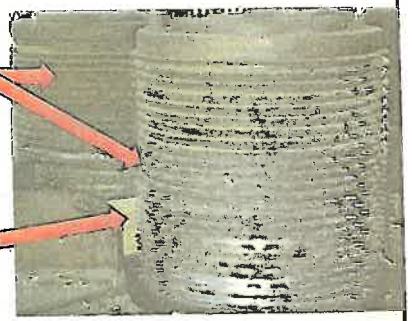
- All wood preservatives must be registered
  - U.S. Environmental Protection Agency (EPA)
- Detailed risk reviews for human health, environmental impacts
- Product labels designate in where treated wood can be used in construction



Incising Western preserved wood for treating

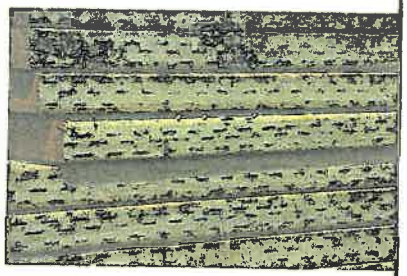
Incisor knives mounted on drums

Lumber drawn through the drums



Incisions on all four sides

- Improves penetration of preservative into wood fiber
- Required in Western species to meet AWPA penetration standards for Ground Contact



AWPA Approved Preservatives

Waterborne

- ACQ – Alkaline Copper Quat
- ACZA (Chemonite) – Ammoniacal Copper Zinc Arsenate
- CA-A – Copper Azole
- MCA –Micronized Copper Azole
- SBX – Inorganic Boron
- PTI and EL² – Carbon-based preservatives

Limited Use

- CCA – Chromated Copper Arsenate

Oil-Type

- Copper Naphthenate

Limited Use

- Creosote
- Pentachlorophenol

How safe are wood preservatives?

Preserved Wood Uses

Use Category 1 – UC1

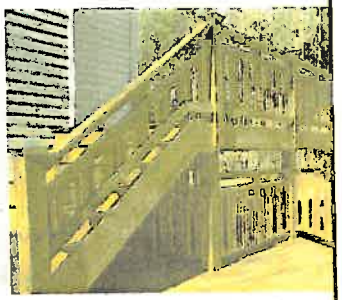
- Interior construction
  - Not in contact with ground or foundations
  - Protected from weather
  - Protected from interior sources of water
- Insect hazard only

Use Category 2 – UC2

- Interior construction
  - Not in contact with ground or foundations
  - Protected from weather
  - Subject to dampness and occasional sources of water
- Decay fungi and insect hazard

Use Category 3 – UC3

- Above ground, exposed to weather
  - UC3A: Coated and rapid water runoff
  - UC3B: Uncoated or poor water runoff
- Decay fungi and insect hazard

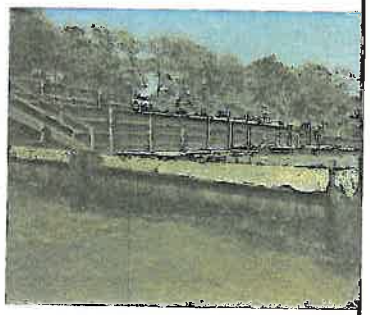


Use Category 4 – UC4

- Ground or fresh water contact, exposed to weather
  - UC4A: Deck supports
  - UC4B: Foundation, building poles
- Decay fungi and insect hazard

Use Category 5 – UC5

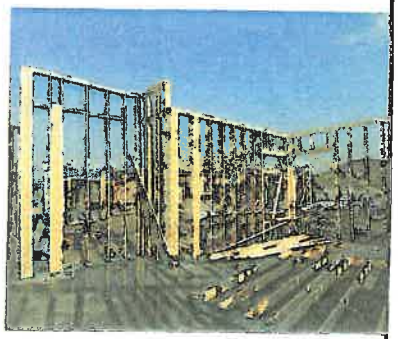
- Wood used in salt or brackish water
  - Marine piles, docks, bridges
- Marine borers hazard



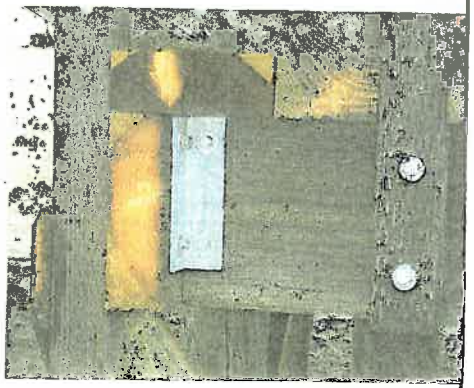
Treated Wood Identification

Preserved wood in building construction

- 90%+ homes built with wood
- Less than 6% of wood used is pressure treated



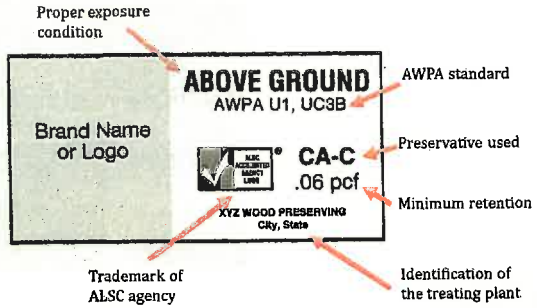
Look for incisions and signs of penetration



Be careful about color

- Green does not always mean it is treated

Product quality mark – required information



Look for End Tag

- IBS Section 2303.1.8.1
  - "All preservative-treated wood shall bear the quality mark of an inspection agency which has been accredited by the American Lumber Standards Committee and complies with the requirements of the ALSC Treated Wood Program or equivalent."

Disposing Treated Wood Waste in California

AB 1353 - Effective January 1, 2005

- Enacted to facilitate the safe and economical disposal of treated wood waste
- Provided alternative management standards and additional disposal options of treated wood waste while protecting public health and the environment
- Allowed disposal of TWW in **composite-lined** Class II and III landfills
- Provided alternative transportation and record-keeping options
  - No hazardous waste manifest
  - No registered hazardous waste hauler
- Created TWW Tracking System to monitor compliance for facilities, landfills and transfer stations

Compliance Report Conclusions *(cont.)*

TWW Facilities

High rate of compliance with most regulatory requirements for storage, disposal and reporting

- Non-compliance focused on occupational safety and health training to employees who handle TWW

Cal EPA 2011 Compliance Report Conclusions

- Since the alternative management standards (AMS) took effect, the amount of TWW received and reported by landfills has increased
- 95% of California's annual TWW tracked was handled according to AMS standards
- Too few inspections were conducted for compliance rates to be conclusive
- TWW is generated by a wide range of businesses, as well as businesses and government agencies
- Load-check programs indicate that commingling and dumping of TWW with other municipal solid waste is relatively uncommon

Compliance Report Conclusions *(cont.)*

TWW Generators

Very limited inspections found to have violations with potential threats to the environment and human health

- Commingling of TWW and non-TWW
- Cutting TWW that could cause release to the environment
- Failure to notify DTSC of large generator status (more than 10,000 lbs/year)
- Improper storage
- Lack of staff training

SB 162 - Effective January 1, 2017

- Extended current law designating pressure-treated wood as non-hazardous when disposed in a composite-lined landfill (RWQCB approved)
- Without it, treated wood waste would have to be disposed in a Class I hazardous waste landfill (utility poles are exempt)
- Treated wood waste must be separated and reported when disposed
- Generators disposing of more than 10,000 lbs/year must register with DTSC
- Mandated a second TWW compliance study

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Three Options For Disposing TWW

- Treat as hazardous waste and dispose in a Class I hazardous landfill
- Include with other hazardous waste consistent with Resource Conservation and Recovery Act
  - Encapsulation, hazardous waste transportation, manifests

-or-

- Follow AMS for TWW – easiest and most economical
  - Separate, report and dispose in a composite-lined Class II or Class III landfill that accepts TWW

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SB 162 Compliance Study

THINK: **ENFORCEMENT**

NOT: study

- DTSC staff emphasized need for a more comprehensive study
- $370,000 budget for 2-year study
- 1 Senior Managing Scientist
- 3 Inspectors (hiring not complete)
- Final report must be delivered to the Legislature by **July 1, 2018**

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TWW Compliance Study

WWPI reaching out to treated wood stakeholders to educate them about the study, including:

- ✓ Lumber Retailers
- ✓ California Chamber
- ✓ Building Industry
- ✓ Construction and Industrial Materials Association
- ✓ Railroads
- ✓ Manufacturers
- ✓ Chemical Industry
- ✓ Cattlemen
- ✓ Farm Bureau
- ✓ Waste Management
- ✓ Wine Growers
- ✓ Deck and Fencing Industry
- ✓ Ports and Marinas
- ✓ Food Processors

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Handling and Disposal of Treated Wood

Handling, installation and maintenance

- Always prefabricate prior to treatment, if possible
- Inspect materials on site
- Use containment where needed
- Work away from water
- Field treat end cuts with care
- Collect, dispose of old materials and construction wastes properly

Safe use of preserved wood

- Precautions for treated wood same as for non-treated wood
- Avoid frequent or prolonged exposure to sawdust; dusk mask recommended
- Consumer info sheets, SDS available from manufacturers

Disposal of treated wood waste

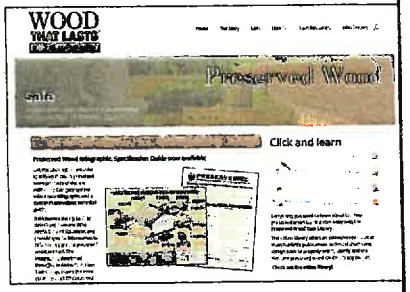
- Reusing treated wood is preferred option
- Do not mulch
- Do not burn, unless in commercial or industrial incinerators
- Not considered hazardous waste, can be disposed at a composite lined landfill

WWPI Resources

References for Preserved Wood

PreservedWood.org

- One-stop online information source
- Technical Library
- California Disposal
  - Landfills list
  - DTSC Fact Sheet



Use Category reference

- Treated Wood Guide app
  - Free download available for iOS, Android smartphones and tablets
  - Search "Treated Wood Guide" in online stores
  - Lists composite lined landfills in California that accept treated wood waste

References for Preserved Wood

Publications

- PreserveTech:
  - Preservatives
  - Incising
  - Fasteners
- PreserveSpec:
  - Specifying with Use Categories
- Available for download at preservedwood.org in the Tech Library

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Questions?

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Agenda Item VII

SOLID WASTE REGULATORY UPDATES

California Environmental Protection Agency
Air Resources Board

NEWS RELEASE

Release #:17-11
Date:03/01/2017

ARB PIO: (916) 322-2990
CONTACT:

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(916) 322-2990
dave.clegern@arb.ca.gov

California and Quebec release results for tenth joint cap-and-trade auction

SACRAMENTO - Today at noon (PST), California and Quebec released the results of the tenth joint cap-and-trade auction of carbon allowances. The final numbers include sales figures and settlement prices for 2014, 2017 and 2020 vintages.

2014/2017 Vintage
Number offered: 65,104,273
Number sold: 11,673,000
Settlement Price: $13.57

2020 Vintage
Number offered: 9,723,500
Number sold: 701,000
Settlement Price: $13.57

For more detailed results on the auction, including maximum and minimum bids placed, please visit the report **here**.

ARB's mission is to promote and protect public health, welfare, and ecological resources through effective reduction of air pollutants while recognizing and considering effects on the economy. The ARB oversees all air pollution control efforts in California to attain and maintain health based air quality standards.

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

Rural Counties Environmental Services JOINT POWERS AUTHORITY

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
SHASTA, SIERRA, SISKIYOU, TEHAMA, TRINITY, TUOLUMNE

CHAIR – MICHAEL KOBSEFF, SISKIYOU COUNTY
VICE CHAIR – MICHAEL RANALLI, EL DORADO COUNTY
EXECUTIVE DIRECTOR – GREG NORTON

TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR – RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

MEMORANDUM

To: ESJPA Board of Directors

From: Mary Pitto, Regulatory Affairs Advocate

Date: March 8, 2017

Re: ARB Short Lived Climate Pollutant Reduction Strategy and the 2030 Target Scoping Plan

Summary

This memo provides an update on two major climate change policies as it affects the solid waste industry from the California Air Resources Board: the 2030 Target Scoping Plan and the Short-Lived Climate Pollutant Reduction Strategy. Both will impact future regulations and programs.

Background

The California Global Warming Solutions Act of 2006, also known as AB 32, requires the California Air Resources Board (ARB) to update its Scoping Plan to reduce greenhouse gas (GHG) emissions every five years. In 2016, Governor Jerry Brown signed Senate Bill 32 (Pavley) into law, which established a GHG emissions reduction goal of 40 percent below 1990 levels by the year 2030. The 2030 goal was not originally established in AB 32, but rather began as a 2015 Executive Order from the Governor. While the Scoping Plan was recently updated in 2014, the Executive Order initiated an early update through the ARB that will create additional regulations and programs statewide to help the State meet those 2030 GHG goals.

In recent years, state agencies and the Legislature have also begun more robust discussions on the role played in California's GHG profile by short-lived climate pollutant (SLCP) emissions, particularly since SLCP emissions were directly addressed in the 2014 AB 32 Scoping Plan Update and related Senate Bill 605 (Lara), which requires ARB to develop a strategy to reduce SLCP emissions. The reductions will also support the 2030 GHG emissions reduction goals of SB 32.

SLCP emissions include three main components:

- Black carbon, which is a component of fine particulate matter and has been identified as a leading environmental risk for premature death. According to ARB, wildfire accounted for 66% of California's black carbon emissions in 2013, and is increasing each year.
- Fluorinated gases (F-gases), which are the fastest growing source of GHG emissions in California. Most F-gas emissions come from leaks in air conditioning and refrigeration systems.
- Methane, which is the principal component of natural gas. Methane emissions largely originate in the agricultural, waste treatment, and oil and gas sectors.

Issue

After months of development, public workshops, concept papers, and preliminary draft releases, ARB released drafts of both the 2030 Target Scoping Plan in mid-January 2017and the SLCP Reduction Strategy in late 2016 for public review and comment.

Short-Lived Climate Pollutant Reduction Strategy

The most recent draft Short-Lived Climate Pollutant (SLCP) Reduction Strategy (Strategy) was released on November 28, 2016. With respect to the methane emissions from landfills, the September 2015 draft accelerated the Assembly Bill 1826 (Chesbro, 2014) goal of 50 percent reduction of organics from landfills by 2020 to 75 percent, and established a goal of 90 percent by 2025. As it will be challenging enough to build the necessary facilities to meet the AB 1826 50 percent diversion goal not only financially, but also due to the constraints of the permitting process, these new proposed goals were unrealistic.

In addition to working with ARB staff and Board members, RCRC staff and several industry stakeholders devoted time to educating legislators on the issue. The coalition actively advocated that any new regulatory actions should not be considered until after 2020, after evaluation of the progress of implementation of AB 1826 and a more thorough and accurate understanding of landfill emissions is known. SB 1383 gained passage and established specified targets for reducing organic waste in landfills by 50 percent by 2020, consistent with AB 1826, and 75 percent by 2025. The current draft SLCP Strategy reinforces the solid waste sector goals for methane emissions reductions set in AB 1826 and SB 1383. It also acknowledges that there is a need to improve understanding of emissions from landfills and landfill gas collection efficiencies before considering potential opportunities to further control emissions from landfills in the future.

The draft SLCP Strategy, along with all other related documents, can be accessed on the ARB website: http://www.arb.ca.gov/cc/shortlived/shortlived.htm

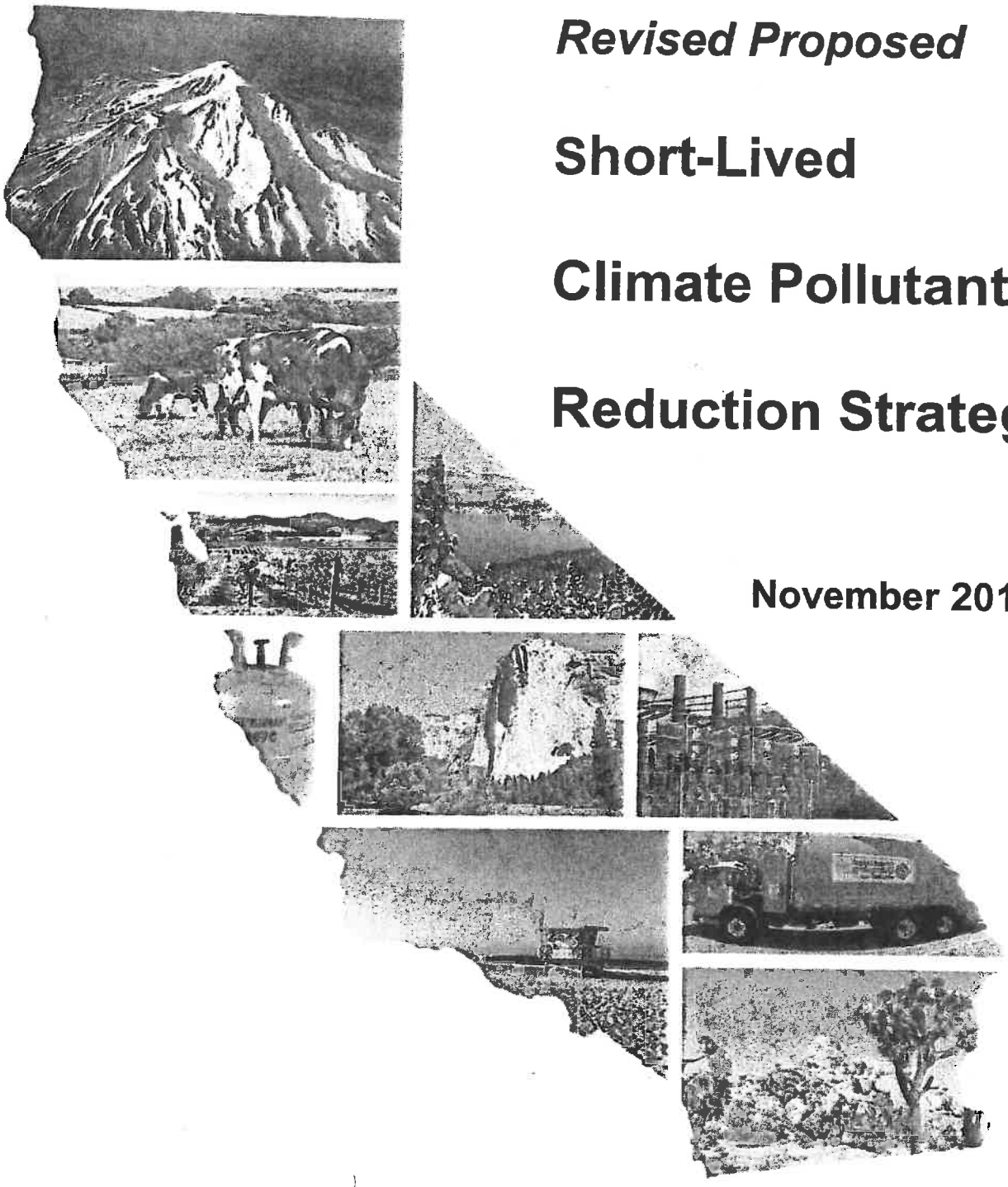
2030 Target Scoping Plan

The draft 2017 Climate Change Scoping Plan Update (Draft Update) was released on January 20, 2017. In contrast with the concept paper released in mid-2016, the Draft Update acknowledges the need to increase and diversify biomass utilization, promises a completed forest carbon emissions inventory by January 1, 2018, and reinforces the solid waste sector goals in Assembly Bill 1826 (Chesbro, 2014) and Senate Bill 1383 (Lara, 2016) for the 50 percent of commercial organic diversion from landfills by 2020, and 75 percent by 2025, maintaining the ultimate goal of 40 percent reduction in methane emissions from the solid waste sector by 2030. Ultimately, the Draft Update contained several policy elements that directly resulted from RCRC's and a small coalition of stakeholders advocacy efforts.

ARB staff expects to release a final draft 2017 Climate Change Scoping Plan Update in the end of May 2017 for a final public review and comment period and adoption by the ARB at their June Board Hearing. Information on the 2030 Target Scoping Plan update can be found on the ARB website: http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm

Attachments

- Solid Waste Excerpts from the ARB Draft Short-Lived Climate Pollutant (SLCP) Reduction Strategy
- Solid Waste Excerpts from the Draft 2017 Climate Change Scoping Plan Update
- RCRC December 15, 2016 Comment Letter on the 2030 Target Scoping Plan Discussion Draft



Revised Proposed

Short-Lived Climate Pollutant Reduction Strategy

November 2016

California Environmental Protection Agency

Air Resources Board

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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November 28, 2016

Appendices

November 28, 2016

Chapter V may be helpful in recommending ways to leverage private sector investment and scale efforts to rapidly cut methane emissions in California.

3. Methane Emission Reductions from Diversion of Landfill Organic Waste

As noted in Chapter V, meeting the SB 1383 organic diversion targets can reduce landfill emissions by 4 $MMTCO_2e$ in 2030, but one year of waste diversion in 2030 is expected to avoid 14 MMTCO2e of emissions over the lifetime of waste decomposition. Achieving these methane emission reduction targets requires developing infrastructure and markets to optimize the economic and environmental value of California's waste streams across sources.

When considering waste diversion options it is essential to balance environmental and economic benefits with any potential impacts on criteria pollutant emissions and ecosystem and human health, especially in disadvantaged communities. Avoiding organic waste generation entirely is the best option to reduce emissions, protect health, and minimize costs. However, once generated, there are many options for creating environmental and economic benefit through the appropriate utilization organic waste. Organics can be diverted to waste facilities with existing excess capacity, including composting facilities, stand-alone anaerobic digesters (AD), and wastewater treatment anaerobic digesters. New facilities can be also built in optimized locations.

In this analysis three scenarios were considered that can achieve the organic diversion target outlined in this SLCP Strategy. The three scenarios are based on projected waste data and potential diversion outlined in Appendix F. The only difference between the scenarios is the waste utilization of grass and leaves. The three scenarios evaluate the costs and revenues for utilizing food waste and grass and leaves in three pathways:

1. New anaerobic digestion facilities
2. Existing excess capacity at wastewater treatment anaerobic digestion facilities
3. New compost facilities

The actual future utilization of food waste and grass and leaves will most likely be some mix of these options. Since it is not possible to predict the exact mix of utilization pathways, these three scenarios were developed to bound potential costs and revenues. The scenarios considered here aim to balance cost and feasibility, while prioritizing economic and environmental benefits. Although ARB recognizes there are other beneficial uses of renewable natural gas, this analysis focuses on the capture and pipeline injection of renewable natural gas from diverted organic waste. Using renewable natural gas as a transportation fuel can result in significant potential revenue streams and reduce criteria pollutant emissions from the transportation sector. Prioritizing the use of biomethane as a transportation fuel may increase costs relative to scenarios that focus solely on methane mitigation. However, important environmental, health, and economic benefits may be most realized in disadvantaged communities by prioritizing pipeline injection of renewable natural gas.

Within scenario 1, food waste and a portion of grasses and leaves are handled through new centralized AD facilities and the resulting methane is pipeline injected. New AD facilities are assumed to accept 100,000 tons per year of organic waste. The costs of scenario 1 include facility construction and permitting, operating and maintenance (O&M), waste and digestate processing and transportation, and the costs associated with pipeline injection of renewable natural gas. These include pipeline, interconnection, and biogas upgrading costs. Potential revenue streams include tipping fees, the sale of biogas, LCFS credits, and RIN credits, as outlined in Appendix F.

Scenario 2 assumes that food waste is diverted to wastewater treatment facilities with existing excess capacity. The analysis assumes that, with modification, existing wastewater treatment facilities can accept 50,000 tons of organic material per year on average by 2025, with some facilities accepting more or less depending on size. Costs for this scenario include upgrading and permitting costs that may be required for facilities to accept food waste, waste and biosolids processing and transportation, O&M, as well as the costs associated with pipeline injection of renewable natural gas. Potential revenue streams include tipping fees, sale of biogas, LCFS credits, and RINs.

Scenario 3 assumes that all food waste and grasses and leaves are composted at new facilities with a throughput of 100,000 tons per year. Costs within the scenario include facility construction, O&M, and transportation of organic materials to the compost facility. Compost facility revenues are estimated in scenario 3 by only including tipping fees and not revenues associated with the sale of compost. This conservative approach represents the lower bound estimate of compost. However, these revenues vary depending on a number of factors such as seasonality, organic certification, and compost blend type

A principal difference in outcomes from these three scenarios is the number of new facilities needed to achieve the organic diversion targets. Table 18 shows the number of new compost or AD facilities needed for each scenario.[171]

Table 18: Estimated Number of New Facilities

Scenario	Estimated Number of New Compost Facilities		Estimated Number of New AD Facilities	
	2020	2025	2020	2025
1. New AD	15	26	39	47
2. Existing WWTP	22	35	--	--
3. Compost Only	47	65	--	--

[171] This analysis assumes existing wastewater treatment facilities can handle 50,000 wet tons of organic material per year, while new AD facilities and compost facilities have a throughput of 100,000 wet tons per year. Additional information regarding the projected organic waste streams by waste, the assumptions surrounding required facilities, and the handling of residuals are presented in Appendix F

There is uncertainty regarding the costs, savings, and potential revenue streams associated with organic waste diversion. Social welfare impacts, including those related to health, noise, odor, ecosystem benefit, and water impacts, are not included in this analysis but require additional consideration and analysis prior to the implantation of any organic diversion measure. Additional uncertainty related to existing infrastructure and technology development may also create economic impacts not analyzed in this analysis, which relies on available data from California agencies, academic researchers, and industry to estimate the direct economic impact, including costs, fuel and energy savings, and potential revenue streams, of achieving the organic waste diversion target in this SLCP Strategy.

Net present value calculations were used to estimate the potential profitability of the three scenarios. By calculating the present value of future cost and organic diversion over a 10-year financing period, the net present value calculation provides insight into the feasibility of projects at the facility level, including the need for upfront grants and incentives as well as the significant opportunities and uncertainty surrounding revenue streams based on existing regulations.

Costs and revenues for the three scenarios are summarized in Table 19. The table includes the net present value for each scenario over a 10-year financing period

Table 19: Cumulative Estimated Costs and Revenues by Scenario Over 10-Year Accounting Period (Million Dollars)

Scenario 1: New AD	**Component**	**Capital Cost**	**O&M**	**Revenue**
New AD	47 Facilities	$1,700	$2,600	$7,000
New Compost	26 Facilities	$400	$700	$1,300
Total		**$2,100**	**$3,300**	**$8,300**
10-Year Net Present Value		**$2,700**		
Scenario 2: WWTP	**Component**	**Capital Cost**	**O&M**	**Revenue**
New Compost	35 Facilities	$600	$900	$1,800
Existing Wastewater Treatment	104 Facilities	$1,600	$2,800	$5,700
Total		**$2,200**	**$3,700**	**$7,500**
10-Year Net Present Value		**$1,400**		
Scenario 3: Compost	**Component**	**Capital Cost**	**O&M**	**Revenue**
New Compost	65 Facilities	$800	$800	$1,600
Total		**$800**	**$800**	**$1,600**
10-Year Net Present Value		**-$100**		

Table 19 suggests that under Scenario 1 and Scenario 2, organic waste diversion can generate a positive return. These scenarios may also contribute to regional air quality

benefits, through reduced transportation emissions. However, revenue for these strategies, and the resulting net present value, is highly dependent on the value of LCFS and RIN credits. As shown in Table 20, for representative wastewater treatment and new AD facilities, the net present value of diverting organic materials – at the facility level – is negative without revenue from LCFS credits and RINs.

Table 20: Net Present Value of Representative Wastewater Treatment and New AD Facility under Varying LCFS Credit Prices and RIN Credit Prices (Million Dollars)

		Wastewater Treatment Facility					New AD Facility				
		LCFS credit price					LCFS credit price				
		$0	$50	$100	$150	$200	$0	$50	$100	$150	$200
Cellulosic RIN credit prices	$0.00	-$26.2	-$21.0	-$15.7	-$10.5	-$5.3	-$44.8	-$26.4	-$8.0	$10.3	$28.7
	$0.50	-$17.2	-$12.0	-$6.7	-$1.5	$3.7	-$24.9	-$6.5	$11.9	$30.2	$48.6
	$1.00	-$8.2	-$2.9	$2.3	$7.5	$12.7	-$5.0	$13.4	$31.8	$50.2	$68.6
	$1.85	$7.1	$12.4	$17.6	$22.9	$28.0	$28.9	$47.3	$65.7	$84.1	$102.5
	$2.50	$18.9	$24.1	$29.3	$34.6	$39.8	$54.8	$73.2	$91.6	$110.0	$128.4
	$3.00	$27.9	$33.1	$38.4	$43.6	$48.8	$74.7	$93.1	$111.5	$129.9	$148.3
	$3.50	$36.9	$42.1	$47.4	$52.6	$57.8	$94.7	$113.0	$131.5	$149.8	$168.2
	$4.00	$45.9	$51.2	$56.4	$61.6	$66.9	$114.6	$133.0	$151.4	$169.8	$188.2

State resources could be deployed to supplement financing of these types of biomethane projects through mechanisms such as upfront grants, loan assistance programs, and tax incentives. For example, the illustrative wastewater treatment facility in Table 19 would break even over a 10-year financing period with an upfront grant of $24 million. In the absence of revenue from the sale of LCFS or RIN credits, a representative new AD facility would require an upfront grant of $41 million to breakeven over a 10-year financing period. State agencies are collaborating to find solutions to these financial challenges.

Altogether, this analysis suggests that the diversion of organic waste can result in environmental and economic value to California. There are important uncertainties associated with facility costs and potential revenues, however, which may limit project development without additional support. In the absence of revenue from LCFS credits and RINs, significant financial support may be required to achieve the targets identified in this SLCP Strategy and deliver other environmental benefits. Through careful research, investments, and structured market-based incentives, the State can work with industry to significantly and permanently reduce methane emissions and divert organic waste.

THE 2017 CLIMATE CHANGE SCOPING PLAN UPDATE

THE PROPOSED STRATEGY FOR ACHIEVING CALIFORNIA'S 2030 GREENHOUSE GAS TARGET

JANUARY 20, 2017

California Air Resources Board

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- Further the development and calibration of quantification tools (Comet-Farm, Comet-Planner, and others) and monitoring tools for agriculture to understand trends in practices (aerial imagery, mapping, and sampling).
- Continue to support research to understand emission factors from soils throughout California and to understand sequestration potential.
- Support research and development and pathways to market for dairy digesters, including pipeline injection and interconnection.
- Support research and development for non-digester dairy manure methane mitigation options including scrape, solids separation, converting to pasture-based systems, and other technologies to help meet CARB's proposed methane reduction goals on dairies.
- Facilitate agricultural biomass utilization.
- Increase the number of farms generating on-farm renewable energy (solar, wind, bioenergy, geothermal, etc.).
- Continue to implement and evaluate other potential actions to include in the Compliance Offset Program to generate GHG reductions in the agricultural sector.

E. Waste Management

The Waste Management sector covers all aspects of solid waste[173] and materials management including reduction/reuse; recycling, and remanufacturing of recovered material; composting and in-vessel (anaerobic and aerobic) digestion; biomass management (chip and grind, composting, biomass conversion); municipal solid waste transformation; and landfilling. This sector also includes market development programs, such as the State's recycled-content product procurement program and a range of grant and loan programs. Data from CalRecycle's report, *2014 Disposal Facility-Based Characterization of Solid waste in California*, shows that materials, such as organics, that decompose in landfills and generate methane comprise a significant portion of the waste stream. Methane is a potent SLCP with a global warming potential 25 times greater than that of carbon dioxide on a 100-year time horizon and more than 70 times greater than that of carbon dioxide on a 20-year time horizon.[174]

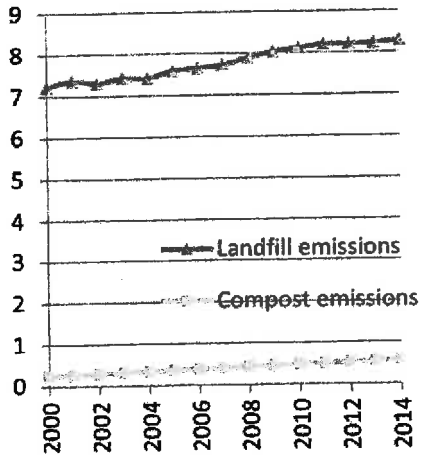
Within CARB's greenhouse gas inventory, emissions from the waste management sector consist of methane and nitrous oxide emissions from landfills and from commercial-scale composting, with methane being the primary contributor to the sector's emissions. The sector emitted 8.85 $MMTCO_2e$ in 2014, comprising approximately 2 percent of the State's GHG emissions.

[173] In general, the term *solid waste* refers to garbage, refuse, sludges, and other discarded solid materials resulting from residential activities, and industrial and commercial operations. This term generally does not include solids or dissolved material in domestic sewage or other significant pollutants in water such as silt, dissolved or suspended solids in industrial wastewater effluents, dissolved materials in irrigation return flows or other common water pollutants.

[174] Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: Working Group I: The Physical Science Basis*. 2.10.2 Direct Global Warming Potentials. Fourth Assessment Report. www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

Emissions from recycling and waste have grown by 19 percent since 2000 (Figure IV-3).[175] The majority of those emissions are attributed to landfills, despite the majority of landfills having gas collection systems in place.[176] Landfill emissions account for 94 percent of the emissions in this sector, while compost production facilities make up a small fraction of emissions.[177] The annual amount of solid waste deposited in California landfills grew from 37 million tons in 2000 to its peak of 46 million tons in 2005, followed by a declining trend until 2009 when landfilled solid waste stabilized to relatively constant levels. Landfill emissions are driven by the total waste-in-place, rather than year-to-year fluctuation in annual deposition of solid waste, as the rate and volume of gas produced during decomposition depends on the characteristics of the waste and a number of environmental factors. As a result, waste disposed in a given year contributes to emissions that year and in subsequent years.

Figure IV-3. Emissions from Landfill and Compost ($MMTCO_2e$)



In addition to direct emissions, the reduction, reuse, and recycling of waste materials decreases upstream GHG emissions associated with the extraction and processing of virgin materials and their use in production and transport of products. Although many of these upstream GHG emissions happen outside of California, California's waste policies can reduce both local and global GHG emissions and create jobs within the State. While landfills are an effective and relatively safe way to manage some waste, disposal-centric activities result in squandering valuable resources and generate landfill gases as well as other risks. A large fraction of the organics in the waste stream can be diverted from landfills to composting or digestion facilities to produce beneficial products. Moreover, food waste is the largest component of organics disposed in landfills; a portion of this is edible and should be captured at its source and, for example, provided to food banks to feed people in need. A State waste management sector "loading order" should focus more attention on reducing how much waste we generate and recovering and recycling whatever resources we can, using landfills as a last resort.

Landmark initiatives like the Integrated Waste Management Act of 1989 (AB 939) demonstrate California's efforts to build communities that consume less, recycle more, and take resource conservation to higher and higher levels. Statewide, Californians achieved a 49 percent recycling rate in 2014, and recycling programs support an estimated 75,000 to 115,000 green jobs in California. If California were to achieve a

[175] ARB. 2016. Documentation of California's 2000–2014 GHG Inventory – Index. Last modified March 30, 2016. www.arb.ca.gov/cc/inventory/doc/doc_index.php
[176] ARB. 2013. California Greenhouse Gas Inventory for 2000–2013 – by Category as Defined in the 2008 Scoping Draft Plan (based upon IPCC Fourth Assessment Report's Global Warming Potentials).
[177] ARB. 2016. *2016 Edition California GHG Emission Inventory*. California Greenhouse Gas Emission Inventory: 2000–2014. Version June 17, 2016.

75 percent statewide solid waste recycling rate by 2020—a goal set out by the Legislature in AB 341 (Chesboro, Chapter 476, Statutes of 2011) —by recycling and remanufacturing at in-state facilities, the State could potentially generate an additional 100,000 green jobs.[178] In addition to employment contributions, diversion of organic waste from landfills can generate positive environmental impacts. Compost from organic matter provides soil amendments to revitalize farmland, reduces irrigation and landscaping water demands, contributes to erosion control in fire-ravaged landscapes, and potentially increase long-term carbon storage in rangelands. Production and use of bioenergy in the form of biofuels and renewable natural gas has the potential to reduce dependency on fossil fuels for the transportation sector. For the energy sector, however, renewable natural gas faces safety, feasibility, and cost issues.

The State has a robust waste management system in place, with established programs that reduce air emissions through activities such as gas collection systems from landfills[179] and stringent recycling mandates. AB 939 required cities and counties to reduce the amount of waste going to landfills by 50 percent in 2000, and municipalities have nearly universally met this mandate. Californians dispose about 30 million tons of solid waste in landfills each year. To further reduce landfilled solid waste, the Legislature adopted AB 341 to achieve more significant waste reductions by setting a goal that 75 percent of solid waste generated be reduced, recycled, or composted by 2020, and by mandating commercial recycling. AB 1826 (Chesboro, Chapter 727, Statutes of 2014) added requirements regarding mandatory commercial organics recycling.

Although solid waste management has evolved over the last 27 years and diversion rates (which include more than recycling) have increased more than six-fold since 1989, if no further changes in policy are made, the State's growing population and economy will lead to higher amounts of overall disposal along with associated increases in GHG emissions. The pathway to reducing disposal and associated GHG emissions will require significant expansion of the composting, anaerobic digestion, and recycling manufacturing infrastructure in the State.

To help reduce GHG emissions by 40 percent below 1990 levels by 2030 and meet California's waste reduction goals, California's waste management sector strives to achieve in-state processing and management of waste generated in California. To carry out this vision, we must work with residents and producers to reduce the volume of waste generated overall and capitalize on technology and social changes that might enable waste reduction. Packaging comprises approximately 8 million tons of waste landfilled in California annually, or about one quarter of the State's total disposal stream. To reduce the climate change footprint of packaging, the State is promoting the inclusion of source reduction principles in packaging and product design; fostering recycling and recyclability as a front end design parameter for packaging and products

[178] CalRecycle. 2013. AB 341's 75 Percent Goal and Potential New Recycling Jobs in California by 2020. July. www.calrecycle.ca.gov/Publications/Documents/1463/20131463.pdf

[179] ARB approved a regulation to reduce methane from municipal solid waste landfills as a discrete early action measure under AB 32. The regulation became effective June 17, 2010. Additional information is available at: www.arb.ca.gov/regact/2009/landfills09/landfillfinalfro.pdf

that cannot be reduced; and encouraging recycling markets and market development for recycled-content products and packaging. CalRecycle is developing a packaging policy model containing components necessary for a mandatory comprehensive, statewide packaging program in California; this would need to be legislatively enacted to achieve a packaging reduction goal, such as 50 percent by 2030. CalRecycle is also continuing to work with stakeholder organizations and industry to explore complementary voluntary activities that have the potential to significantly decrease packaging disposal in California. In addition, large-scale shifts in materials management will be necessary, including steps to maximize recycling and diversion from landfills and build the necessary infrastructure to support a sustainable, low carbon waste management system within California. Working together, State and local agencies will identify ways to increase the use of waste diversion alternatives and expand potential markets, obtain funds and incentives for building the infrastructure and strengthening markets, and evaluate the need for additional research to achieve California's GHG reduction and waste management goals.

Recently adopted legislation outlines new opportunities and requirements to reduce GHG emissions from the waste sector, with a focus on reducing organic waste sent to landfills. SB 605 (Lara, Chapter 523, Statutes of 2014) requires that CARB develop a strategy to reduce SLCPs and SB 1383 requires the strategy to be implemented by January 1, 2018. CARB's Proposed SLCP Reduction Strategy includes organic waste diversion targets for 2020 and 2025 consistent with SB 1383 to reduce methane emissions from landfills. It requires CalRecycle, in consultation with CARB, to adopt regulations to achieve statewide disposal targets to reduce landfilling of organic waste by: (1) 50 percent from the 2014 level by 2020, and (2) 75 percent from the 2014 level by 2025. Under SB 1383, of the edible food destined for the organic waste stream, not less than 20 percent is to be recovered to feed people in need by 2025. The regulations are to take effect on or after January 1, 2022, and CalRecycle, in consultation with CARB, must analyze the progress that the waste management sector, State government, and local government have made in achieving the 2020 and 2025 goals by July 1, 2020. Incorporating SB 1383 requirements, CARB's Final SLCP Reduction Strategy is expected to be presented to the Board for approval in the first quarter of 2017. It is estimated that the combined effect of the food waste prevention and rescue programs and organics diversion from landfills will reduce 4 $MMTCO_2e$ of methane in 2030 (using a 20-year GWP), but one year of waste diversion in 2030 is expected to result in a reduction of 14 $MMTCO_2e$ of emissions over the lifetime of waste decomposition.

1. Looking to the Future

This section outlines the high-level objectives and goals to reduce GHGs in this sector.

Goals

- Take full ownership of the waste generated in California.
- View waste as a resource.

- Develop a sustainable, low carbon waste management system that processes collected waste within California and generates jobs.
- Maximize recycling and diversion from landfills.
- Reduce direct emissions from composting and digestion operations through improved technologies.
- Build the infrastructure needed to support a sustainable, low carbon waste management system within California.
- Increase organics markets which complement and support other sectors.[180]
- Capture edible food before it enters the waste stream and provide to people in need.
- Increase production of renewable transportation fuels from anaerobic digestion of waste.
- Recognize the co-benefits of compost application.

2. Cross-Sector Interactions

The waste management sector interacts with all of the other sectors of the State's economy. Reducing waste, including food waste, is key to reducing the State's overall carbon footprint. Additionally, replacing virgin materials with recycled materials reduces the energy and GHGs associated with the goods we produce and consume.

California leads the United States in agricultural production in terms of value and crop diversity. Soil carbon is the main source of energy for important soil microbes and is key for making nutrients available to plants. Waste-derived compost and other organic soil amendments support the State's Healthy Soils Initiative being implemented by CDFA. In addition, the use of compost to increase soil organic matter in the agricultural sector provides other benefits, including reduced GHG emissions, conserved water, reduced synthetic (petroleum-based) fertilizer and herbicide use, and sequestered carbon.

3. Efforts to Reduce Greenhouse Gases

The measures below include some required and new potential measures to help achieve the State's 2030 target and to support the high-level objectives for this sector. Some measures may be designed to directly address GHG reductions, while others may result in GHG reductions as a co-benefit. In addition, to move forward with the goals of the waste management sector and achieve the 2030 target, certain actions are recommended to help set the groundwork. These actions affect several broad areas and are necessary for reducing the challenges facing this sector, and they are listed below as supporting actions.

[180] Examples may include renewable energy (biogas to renewable transportation fuels or electricity); soils (application of organics to agricultural soils for building soil organic matter and conserving water; application of organics to mulch for erosion control; application of organics to rangelands for increased carbon sequestration); and forests (support use of forest residues for erosion control; stabilization of fire-ravaged lands).

Ongoing and Proposed Measures

- Continue implementation of the Landfill Methane Control Measure.
- Continue implementation of the Mandatory Commercial Recycling Regulation and the Mandatory Commercial Organics Recycling requirements.
- As required by SB 1383:
  - By 2018, CARB will adopt and implement the Short-Lived Climate Pollutant Reduction Strategy.
  - CalRecycle will develop regulations to require 50 percent organic waste diversion from landfills from 2014 levels by 2020 and 75 percent by 2025, including programs to achieve an edible food waste recovery goal of 20 percent below 2016 levels by 2025. The regulations shall take effect on or after January 1, 2022. By July 1, 2020, analyze the progress that the waste sector, State government, and local governments have made in achieving these goals.
  - CEC will develop recommendations for the development and use of renewable gas as part of the 2017 Integrated Energy Policy Report. Based on these recommendations, adopt policies and incentives to significantly increase sustainable production and use of renewable gas.

Potential Additional or Supporting Action

The actions below have the potential to reduce GHGs and complement the measures and policies identified in Chapter II. These are included to spur thinking and exploration of innovation that may help the State achieve its long-term climate goals.

- Establishing a sustainable State funding source (such as an increased landfill tip fee and new generator charge) for development of waste management infrastructure, programs, and incentives.
- Working with residents and producers to reduce the volume of waste generated overall and capitalize on technology and social changes that might enable waste reduction.
- Increasing organics diversion from landfills, building on established mandates (AB 341's 75 percent by 2020 solid waste diversion goal, AB 1594,[181] AB 1826,[182] AB 876[183]) and new short-lived climate pollutant targets for 2025 (SB 605, SB 1383) to be accomplished via prevention (including food rescue), recycling, composting/digestion, and biomass options.
- Addressing challenges and issues associated with significant expansion and construction of organics and recycling infrastructure in California that is needed to achieve recycling and diversion goals. Challenges and issues include permitting, grid/pipeline connection, funding, local siting, markets, and research.
- Developing programmatic Environmental Impact Reports (EIRs) and model permit and guidance documents to assist in environmental review and CEQA for new facilities.
- Providing incentives for expanded and new facilities to handle organics and recyclables to meet 2020 and 2030 goals.

[181] Assembly Bill 1594, *Waste Management* (Williams, Chapter 719, Statutes of 2014).
[182] Assembly Bill 1826, *Solid Waste: Organic Waste* (Chesbro, Chapter 727, Statutes of 2014).
[183] Assembly Bill 876, *Compostable Organics* (McCarty, Chapter 593, Statutes of 2015).

- Providing incentives to develop and expand food rescue programs to reduce the amount of edible food being sent to landfills.
- Further quantifying co-benefits of compost products and addressing regulatory barriers that do not provide for consideration of co-benefits.
- Supporting existing and new technologies and markets for excess woody biomass from urban areas, forests, and agriculture.
- Supporting the development of transportation fuel production at digestion facilities to generate renewable transportation fuels.
- Resolving issues of pipeline injection and grid connection to make renewable energy projects competitive.
- Supporting the use of available capacity at wastewater treatment plants that have digesters to process food waste.
- Working with local entities to provide a supportive framework to advance community-wide efforts that are consistent with, or exceed, statewide goals.
- Supporting research and development and pathways to market for dairy and co-digestion digesters, including pipeline injection and interconnection.
- Supporting research on digestate characterization and end products.

F. Water

Water is essential to all life, and is vital to our overall health and well-being. A reliable, clean, and abundant supply of water is also a critical component of California's economy and has particularly important connections to energy, food, and the environment. California's water system includes a complex infrastructure that has been developed to support the capture, use, conveyance, storage, conservation, and treatment of water and wastewater. This elaborate network of storage and delivery systems enables the State to prosper and support populations, amidst wide variability in annual precipitation rates and concentration of rain north of Sacramento, through storing and moving water when and where it is needed.

Local water agencies play an important role in delivering water to communities, farms, and businesses. Some purchase water from the major State and federal projects, treat the water as needed, and deliver it to their customers; others act as wholesale agencies that buy or import water and sell it to retail water suppliers. Some agencies operate their own local water supply systems, including reservoirs and canals that store and move water as needed. Many agencies rely on groundwater exclusively, and operate local wells and distribution systems. In recent decades, local agencies have developed more diversified sources of water supplies. Many agencies use a combination of imported surface water and local groundwater, and also produce or purchase recycled water for end uses such as landscape irrigation.[184]

[184] California Department of Water Resources. Regional Energy Intensity of Water Supplies. www.water.ca.gov/climatechange/RegionalEnergyIntensity.cfm

RURAL COUNTY REPRESENTATIVES
OF CALIFORNIA

December 15, 2016

Mr. Richard Corey, Executive Officer
California Air Resources Board
1001 I St.
Sacramento, CA 95812

RE: 2030 Target Scoping Plan Update Discussion Draft

Dear Mr. Corey:

The Rural County Representatives of California (RCRC) is an association of thirty-five California counties and the RCRC Board of Directors is comprised of elected supervisors from each of those member counties. RCRC member counties are tasked with a variety of decision-making responsibilities related to land use and development in rural California communities and are challenged with environmental stewardship, economic vitality, and social equity at the local level. We appreciate this opportunity to comment on the 2030 Target Scoping Plan Update Discussion Draft (Discussion Draft).

Natural and Working Lands

Much of California's forested lands are located within RCRC member counties including more than 70 percent of the lands managed by the USDA Forest Service (USFS). RCRC has long urged the State to address the escalating wildfire problem, particularly as temperatures rise and amplify the need for better forest management practices on both state and federal lands. Now, many rural forested counties are also grappling with the compounded risk of high severity wildfire due to the 102 million dead trees resulting from drought-induced tree mortality since 2010, a staggering 62 million of which have died since October 2015 when Governor Brown issued his Emergency Proclamation on Tree Mortality.

RCRC acknowledges the good work the State is doing on the Forest Carbon Plan to address the long term carbon storage and emission goals from California's natural and working lands. We also appreciate the robust discussion in the Discussion Draft on options for enhancing carbon sequestration and resilience through management and restoration of California's forested lands. Our State's forest lands are overstocked and therefore more susceptible to high severity wildfire, and remain in desperate need of a more substantial management and restoration program—particularly those managed by the USFS. With a full 20 percent of California's 100

1215 K Street, Suite 1650, Sacramento, CA 95814 | www.rcrcnet.org | 916.447.4806 | Fax: 916.448.3154

ALPINE AMADOR BUTTE CALAVERAS COLUSA DEL NORTE EL DORADO GLENN HUMBOLDT IMPERIAL INYO LAKE LASSEN MADERA MARIPOSA MENDOCINO MERCED MODOC MONO NAPA NEVADA PLACER PLUMAS SAN BENITO SAN LUIS OBISPO SHASTA SIERRA SISKIYOU SUTTER TEHAMA TRINITY TULARE TUOLUMNE YOLO YUBA

million acres of land managed by the USFS, and the budgeting practice of "fire borrowing" effectively halting the ability of the USFS to increase the pace and scale of its management and restoration activities, RCRC has long believed that the only path to healthy, more resilient forests in California is to implement programs that intensify management activities across jurisdictional borders throughout the State's forest lands.

To that end, RCRC would support a more aggressive management scenario as discussed on pages 63-65 of the Discussion Draft. Figure II-2 on page 65 clearly suggests that a higher level of management and restoration on the State's forested lands, including national forests, would ultimately yield a greater increase in carbon sequestration by improving the overall health of the forests and decreasing the risk of high severity wildfire. The Discussion Draft acknowledges that such a scenario would necessitate additional coordination with federal partners, something that we have always deemed essential for the health of California's forest lands. State, federal, and local governments are already coordinating to tackle the challenges presented by the current tree mortality disaster, and while we acknowledge that coordination on climate change policy with federal partners may present its own unique barriers, the need to manage the forests for greater health and resilience is a universal concern.

RCRC also supports the Discussion Draft's recommendations to diversify and increase biomass utilization pathways. We recognize the need to establish methods to dispose of excess biomass waste from forest management and restoration treatments and agricultural operations in ways that minimize greenhouse gas (GHG) and black carbon emissions. RCRC is a proponent of clean biomass utilization infrastructure, and appreciates ARB's commitment to innovating and developing biomass utilization pathways.

Finally, while RCRC appreciates that there is finally a set date to complete the GHG emissions inventory for natural and working lands, we are somewhat disappointed that it is still two years in the future. RCRC and its member counties have been asking for this inventory since Assembly Bill 32 became law in 2006, and we feel it is long overdue.

Waste Management

Reducing methane emissions from landfills has been the subject of GHG emissions reductions since ARB's Landfill Methane Control Measure, which was an early action measure from Assembly Bill 32. More recently, with the adoption of Assembly Bill 1826 (Chesbro, 2014), a commitment was made to divert commercial organics from landfills beginning in 2016, phasing implementation through 2019, with the goal of reaching 50 percent organic diversion from landfills in 2020. RCRC worked with the author's office, CalRecycle, and stakeholders to craft legislation that was feasible and reasonable, and supported the legislation. This legislation was enacted to

help the state meet the statewide goal of 75 percent diversion of solid waste from landfills and would also serve to decrease additional methane emissions from landfills.

RCRC fully supports the goals to reduce GHGs in the solid waste sector, as outlined on page 73 of the Discussion Draft. We are also pleased the Discussion Draft reinforced the goals in AB 1826 and SB 1383 for the 50 percent of commercial organic diversion from landfills by 2020 and 75% by 2025, and maintains the ultimate goal of 40 percent reduction in methane emissions from the solid waste sector by 2030, as indicated on page 74. RCRC strongly recommends that the emphasis to meet the goals be on providing incentives and addressing challenges and issues associated with construction of the necessary infrastructure needs in California as stated on page 75, and hope this emphasis is prioritized over additional mandatory programs.

Our member counties are committed to implementation of programs that will reduce GHG emissions to the extent they are economically feasible. Our rural counties face additional challenges with the organic processing facility infrastructure in that current technology and the economies of scale often make their construction infeasible.

Cap-and-Trade Program vs. Carbon Tax

RCRC does not have official policy on the continuation of the Cap-and-Trade Program versus the establishment of a carbon tax to achieve future GHG emissions reductions goals. However, we do encourage ARB to remain thoughtful about whether the Greenhouse Gas Reduction Fund has been allocated in an equitable, valuable, and cost-effective manner to this point. We recognize that ARB has little influence over how GGRF dollars are spent once those funds are collected. However, since the Cap-and-Trade Program funds were first made available in the 2014-15 Budget year, the State has been utilizing the majority of funds for projects that focus more on co-benefits than on actual GHG emissions reductions, and has been hesitant to fund the very program types that have been shown to be the most cost effective such as waste diversion and forest health projects. In fact, the Legislature did not allocate the 40 percent in discretionary GGRF funds at all in 2015-16, and subsequently allocated the vast majority of the GGRF funds in the 2016-17 State Budget to programs that were among the least cost effective yet most beneficial to urban and suburban areas.

Furthermore, we continue to believe that GGRF spending policies have disproportionately impacted rural communities in the wake of Senate Bill 535 (De León) due to what we believe is a flawed interpretation of the bill by CalEPA. SB 535 clearly states (bold and underline added for emphasis):

> "The California Environmental Protection Agency **shall** identify disadvantaged communities for investment opportunities related to this chapter. These communities shall be identified based on geographic, socioeconomic, public

> health, and environmental hazard criteria, and may include, but are not limited to, **either** of the following:
>
> (a) Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation.
>
> (b) Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment."

Instead of following the letter of the law, CalEPA has instead adopted a methodology that necessitates both categories and inequitably weighs factors that favor urban areas. The mandated use of the CalEnviroScreen tool to identify disadvantaged communities (DACs) entirely excludes half of all California counties from receiving any of those earmarked funds. Most of the twenty-nine excluded counties are RCRC members, many of which have among the lowest median household incomes (MHIs) and highest unemployment rates in the State. For example, both Lake County and Modoc County have countywide MHIs that are less than 60 percent of the statewide MHI, yet neither county has any communities that are considered disadvantaged under CalEPA's current methodology. Once the currently proposed CalEnviroScreen 3.0 update is approved, a full thirty counties will be excluded from CalEPA's DAC definition.

Without qualifying as DACs, it is extremely difficult for most rural communities to compete with urban and suburban communities for the remaining funds due to the higher cost of completing projects in remote, rural areas. The result has been rural citizens indirectly paying into the program, but receiving little to no actual benefit from the proceeds. While we appreciate discussion in the most recently adopted Cap-and-Trade Investment Plan of increasing rural participation in the Program, we have seen little progress and heard little discussion in the months that have followed. Regardless of how GGRF funds are collected, whether by Cap-and-Trade or a carbon tax, RCRC would recommend a review and modification of the way DACs are defined that is faithful to the letter of SB 535 so that disadvantaged rural communities can also benefit from the funds.

Finally, while RCRC appreciates the opportunity to comment on the Discussion Draft, a 14-day comment period during the holiday season is woefully inadequate to give meaningful input on such a complex draft. While we understand there will be a longer comment period for the January Proposed 2030 Target Scoping Plan, RCRC is concerned that there will not be adequate time to fully consider and incorporate concerns and recommendations submitted during this comment period into that January proposal.

RCRC appreciates your consideration of our comments. If you should have any questions or would like to discuss our comments further, please contact me at (916) 447-4806 or sheaton@rcrcnet.org.

Sincerely,

STACI HEATON
Regulatory Affairs Advocate

cc: Mary Nichols, Chair, California Air Resources Board
Edie Chang, Deputy Executive Officer, California Air Resources Board
Matthew Rodriquez, Secretary, California Environmental Protection Agency
Claire Jahns, Assistant Secretary, California Natural Resources Agency
RCRC Board of Directors

CalRecycle

DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

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P.O. BOX 4025 SACRAMENTO, CALIFORNIA 95812

Date: January 10, 2017

To: Elected Officials and Recycling Coordinators

From: Scott Smithline, Director

Subject: Reviews of Jurisdiction Mandatory Commercial Recycling and Commercial Organics Recycling Programs

This memo outlines how the Department of Resources Recycling and Recovery (CalRecycle) will exercise its existing statutory authority to formally review jurisdictions' mandatory commercial recycling and mandatory commercial organics recycling programs more frequently as needed. Specifically, CalRecycle will initiate a review and may refer a jurisdiction to enforcement **at any time** that CalRecycle receives information that a jurisdiction has not implemented, or is not making a good faith effort to implement, its required programs.

In establishing the requirements for jurisdictions to implement mandatory commercial recycling programs through AB 341 (Chesbro, Chapter 476, Statutes of 2011) and mandatory commercial organics recycling programs through AB 1826 (Chesbro, Chapter 727, Statutes of 2014)[1], the Legislature and Governor also set ambitious goals to increase recycling and reduce statewide solid waste disposal. In particular, AB 341 established a goal to source reduce, recycle or compost 75 percent of waste by 2020. Additionally, AB 1826 set a goal to reduce organics disposal by 50 percent by 2020.

AB 341 and AB 1826 require each jurisdiction to implement commercial recycling and commercial organics recycling programs designed to divert waste generated by regulated businesses. Jurisdictions' programs must, among other requirements, include "*education of, outreach to, and monitoring of, businesses,*" within their jurisdiction.

In spite of these goals and requirements, statewide disposal has increased every year since 2012. As a result, it is imperative that CalRecycle fully exercise its authority to ensure that jurisdictions' specified disposal reduction and recycling programs are in compliance with state law. In order to ensure that mandated statewide goals are met, AB 341 and AB 1826 specifically authorize CalRecycle to conduct reviews of jurisdictions' mandatory commercial recycling programs and mandatory commercial

[1] Per PRC 42649.82. Select rural jurisdictions that submitted a resolution to CalRecycle are exempt from the requirements of AB 1826. In 2020, if the statewide disposal of organic waste has not been reduced by 50 percent the exemptions will be repealed.

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organics recycling programs at any time[2]. This means that a jurisdiction may be formally reviewed at any time outside of and in addition to the regular review cycle.

Conducting reviews at any time allows CalRecycle and the jurisdiction to address program gaps early in the process so disposal reductions and mandated programmatic requirements can be achieved. CalRecycle will continue to provide jurisdictions with assistance, informal feedback and appropriate time to address gaps in programs. **However, if after extensive staff communication with the jurisdiction, the gaps are not addressed and a jurisdiction has not implemented, or is not making a good faith effort to implement, either program, CalRecycle will initiate a formal public review sooner rather than waiting until the end of the regular 4-year review cycle.**

Specifically, the following will occur:

- Staff will inform the jurisdiction that a formal Letter of Concern from CalRecycle to the jurisdiction is coming. Once the Letter is received, the jurisdiction will have 30 days to respond.
- After CalRecycle receives the jurisdiction's response to the Letter, or lack thereof, an agenda item for approval by CalRecycle's Director will be presented at a CalRecycle monthly public meeting. The agenda item will indicate one of three potential staff recommendations:
    - The jurisdiction failed to respond and staff recommends that the jurisdiction be referred to CalRecycle's enforcement unit for consideration of a compliance order; or
    - The jurisdiction's response to the Letter is inadequate and staff recommends that the jurisdiction be referred to the enforcement unit for consideration of a compliance order; or
    - The jurisdiction's response to the Letter is adequate and staff recommend that the program be assessed again in 12 months. However, if the same gaps still persist within the next year, an agenda item that refers the jurisdiction to the enforcement unit for consideration of a compliance order will be presented at CalRecycle's next monthly public meeting.

In summary, CalRecycle plans to execute its existing authority to review compliance at any time in a formal public setting. CalRecycle's Local Assistance staff will continue to provide jurisdictions with tools/examples to implement your required education, outreach, and monitoring activities. In addition, CalRecycle will be soliciting ideas on what more the Department can do to assist local jurisdictions at SB 1383 workshops scheduled for February 2017.

Please contact/email your CalRecycle Local Assistance liaison for any questions that you have about this process or your program implementation.

Sincerely,

Scott Smithline
Director

[2] Public Resources Codes 42649.3(h) and 42649.82(g)(2))

CalRecycle

Mandatory Commercial Recycling

Program News...

- The Mandatory Commercial Recycling final regulation (PDF, 1.2 MB) and rulemaking documents and information have been archived.
- Mandatory Commercial Recycling FAQs have been updated.
- CalRecycle's Commercial Climate Calculator
- Check out this two-page brochure that explains the new state mandatory commercial recycling requirements

Introduction and Background: California's Mandatory Commercial Recycling Law

According to 2008 Statewide Waste Characterization data, the commercial sector generates nearly three fourths of the solid waste in California. Furthermore, much of the commercial sector waste disposed in landfills is readily recyclable. Increasing the recovery of recyclable materials will directly reduce greenhouse gas emissions (GHG) emissions. In particular, recycled materials can reduce the GHG emissions from multiple phases of product production; including extraction of raw materials, preprocessing and manufacturing. A cobenefit of increased recycling is avoided methane emissions at landfills from the decomposition of organic materials. Use of composted organic materials also provides environmental benefits such as carbon storage in soils and reduced use of fertilizers, pesticides, and water.

Mandatory Commercial Recycling was one of the measures adopted in the Assembly Bill 32 Scoping Plan by the Air Resources Board (ARB) pursuant to the California Global Warming Solutions Act (Chapter 488, Statutes of 2006). The Mandatory Commercial Recycling Measure focuses on increased commercial waste diversion as a method to reduce GHG emissions. It is designed to achieve a reduction in GHG emissions of 5 million metric tons of carbon dioxide (CO2) equivalents. To achieve the measure's objective, an additional 2 to 3 million tons of materials annually will need to be recycled from the commercial sector by the year 2020 and beyond.

The regulation was adopted at CalRecycle's January 17, 2012 Monthly Public Meeting. This regulation reflects the statutory provisions of AB 341 (Chapter 476, Statutes of 2011 [Chesbro, AB 341]) and provides additional procedural clarifications. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012 the Governor signed Senate Bill 1018 which included an amendment that requires a business that generates **4 cubic yards or more** of commercial solid waste per week to arrange for recycling services.

Key Elements of the Law

Chapter 476, Statutes of 2011 (Chesbro, AB 341) sets forth the requirements of the statewide mandatory commercial recycling program. Below are basic descriptions:

Purpose

To reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Key Roles

- **Business Commercial Recycling Requirements.** A business (includes public entities) that generates four cubic yards or more of commercial solid waste per week or is a multifamily residential dwelling of five units or more shall arrange for recycling services. Businesses can take one or any combination of the following in order to reuse, recycle, compost or otherwise divert solid waste from disposal:
  - Self-haul.
  - Subscribe to a hauler(s).
  - Arrange for the pickup of recyclable materials.
  - Subscribe to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation.

  A property owner of a commercial business or multifamily residential dwelling may require tenants to source separate their recyclable materials to aid in compliance with this section.

  CalRecycle advises businesses to contact their local recycling coordinator to find out how to recycle in their community and if there are any specific requirements in their community. Communities may have mandatory commercial recycling ordinances with different thresholds or more specific business recycling requirements than the state law. The local recycling coordinator also may have related business opportunities and/or resources to share.

  Recycling benefits identified by CalRecycle include:

  - Opportunities for businesses or multifamily complexes to save money.
  - Creating jobs in California by providing materials for recycling manufacturing facilities.
  - Reducing greenhouse gas emissions.
  - Keeping valuable materials out of landfills.
  - Creating a healthy environment for the community and future generations by recovering natural resources.

- **Local Government Requirements**. Each jurisdiction shall implement a commercial solid waste recycling program that consists of education, outreach and monitoring of businesses, that is appropriate for that jurisdiction and is designed to divert commercial solid waste from businesses, whether or not the jurisdiction has met the requirements of PRC Section 41780.

  Each jurisdiction shall report the progress achieved in implementing its commercial recycling program, including education, outreach and monitoring, and if applicable, enforcement efforts and exemptions, by providing updates in its electronic annual report.

- **CalRecycle Review**. CalRecycle will review each jurisdiction's commercial recycling program that consists of education, outreach and monitoring. The following is an overview of the review process:
  - An evaluation as part of its formal AB 939 review, conducted every two or four years pursuant to PRC 41825, of each jurisdiction's programs, which includes an annual jurisdiction site visit, review of the Electronic Annual Report, and other information a jurisdiction may deem relevant.
  - If the jurisdiction is found to not have made a good-faith effort in implementing its programs, possibly including its mandatory commercial recycling program, CalRecycle can place the jurisdiction on a compliance order as part of the AB 939 review, and if it fails to adequately meet the conditions of the compliance order, then CalRecycle could consider a penalty hearing.

Implementation Dates: Mandatory Commercial Recycling Program

- **July 1, 2012, Local Jurisdiction Commercial Recycling Program Implementation**: On or after July, 1, 2012, each jurisdiction shall implement an education, outreach and monitoring program. Efforts may be phased in over time.
- **July 1, 2012, Commercial Recycling Requirements**: On and after July 1, 2012, a business that generates four cubic yards or more of commercial solid waste per week or a multifamily residential dwelling of five units or more shall recycle.

- **August, 2013, Jurisdiction Annual Reports**: Each jurisdiction shall report the progress achieved in implementing its commercial recycling program, including education, outreach and monitoring, and if applicable, enforcement efforts and exemptions, by providing updates in its electronic annual report required by Section 41821.
- **August, 2014, CalRecycle Review**: First review of jurisdictions' that are in a biennial review cycle on their implementation of the regulation, with reviews conducted every biennial or quadrennial review cycle thereafter depending on each jurisdiction's review status.

Related Projects

Title	Description
Recycling and Composting Emission Reduction Factors	ARB staff developed life-cycle based greenhouse gas emission reduction factors for recycling and composting. These factors were designed to provide local government officials, planners and other interested stakeholders with a reliable estimate for alternative waste management options. The methodology for their development can be found at: Recycling Emission Reduction Factors (PDF, 212 KB) and Composting Emission Reduction Factor (PDF, 152 KB).
Cost Study on Commercial Recycling	An important consideration in implementing commercial recycling is the cost of such programs. A Cost Study on Commercial Recycling documents the costs, savings, and net costs associated with the expansion of commercial recycling in California. For more information, contact Janelle Auyeung.
Commercial Climate Calculator	The Commercial Climate Calculator was developed as part of the Cost Study on Commercial Recycling. This calculator is designed for virtually any California business or multifamily complex to assess the financial, climate change, and waste reduction/environmental benefits of reducing and recycling their discarded materials. In doing so, businesses can reduce greenhouse gas emissions, and keep reusable and recyclable material out of landfills. Recycling may also provide opportunities for businesses to save money by reducing trash disposal costs
Implementation	In an effort to encourage expansion in commercial recycling programs and in partnership with CalRecycle, the Institute for Local Government has developed: - A Sample Commercial Recycling Ordinance - Examples of Local Commercial Recycling Ordinances - Creating Effective Commercial Recycling Education and Outreach Activities Webinar - Commercial Recycling Case Stories - Sample Commercial Recycling Flyer for Businesses and Apartments - Commercial Recycling Ordinance Webinar Series - A Snapshot of Local Agency Commercial Recycling Programs and Policies (PDF, 409 KB) - Article on Working with Local Businesses to Increase Recycling - Increasing Commercial Recycling: Tips for Local Agency Leaders (PDF, 65 KB) - A Discussion Forum on Commercial Recycling Ordinances and Programs (log in required) For more information, contact Kaoru Cruz, contract manager.
Recycling and Waste Management Infrastructure	When implementing any diversion program, a critical consideration is the impact on the existing solid waste management and recycling infrastructure. CalRecycle's Facility Information Toolbox (FacIT) Project is aimed at providing a centralized source of information on California waste management and recycling facilities. This tool will be helpful in determining if future material generation amounts or programs under consideration for

	implementation or expansion could be supported within the existing regional processing facility capacity limits and/or require the need for expansion of the infrastructure.

Related Links

- Frequently Asked Questions regarding CalRecycle's Mandatory Commercial Recycling regulation.
- Mandatory Commercial Organics Recycling. Requirement that California local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (Note that multifamily dwellings are not required to have a food waste diversion program).
- Other Resources for Business and Industry. CalRecycle interacts with California's business community on several fronts, with programs and services geared toward a variety of business groups. This page is continuously updated with resources to help businesses in California to make waste management and purchasing choices that minimize waste, maximize the purchase of recycled content products, increase the use of recycled content materials in manufacturing, and reduce environmental impacts of doing business.
- Small Business Toolkit. A "one-stop-shop" of guidance and resources to help small businesses reduce greenhouse gas emissions and save money. This is just one of the many tools provided at www.coolcalifornia.org to provide all Californians with the tools they need to voluntarily reduce global warming pollution.
- The California Green Business Program is a network of local governments working with the Department of Toxic Substances Control to help companies make the switch to green business practices. Businesses earn a seal of certification from their local city or county by meeting rigorous criteria established by the California Green Business Program.
- Examples of successful waste reduction techniques from CalRecycle's former Waste Reduction Award Program (WRAP), which California businesses may adopt as their own.

Last updated: August 30, 2016
Commercial Recycling, http://www.calrecycle.ca.gov/Recycle/Commercial/
Contact: LAMD@CalRecycle.ca.gov (916) 341-6199

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CalRecycle

Mandatory Commercial Organics Recycling (MORe)

Local Government Requirements and Resources

Local jurisdictions shall implement an organic waste recycling program on and after January 1, 2016, to divert organic waste generated by businesses. Each jurisdiction is unique and shall adopt a program that suits its specific local needs, depending on the type of organic materials that businesses generate and other factors. If a jurisdiction, on and after January 1, 2016, has in place an organic waste recycling program that meets the requirements of this section, it is not required to implement a new or expanded organic waste recycling program.

A jurisdiction's organic waste recycling program targeted to commercial organic waste generators may include, but is not limited to, one or more of the following key elements:

- Implementing a mandatory commercial organic waste recycling policy or ordinance.
- Enforcement provisions, including a structure for fines and penalties.
- Requiring a mandatory organic recycling program through a franchise contract or agreement.
- A requirement that organic waste go through a source-separated or mixed-processing system that diverts organic waste from disposal.
- Certification requirements for self-haulers.
- Charging and collecting fees from organic waste generators to recover the jurisdictions' cost complying with the law.
- Implementation or enforcement of organic waste recycling requirements that are more stringent or comprehensive than the minimum requirements outlined here.

Program News...

- Tool to identify and map waste recycling facilities (PDF, 1.8 MB)
- Education/outreach tools–updated to include resources for schools.
- New AB 876 Guidance--CalRecycle created guidance and a calculator to assist jurisdictions with longer term planning for organics infrastructure. The related calculator is now available for use.

The law also requires that each jurisdiction's program contain certain common elements. These requirements are applicable whether or not the jurisdiction meets its 50 percent per capita disposal target:

- Identifying the businesses that meet the applicable thresholds.
- Conducting annual education and outreach to inform businesses about the law and how to recycle organics in the jurisdiction. Jurisdictions can build their education, outreach and monitoring activities into the activities that they are doing to implement the Mandatory Commercial Recycling law. A jurisdiction could incorporate information about how to recycle organics into its existing education/outreach activities via its electronic tools, e.g., the jurisdiction's and the hauler's websites; written materials, e.g., a brochure; and direct contact with businesses, e.g., on waste assessments or presentations to business organizations.
- Implementing annual monitoring activities to identify those not recycling and to inform them of the law and how to recycle organics in the jurisdiction.

Rural Exemptions

Exemptions are allowed for jurisdictions that are located entirely within a rural county or counties. A rural county is one with a population of less than 70,000. A rural jurisdiction, e.g., county, city, or regional agency, can submit a resolution to CalRecycle exempting themselves and the businesses that operate in the region from the mandatory organic recycling requirements. Jurisdictions wishing to be exempt from implementation of the law

Jurisdictions can build on their monitoring activities for Mandatory Commercial Recycling. For example, the hauler may be responsible for identifying those not recycling organics and the jurisdiction may contact those not recycling organics via a letter, phone call, and/or site visit.

on January 1, 2016, submitted a related resolution to CalRecycle prior to June 30, 2015.

- List of Rural Jurisdictions with Exemptions
- Map of Rural Counties (PDF, 412 KB)

Note: The authority of a local governmental agency to adopt, implement, or enforce a local organic waste recycling requirement, or impose a condition upon a self-hauler, that is more stringent or comprehensive than the requirements of this law is not limited. Additionally, the following are not modified, limited, or abrogated in any manner by this law:

- A franchise granted or extended by a city, county, city and county, or other local governmental agency.
- A contract, license, or permit to collect solid waste previously granted or extended by a city, county, city or county, or other local governmental agency.
- The existing right of a business to sell or donate its recyclable organic waste materials.
- The authority of a local jurisdiction with respect to land use, zoning, or facility siting decisions by or within that local jurisdiction.

Exemptions. On a case-by-case basis, a jurisdiction may exempt individual businesses from the organic waste recycling requirements. Jurisdictions must include their rationale for allowing exemptions in the electronic annual report (EAR) they submit to CalRecycle. Certain exemptions (denoted below with an asterisk) will not be allowed on and after January 1, 2020, if CalRecycle determines that statewide disposal of organic waste has not been reduced to 50 percent of the level of disposal during the 2014 calendar year. Reasons for exemptions may include, but are not limited to, the following:

- Lack of sufficient space in multifamily complexes or businesses to provide additional organic material recycling bins.
- Existing business actions that result in the recycling of a significant portion of its organic waste.
- Generation by the business or group of less than one-half of a cubic yard of organic waste per week.
- *Generation by the business or group of less than one cubic yard of organic waste per week (if the local jurisdiction provides CalRecycle with information that explains the need for this higher exemption).
- Extraordinary and unforeseen events (limited-term exemptions).

Reporting. Beginning with the submission of the 2016 Electronic Annual Report (EAR), which is due August 2017, to CalRecycle (and covers calendar year 2016 recycling activities and programs), jurisdictions will be required to report on progress on the implementation of the organic waste recycling program. Each jurisdiction's annual report must include the following information in the 2016 EAR and subsequent EARs:

- Existing local organic waste recycling facilities and the respective capacities available for materials to be accepted.
- Existing solid waste and organic waste recycling facilities within the jurisdiction that may be suitable for potential expansion or co-location of organic waste processing or recycling facilities.
- Efforts underway to develop new private or public regional organic waste recycling facilities that may serve some or all of the organic waste recycling needs of the commercial waste generators within the jurisdiction, and the anticipated timeframe for completion of those facilities.
  - Closed or abandoned sites that might be available for new organic waste recycling facilities.
  - Other nondisposal opportunities and markets.
  - Appropriate zoning and permit requirements to site new organic waste recycling facilities.
  - Incentives available, if any, for developing new organic waste recycling facilities within the jurisdiction.

- Barriers to siting new or expanded composting, anaerobic digestion and chip and grind facilities and a plan to remedy those barriers that are within the control of the local jurisdiction.

- Report on the identification, education, outreach, and monitoring activities, including the number of businesses that are not recycling organics and what was done to inform them of the law. Providing tonnage on the amount of material that is recycled is optional.

- Rationale for allowing exemptions, and, if applicable, report on enforcement efforts.

Related Resources

Employee-based Generator ID Tool (Excel, 46 KB). The purpose of this tool is to help identify businesses that generate 8 cubic yards or 4 cubic yards of organics per week for different business types based on number of employees. For additional information, see the background and instructions document (PDF, 177 KB) for this tool. A disposal-based service level Generator ID Tool (Excel, 24 KB) has been developed by CalRecycle as well.

Example of Generator ID Methods (PDF, 432 KB). While CalRecycle considers that using employee and waste characterization data to be more inclusive, the Department also recognizes that a service level approach based upon disposal service level may be sufficient in some situations. Different type of service level approaches are listed in this document.

Program Needs Assessment Tool (PDF, 378 KB). This is a simple analytical tool to help jurisdictions assess business and programmatic needs. It incorporates the types of questions that CalRecycle staff will ask during annual site visits, annual report reviews, and the formal jurisdiction review period to assess the adequacy of program implementation and to make a recommendation regarding a jurisdiction's compliance with pertinent requirements.

Letter to Covered Businesses from CalRecycle (PDF, 202 KB). This letter from CalRecycle to covered businesses describes the new mandatory commercial organic recycling requirements and how to get more information.

Education/Outreach Tools. CalRecycle has developed a number of customizable materials, including PSAs, a promotional kit, and a brochure that local jurisdictions can use as education and outreach tools. Additionally, special thanks are due to Alameda, Los Angeles, Sacramento, and San Francisco counties for sharing Mandatory Commercial Organics Recycling resources for other jurisdictions to use.

Specific to schools, CalRecycle has developed a:

- Flyer (PDF, 282 KB) to educate the school community about AB 341 and AB 1826; and
- Brochure--FAQs for Schools and Other Small-Scale Food Composters

Additional information regarding school recycling requirements is provided on CalRecycle's School Waste Reduction pages.

Draft Electronic Annual Report Questions to Address AB 1826 (PDF, 632 KB). This file details the specific questions that will need to be addressed in the Electronic Annual Report for each jurisdiction, starting with the 2016 report (due in August 2017).

AB 876 Guidance and Calculator--CalRecycle created guidance and a calculator to assist jurisdictions with compostable organics diversion planning. AB 876 requires a county or regional agency to provide an estimate of organics generated and diversion capacity needed over a 15-year period. Jurisdictions and counties will report to CalRecycle on their progress in implementing an organic waste recycling program, estimates of organic waste disposed, needed capacity to divert organics, and planning to develop this infrastructure through the Electronic Annual Report (EAR) beginning with the 2016 report (due in August 2017).

Tool to Identify and Map Waste Recycling Facilities (PDF, 1.8 MB). Starting with the 2016 Annual Report (due August 2017), each jurisdiction needs to identify existing organic waste recycling facilities within a reasonable vicinity and the capacities available for materials to be accepted at each facility. To assist in this process, CalRecycle has developed a GIS-based capacity tool that can be used in conjunction with the existing FacIT database and the Where to Recycle mapping resource. Please refer to this tool to identify organic waste recycling facilities within a reasonable vicinity and get an idea of related capacity ranges. Future updates to this tool will allow users to map concentric circles

around the jurisdiction to determine organic waste recycling facilities within a given radius and, through the overlay of permit information, have the ability to determine capacity information.

Potential Funding Support for Food Banks. Expanding California Food Banks' food rescue operations would be beneficial to California for a number of reasons:

- California food banks will play a key role in helping California to achieve its 75 percent goal and to reduce greenhouse gas emissions while addressing food insecurity.
  - There are significant greenhouse gas emission reductions realized when food is rescued instead of disposed.
  - In California, 1 in 4 children face hunger every day.
- Expanding food banks can create jobs and support businesses because rescuing food can reduce a business' solid waste disposal costs.

For information about California food banks visit: http://www.cafoodbanks.org.

Green Material Used as Alternative Daily Cover (ADC)--AB 1594. As of January 1, 2020, the use of green material as alternative daily cover (ADC) will no longer constitute diversion through recycling and will instead be considered disposal in terms of measuring a jurisdiction's annual 50 percent per capita disposal rate. This page outlines key elements of the law, FAQs, and additional references and resources.

Updated Countywide Integrated Waste Management Plan (CIWMP) Enforcement Policy Part II: This section includes a document titled "Failure to Implement a SRRE and HHWE, Including Failure to Implement MCR, MORe, and AB 1594."

The Institute for Local Government's (ILG) Recycling Resource Center offers useful resources and tools related to the funding and financing as well as the planning and siting of local recycling infrastructure. This resource center also features a section devoted to commercial recycling.

Mandatory Commercial Organics Recycling Home

Last updated: December 1, 2016
Commercial Recycling, http://www.calrecycle.ca.gov/Recycle/Commercial/
Contact: LAMD@CalRecycle.ca.gov (916) 341-6199

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Assembly Bill No. 876

CHAPTER 593

An act to add Section 41821.4 to the Public Resources Code, relating to solid waste.

[Approved by Governor October 8, 2015. Filed with Secretary of State October 8, 2015.]

LEGISLATIVE COUNSEL'S DIGEST

AB 876, McCarty. Compostable organics.

The California Integrated Waste Management Act of 1989, which is administered by the Department of Resources Recycling and Recovery, establishes an integrated waste management program. Existing law requires each city, county, and regional agency, if any, to develop a source reduction and recycling element of an integrated waste management plan. On and after January 1, 2000, the element is required to provide for the diversion of 50% of the solid waste subject to the element, except as specified, through source reduction, recycling, and composting activities. Existing law requires each city, county, and regional agency to submit an annual report to the department summarizing its progress in reducing solid waste.

This bill would require, commencing August 1, 2017, a county or regional agency to include in its annual report to the department an estimate of the amount of organic waste in cubic yards that will be generated in the county or region over a 15-year period, an estimate of the additional organic waste recycling facility capacity in cubic yards that will be needed to process that amount of waste, and areas identified by the county or regional agency as locations for new or expanded organic waste recycling facilities capable of safely meeting that additional need, thereby imposing a state-mandated local program. The bill would also make legislative findings and declarations.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) With the enactment of the California Integrated Waste Management Act of 1989 (Division 30 (commencing with Section 40000) of the Public Resources Code), the Legislature required the Department of Resources

Recycling and Recovery and local agencies to promote recycling, anaerobic digestion, and composting over land disposal and transformation.

(b) Since the enactment of the act, local governments and private industries have worked jointly to create an extensive material collection infrastructure and have implemented effective programs to achieve a statewide diversion rate of greater than 50 percent.

(c) Although California now leads the nation in waste reduction and recycling, the state continues to dispose of more than 15 million tons of compostable organics each year in solid waste landfills.

(d) To reduce the landfilling of organics, increase composting and anaerobic digestion, and meet the state's organic diversion goals, cities and counties must plan for organics processing facilities that can process organics diverted from landfills and organics waste generators.

SEC. 2. Section 41821.4 is added to the Public Resources Code, to read:

41821.4. (a) Commencing August 1, 2017, a county or regional agency shall include, in the annual report required pursuant to Section 41821, the following information:

(1) An estimate of the amount of organic waste in cubic yards that will be generated in the county or region over a 15-year period.

(2) An estimate of the additional organic waste recycling facility capacity in cubic yards that will be needed to process the amount of organic waste identified pursuant to paragraph (1).

(3) Areas identified by the county or regional agency as locations for new or expanded organic waste recycling facilities capable of safely meeting the additional organic waste recycling facility capacity need identified pursuant to paragraph (2).

(b) To provide the information pursuant to subdivision (a), the county or regional agency may use existing data regarding its diversion programs and is not required to perform additional waste characterization studies.

(c) For purposes of this section, "organic waste recycling facility" has the same meaning as defined in paragraph (2) of subdivision (d) of Section 42649.82.

SEC. 3. If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

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CalRecycle

Local Government Central

AB 876 (Organics Management Infrastructure Planning) Guidance

With the enactment of the California Integrated Waste Management Act of 1989 (Division 30 [commencing with Section 40000] of the Public Resources Code), the Legislature required the Department of Resources Recycling and Recovery and local agencies to promote recycling and composting over land disposal and transformation. Since the enactment of the Act, local governments and private industries have worked jointly to create an extensive material collection infrastructure and have implemented effective programs to achieve a statewide diversion rate of greater than 50 percent. However, although California now leads the nation in waste reduction and recycling, the state continues to dispose of more than 12 million tons of compostable organics each year. This constitutes approximately 40 percent of the 31 million tons disposed of during 2014 in solid waste landfills. To reduce the landfilling of organics, increase composting and anaerobic digestion, and meet the state's organic diversion goals, cities and counties now must plan for organics processing facilities that can process organics diverted from landfills and organics waste generators. In particular, AB 1826 (Chesbro, Chapter 727, Statutes of 2014), requires each city and county to assess the infrastructure necessary for implementing their commercial organics recycling programs.

Additionally, in October 2015 the Governor signed AB 876 (McCarty, Chapter 593, Statutes of 2015) to address longer-term planning for organics infrastructure by requiring counties and regional agencies to report the following information in the Electronic Annual Report (EAR) commencing on August 1, 2017:

(1) An estimate of the amount of organic waste in cubic yards that will be disposed by the county or region over a 15-year period. (Note: CalRecycle received clarification from the author that it is the amount of organic waste to be disposed that should be estimated. Additionally, it is not necessary to conduct a waste characterization study since the focus is on estimating how much material will be disposed in the future. See tools below for estimating the amount of organics disposal.)

(2) An estimate of the additional organic waste recycling facility capacity in cubic yards that will be needed to process the amount of organic waste identified in (1) above.

(3) Areas identified by the county or RA as locations for new or expanded organic waste recycling facilities capable of safely meeting the additional organic waste recycling facility capacity need identified in (2) above.

I. Collaboration:

Counties and regional agencies are encouraged to communicate and collaborate with the cities on developing this information for the Electronic Annual Report (EAR). Since cities are planning for and implementing the mandatory commercial organics recycling programs, they may already have information on potential areas for new or expanded facilities.

The following is guidance on how to report if a regional agency does not consist of all of the jurisdictions in a county:

- Since the county and RA(s) all report in the EAR, CalRecycle recommends that the county coordinate with the RA(s) and discuss how they want to compile their data. For example, it would be acceptable if the data is for the county as a whole and not broken out by RA. In the EAR, regional agencies and the county could report the same data and explain that the data is for the county as a whole. Each reporting entity would need to include this information, as the data fields will be required entries in the EAR.

II. Tools:

1. Estimating the Amount of Organic Waste Disposed and Additional Facility Capacity Needed Over a 15-Year Period

CalRecycle has developed a tool to help counties and regional agencies estimate projected tonnage information. This tool provides default values using data from CalRecycle's FacIT database, the 2014 statewide waste characterization study, and population projections from the California Department of Finance. While the tool provides a rough estimate of the amount of organic waste disposed over a 15-year period and additional facility capacity needed to process that material, it also allows the user the flexibility to enter its own information for a more refined estimate. AB 876 (Organics Management Infrastructure Planning) Calculator

2. Identifying Areas for New or Expanded Facilities

Addressing the facilities that may need to be expanded or sited to process the organic materials in 15 years will require each county or regional agency to assess its unique situation, including existing facilities and their ability to process the material, and any new or expanded facilities that can be identified.

CalRecycle is intentionally not including a definition of "areas" to allow counties and regional agencies flexibility in identifying areas for new or expanded facilities based on their unique situations. For example, CalRecycle understands there could be some challenges in identifying "areas" too specifically without conducting a public process or forum, prior to reporting such areas in the EAR. Since this information is to be updated in the EAR on an annual basis, in future years CalRecycle will work with counties and regional agencies to further refine the types of areas they should identify.

The Department will consider the following types of questions in evaluating responses regarding how you are identifying or have identified locations for new or expanded organic waste recycling facilities capable of safely meeting the additional organic waste recycling facility capacity need identified over a 15-year period:

a. Have you met as a county, regional agency, or even a broader geographic region to discuss areas or locations where new organics diversion facilities can be placed or existing facilities can be expanded?

b. Have you considered how different types of organics, e.g., food waste and yard waste, will affect your capacities and types of facilities you will need?

c. Have you already identified areas or sites through some type of public process? If so, please provide that information. If not, how and when will you go about doing this?

d. Have you assessed existing MRFs and diversion facilities that could be used for co-location, and assessed closed or abandoned sites that could be used again?

e. Have you identified existing diversion facilities in your area that are permitted to accept organics, and have you assessed the amount of additional material they can process?

f. Are there any existing contracts in place between the jurisdictions or facilities that could limit the amount of new organic material that can be taken to existing facilities?

3. Additional Resources

In 2014 and 2015, the Institute for Local Government (ILG) worked closely with CalRecycle under contract to develop a variety of guidance documents and webinars to help elected officials and stakeholders plan and finance new recycling facilities. The following documents and much more can be found online at ILG's online Recycling Resource Center:

- Recycling Roadmap: How to Plan, Site and Finance Your Recycling Facility
- Model Goals, Policies, Zoning, and Development Standards for Composting and Remanufacturing Facilities
- Understanding Recycling Facilities and Required Permits

III. Reporting in the Electronic Annual Report (EAR)

Guidance for counties and regional agencies will be addressed in the EAR webinar training that will be conducted in Spring 2017. Additional features include:

- Starting with the August 1, 2017, EAR, there will be specific fields for reporting on AB 876. The fields will be designed to provide flexibility in communicating the data. You will also be able to upload documents in the EAR, and in the EAR text field you can refer to the document that was uploaded.
- As noted above, each county or regional agency is encouraged to interact with the cities. However, there is no requirement for approval by the cities. This process is not intended to be an overly burdensome planning process.
  - After the first year of AB 1826 infrastructure reporting, CalRecycle can provide each county or regional agency with infrastructure information as reported from the applicable cities.
- Counties and regional agencies will update, if applicable, this data each year.

Mandatory Commercial Organics Recycling (MORe) and Mandatory Commercial Recycling (MCR), Electronic Annual Report Questions (PDF, 501 KB) Commencing August 1, 2017 (Revised February 2016)

For additional information, please contact your Local Assistance and Market Development liaison at (916) 341-6199.

Last updated: August 26, 2016
Local Government Central http://www.calrecycle.ca.gov/LGCentral/
Local Assistance & Market Development: LAMD@calrecycle.ca.gov (916) 341-6199

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ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
DEL NORTE, EL DORADO, GLENN, IMPERIAL, INYO, LASSEN

Rural Counties Environmental Services JOINT POWERS AUTHORITY

MADERA, MARIPOSA, MODOC, MONO, NEVADA, PLUMAS,
SHASTA, SIERRA, SISKIYOU, TEHAMA, TRINITY, TUOLUMNE

CHAIR – MICHAEL KOBSEFF, SISKIYOU COUNTY
VICE CHAIR – MICHAEL RANALLI, EL DORADO COUNTY
EXECUTIVE DIRECTOR – GREG NORTON

TECHNICAL ADVISORY GROUP (TAG)
TAG CHAIR – JIM MCHARGUE, AMADOR COUNTY
TAG VICE CHAIR – RACHEL ROSS, TEHAMA COUNTY
PROGRAM MANAGER – MARY PITTO

MEMORANDUM

To: **ESJPA Board of Directors**

From: **Mary Pitto**
Program Manager

Date: **March 8, 2017**

RE: **SB 1383 Short-Lived Climate Pollutants- Methane Emissions**

Senate Bill 1383 (Lara) was enacted last year to be the vehicle to address methane emission reduction goals of the Short-Lived Climate Pollutants (SLCPs) to 2030. SB 1383 requires the California Air Resources Board (ARB), no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of SLCPs to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030.

SB 1383 also established specified targets for reducing organic waste in landfills consistent with Assembly Bill 1826 (Chesbro, 2014), the mandatory commercial organics diversion bill requiring 50 percent diversion of organics from landfills by 2020, and 75 percent by 2025. ARB's Proposed Short-Lived Climate Pollutant (SLCP) Reduction Strategy (Draft Strategy) was proposing to reach 75 percent organics diversion from landfills by 2020, and 90 percent organics diversion by 2025. RCRC worked with a small coalition from the public and private solid waste industry and devoted much time to educate legislators that any new regulatory action should not be considered until after 2020, following evaluation of the progress of implementation of AB 1826, and a more thorough and accurate understanding of landfill emissions is known. SB 1383 was ultimately adopted consistent with the goals of AB 1826, and ARB has revised the Draft Strategy to reflect the goals of SB 1383.

SB 1383 also requires CalRecycle, in consultation with ARB, to adopt regulations to meet the specified organic waste reduction goals, however not to take effect until on, or after, January 1, 2022. There are aspects of the bill that provide some flexibility including numeric organic waste disposal limits shall not be established for individual landfills, and the regulations may include different levels of requirements for local jurisdictions, and phased timelines based upon their progress in meeting the organic waste reduction goals for 2020 and 2025.

CalRecycle has already initiated the informal process of development of the regulations and presented SB 1383 Regulatory Concepts (attached) in February. The concepts and strategies include organic waste collection services, infrastructure capacity and planning, edible food recovery, reporting, compliance and enforcement, and market development. RCRC recently hosted a Solid Waste Industry Group (SWIG) meeting where it was agreed that success of any organic diversion program was contingent upon having the necessary infrastructure, which is dependent upon infrastructure funding and permitting alignment with state and local agencies.

CalRecycle expects to start the formal rulemaking process in late 2017 or early 2018, with adoption in late 2018 or early 2019. While the regulations will not take effect until 2022, adopting them early will provide regulated entities time to plan and implement any necessary budgetary, contractual, and/or other program changes. RCRC will be actively participating in the rulemaking process.

Attachment

- SB 1383 Regulatory Concepts - CalRecycle February 2017

SB 1383 Regulatory Concepts
Department of Resources Recycling and Recovery (CalRecycle)
February 2017

CalRecycle is providing this concept paper to initiate a conversation with stakeholders regarding the types of programs and actions that can achieve and maintain the organic waste disposal reductions required by SB 1383 (Lara, Chapter 395, Statutes of 2016).

SB 1383 established the most ambitious disposal reduction mandates since the passage of AB 939 (Sher, Chapter 1095, Statutes of 1989). SB 1383 requires CalRecycle, in consultation with the California Air Resources Board (ARB) to develop regulations to reduce the disposal of organic waste 50 percent below 2014 levels by 2020 and 75 percent by 2025. The legislation also states that the regulations include requirements designed to recover 20 percent of edible food for human consumption that is currently landfilled by 2025. These mandates support the broader Short-Lived Climate Pollutant (SLCP) Reduction Strategy developed by the California Air Resources Board because the deterioration of organic matter in a landfill releases methane and other greenhouse gases.

The mandates set forth in SB 1383 are based on the methane reductions laid out in ARB's SLCP Reduction Strategy. However, reducing the disposal of organic waste can lead to other environmental co-benefits. These benefits include, increasing the availability of compost to build soil health and conserve water, displacing the use of fossil fuels, reducing food insecurity, and creating green jobs. CalRecycle will seek to maximize these additional benefits and to identify and avoid additional negative impacts to communities and the environment while achieving the mandates in SB 1383.

The concepts presented here are one piece of the larger picture of the changes and collaboration being discussed to help achieve SB 1383's mandates. Achieving the mandates will require additional actions outside of this regulatory process from all entities involved. For example, planning for new recycling facilities, including careful collaboration with impacted communities must commence. To assist those efforts, CalRecycle will continue to work with other state agencies on cross-media regulatory issues. Developing the infrastructure will also require additional public and private financing and market development. The Administration will continue to seek Greenhouse Gas Reduction Funds to support recycling infrastructure development and will work with others to find additional resources to help achieve the mandates.

The legislatively established waste reduction mandates require coordinated efforts from the state, local jurisdictions, industry, and generators. CalRecycle will continue to work with and listen to all stakeholders, gather new ideas and refine existing proposals, and move forward in the development of policies in a transparent and inclusive fashion.

Definitions and Baselines

SB 1383 codifies organics recycling requirements in Chapter 13.1 of Part 3 of Division 30 of the Public Resources Code and Chapter 4.2 of Part 2 of Division 26 of the Health and Safety Code. However, SB 1383 left the definition of many key terms to the departments implementing the legislation. To provide a common understanding of the scope of SB 1383, the Department of Resources Recycling and Recovery (CalRecycle) will need to propose in formal rulemaking several key definitions for terms that are critical to meeting the organic waste reduction targets. To begin the process to develop the necessary definitions, CalRecycle is seeking feedback on the draft definitions included below and is seeking input from stakeholders to identify additional terms that may need to be defined.

Draft Definitions

A. **Organic Waste:** "Organic Waste" means solid waste containing material originated from living organisms and their metabolic waste products, including but not limited to food, green waste, landscape and pruning waste, applicable textiles and carpets, wood, lumber, fiber, biosolids, digestate and sludges. ***Please see attachment I for additional detail.***

B. **Edible Food:** "Edible Food" means food intended for human consumption. In order for this edible food to be recovered, it must meet applicable public health and food safety standards.

C. **Generator:** "Generator" means a public or private entity that is responsible for the initial creation of solid waste, organics and recyclable material.

Organic Waste 2014 Baseline: 50 Percent and 75 Percent

SB 1383 mandates a 50 percent reduction from the 2014 level by 2020 and 75 percent by 2025. According to CalRecycle's 2014 Waste Characterization Study, approximately 20 million tons of organics (as defined above) were disposed in 2014. For the SB 1383 mandates, this translates to a requirement to limit disposal of organics to roughly 10 million tons by January 1, 2020. A 75 percent reduction from the 2014 level requires California to limit disposal to roughly 5 million tons of organics annually on and after 2025. Please ***see Attachment II for additional detail.***

Edible Food Recovery Baseline

SB 1383 requires CalRecycle's regulations to include requirements designed to improve the recovery of edible food that is currently landfilled by 20 percent by 2025. CalRecycle is seeking feedback on approaches to determine a baseline for measuring the amount of edible food currently disposed.

SB 1383 Concepts and Strategies

SB 1383 requires CalRecycle, in consultation with ARB, to develop regulations to ensure that the state achieves the 2020 and 2025 disposal reduction mandates. To achieve the mandates, CalRecycle is seeking feedback on concepts identified to: 1) provide organics recycling services to every generator of organics in the state; 2) keep organic materials clean and recoverable; 3) foster sufficient capacity planning and strengthening of organics recycling markets; 4) ensure edible food is recovered for human consumption; 5) ensure regulatory programs and goals are measurable and enforceable.

I. Organic Waste Collection Services

To decrease landfilling to the level required by 2025, generators must have access to organics collection opportunities wherever they go. How can the state ensure that all generators have access to organics recycling? How could the following concepts be addressed in regulations?

A. Organic Waste Collection

Concepts Identified

1. Local organic waste collection services provided to all residential and commercial generators
2. Organic waste recycling bins located where public refuse bins are located (e.g. park trashcans, cafeterias etc.)

B. Ensure Collected Organics are Recovered

Concepts Identified

1. Local waste services include source-separated organics recycling
2. Local waste services include non-putrescible organics (i.e. paper and cardboard, cartons) in curbside recycling programs[1]
3. Local waste services include mixed waste collection that specifically recycles organic waste
4. Identify appropriate end-uses for processed organics
5. Recovery rates for organics processing and recycling facilities
6. Biweekly hauling of refuse and curbside recycling bins where weekly source-separated organics recycling services are provided
7. Reinforce CalGreen Building Standards related to organic waste

What additional or alternative concepts could help ensure that the maximum amount of organics collected and recovered?

[1] Certain organics, such as paper, cardboard and other organics, are typically non-putrescible and collected in existing curbside recycling services (sometimes referred to as "blue-bin services").

C. Generator Participation

Concepts Identified

1. Organics collection services provided are mandatory
2. Allow generators not participating in a jurisdiction's collection services to recycle material on-site, or backhaul/self-haul material to a facility that recycles organic waste
3. Specify materials that should be placed in the organics collection bin

What additional or alternative concepts can increase or improve generator participation in organics recycling collection services?

D. Managing Contamination

Concepts Identified

1. Local public education and outreach efforts
2. Compliance monitoring by jurisdictions and haulers
3. Inspection, monitoring, and reporting of contamination by haulers and facilities
4. Local programs to address "other" organics (composite paper, coated paper, textiles etc.)

What additional or alternative concepts can manage or reduce contamination?

II. Infrastructure Capacity and Planning

CalRecycle recognizes the need for organics recycling capacity development. This requires that proper capacity planning is initiated and that market drivers exist for recycled organic products. There are many ongoing activities to address facility development and market issues. Within the context of these regulations, how can the state ensure that recycling options are available for all collected organics?

How could the following concepts be addressed in regulations?

A. Infrastructure and Capacity Planning

Concepts Identified

1. Expand AB 876 (McCarty) organics recycling capacity requirements to include plans by jurisdictions to address insufficient capacity
2. Planning for edible food recovery capacity and programs
3. Consultation with environmental justice communities for facility permitting
4. Account for organics disposal reductions in landfill financial assurance planning

What additional or alternative concepts can increase or improve infrastructure capacity and financial planning?

III. Edible Food Recovery

To achieve the statewide edible food recovery goal, CalRecycle sought to identify potential points in the food distribution chain where edible food currently enters the disposal stream, how that disposal can be avoided, and how the recovery of edible food can be quantified.

In addition, CalRecycle is seeking stakeholder feedback on how to define and develop a baseline measurement for the disposal and recovery of "edible food."

How could the following concepts be addressed in regulations?

A. Generator Access to Edible Food Recovery Services

Concepts Identified

1. Jurisdiction food recovery programs
2. Edible food pick-up services for relevant generators
3. Edible food recovery services as part of event permits (e.g., farmers' markets, festivals)

Are there other ideas for providing generator access to edible food recovery services?

B. Generator Participation in Edible Food Recovery Programs

Concepts Identified

1. Food donation plans for public facilities
2. Food donation plans for large edible food generators
3. Formal arrangements between large edible food generators and edible food recovery organizations
4. Local public education and outreach efforts
5. Compliance monitoring by jurisdictions

Are there other ideas for ensuring generator participation in edible food recovery programs?

C. Tracking and Reporting of Edible Food Recovery

1. Generator reporting on edible food donation
2. Edible food recovery organization reporting on edible food donations received

Are there other ideas for tracking, measuring and reporting data on edible food recovery?

IV. Reporting

The concepts below identify reporting items that could assist with: 1) monitoring the effectiveness of any regulatory requirements; 2) measuring progress toward achieving the 50 and 75 percent mandates; 3) meeting the short-lived climate pollutant emissions reductions. CalRecycle is seeking stakeholder feedback on the most efficient reporting structure, including the sources of data and the types of reporting mechanisms used.

How could the following be addressed in regulations?

A. Monitoring Effectiveness of Programs

Concepts Identified

1. Reporting:
    a. Organics recycling program implementation
    b. Edible food recovery program implementation
    c. Compliance and enforcement actions
    d. Number of generators served
    e. Contamination levels and efforts to reduce contamination
    f. Local rate structures
2. Licensing/registering/permitting of haulers and self-haulers

Are there other data items that would assist in monitoring program implementation?

B. Tracking Organic Waste Disposal and Methane Reduction Mandate

Concepts Identified

1. Facility organic recovery rates
2. Jurisdiction organic recovery rates
3. Origin of collected organics
4. Type of organics collected
5. Collection method
6. Facility rejection of contaminated organics
7. Destination and end-use of collected/processed organics

Are there other data items that could assist in quantifying methane emissions from the waste sector to assist in measuring state progress towards meeting 1383/SLCP disposal reduction and methane emissions reduction goals?

V. Compliance and Enforcement

CalRecycle recognizes the role that the state and local jurisdictions play in the implementation and enforcement of state and local mandates. CalRecycle has identified enforcement concepts that would be consistent with the statutory requirements of SB 1383. Which entities should have a role in compliance and enforcement?

A. Entities With a Potential Role in Monitoring Compliance and Enforcing Requirements

1. CalRecycle: jurisdictions, all other entities subject to regulations?
2. Jurisdictions: haulers, generators?
3. Local Enforcement Agencies (LEA): solid waste facilities?
4. Haulers: generators?

Are there additional entities and roles that could be identified in a compliance and enforcement structure?

B. Potential Compliance and Enforcement Roles

Concepts Identified

1. Direct state compliance and enforcement
    a. CalRecycle compliance and enforcement relationship with all involved entities
2. Delegated enforcement to local government, with/without state oversight
    a. Jurisdiction compliance enforcement purview of:
        1. Generators
        2. Haulers
    b. LEAs include enforcement of any additional related state standard regarding:
        1. Solid waste facilities
3. Joint state and jurisdiction enforcement authority on all entities other than jurisdiction compliance
4. Optional delegated authority
5. Other hybrid models:
    a. CalRecycle primary compliance enforcement relationship with jurisdictions, direct authority for other entities retained for certain violations or certain entities
    b. Jurisdiction conducts primary compliance activities and delegates enforcement activities

Are there alternative models that should be considered?

VI. Market Development

Achieving the 50 and 75 percent mandates will greatly depend on the development of markets for recycled organic products. Such markets need to be developed in parallel with establishing and implementing the new regulatory framework to achieve the targets of SB 1383.

A. Recycled Organic Product Market Development

Concepts Identified

1. Recycled organic products in need of market development
    a. Compost/mulch
    b. Biogas
    c. Cardboard
    d. Paper
    e. Building materials
2. Market development tools
    a. Incentives/subsidies
    b. Procurement mandates

What additional or alternative concepts can increase market demand for recycled organic products? Which market development tools are the most effective given the recycled organic products likely to be produced and marketed? What additional legislative or regulatory actions need to be taken to facilitate the utilization of these market development tools?

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Water Quality Fees Stakeholder Meeting

DATE:	Wednesday, February 1, 2017
TIME:	9:00-11:30 am
LOCATION:	CalEPA Headquarters Building Byron Sher Auditorium, 2nd Floor 1001 I Street Sacramento, CA 95814
WEBCAST LINK:	http://www.calepa.ca.gov/broadcast/
QUESTIONS:	FeeBranch@waterboards.ca.gov – Questions received prior to and during the meeting will be addressed during the meeting unless otherwise requested.

AGENDA

1. Welcome and Introductions
2. Waste Discharge Permit Fund Budget Cost Drivers (Attachment 1)
3. Recent Program Fee Increases (Attachment 2)
4. Budget Change Proposals
   http://web1a.esd.dof.ca.gov/dofpublic/viewBcp.html
5. Annual Performance Report – Fee Card
   http://www.waterboards.ca.gov/about_us/performance_report_1415/index.shtml
6. Open Discussion

WDPF Budget Cost Drivers
FY 2017-18 ($000)

A	B	C	D	E (B+C+D)	F	G	H (F+G)	I	J	K (G+J)	L (F+K)	M
WDPF Program	**FY 16-17 Fee Budget[1]**	**BCP Changes**	**Staff Cost & Program Adjustments[2]**	**FY 17-18 Allocation Budget**	**FY 17-18 Revenue Forecast**	**Forecasted Revenue Increase / (Decrease)**	**FY 17-18 Total Revenue**	**Average Program Percent Change**	**Revenue Adjust for 5% Fund Reserve[3]**	**Adjusted Revenue Increase / (Decrease)[4]**	**FY 17-18 Adjusted Total Revenue[5]**	**Adjusted Average Program Percent Change[6]**
NPDES	$31,165		$150	$31,315	$29,126	$2,190	$31,315	7.5%		$2,190	$31,315	7.5%
Storm Water	$30,086	($381)	($780)	$28,924	$32,213	($3,288)	$28,924	-10.2%		($3,288)	$28,924	-10.2%
WDR	$30,102		$18	$30,119	$28,157	$1,963	$30,119	7.0%		$1,963	$30,119	7.0%
Land Disposal	$14,214		($983)	$13,231	$14,142	($911)	$13,231	-6.4%		($911)	$13,231	-6.4%
WQC (401 Cert)	$10,272		$414	$10,686	$8,572	$2,113	$10,686	24.7%		$2,113	$10,686	24.7%
Ag Land (ILRP)	$5,878	$1,000	$434	$7,312	$5,997	$1,315	$7,312	21.9%		$1,315	$7,312	21.9%
CAF	$4,187		$187	$4,375	$4,177	$198	$4,375	4.7%		$198	$4,375	4.7%
Cannabis	$790		$324	$1,113	$1,113		$1,113				$1,113	
TOTAL	**$126,693**	**$619**	**($236)**	**$127,076**	**$123,497**	**$3,579**	**$127,076**		**$0**	**$3,579**	**$127,076**	**0.0%**

Adjusted Revenue Reserve Percent:	7.2%
Adjusted Revenue Reserve Amount:	$9,271

Target 5% Reserve Amount:	$6,397
Reserve Available to Reduce Increases:	$2,874

Footnotes:

[1] Includes redirected expenditures for programs like Basin Planning, TMDL, monitoring and enforcement.
[2] Includes resource reallocation for employee compensation, retirement, health care costs and pro rata.
[3] Adjustments to revenue levels while maintaining a prudent reserve.
[4] Recommended revenue level adjustments.
[5] Net revenue levels after adjustments.
[6] Net percentage change impact after recommended adjustments.

WDPF Fee Paying Programs
Recent Program Fee Increases

	FY 2014-15	FY 2015-16	FY 2016-17	
Program	**Actual**	**Actual**	**Needed**	**Actual**
Storm Water	0%	0%	-	0%
ILRP	0%	0%	3.1%	0%
NPDES	0%	0%	3.3%	0%
WDR	7.9%	0%	3.0%	0%
Land Disposal	9.8%	0%	-	0%
CAF	33.0%*	0%	-	0%
401 Cert	N/A**	N/A**	32.4%	20.0%

* Increase delayed from FY 2013-14

** New annual fee structure implemented in FY 2014-15

Haz-Waste Reduction Initiative
Advisory Committee
Pilot Project Secondary Recommendations Summary

Waste Stream	Proposer	Project Summary
Asbestos	Oladele Ogunseitan	(1) Install asbestos thermochemical conversion equipment at the Azusa Land Reclamation Site. (2) Use the Safer Consumer Products Law to eliminate all forms of asbestos in products manufactured or sold in California.
	Virginia St. Jean	Research BMP for long term storage of asbestos, such as encapsulation, cementation, vitrification, or deep burial.
N-methylpyrrolidone	Oladele Ogunseitan	(1) List n-methylpyrrolidone as a priority product under the Safer Consumer Products Law. (2) Conduct a life cycle analysis for alternatives to n-methylpyrrolidone at the Western Digital Corporation facility in Fremont.
Automobile/metal shredder waste	Xonia Villanueva	Research ways to reduce volume and toxicity of auto/metal shredder waste. Rescind variances for auto/metal shredders to dispose of waste as non-hazardous and use as alternative daily cover.
Flares and pyrotechnics	Virginia St. Jean	(1) Develop a transportable treatment unit (incinerator) for on-site destabilization of explosives and capture fugitive emissions. (2) Change waste code to include explosives as universal waste for management by recycling facilities. (3) Incentivize research for non explosive substitutes.
Portable gas cylinders	Nick Lapis	(1) Identify a region with a large number of retailers providing refill services of one pound propane cylinders. (2) Recruit additional retailers. (3) Work with retailers to provide streamlined cylinder exchanges, including self service vending machines. (4) Educate consumers about refillable propane cylinders. (5) Work with government to ban disposable cylinders. (6) Gather data about number of cylinders disposed. (7) Calculate greenhouse gas reductions from using refillable as opposed to disposable cylinders.
	Virginia St. Jean	Use mobile units to crush spent portable gas cylinders and capture residual gasses, such as the unit pilot tested in Yellowstone. Crushed cylinders have no hazardous gas remaining and can be recycled as scrap metal.
Flame retardants	Chuck White	(1) Use Green Chemistry Program to evaluate discontinuing production of flame retardant chemicals. (2) Evaluate management of materials containing flame retardants and consider classifying as hazardous waste.
Nitrate contaminated soil & groundwater	David Asti	Work with the water board to research options to determine the most cost-effective method to remediate nitrate contaminated soil and groundwater in the Central Valley.

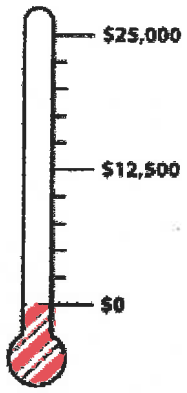
Mary Pitto

From: cpsc-pharmaceuticals-listserv@googlegroups.com on behalf of Heidi Sanborn [Heidi@calpsc.org]
Sent: Thursday, December 22, 2016 5:01 PM
To: Heidi Sanborn
Subject: Give Back This Holiday Season

December 22, 2016

CPSC California Product Stewardship Council℠

Our Holiday Wish For You



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As CPSC enters our 10th year working hard to advance product stewardship and shared responsibility in California, we are excited to end 2016 strong and well-positioned to make next year an even greater success!

Reflecting on 2016 and the work we need to do in 2017, there are a number of highlights and new developments we'd like to share:

CPSC Welcomes New Board Members

CPSC is thrilled to welcome Antonia Graham with the City of Huntington Beach and Steve Rodowick with Butte County to the Board of Directors!

Antonia and Steve each bring an incredible wealth of knowledge and experience in recycling and sustainability to the team, broadening the Board's expertise and geographic representation of California.

CPSC

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Thank You Supporters!

Recology WASTE ZERO

Edgar

Defeated AB 45

AB 45's intent was to preempt local government authority to require producers to have a significant share of cost and responsibility for the end-of-life management of their products. Supporters were primarily pharmaceutical companies. Although the bill was unsuccessful this session, we must remain vigilant and ready to stop similar legislation that could emerge in 2017.

Santa Barbara and Contra Costa Become 7th & 8th CA Counties to Adopt Producer Pays Ordinances for Safe Drug Disposal

Thanks to support from CPSC and a broad group of stakeholders, the Counties of Santa Barbara and Contra Costa became the latest California counties to adopt producer responsibility ordinances for safe drug disposal in 2016!

Recycling Today covered Contra Costa's adoption of the ordinance which occurred Tuesday of this week.

We look forward to supporting all the counties who are considering or in the process of implementing ordinances in 2017!

Carpet America Recovery Effort (CARE)

Called Out on the Carpet by CPSC

We have a lot of hard work ahead in 2017 and need your help! Please make a tax-deductible donation now and help us add more staff to support our good work in California in 2017! Donate now as an organization or personally and please tell your friends! We need to broaden citizen awareness and engagement to target waste problems at the source.

Thank You New Associate Funders!

Thank You & Happy New Year from CPSC!

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Our mailing address is:
California Product Stewardship Council
1822 21st Street, Suite 100
Sacramento, CA 95811

To unsubscribe, email Chris@CalPSC.org

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To reply to this message or send a message to this group, send email to cpsc-associates-listserv@googlegroups.com. Upon sending an email to the entire group, you will receive a delivery failure notice, because the message will automatically await approval from CPSC before it is actually sent to the entire group.

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You received this message because you are subscribed to the Google Groups "CPSC Pharmaceuticals Stewardship Listserv" group.
To unsubscribe from this group and stop receiving emails from it, send an email to cpsc-pharmaceuticals-listserv+unsubscribe@googlegroups.com.
For more options, visit https://groups.google.com/d/optout.

Mary Pitto

From: cpsc-associates-listserv@googlegroups.com on behalf of Jordan [Jordan@calpsc.org]
Sent: Monday, January 30, 2017 12:24 PM
To: Jordan
Subject: ReFueling Your Fun Goes National

Importance: High

January 30, 2017

ReFuel Your Fun Went National in 2017!

The award winning ReFuel Your Fun (RFYF) Campaign promotes the use of refillable 1 lb. propane cylinders as a cost-effective & environmentally friendly alternative to disposables. Did you know 80% of the cost of disposables is the package? Only 20% of the cost is the gas inside, so refillables $ave money & the hassle of disposal!

U-Haul developed this short video on the benefits of refillables:

[redacted]

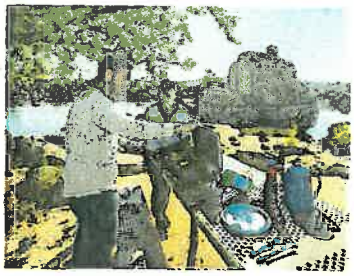
Business Partners

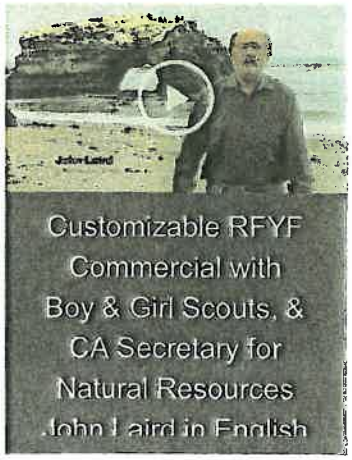
MORE EXCITING NEWS!

RFYF has grown significantly since it's inception in 2015, including the recruitment of 440 retail locations in the United States. Special thanks to U-Haul, the first national propane retailer to join the Campaign by selling & offering refill services for refillables at 126 of their California stores that dispense propane. Check out U-Haul's new landing page for refillables & read the most recent blog post.

- RFYF map of locations is constantly being updated
- **West Marine**: Selling empty refillables in 200 stores nationwide & online
- **REI**: Selling empty refillables in 29 stores in 13 states & online
- **Home Depot**: Selling empty refillables online and is conducting a pilot at 18 stores in CA
- **Sam's Club**: Conducting a pilot in 29 stores in 5 states
- **Yosemite National Park:** Conducting a pilot project with Kamps Propane & working with Subaru on RFYF outreach

Funded in part by a grant from CalRecycle





- **Wild & Scenic Film Festival:** Kamps Propane & California Product Stewardship Council distributed 30 full refillables to film festival attendees at the RFYF Enviro Fair booth in Nevada City, CA January 14-15 with CPSC Board Members Josh Simpson & Steve Rodowick

We've come a long way, but our work isn't done yet...
We need **YOUR** help!

WHAT CAN YOU DO TODAY:

1. Like RFYF on Facebook, invite your friends to like the page, & share posts!
2. Ask your local propane dealer to sell & refill cylinders so they can be promoted through the Campaign: http://refuelyourfun.org/information-interested-retailers/
3. Help expand the Campaign to other states & tell your friends across the U.S.

For more details contact Jordan @ jordan@calpsc.org or 916-706-3420.

Together we can make the paradigm shift from disposable 1 lb. propane cylinders to refillables. Together we can ReFuel Our Fun!

Here's how you can ReFuel Your Fun while camping:

(Spanish is available)

"When we started working with CPSC in August 2014, there was not one retailer selling or refilling the 1lb refillables in Santa Cruz County and the State of California. In two short years, we have recruited four retailers that sell and three that refill in the County, with 193 in the State, and more are in process. We developed a TV commercial with Secretary of Natural Resources John Laird and the Boy and Girl Scouts that runs in the Central Coast media market and beyond and has made such an impression that Secretary Laird has told me he gets approached on the streets and thanked for letting people know about the refillables". **– Tim Goncharoff, Resource Planner at County of Santa Cruz**

THERE'S A NEW TYPE OF CYLINDER IN TOWN

BE GREEN AND $AVE GREEN WITH REFILLABLES

Mary Pitto

From: CARE [info@carpetrecovery.ccsend.com] on behalf of CARE [acline@carpetrecovery.org]
Sent: Thursday, December 08, 2016 7:01 AM
To: Mary Pitto
Subject: Recycling News: CarpetCycle Introduces Quiet-Tech Insulation Batts

Like

Some readers see this part of your email after the subject line in the inbox. Write something brief and catchy, compelling them to open the email.

CARPET AMERICA RECOVERY EFFORT
Developing market-based solutions for the recycling & reuse of post consumer carpet

CONTACT
Bob Peoples
Executive Director, CARE
bpeoples@carpetrecovery.org
Phone: 706-428-2127

CarpetCycle Introduces Quiet-Tech Insulation Batts for Acoustic and Thermal insulation in Commercial Building's Walls and Ceilings

Quiet-Tech insulation is made with a blend of recycled carpet, cotton and PET fibers, and qualifies as a Double Green product

Dalton, Ga. - December 7, 2016 - The Carpet America Recovery Effort (CARE) and CarpetCycle recyclers are pleased to announce the introduction of Quiet-Tech insulation, offering superior sound absorption and noise reduction between wall-separated workspaces.

Quiet-Tech insulation batts contain 85% recycled materials from recycled carpet, cotton and PET fibers. Quiet-Tech insulation is UL Greenguard gold certified, contains no formaldehyde or fiberglass, and can be recycled or reused at the end of its useful life.

Quiet-Tech insulation is a Double Green product. Double Green products contain recycled California post-consumer carpet material, plus at least one other post-consumer recycled material. Learn more at www.carpetrecovery.org/products.

"Quiet-Tech insulation is commercially available and has been installed in projects in

New York and New Jersey,"states Sean Ragiel, president of CarpetCycle. "Architects, acoustic consultants, engineers and business owners are very satisfied with Quiet-Tech insulation's ease of handling, and its acoustic and thermal performance."

"We are excited to see this innovative building product launched in the commercial market," notes Bob Peoples, Executive Director of CARE. "Quiet-Tech insulation is an excellent example of how post-consumer carpet is recycled back into high performance products that are economically, environmentally and socially sustainable."

Quiet-Tech insulation joins the wide array of beautiful, durable and sustainable products marketed by CARE members nationwide. By specifying and purchasing these products, architects, designers and engineers can qualify for project certifications, such as LEED, NSF/ANSI 140, EPDs and more. For more information on recycled content products, please visit www.carpetrecovery.org/innovation.

About Carpet America Recovery Effort (CARE)

Carpet America Recovery Effort (CARE) is a voluntary, non-profit organization dedicated to increasing the landfill diversion, reuse and recycling of post-consumer carpet, through market based solutions that benefit the economy as well as the environment.

Since 2002, CARE has diverted more than 4.2 billion pounds of carpet from landfills in the United States and promoted the use and development of products containing materials derived from post-consumer carpet. CARE members include independent carpet recyclers, carpet manufacturers, dealers, retailers, equipment manufacturers, and suppliers and non-governmental organizations. For more information about CARE, visit www.carpetrecovery.org.

Carpet America Recovery Effort, 100 S. Hamilton Dr., Dalton, GA 30720

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Forward this email | Update Profile | About our service provider
Sent by acline@carpetrecovery.org

Mary Pitto

From: California Carpet Stewardship Program [info@carpetrecovery.ccsend.com] on behalf of California Carpet Stewardship Program [bjensen@carpetrecovery.org]
Sent: Wednesday, December 14, 2016 8:53 AM
To: Mary Pitto
Subject: December News: Retailer POS Signs and CalRecycle Meeting

Having trouble viewing this email? Click here

California Carpet Stewardship Program
December 2016 Update

California Carpet Stewardship Program
An initiative of CARE: Carpet America Recovery Effort

CalRecycle to Consider CARE Plan

The current CARE California Carpet Stewardship Plan expires on December 31, 2016. Carpet America Recovery Effort has submitted to CalRecycle a new Carpet Stewardship Plan, California Carpet Stewardship Plan 2017-2021.

This new Plan will be considered at the December 20, 2016 public meeting, to be held at the Cal/EPA Headquarters Building at 1001 I Street, Sacramento. The public can attend in person or via webcast (information here). The Public Notice for this agenda item is posted on CalRecycle's website.

Final Reminder: Assessment Increase

As previously noted, the carpet assessment increases to $0.25 per square yard from the current $0.20 per square yard on January 1, 2017. CARE has notified retailers of the increase via multiple mail, email and phone calls. Retailers also should have received notice of the increase from mills with which they do business.

For more information, see the CARE website.

New Point-of-Sale Signs for Retailers

CARE has created point-of-sale signs that retailers can use to inform customers of the assessment along with more general reminders about choosing carpet with sustainability in mind. The latest sign encourages consumers to "Buy Wisely, Recycle Right and Learn More." It provides brief information on recycled content products and assistance finding drop-off sites in their area.

View and download the signs on our Retailers page.

New Drop-Off Sites Welcomed

CARE added two new drop-off sites in November:

- Imperial Landfill, Imperial, Imperial County
- Sun Street Transfer Station, Salinas, Monterey County

CARE supports drop-off sites by providing:

- A container for collection,
- Third party hauling to bring carpet material to recyclers,
- Promotional materials for local government and the hosting facility and
- Technical assistance from CARE staff.

CARE intends to set up one carpet recycling drop-off site in every county by July 2017.

CARE California Drop-Off Site Map

To see if there is a CARE sponsored drop-off site in your county, visit the drop-off site map here. If you would like to set up a carpet recycling drop-off site, please contact: CA@carpetrecovery.org.

New Insulation Product Contains Recycled Carpet

A new insulation product made by CarpetCycle contain 85% recycled materials from recycled carpet, cotton and PET fibers. Quiet-Tech insulation is UL GREENGUARD gold certified, contains no formaldehyde or fiberglass, and can be recycled or reused at the end of its useful life.

Quiet-Tech insulation is a Double Green™ product. Double Green™ products contain recycled California post-consumer carpet material, plus at least one other post-consumer recycled

Mary Pitto

From: California Carpet Stewardship Program [info@carpetrecovery.ccsend.com] on behalf of California Carpet Stewardship Program [bjensen@carpetrecovery.org]
Sent: Tuesday, January 17, 2017 10:41 AM
To: Mary Pitto
Subject: January News: CalRecycle Rejects 5 Year Plan

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California Carpet Stewardship Program
January 2017 Update

California Carpet Stewardship Program
An initiative of CARE: Carpet America Recovery Effort

CalRecycle Rejects CARE California 5 Year Plan

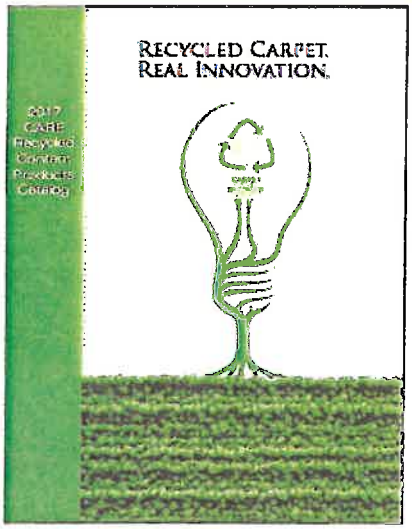
Following the December 20, 2016 public meeting, CalRecycle rejected the new 5 Year Plan that CARE submitted last fall, finding that the Plan does not conform to the requirements of the law to show continuous and meaningful improvement in recycling and diverting carpet from landfills in the state. CARE has 60 days to submit a revised plan to meet CalRecycle's requirements. The finding allows CARE to continue to operate under the existing plan for 120 days.

CARE would like to assure stakeholders and participants that program offerings will continue without interruption and in line with existing notices until a new Plan can be approved. CARE is working with its governing bodies, the Stewardship Planning Committee and the Sustainable Funding Oversight Committee, to review feedback from CalRecycle and Stakeholder comments to prepare a revised Plan. Interested parties may also provide their input to CARE here.

January 1 Assessment Increase In Effect

As of January 1, the California carpet assessment is now $0.25 per square yard for all carpet sold in the state. The assessment is charged at point of sale. Retailers or others needing more information or new brochures to explain the assessment to customers are encouraged to order copies here.

New Product Catalog Now Online



The CARE 2017 Recycled Content Product Catalog is now available online. The catalog identifies a wide array of products utilizing recycled carpet content.

By specifying and purchasing these products, architects, designers and engineers can qualify for project certifications, such as LEED, NSF/ANSI 140, EPDs and more.

Download the catalog here.

Procurement Grant Program Update

CARE's Recycled Carpet Content Product Procurement Grants Cycle (Cycle 1C) is now closed. CARE may reopen this Cycle in 2017 based on available funds. If reopened, CARE will likely accept applications for review on a continuous basis throughout the year, with a final submission deadline of December 31, 2017.

For more information on eligible products, project requirements, scoring criteria and other Cycle 1C details, please visit our Grants page.

CARE On the Road: CAPPO Conference

100th CAPPO CONFERENCE
RAISING the STANDARD

CARE's California Carpet Stewardship Program will be an exhibitor at the California Association of Public Procurement Officials (CAPPO) Conference on January 25 in Napa. CARE team members look forward to meeting procurement officials from across the state and informing them about products using recycled carpet material and the Double Green™ designation.

For more information on products containing recycled carpet content, see our website.

Shaw's Georgia Recycling Facility Changes Course

In a move that illustrates the complexity and challenges of recycling carpet, major carpet manufacturer Shaw Industries Group announced that the focus of its post-consumer carpet recycling facility in Georgia is shifting from a production facility to an innovation center. The center will no longer be accepting post-consumer carpet for recycling.

"The nature of innovation promises that not every effort will succeed, but we will learn from every investment. In addition to Shaw's R&D and innovation efforts, we remain committed to seeking market driven solutions through industry collaboration via CARE, CRI (Carpet and Rug Institute), joint ventures and partnerships and other endeavors," said Paul Murray, Shaw vice president of sustainability and environmental affairs. Murray is a member of CARE's Stewardship Planning Committee (SPC), which manages the California Carpet Stewardship Program.

Read more here.

CARE 2017 Annual Conference Set

CARE will hold its 15th annual conference on May 10-11 in Indianapolis, IN. Registration is now open along with hotel reservations. Please visit the CARE website to learn more and to register.

STAY CONNECTED:

Follow us on twitter

Carpet America Recovery Effort, 100 S. Hamilton Dr., Dalton, GA 30720

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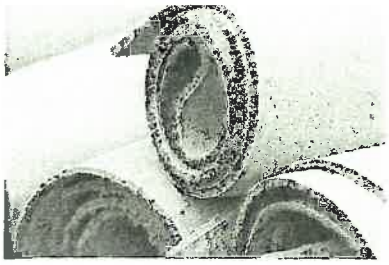
Sent by bjensen@carpetrecovery.org

RESOURCE RECYCLING

Carpet stewardship program grilled in California (http://resource-recycling.com/recycling/2017/01/10/carpet-stewardship-program-grilled-in-california/)

Posted on January 10, 2017 (http://resource-recycling.com/recycling/2017/01/10/carpet-stewardship-program-grilled-in-california/)

by Jared Paben (http://resource-recycling.com/recycling/author/jared-paben/)



California regulators are threatening to bring the hammer down on a carpet stewardship group, saying it has failed for years to grow carpet recycling.

The California Department of Resources Recycling and Recovery (CalRecycle) says that for the past three years it has warned Carpet America Recovery Effort (CARE) that its efforts were falling short of legal requirements. It is now pursuing enforcement, which could include fines as high as $10,000 a day.

"Enforcement action was determined to be the appropriate course of action at this time, given CARE's failure to correct previous findings of noncompliance, and a recycling rate that has not shown improvement under its program stewardship," CalRecycle spokesman Mark Oldfield told Plastics Recycling Update.

Recycling carpet face fiber, the upper part consumers regularly touch, can yield post-consumer nylon, nylon 6,6, PET/PTT and PP. In some cases, the plastics can even be recycled back into new carpet.

In California, the carpet recycling rate has plateaued at around 10 percent. CARE's goal for 2020 is 24 percent.

In addition to pursuing possible penalties, CalRecycle rejected CARE's proposed 2017-21 carpet collection and recycling plan (http://www.calrecycle.ca.gov/Carpet/Plans/2017Plan.pdf), arguing that it fails to comply with state law.

Bob Peoples, executive director of CARE, declined to comment to Plastics Recycling Update. In a 2017 plan submittal statement to CalRecycle, however, he wrote that the framework meets the legal requirements for approval. He stated those requirements dictate that the plan won't lower diversion and recycling rates and that it won't create any unfair advantages in the marketplace.

California is the only state with an extended producer responsibility (EPR) law in place for carpet. CARE, a Dalton, Ga.-based group, works on behalf of manufacturers of carpet sold in California to cover the requirements of the law. It collects fees paid by consumers when they purchase new carpet and provides subsidies to the recycling industry.

CARE also runs a voluntary program (http://resource-recycling.com/plastics/2016/09/08/carpet-manufacturers-extend-stewardship-program/) providing subsidies to carpet sorting companies in other parts of the country — funds from the program are not available to entities handling material from California.

Tough time for recycling

CalRecycle's Waste Evaluation and Enforcement Branch (WEEB) during a Dec. 20 public meeting (http://www.calrecycle.ca.gov/Agendas/85/20162016/1801/December%20Agenda.pdf) unveiled the decision to pursue enforcement. During that meeting, staff from a different CalRecycle branch presented a request to reject CARE's 2017 plan. CalRecycle Director Scott Smithline agreed and rejected it.

According to a CalRecycle enforcement evaluation (http://www.calrecycle.ca.gov/Actions/Documents%5c139%5c20162016%5c1800%5cEnforcement%20Evaluation%20Informational%20Memo%20EB%20editsGT%201206%20v2%20.pdf), regulators made several findings to justify their enforcement action: a lack of continuous and meaningful improvement in carpet recycling; significant gaps in collection opportunities around the state; ineffective marketing, education and outreach efforts; and a failure to respond to depressed markets for recovered carpet.

In its 2017 plan, CARE cited difficult market conditions as a challenge that is holding back growth in carpet recycling.

"The past five years have provided key lessons: Recycle markets are not only dynamic, but often unpredictable and coupled with global supply chains, outside the control of CARE, and thus difficult to manage," according to the plan.

Resource Recycling Search

in (https://www.linkedin.com/company/resourc recycling-inc-)

(http://rrconference.com/)

The latest recycling industry news

Scrap exports still off 2015 pace (http://resource-recycling.com/recycling/2017/01/10/scra exports-still-off-2015-pace/)

Numbers on exported scrap totals continue to show 2016 lagging 2015 in terms of volume and value.

Recycling markets continue price rise (http://resource-recycling.com/recycling/2017/01/10/recy markets-continue-price-rise/)

The growing smiles you see among recycling collectors and processors are because of continuing market improvement.

Feds hope to catalyze development of recycling technology (http://resource-recycling.com/recycling/2017/01/10/feds hope-to-catalyze-development-of-recycling-technology/)

The federal government will invest up to $70 million in a new research institute focused on reducing recycling costs and boosting recycled content in manufacturing.

Michigan outlaws bag bans (http://resou recycling.com/recycling/2017/01/10/mich outlaws-bag-bans/)

Recycling and waste-reduction advocates in Michigan were unable to stop passage of a bill that prohibits local ordinances limiting the use of plastic bags and plastic food-service items.

Wide world of recycling: Jan. 9, 2017 (http://resource-recycling.com/recycling/2017/01/09/wide world-of-recycling-jan-9-2017/)

A leader in a German village vows to fight food scrap collection, and an online panel will discuss ways to reverse the U.K.'s falling recycling rate.

In other news: Jan. 9, 2017 (http://resource-recycling.com/recycling/2017/01/09/in-other-news-jan-9-2017/)

A couple of cities consider adding curbside service, and two other municipalities wrestle with the difficulties of providing recycling service to apartment buildings.

Grant watch: Jan. 9, 2017 (http://resourc recycling.com/recycling/2017/0 gran watch-jan-9-2017/)

Low plastics values have hurt plastics recycling companies, including those recycling carpet. Carpet is made up of different materials that are bound together with longevity in mind. Separating them for recycling is already difficult to do cost effectively.

Shaw Industries, a global carpet manufacturer, recently announced it was halting commercial-scale recycling at its $20 million facility in Ringgold, Ga. Shaw wasn't able to make the recycling of polyesters and nylons from post-consumer carpets technically viable on a commercial scale, according to floordaily.net (https://www.floordaily.net/flooring-news/shaw-converting-evergreen-recycling-operation-to-innovation-facility). CARE's rejected California plan emphasized that an out-of-state recycling infrastructure is essential if carpet recycling in California is to be viable

Subsidizing a nascent industry

In a 17-page memo (http://www.calrecycle.ca.gov/Actions/Documents%5c112%5c20162016%5c1788%5c2017%20CARE%20Carpet%20Stewardship%20Plan%20RFA%20-%20signed.pdf), CalRecycle cited the difficult market conditions when they accused CARE of continuing what they saw as inadequate subsidy programs.

"The 2017 plan does not describe a process for achieving continuous meaningful improvement beyond a general discussion of existing subsidies, which have proven insufficient to date," according to the memo. "In fact, CARE proposes to scale back subsidy guarantees to six months from the current one-year period; this seems counterintuitive for supporting a nascent California carpet recycling industry struggling to stay in business."

The subsidy guarantees give recycling companies predictability in how much they'll be paid so they can make needed investments. In its plan, CARE said the change to six months was necessary to "ensure liquidity of the funds" and allow money to be refocused to other subsidies in response to program goals and market changes.

"Given the significant level of subsidies currently being offered by the program, it is believed that this change will not greatly affect stakeholders' willingness to invest in opportunities presented by the program," according to CARE's 2017 plan.

The fee consumers pay when they buy new carpet increased on Jan. 1 from 20 cents to 25 cents per square yard. That fee hike will boost revenue to CARE's California recycling program. CARE also budgeted an increase in spending for "subsidy payouts" this year. Specifically, its 2017 plan proposes providing $19.7 million to carpet collectors, sorters, processors and recycled-content manufacturers, up 12.5 percent from last year.

CARE currently provides subsidies to manufacturers using post-consumer PET/PTT and PP from carpet, but it doesn't apply to nylon. CalRecycle suggested extending the subsidies to post-consumer nylon carpet, which has seen a significant drop in demand.

Details enforcement options

In the past, CalRecycle has deferred enforcement action to "provide CARE with the time and space necessary to build the foundation for recycling success," Oldfield said.

CalRecycle warned CARE in September 2013, September 2014 and September 2015 that its plans were not compliant and needed changes, according to the enforcement evaluation.

CalRecycle has legal authority to issue fines up of up to $10,000 per day, with the amount depending on various factors, according to the enforcement evaluation. If the agency decides to issue fines, its legal office will draw up an accusation document and file it with the Office of Administrative Hearings. CARE has 15 days to request a hearing. Hearings are typically scheduled about nine months out, Oldfield said.

As another option, CalRecycle could issue a compliance order spelling out milestones and timeframes CARE needs to meet.

In rejecting the plan, Smithline gave CARE up to 120 days to work with the agency to develop an amended plan and receive CalRecycle approval. He instructed agency staff to delay any enforcement action connected to the 2017 plan during that time.

(http://www.ousei.co.jp/en)

Posted in News (http://resource-recycling.com/recycling/category/news/), Top stories (http://resource-recycling.com/recycling/category/top-stories/)| Tagged California (http://resource-recycling.com/recycling/tag/california/), carpet (http://resource-recycling.com/recycling/tag/carpet/), EPR (http://resource-recycling.com/recycling/tag/epr/), industry groups (http://resource-recycling.com/recycling/tag/industry-groups/), legislation (http://resource-

Oregon awards $1.2 million to support materials diversion efforts, and California makes $24 million available to propel organics processing facilities.

See more Resource Recycling headlines (http://resource-recycling.com/recycling/category/news/)

BHS What's next.
(http://www.bulkhandlingsystems.com/mat recovery-facilities-mrfs)

AMERICAN BALER COMPANY
(http://americanbaler.com/)

Government Liquidation
SCRAP METAL
(http://www.govliquidation.com/Scrap-Metal.html)

M MACHINEX Experience Results Sorting Technologies Expert
(http://www.machinexrecycling.com/)

nrt In-Flight Sorting
(http://www.nrtsorters.com/)

DEDICATED Harris
(http://www.harrisequip.com/)

VAN DYK recycling solutions
(http://vdrs.com/)

Mary Pitto

From: Mattress Recycling Council [ispa@sleepproducts.ccsend.com] on behalf of Mattress Recycling Council [info@mattressrecyclingcouncil.org]
Sent: Friday, December 16, 2016 10:47 AM
To: Mary Pitto
Subject: December Program Update

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You are receiving this email because you signed up to receive MRC Program Updates, are a registered participant on MRCreporting.org or serve as or expressed interest in becoming a collection site.

You may unsubscribe if you no longer wish to receive our emails.

MRC Program Update

Mattress Recycling Council

Dec. 16, 2016

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MRC In the Community:
* Las Vegas Market
* MRC In the News
* New Collection Sites

For Retailers:
* CA: Free Retail Drop-off Sites
* Customer Materials Survey

For Collection Sites:
* Mattress Stacking Tips
* Verify Your Locator Listing
* CA: Illegal Dumping Program

In Every Issue

Customer Education

MRC ANNOUNCEMENTS: Holiday Hours

Happy Holidays! With upcoming closures for Christmas and New Years, those that are required to collect and remit recycling fees to MRC are encouraged to submit reports and payments early. If you experience an issue with your report or payment via MRCReporting.org during the holiday closures, we will address it promptly on the next business day.

Customer Service will be closed on the following days:
December 26 & 30
January 2

Limited Customer service support will be available December 21-22 and 27-29.

Technical Support for MRCreporting.org will be unavailable December 26-January 2.

IN THE COMMUNITY: Winter Las Vegas Market is Approaching

Reporting & Payment Deadlines
Publicity Toolkits
Recyclers in Your Area

FOR RETAILERS

Customer Education Materials

Online Order Form

Samples:
Information Card
Customer Q & A
Customer Q & A Spanish

Request artwork or logos

Reporting & Payment Deadlines

Collection Period	Due
Nov. 1-30	Dec. 30
Dec. 1-31	Jan. 30
Jan. 1-31	Mar. 2
Feb. 1-28	Mar. 30

Submit Reports & Payments via MRCreporting.org

PUBLICITY TOOLKITS

Collection Site Hosts:
Find press releases, flyers, site signage and more!
Site Host Toolkit

Event Hosts:
Media alerts, flyers,

We will be at the Winter Las Vegas Market January 22-25 in the Home Furnishing Association's Retailer Resource Center in Building B. If you are attending, we would love to meet you!

Make sure you plan to stay for our brief information session and 1 Millionth Mattress Milestone celebration on Tuesday afternoon.
We will cover program highlights and answer any questions you have about mattress recycling or your state law's requirements. Please join us!

Tuesday, Jan. 24
Surya Seminar Room
Building C, C174
4:30-6:00 pm
Desserts and light refreshments available

Let us know how we can help you by making complying with the law and recycling easier. We hope to see you there!

COLLECTION LOCATIONS:Tips for Properly Stacking Mattresses

Proper stacking is important for several reasons. It is cost effective, and essential for the viability of the program, as well as workers safety during offloading. As part of the participant agreement, it is important to ensure that this is being done correctly and efficiently. Stacking can be tedious, so to help lighten the load, your Program Coordinators would like to provide you with some useful tips!

Connecticut and Rhode Island

MRC-contracted recycling facilities in Connecticut and Rhode Island may reject loads that are not properly stacked. If this occurs, the transporter will return the container back to the collection site for re-stacking. Improperly loaded containers use less than half of the available container space. If possible, please place a box spring at the bottom of each horizontal stack.

Stacking inefficiencies cost the program 2-3 times the transport cost and create backlogs at processing facilities as these

posters, signage and more!
Event Host Toolkit

Recyclers in Your Area

CALIFORNIA:
Businesses need to make arrangements directly with recyclers.

Blue Marble-Commerce
Blue Marble - Fresno
Blue Marble-San Diego
Blue Marble-San Leandro
Cleaner Earth Company
Cristal Materials
DR3 Oakland
DR3 Woodland
Goodwill of Silicon Valley
R5 Recycling

CONNECTICUT & RHODE ISLAND
Businesses should contact our Northeast Program Coordinator Justine Fallon for arrangements.

Park City Green-CT

Ace Mattress Recycling-RI
Express Mattress Recyclers-RI

Get SleepSavvy Today!

Sleep Savvy is the go-to, hands-on resource for mattress retailers who want to sell more and better bedding. With features, tips and ideas, it's designed to make your business grow.

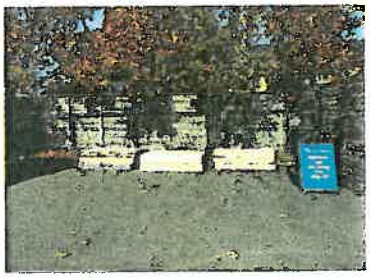
mattresses must be manually off-loaded and re-stacked. Horizontal stacking is the preferred method of stacking. This is to maximize the amount in the container and for effective offloading.

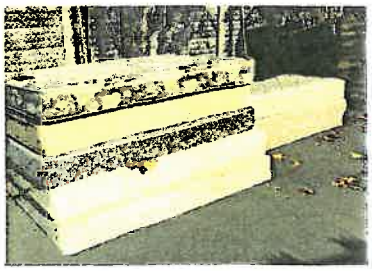
An improperly loaded container

A properly loaded container

California

Maintaining order of your outdoor staging area will make loading mattresses into a trailer easier and less time consuming. Here's how to get started:





Set your footprint for your mattress collection area. The space should hold at least four stacks of mattresses and allow for safe manuvering of a forklift.

Each stack of mattresses should be no more than five mattresses high. Consider starting your stacks with a queen box spring and keeping stacks organized by mattress size (queen, full, twin). Consolidate completed stacks into a larger 10 unit stack as needed.

Tip: Use a box spring as a makeshift pallete to to assist with moving and loading stacks of mattresses with a forklift.

Check out the latest issue at sleepsavvymagazine.com

Subscriptions are FREE!

When moving or consolidating stacks, puncture the box spring in the middle with the forks. Slide the fork all the way into the box spring and once forks are fully inserted, lift the stacked units.

It is suggested to load up to 10 units onto a trailer with the forklift from ground level.

As you load a stack of 10 units on to the trailer, make sure the edge of the mattresses and edge of the trailer are flush. As you load the next stack on, the previous stack(s) will be pushed to the back.

To maximize your space, make sure you also have units lined up with the left or right side of the trailer. The remaining space between the edge of the trailer and mattress stacks can be filled with king mattresses (vertically stacked and not shown above). Lighter twins can be placed on top of the stacks to fill any extra room between the mattresses and the roof of the trailer.

We hope you find these tips helpful! Be sure to refer to your collection site guidelines or contact your Program Coordinator with further questions.

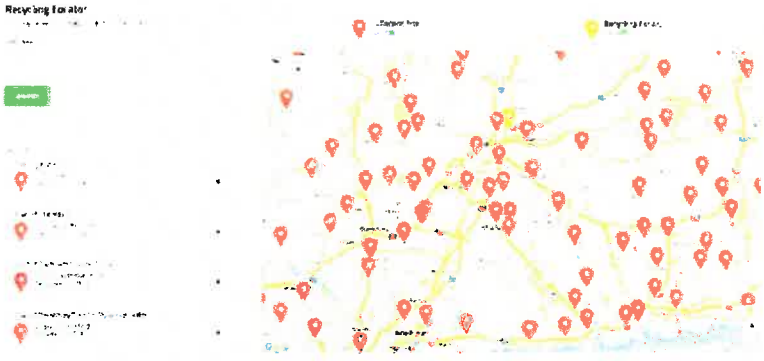
IN THE COMMUNITY: MRC in the News

Marketplace, broadcasted by nearly 800 public radio stations nationwide and heard by 13 million weekly listeners, mentioned the state laws that created MRC and the Bye Bye Mattress Program in a segment on a Minnesota Goodwill recycling facility.

Lompac Landfill, Santa Maria Regional Landfill and Bethany Recycling Center used our toolkit and were featured in their local news. Our toolkit works and it is totally free. For more information, click here.

MRC was also amoungst the nominees in the 2016 Waste Dive Award's Education Program of the Year category!

COLLECTION LOCATIONS: Is Your Listing Accurate in Our New Locator?



We are heading into a new year, so make sure your listing is correct! Our new locator has added additional fields of information to listings such as unit limits and gate fees. To ensure we have the latest details about your location, please complete this form.

RETAILERS: Customer Education Materials Survey

Are the information cards helpful? Are the cards and posters making the fee easy to explain? Are the materials understood by your customers and staff? We want to hear from you!

A Customer Education Materials Survey is currently available at the link below. MRC is looking forward to hearing from retailers in an effort to better improve our education materials. Your feedback is very important to us!

Tell Us What You Think

COLLECTION LOCATIONS: Join the California Illegal Dumping Payment Program

More than **70 California sites** have joined MRC's Illegal Mattress Dumping Payment Program. This program allows agencies responsible for collection of illegally dumped mattresses from the public right-of-way (including California local governments, certain permitted solid waste facilities, and authorized solid waste operations) to receive payment from MRC for the collection of illegally dumped mattresses. MRC has allotted $750,000 to fund this effort for 2016. Eligible entities that wish to receive reimbursement must register and begin tracking the number of illegally dumped mattresses collected.

If interested in participating in the program or looking for more information and eligibility requirements, check out https://connect.re-trac.com/registration/mrc-idp or contact Mark Patti.

Upcoming Events

IMM Cologne - The International Interiors Show

January 16-22

Cologne, Germany
Event Website

We've partnered with the International Sleep Products Association (ISPA) to host a Sleep Panel devoted to used product recycling and organized two panel discussions. The first, scheduled for January 17 at 11AM, will involve a discussion between representatives from Australia, France, the United Kingdom and the United States about the mattress recycling programs that exist in those countries. The second panel, to be held on January 18 at 11AM, will highlight how materials reclaimed from discarded mattresses can be recycled into new products, and technologies designed to make mattress dismantling more efficient.

Please visit us to hear these discussions and ask the experts to answer your questions.

2017 Connecticut Recycling Conference

January 18
The Aqua Turf Club
Southington, Connecticut
Event Website

Ask our Northeast Program Coordinator Justine Fallon about our Connecticut progress and program.

Las Vegas Market - Winter 2017

January 22-26
World Market Center
Las Vegas, Nevada
Event Website

Find us in the Home Furnishing Association's Retailer Resource Center (Building B) throughout the market and don't miss our Tuesday afternoon information session and 1 Millionth Mattress Milestone celebration (Building C).

ISPA Industry Conference

March 8-9
St. Petersburg, Florida
Event Website

Registration is now open! Join us and learn from expert conference speakers, network at social events, and see the latest industry products and services. Click here to register.

RETAILERS: Free Retail Collection Points in CA

While we have worked hard to contract with various recyclers throughout the state to be free drop-off sites for retailers, there are portions of the state that lack access to a recycling facility. To fill this need, we've been scouting other organizations and businesses as possible free collection sites.

Only California retailers that are complying with the law and registered with MRC can use these free collection points. We've established free retail collection sites in the following areas:

- Sonora
- Yreka

Because these sites are not accepting from the general public and require making an appointment for drop-off, their details are not disclosed on the locator. **Please contact MRC's Customer Service for the site's contact information.**

INTERESTED IN BECOMING A RETAIL-ONLY COLLECTION SITE?
If you have space to host a container or know of a non-profit or other community organization to approach, contact MRC's Customer Service and we will connect you with a member of the California Program team.

Welcome: New Collection Sites

We are always adding new sites to the program. Visit the recycling locator at ByeByeMattress.com for the latest details. If you would like to become a collection site, please contact MRC today.

Here are some recent additions to our locator directory:

California

Big Oak Flat (Groveland) Transfer Station
Big Oak Flat, CA 95321

Blue Line Transfer Station
South San Francisco, CA 94080

Goodwill - Redwood Empire
Santa Rosa, CA 95404

Recology Mountain View
Mountain View, CA 94043

Recology of the Coast

Rhode Island

Town Transfer Station
East Greenwich, RI 02818

Pacifica, CA 94044

The John Smith Road Landfill
Hollister, CA 95023

Mattress Recycling Council (MRC) is a non-profit organization formed by the industry to operate recycling programs in states which have enacted mattress recycling laws. Connecticut's program launched on May 1, 2015, California launched December 30, 2015 and Rhode Island began May 1, 2016. Each state's program is funded by a recycling fee that is collected when a mattress or box spring is sold. The fees pay for the transportation and recycling of the mattresses.

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Mattress Recycling Council, 501 Wythe Street, Alexandria, VA 22314

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Mary Pitto

From: Mattress Recycling Council [ispa@sleepproducts.ccsend.com] on behalf of Mattress Recycling Council [info@mattressrecyclingcouncil.org]
Sent: Tuesday, January 24, 2017 7:21 AM
To: Mary Pitto
Subject: January Program Update

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You are receiving this email because you signed up to receive MRC Program Updates, are a registered participant on MRCreporting.org or serve as or expressed interest in becoming a collection site.

You may unsubscribe if you no longer wish to receive our emails.

MRC Program Update

Mattress Recycling Council

Jan. 24, 2017

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MRC In the Community:
* 1 Million Mattresses Collected and Counting
* New Collection Sites

For Retailers:
*Fee Policy Revisions

For Collection Sites:
* Verify Your Locator Listing

In Every Issue

Customer Education
Reporting & Payment Deadlines
Publicity Toolkits
Recyclers in Your Area

IN THE COMMUNITY: 1 Million Mattresses Collected and Counting

The Mattress Recycling Council's Bye Bye Mattress program announced that it has recycled its one millionth mattress. This means that Bye Bye Mattress has diverted nearly 25,000 tons of materials from landfills in the three participating states - California, Connecticut and Rhode Island. Each state enacted its own mattress recycling law to reduce the number of mattresses sent to landfills, combat illegal mattress dumping, and increase recycling rates.

The mattresses are collected from more than 300 collection sites, which allows the public to drop-off old mattresses and box springs for recycling without charge, a service that was not available before. Now that consumers have a new option to recycle more than 11 million cubic feet of landfill space has been saved. To read more about this milestone, check out our press release.

In honor of this, if you are attending Winter Las Vegas Market, make sure you plan to stay for our 1 Millionth Mattress Milestone celebration.

Tuesday, Jan. 24
Surya Seminar Room
Building C, C174

FOR

RETAILERS

Customer Education Materials

Online Order Form

Samples:
Information Card
Customer Q & A
Customer Q & A Spanish

Request artwork or logos

Reporting & Payment Deadlines

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Feb. 1-28	Mar. 30
Mar. 1-31	April. 30

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Site Host Toolkit

Event Hosts:
Media alerts, flyers, posters, signage and more!
Event Host Toolkit

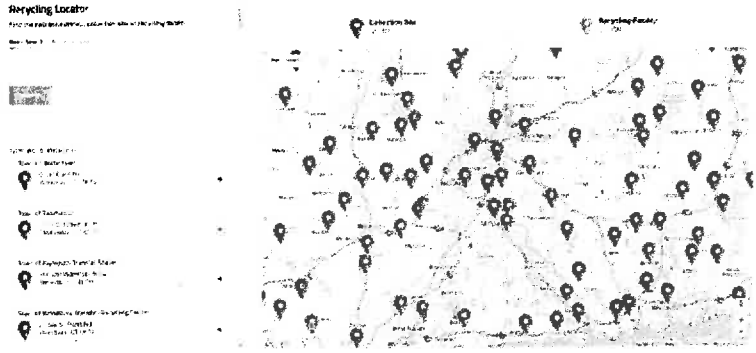
4:30-6:00 pm
Desserts and light refreshments available

We will cover program highlights and answer any questions you have about mattress recycling or your state law's requirements. Please join us!

For Retailers: Fee Policy Revisions

As of January 2017, MRC has made a number of minor updates to the fee policy to reflect the now active Rhode Island program, add clarity, and provide additional flexibility with regard to fee refunds for comfort returns. We encourage you to read over the fee policy so that you are aware of these changes. To review the updated policy, click here.

COLLECTION LOCATIONS: Is Your Listing Accurate in Our New Locator?



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Blue Marble - Fresno
Blue Marble-San Diego
Blue Marble-San Leandro
Cleaner Earth Company
Cristal Materials
DR3 Oakland
DR3 Woodland
Goodwill of Silicon Valley
R5 Recycling

CONNECTICUT & RHODE ISLAND
Businesses should contact our Northeast Program Coordinator Justine Fallon for arrangements.

Park City Green-CT

Ace Mattress Recycling-RI
Express Mattress Recyclers-RI

Get SleepSavvy Today!

Sleep Savvy is the go-to, hands-on resource for mattress retailers who want to sell more and better bedding. With features, tips and ideas, it's designed to make your business grow.

Check out the latest issue at sleepsavvymagazine.com

Subscriptions are FREE!

Public Works Officers Institute & Expo

March 22-24
San Diego, Calif.
Event Website

Mark Patti, our Southern California Program Coordinator, will be in attendance. Find him and introduce yourself! It will be the perfect opportunity to ask him about participating in the Illegal Dumping Payment Program or about becoming a site in our network.

Welcome: New Collection Sites

We are always adding new sites to the program. Visit the recycling locator at ByeByeMattress.com for the latest details. If you would like to become a collection site, please contact MRC today.

Here are some recent additions to our locator directory:

California

A&J Industrial
Selma, CA 93662

Holdorff's Recycling Center
Alturas, CA 96101

Pine Grove Transfer Station
Pine Grove, CA 95665

Rice Road Recycling & Transfer Staiton
Fresno, CA

The Wilkerson Company
Fairfield, CA 94533

Tracey Material Recovery Facility & Transfer Station
Tracey, CA 95377

WARF-Buena Vista Transfer station
Ione, CA 95640

Zaengles Floor and Home
Susanville, CA 96130

Mattress Recycling Council (MRC) is a non-profit organization formed by the industry to operate recycling programs in states which have enacted mattress recycling laws. Connecticut's program launched on May 1, 2015, California launched December 30, 2015 and Rhode Island began May 1, 2016. Each state's program is funded by a recycling fee that is collected when a mattress or box spring is sold. The fees pay for the transportation and recycling of the mattresses.

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Sent by info@mattressrecyclingcouncil.org in collaboration with

Constant Contact

Try it free today

Mary Pitto

From: Tire-Derived Product (TDP) Grant Program [grants@calrecycle.ca.gov]
Sent: Friday, March 03, 2017 10:14 AM
To: Mary Pitto
Subject: Notice of Funds Available - 2017/18 Tire-Derived Product Grant Program

Importance: High

Tire-Derived Product Grant Program Subscribers:

CalRecycle has issued the Notice of Funding Availability and released the application for Fiscal Year 2017–18 Tire-Derived Product (TDP) Grant Program. For specific information including: eligibility, grant amount, application, and timelines, please visit the TDP Grant Program website at: http://www.calrecycle.ca.gov/Tires/Grants/Product/FY201718/default.htm

The Application deadline is April 12, 2017

Applications must be submitted electronically in the Grant Management System (GMS) by 11:59 p.m. Customer service will be available until 4:00 p.m. on this date.

To subscribe to or unsubscribe from the Tire-Derived Product (TDP) Grant Program listserv or other listservs, please go to http://www.calrecycle.ca.gov/listservs/. For information on Tire-Derived Product (TDP) Grant Program go to http://www.calrecycle.ca.gov/Tires/Grants/Product/default.htm.

CalRecycle
10:00 A.M., December 20, 2016
Cal/EPA Building – Byron Sher Auditorium

A. DIRECTOR'S REPORT

Presentations or discussions by the Director and/or Executive Offices regarding department matters, legislative updates, public affairs or 75% initiative/legislative report.

B. PUBLIC COMMENT*

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*Please note that while CalRecycle affords members of the public the opportunity to participate by Webcast, CalRecycle strongly encourages public comments to be made in person.

C. BEVERAGE CONTAINER RECYCLING PROGRAM

Possible decisions or announcements regarding BCRP matters including fund condition, rates, approval of new/renewed certifications, or enforcement actions.

Action Items
No actions at this time

Information Items
Nothing to report at this time

D. ELECTRONIC WASTE RECYCLING PROGRAM

Possible decisions or overview regarding the reuse, recycling, and handling of covered electronic devices; including matters related to fees, recyclers, enforcement, claim reviews and adjustments.

Action Items

1. Regulations Modifying the Designated Approved Collector Provision of the Covered Electronic Waste Recycling Program
   Department Staff Contact: Jason.Smyth@CalRecycle.ca.gov
   Public Notice

Information Items
Nothing to report at this time

E. LOCAL ASSISTANCE

Possible approval or discussion of locally adopted planning documents, bi-annual reviews, compliance and enforcement actions, or other program-related proceedings.

Action Items

1. Approve the Expansion Application for the Recycling Market Development Zone (RMDZ) Chico/Northern Butte RMDZ
   Department Staff Contact: Mitch.Delmage@CalRecycle.ca.gov
   Public Notice

Information Items

1. Five-Year Review Report For The Countywide Integrated Waste Management Plan For Santa Clara County
   Department Staff Contact: Karla.Miller@CalRecycle.ca.gov
   Public Notice

F. GRANT AND LOAN PROGRAMS

Possible decisions or overview regarding matters related to the used oil and household hazardous waste programs.

Action Items

1. Criteria and Evaluation Process for the Tire-Incentive Grant Program (Tire Recycling Management Fund, FY 2016–17)
   Department Staff Contact: Melissa.Sanford@CalRecycle.ca.gov
   Public Notice

Information Items

1. Recycling Market Development Zone Loan for Tri-C Manufacturing, Inc. (Recycling Market Development Revolving Loan Subaccount, FY 2016–17)
   Department Staff Contact: Shirley.Hom@CalRecycle.ca.gov
   Public Notice

2. Awards for the Tire-Derived Product Grant Program (Tire Recycling Management Fund, Fiscal Year 2016–2017)
   Department Staff Contact: Noel.Davis@CalRecycle.ca.gov
   Public Notice

G. SOLID WASTE AND TIRE FACILITIES

Possible decisions or reconsiderations to petitions for a facility or landfill permit or modification; and, possible determinations of enforcement actions, clean-up requirements; or LEA training.

Action Items

1. CR&R South County Materials Recovery Facility – Orange County, Modified Solid Waste Facilities Permit, Action Needed December 23, 2016
   Department Staff Contact: Jeffery.Esquivel@CalRecycle.ca.gov
   Public Notice

2. City of Napa Materials Diversion Facility – Napa County, Modified Solid Waste Facilities Permit, Action Needed December 26, 2016
   Department Staff Contact: Marcus.Santillano@CalRecycle.ca.gov
   Public Notice

3. Blythe Sanitary Landfill – Riverside County, Modified Solid Waste Facilities Permit, Action Needed January 9, 2017
   Department Staff Contact: Megan.Emslander@CalRecycle.ca.gov
   Public Notice

4. Recology Los Angeles – City of Los Angeles, Revised Solid Waste Facilities Permit, Action Needed January 13, 2017
   Department Staff Contact: Megan.Emslander@CalRecycle.ca.gov
   Public Notice

5. Rubber Recovery, Inc. – San Bernardino County, Major Waste Tire Facility Permit, Action Needed January 16, 2017
   Department Staff Contact: Dianne.Ohiosumua@CalRecycle.ca.gov
   Public Notice

6. West Coast Waste Recycling Facility – Fresno County, New Solid Waste Facilities Permit, Action Needed January 28, 2017
   Department Staff Contact: Marcus.Santillano@CalRecycle.ca.gov
   Public Notice

7. Chicago Grade Landfill – San Luis Obispo County, Revised Solid Waste Facilities Permit, Action Needed January 31, 2017
   Department Staff Contact: Patrick.Snider@CalRecycle.ca.gov
   Public Notice

Information Items

1. Status of the Enforcement Evaluation of CARE's 2015 Annual Report
   Department Staff Contact: Georgianne.Turner@Calrecycle.ca.gov
   Public Notice

H. POLICY MANDATES/WORKSHOPS/RULEMAKING PROCEEDINGS

Possible decisions or discussions by department staff regarding any order instituting a rulemaking proceeding to develop and adopt regulations and/or policy guidelines specifying the procedures to implement or revise program guidelines or requirements such as Product Stewardship, Commercial Recycling, Organics Roadmap or the 75% initiative.

Action Items

1. Consideration of Carpet America Recovery Effort's California Carpet Stewardship Plan 2017--2021
   Department Staff Contact: Faridoon.Ferhut@CalRecycle.Ca.Gov
   Public Notice

Information Items

1. Informal Workshop on a Rulemaking Under the Electronic Waste Recycling Act
   December 20, 2016 1:30PM–4:30PM (Cal/EPA Building - Sacramento)
   Department Staff Contact: Jeff.Hunts@CalRecycle.ca.gov
   Public Notice

2. Informal Regulation Workshop for Glass Container Processing and Other Similar Materials
   December 21, 2016 – 9:00AM-12:00PM (Cal/EPA Building, Sacramento)
   Department Staff Contact: Martin.Perez@CalRecycle.ca.gov
   Public Notice

3. California Oil Recycle Enhancement Act: Workshop to Discuss Status of the Program and Possible Next Steps
   January 24, 2016 1:30PM–3:00PM (Sacramento)
   Department Staff Contact: Caroll.Mortenson@CalRecycle.ca.gov
   Public Notice

I. OTHER

Possible decisions or discussions regarding the development or implementation of a new or an amendment to policies and procedures for grants, loans and contracts. Please note that grants, loans, or scopes of work will be agendized specific to program area unless otherwise noted here.

Action Items

1. Adoption of the 2017 Rulemaking Calendar
   Action Needed December 21, 2016
   Department Staff Contact: Elliot.Block@CalRecycle.ca.gov

Information Items

No Actions at the Time

J. COMPLIANCE AND ENFORCEMENT HEARINGS

Hearings for Compliance and Enforcement matters and Administrative Appeals which are required to have a public hearing prior to the Department taking action

Action Items

No actions at this time

Information Items

Nothing to report at this time

We want to assure all of our stakeholders that transparency and stakeholder involvement remains a high priority for CalRecycle. In keeping with a history of providing stakeholders with information about programs, activities, and departmental decisions, CalRecycle has a public noticing site. To review Final CalRecycle Decisions and other department activities, please go to: http://www.calrecycle.ca.gov/Actions/ or http://www.calrecycle.ca.gov/BevContainer/Notices. For meeting participation, listserv, and feedback information, please go to: http://www.calrecycle.ca.gov/PublicMeeting/.

CalRecycle

Monthly Public Meeting

CalRecycle
10:00 A.M., January 24, 2017
Cal/EPA Building – Sierra Hearing Room

A. DIRECTOR'S REPORT

Presentations or discussions by the Director and/or Executive Offices regarding department matters, legislative updates, public affairs or 75% initiative/legislative report.

B. PUBLIC COMMENT*

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C. PROGRAM AND ISSUE UPDATES

Action Items
No actions at this time

Information Items
1. Disposal Reporting System Updates
   Department Staff Contact: Eileen.Nathaniel@CalRecycle.ca.gov

D. BEVERAGE CONTAINER RECYCLING PROGRAM

Possible decisions or announcements regarding BCRP matters including fund condition, rates, approval of new/renewed certifications, or enforcement actions.

Action Items
No actions at this time

Information Items
1. Recycling Program Certification & Registration Report
   Quarterly Report on Branch workload metrics and key data.
   Department Staff Contact: George.Donkor@CalRecycle.ca.gov

2. Recycling Program Enforcement Report
   Quarterly Report on the Branch activities, including Probationary Reviews, Inspections, Investigations completed, and accusations filed. Updates will also be provided on Department of Justice/Office of the Attorney General interagency activities.
   Department Staff Contact: Angelica.Ibarra@CalRecycle.ca.gov

3. Recycling Program Operations Report
   Quarterly Report on the Branch activities will include a summary of Rate Determination Studies statistics, Market Information and Statistics.
   Department Staff Contact: Mike.Miller@CalRecycle.ca.gov

E. ELECTRONIC WASTE RECYCLING PROGRAM

Possible decisions or overview regarding the reuse, recycling, and handling of covered electronic devices; including matters related to fees, recyclers, enforcement, claim reviews and adjustments.

Action Items

1. Regulations Amending the Covered Electronic Waste Recycling Program and Finalizing Existing Emergency Regulations
   Department Staff Contact: Ana-Maria.Stoian-Chu@CalRecycle.ca.gov
   Public Notice

Information Items

1. 2016 Covered Electronic Waste Net Cost Reporting Requirement
   Department Staff Contact: Andrew.Hurst@CalRecycle.ca.gov
   Public Notice

F. LOCAL ASSISTANCE

Possible approval or discussion of locally adopted planning documents, bi-annual reviews, compliance and enforcement actions, or other program-related proceedings.

Action Items

No actions at this time

Information Items

1. Approval To Initiate A Recycling Market Development Zone Designation Cycle For 2017
   Department Staff Contact: Cara.Morgan@CalRecycle.ca.gov
   Public Notice

G. GRANT AND LOAN PROGRAMS

Possible decisions or overview regarding matters related to the used oil and household hazardous waste programs.

Action Items

1. Eligibility, Scoring Criteria, and Evaluation Process for the Household Hazardous Waste Grant Program (Integrated Waste Management Account, FY 2017–18)
   Department Staff Contact: Harnak.Samra@CalRecycle.ca.gov
   Public Notice

2. Eligibility Criteria and Evaluation Process for the Local Government Waste Tire Amnesty Grant Program (Tire Recycling Management Fund, Fiscal Year 2017–18)
   Department Staff Contact: Carla.Repucci@CalRecycle.ca.gov
   Public Notice

Information Items

1. Awards for the Rubberized Pavement Grant Program (Tire Recycling Management Fund, Fiscal Year 2016–17)
   Department Staff Contact: Loreto.Tamondong@CalRecycle.ca.gov
   Public Notice

2. Awards for the Beverage Container Recycling Grant Program (California Beverage Container Recycling Fund, FY 2016–17 & FY 2017–18)
   Department Staff Contact: Rhoderick.Estrada@CalRecycle.ca.gov

Public Notice

3. Recycling Market Development Zone Loan for North State Rendering, Co., Inc. (Recycling Market Development Revolving Loan Subaccount, FY 2016–17)
   Department Staff Contact: Carlos.Nakata@CalRecycle.ca.gov
   Public Notice

H. SOLID WASTE AND TIRE FACILITIES

Possible decisions or reconsiderations to petitions for a facility or landfill permit or modification; and, possible determinations of enforcement actions, clean-up requirements; or LEA training.

Action Items

1. Tajiguas Resource Recovery Project and Sanitary Landfill – Santa Barbara County, Revised Solid Waste Facilities Permit, Action Needed February 5, 2017
   Department Staff Contact: Dianne.Ohiosumua@CalRecycle.ca.gov
   Public Notice

2. Evergreen Nursery Compost Facility – San Diego County, Modified Solid Waste Facilities Permit, Action Needed February 25, 2017
   Department Staff Contact: Patrick.Snider@CalRecycle.ca.gov
   Public Notice

3. Blythe Sanitary Landfill – Riverside County, Modified Solid Waste Facilities Permit, Action Needed February 28, 2017
   Department Staff Contact: Megan.Emslander@CalRecycle.ca.gov
   Public Notice

4. Central Transfer/Processing Facility – Sonoma County, Revised Solid Waste Facilities Permit, Action Needed February 28, 2017
   Department Staff Contact: Marcus.Santillano@CalRecycle.ca.gov
   Public Notice

5. KORE Infrastructure Plant #1 – San Bernardino County, New Solid Waste Facilities Permit, Action Needed March 5, 2017
   Department Staff Contact: Dianne.Ohiosumua@CalRecycle.ca.gov
   Public Notice

6. SANCO Resource Recovery – San Diego County, Modified Solid Waste Facilities Permit, Action Needed March 14, 2017
   Department Staff Contact: Patrick.Snider@CalRecycle.ca.gov
   Public Notice

Information Items

1. Waste Tire Enforcement Report
   Department Staff Contact: Bill.Albert@Calrecycle.ca.gov

I. POLICY MANDATES/WORKSHOPS/RULEMAKING PROCEEDINGS

Possible decisions or discussions by department staff regarding any order instituting a rulemaking proceeding to develop and adopt regulations and/or policy guidelines

specifying the procedures to implement or revise program guidelines or requirements such as Product Stewardship, Commercial Recycling, Organics Roadmap or the 75% initiative.

Action Items

1. Consideration of California Paint Stewardship Program Year 4 Annual Report
   Department Staff Contact: Allyson.Williams@CalRecycle.ca.gov
   Public Notice

Information Items

1. California Oil Recycle Enhancement Act: Workshop to Discuss Status of the Program and Possible Next Steps
   January 24, 2016 1:30PM–3:00PM (Sacramento)
   Department Staff Contact: Caroll.Mortensen@CalRecycle.ca.gov
   Public Notice

J. OTHER

Possible decisions or discussions regarding the development or implementation of a new or an amendment to policies and procedures for grants, loans and contracts. Please note that grants, loans, or scopes of work will be agendized specific to program area unless otherwise noted here.

Action Items

No actions at this time

Information Items

Nothing to report at this time

K. COMPLIANCE AND ENFORCEMENT HEARINGS

Hearings for Compliance and Enforcement matters and Administrative Appeals which are required to have a public hearing prior to the Department taking action

Action Items

No actions at this time

Information Items

Nothing to report at this time

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CalRecycle

Monthly Public Meeting

CalRecycle
10:00 A.M., February 21, 2017
Cal/EPA Building – Byron Sher Auditorium

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C. PROGRAM AND ISSUE UPDATES

Action Items
No actions at this time

Information Items
Nothing to report at this time

D. BEVERAGE CONTAINER RECYCLING PROGRAM

Possible decisions or announcements regarding BCRP matters including fund condition, rates, approval of new/renewed certifications, or enforcement actions.

Action Items
No actions at this time

Information Items
1. The Beverage Container Recycling Fund Quarterly Status Report: Quarter 1
   Department Staff Contact: Mike.Miller@CalRecycle.ca.gov

E. ELECTRONIC WASTE RECYCLING PROGRAM

Possible decisions or overview regarding the reuse, recycling, and handling of covered electronic devices; including matters related to fees, recyclers, enforcement, claim reviews and adjustments.

Action Items
No actions at this time

Information Items
Nothing to report at this time

F. LOCAL ASSISTANCE

Possible approval or discussion of locally adopted planning documents, bi-annual reviews, compliance and enforcement actions, or other program-related proceedings.

Action Items
No actions at this time

Information Items
Nothing to report at this time

G. GRANT AND LOAN PROGRAMS

Possible decisions or overview regarding matters related to the used oil and household hazardous waste programs.

Action Items

1. Eligibility Criteria and Evaluation Process for the Tire-Derived Product Grant Program (Tire Recycling Management Fund, Fiscal Years 2017–18 and 2019–20)
   Department Staff Contact: Noel.Davis@CalRecycle.ca.gov
   Public Notice

2. Adoption of Revisions to Used Oil Regulations
   Department Staff Contact: Emily.Wang@CalRecycle.ca.gov
   Public Notice

Information Items
Nothing to report at this time

H. SOLID WASTE AND TIRE FACILITIES

Possible decisions or reconsiderations to petitions for a facility or landfill permit or modification; and, possible determinations of enforcement actions, clean-up requirements; or LEA training.

1. SANCO Resource Recovery – San Diego County, Modified Solid Waste Facilities Permit, Action Needed March 14, 2017
   Department Staff Contact: Patrick.Snider@CalRecycle.ca.gov
   Public Notice

2. Fairmead Landfill – Madera County- Revised Solid Waste Facilities Permit, Action Needed March 31, 2017
   Department Staff Contact: Margaret.Comotto@CalRecycle.ca.gov
   Public Notice

3. Landers Sanitary Landfill Facility – San Bernardino County, Revised Solid Waste Facilities Permit, Action Needed April 1, 2017
   Department Staff Contact: Dianne.Ohiosumua@CalRecycle.ca.gov
   Public Notice

Information Items
Nothing to report at this time

I. POLICY MANDATES/WORKSHOPS/RULEMAKING PROCEEDINGS

Possible decisions or discussions by department staff regarding any order instituting a rulemaking proceeding to develop and adopt regulations and/or policy guidelines specifying the procedures to implement or revise program guidelines or requirements such as Product Stewardship, Commercial Recycling, Organics Roadmap or the 75% initiative.

Action Items

1. Approval of Supplemental Environmental Projects (SEP) Policy
   Department Staff Contact: Maria.Salinas@Calrecycle.ca.gov
   Public Notice

Information Items

1. Workshop: Future of Electronic Waste Management in California Part 2
   March 15, 2017 9:30AM – 12:30PM
   Department Staff Contact: Shirley.Willd-Wagner@CalRecycle.ca.gov
   Public Notice

2. Public Hearing on Proposed Regulations Amending the Electronic Waste Recycling Program
   March 15, 2017 1:30PM – 3:30PM
   Department Staff Contact: Jeff.Hunts@CalRecycle.ca.gov
   Public Notice

3. CalRecycle Packaging Reform Workshop
   March 22, 2017 9:30AM – 4:30PM (Sacramento)
   Department Staff Contact: Cynthia.Dunn@CalRecycle.Ca.Gov
   Public Notice

J. OTHER

Possible decisions or discussions regarding the development or implementation of a new or an amendment to policies and procedures for grants, loans and contracts. Please note that grants, loans, or scopes of work will be agendized specific to program area unless otherwise noted here.

Action Items

No actions at this time

Information Items

Nothing to report at this time

K. COMPLIANCE AND ENFORCEMENT HEARINGS

Hearings for Compliance and Enforcement matters and Administrative Appeals which are required to have a public hearing prior to the Department taking action

Action Items

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Information Items

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Product stewardship awakens in the mattress industry

by Eric Miller, CVBT Correspondent

CHICO
February 5, 2017 9:01pm

- **Most consumers take the industry lying down**
- **"It's mind-boggling. Lined end to end those mattresses would span nearly 20 miles"**

In an industry that relies on one's snoozing, the United States mattress industry is anything but asleep: Nearly 40 million new mattresses and box springs are sold annually in the U.S. according to the International Sleep Products Association (ISPA), the trade association representing mattress manufacturers and industry suppliers from around the world.

Americans love their beds. Television commercials promote sleep numbers and memory foam. But when it's time to retire old beds what are consumers to do?

"Landfill operators dislike burying mattresses," says Butte County Deputy Director of Waste Management Bill Mannel. "The springs entangle landfill equipment. Like tires, mattresses don't compact well. Mattresses and coils literally spring back after compaction and occupy valuable air space. We've been involved in mattress recycling at the Neal Road Recycling and Waste Facility since 2010 but started a more robust stewardship program last year. We're diverting several trailer loads every week. It's lots of work but we're thrilled to conserve landfill space."

Mattresses, unlike many other consumer goods, pose a challenging end-of-product life management strategy for waste managers. They're bulky, heavy, and burden consumers and retailers responsible for their disposal.

Mattresses are also a menace to commercial garbage truck drivers. Take for instance king-size mattresses, textile wrapped commodities that include steel coils, padding and foam. A king-size bed exceeds a cubic yard (i.e. 72,000 cubic inches) of space, about the same volume held in 54 trash cans. Old beds hog air space.

Fortunately industry programs like the Mattress Recycling Council's (MRC) Bye Bye Mattress are facilitating end-of-life product management for goods produced. The ISPA formed MRC as a non-profit organization with the sole purpose of designing, implementing, and administering recycling programs in states with mattress recycling laws. MRC's Bye Bye Mattress program debuted in Connecticut in May 2015. California followed later in December that year and Rhode Island began their program in 2016. To date more than one million mattresses have been recycled through the program.

State agencies provide oversight and assist with the enforcement of regulations. In California, MRC works with CalRecycle, a department within the California Environmental Protection Agency that administers waste handling and recycling programs.

The United States mattress industry consists of establishments primarily engaged in manufacturing inner springs, box springs, and non-inner spring mattresses such as water beds. Nationwide at least 15-20 million used mattresses are discarded annually.

In a November 2015 report submitted to CalRecycle, MRC reported that over 1.9 million mattresses (weighing more than 48,000 tons) were disposed statewide in 2014. If not for MRC implementing a model of product stewardship, California's solid waste facilities would pile high with mattresses.

Butte County Recycling Coordinator Steve Rodowick tracks recyclable commodities diverted from the county's landfill. Mr. Rodowick coordinates shipments of used mattresses for delivery to a recycler in Woodland, 80 miles away.

"In 2003 we received about 500 mattresses a month, back in the days when we buried them. When we started our initial recycling program in 2010 we were getting nearly 700 mattresses per month. We teamed with MRC last February and the program continued to grow. We now average over 1,200 mattresses per month. Overall we diverted nearly 15,000 mattresses from the landfill in 2016," says Mr. Rodowick.

"It's mind-boggling. Lined end to end those mattresses would span nearly 20 miles," he says.

Mattress retailers sell a variety of mattresses ranging in thickness of five to nine inches or more. When asked how high Butte County's mattresses would stack Mr. Rodowick grinned. "Assume each mattress is eight inches thick. If stacked they'd reach nearly two miles high, just shy of Lassen Peak (10,463 feet)."

Butte County's mattress counts compare to data observed in other counties. Sacramento County reports several thousand mattresses diverted monthly from its landfills. Across the Sacramento River in Yolo County nearly a thousand mattresses per month are diverted from the Yolo County Central Landfill.

"Connecticut, Rhode Island and California each passed mattress recycling laws," explains Liz Wagner, California representative for the MRC.

"These mattress recycling laws operate under a model of shared responsibility, where the producers and manufacturers design and implement the recycling program. The program is funded by an $11 per mattress recycling fee collected from consumers at the point of purchase," she says. "With this funding, consumers can drop off their mattress free of charge at participating collection locations, and the mattresses will be transported to the nearest recycler. Although the state has oversight and enforcement responsibility, MRC coordinates all operational program aspects."

Ms. Wagner provided insight for mattress generation figures within Butte County. Located 90 miles north of Sacramento, Butte County has a population of about 220,000. Valley areas within the county are planted with rice and orchard crops. Nearby foothill communities are shaded with forest.

"MRC estimates that a person buys a new mattress once every 10 years," says Ms. Wagner. "Based on its population, over 22,000 waste mattresses will be generated from within Butte County in 2017. We're encouraging retailers to join our collection network, by providing collection containers and transportation to conveniently recycle mattresses."

Companies such as Motorola, Nokia, Xerox, IBM and Hewlett-Packard have implemented reverse logistics programs to reclaim or reuse materials from the point of consumption for the repair, remanufacturing or redistribution of old products into new products. Motorola and Nokia do this for cell phones, and Xerox, IBM and HP do this to remanufacture and recycle computers and hardware. The companies recover these goods at the end of their product life because they don't see the old products as waste, but rather, as reusable commodities.

Some firms utilize third party logistics providers like FedEx or UPS to handle this process in addition to other supply chain functions.

However, customers dumping trash won't see FedEx or UPS retrieving old mattresses from local landfills. Through its Bye Bye Mattress program MRC contracts with companies such as DR3 Recycling of Woodland to haul old mattresses to their recycling facility.

"Markets exist for materials extracted from mattresses," says Ms. Wagner. "Springs are removed and bought in the secondary scrap metal markets, wood from box springs is used as wood chips for mulch or used as fuel for the biomass industry, and foam is made into carpet padding. Other mattress components become dog beds or acoustical insulation for cars."

It's ironic that a component of one's car could possibly be derived from an old mattress. Like car shopping, mattress shopping can be difficult — but the ramification is that you must sleep on it every night.

"Practically everyone generates a mattress," quipped Ms. Wagner. "We have contracts with waste hauling companies, waste facilities, recyclers and retailers located from the Northern Sacramento Valley and into the foothill counties, including Lassen, Modoc and Nevada counties. It's a statewide program with locations throughout Northern, Central and Southern California."

"The MRC's mattress recycling program is a good example of closing the loop," explains Heidi Sanborn, executive director of the California Product Stewardship Council. Based in Sacramento, Ms. Sanborn analyzes the effects of other state administered programs developed to facilitate waste reuse and recyclable commodities markets. "The issue though," says Ms. Sanborn, "is that many manufacturing industries may not consider end-of-life product management. As with buying a new mattress, consumers ultimately pay the true management cost for that given product, whether it's an advance disposal fee or recycling fee."

For Butte County's mattress recycling program, the county receives several dollars per unit to reimburse handling costs. Semi-truck trailers are loaded by workers and a forklift, rain or shine, with wet mattresses akin to loading rain-soaked sponges.

"Many issues must be considered," says Mr. Mannel. "Mattresses, if buried in the landfill, occupy volume that is better utilized for waste material having no market value. Consumers take landfills for granted. Customers just want their garbage to go away. But to landfill managers a cubic yard of air space has a quantitative monetary value."

CalRecycle reports that the average disposal fee for California landfills is $54 per ton. Heavy equipment that rolls across a landfill can compact and densify waste up to 1,300 pounds per cubic yard (roughly 100 basketballs contain a cubic yard of air). Using those figures the corresponding landfill air space is worth about $35 per cubic yard.

For landfills with higher disposal fees that value increases. "We must consider the opportunity cost of lost air space in a municipal landfill," says Mr. Mannel. "Modern day sanitary landfills are highly engineered facilities, difficult to site and expensive to build. Development costs can exceed several hundred thousand dollars per acre. Why waste that space? Through our program we waive mattress disposal fees for our self-haul customers. Another benefit is that the illegal dumping of mattresses, though still problematic, has been greatly reduced."

"What we really need is more business disruption in manufacturing," says Ms. Sanborn. "We work with companies that disrupt conventional thinking. The MRC is trying to resolve waste disposal issues within their industry by supporting logistical solutions and market development for reusable commodities. Consider for example U-Haul and its Refuel Your Fun campaign. U-Haul, a retailer and North America's largest propane filling network, and our organization intends to shift an entire industry away from single-use propane canisters to refillable one-pound cylinders. Working with manufacturers such as Flame King, U-Haul is in the process of branding a new reusable product and creating new markets. Retailers like REI, Home Depot, and others are now joining the band wagon."

Meanwhile, nearly 40 million Californians will sleep tonight unaware that their beds may someday become another product. "We're experiencing challenges similar to any start-up," Ms. Wagner adds. "But overall this program is doing well and we're encouraged to see so much early success."

About the writer

Eric Miller is a freelance writer based in Chico. He has industry experience in waste management and water resources. Contact him at eric@etcguy.com, via Linked In, or visit his humor blog at www.etcguy.com.

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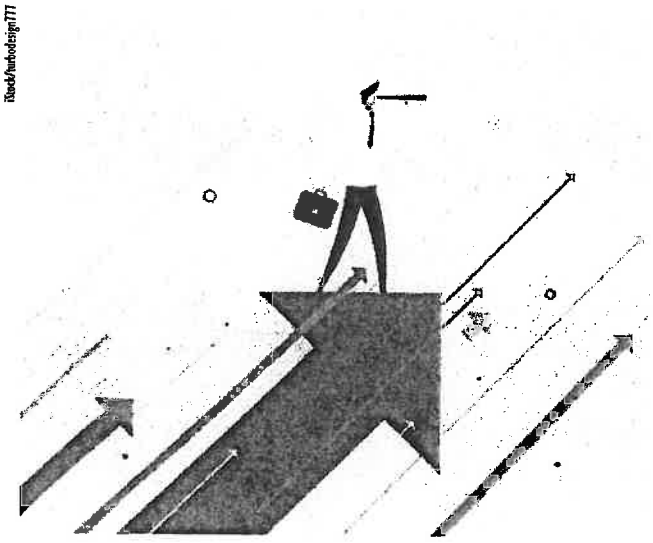
Future-Proof Your Solid Waste Career

Picture, if you will, the locker room before a hockey game. The players are strapping on updated versions of medieval armor. They intensely prepare for a rousting contest. This careful preparation contributes to their future success. The same is true in planning for a successful career in the solid waste industry. Career success is awarded to participants who have prepared ahead. Preparation is key. Call it "future-proofing" your career.

Economic and regulatory changes buffet everyone in the solid waste industry, like body checks into the boards. Future insights into the trends in the industry and society will prepare you to meet the needs of tomorrow.



Let's take a look as to why hockey legend, Wayne Gretzky, "The Great One," was so great. As the story goes, he was encouraged by his father to look ahead to what was to come. Gretzky's father took him to see his first hockey game. The young Gretzky watched the on-ice action with fascination when his father commented, "Why don't they just skate to where the puck's going to be?"

Gretzky learned this treasured lesson. Observation of on-ice patterns and forethought to the next play demonstrate the value of looking ahead in hockey, and similarly this lesson is important in the solid waste industry.

Understanding the Big Picture

Predicting the future needs of the solid waste sector involves understanding the bigger issues and challenges that face the world. Climate change, managing carbon outputs, an aging and growing population, the rise of automation including automated driving, and concern about water and other natural resources are contributing future issues. It helps to look at big picture trends such as these to prepare for their impact on the waste industry.

For instance, landfills used to be just that: solid waste being dumped. As time passed, concern grew over protecting groundwater and surface water from pollutants seeping from that solid waste. This issue led siting and location restrictions, design and operations standards. Continued evolution of issues involved the development of complex leachate pumping and treatment systems, in turn leading to development of systems to minimize infiltration and leachate generation. From these changing trends, it's easy to see why the management of stormwater and leachate control are vital landfill operation skills today. That's why accessing the future needs of the industry is even more important than ever.

Trends Affect the Future

Examining big-picture trends alerts us to changes in the industry so that you can see where the "puck" will be in the future. The solid waste industry is well on its way to managing carbon output—partly by managing organics and through complex methane-capture, and waste-to-energy networks within existing landfills.

Furthermore, waste in North America is still largely truck-transported, situating the industry squarely in the crosshairs of environmental regulators. If carbon pricing becomes an issue in your part of the world, emissions from trucks will carry a tangible financial cost. There may be more trucks powered by compressed natural gas (some made from landfill gas), possibly all electric in the future. Think about it—in a face-off between fossil fuel technology and electric motors, which way do you think the game will go?

Build Skills Needed to Succeed

Society's desire to reduce landfilling, and also to manage resources wisely, is putting a premium on skills related to waste minimization and recycling. Anyone working in solid waste today needs a sound understanding of the mechanics of recycling, as well as the economic trends of recycled materials. Consider the social trend of packaging of consumer goods, such as baby food. Easily recycled glass jars have steadily been replaced by shatter-resistant, complexly engineered squeeze tubes, an increased challenge troubling recycling efforts. Industry professionals may need to work more closely with manufacturers to devise easy disassembly for recycling, as we already see in the automotive sector.

Keep Your Education Up-to-Date

A large part of career success involves thinking about how long your education stays relevant. Consider the "half-life" of your technical degree—how long before half of the technical information that you learned in college is out of date? (I've got another story about when I started thinking about "half-life" of my engineering degree, but will save that for another time.) It's inevitable that skills and knowledge progress, added to the speed of change in the industry. (Who foresaw the capture and conversion of landfill gas as vehicle fuel?)

It is important to think how you will keep your technical skills current. Returning to college or technical training courses for the latest updates, or using any of the online education alternatives, enhances your technical base. Attending industry events such as Solid Waste Association of North America (SWANA) informs you to current trends and action unfolding in this industry's latest issues. The result can be much like a breakaway in hockey—a chance for your career to excel and do the world a good turn at the same time. MSW

***Paul Sgriccia**, PE is a Senior Consultant at GHD, Plymouth, MI, office.*

Mary Pitto

From: hhwie@yahoogroups.com on behalf of sgroner@sga-inc.net [hhwie] [hhwie-noreply@yahoogroups.com]
Sent: Monday, March 06, 2017 11:24 AM
To: hhwie@yahoogroups.com
Subject: [hhwie] Small Pails for Hg Thermostat Collection Now Available

The Thermostat Recycling Corporation has made a new 1-gallon collection pail available for use, based on feedback from HHW programs and contractors.

There is limited supply of pails available right now free to contractors in California. Also, contractors still have a collection incentive of $100 for 40 Hg Thermostats (or $2.50 per thermostat).

Please promote in your jurisdiction to help get the word out to contractors. If you have any questions regarding the program, please feel free to contact me at (562) 597-0205 or sgroner@sga-inc.net.

Stephen Groner
S. Groner Associates, Inc.

Offices:

Long Beach 562.597.0205
Oakland 510.257.2118

sgamarketing.com

Posted by: sgroner@sga-inc.net

Reply via web post • Reply to sender • Reply to group • Start a New Topic • Messages in this topic (1)

Mary Pitto

From: CalRecycle Electronic Waste Management ListServ [EWaste@calrecycle.ca.gov]
Sent: Wednesday, December 07, 2016 1:43 PM
To: Mary Pitto
Subject: California E-Waste Updates: Implementing the Electronic Waste Recycling Act

December 7, 2016

Dear Electronic Waste Stakeholder:

This electronic newsletter is an update on the implementation of California's Electronic Waste Recycling Act of 2003 (Act) and other electronic waste (e-waste) management developments in California.

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In this issue:

CEW PROGRAM RULEMAKING – DESIGNATED APPROVED COLLECTORS

PRE-RULEMAKING WORKSHOP – FINALIZING EXISTING EMERGENCY RULES

==========

CEW Program Rulemaking – Designated Approved Collectors

The Department of Resources Recycling and Recovery (CalRecycle) is scheduled to consider an agenda item at its December 20, 2016 Monthly Public Meeting seeking approval to file proposed regulations with the Office of Administrative Law (OAL) on the topic of Designated Approved Collectors. A Public Notice containing additional information on this item is posted on the CalRecycle website at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1951&aiid=1782

Only covered electronic waste (CEW) originating from a California source is eligible for payment in the CEW recovery and recycling payment system. Existing regulations specify the documentation required to demonstrate CEW eligibility. Approved collectors that are California local governments, or the Designated Approved Collector providing service on behalf of a California local government, are relieved of certain source documentation requirements. The proposed rules would clarify aspects of the Designated Approved Collector provision, including the definition of local government and the respective roles of local government and Designated Approved Collectors, as well as the connections to the annual Form 303 HHW reporting requirements.

CalRecycle intends to adopt the proposed rules as emergency regulations pursuant to Public Resources Code 42475.2. Once approved by OAL, the rules would remain in effect for two years, or until they are adopted as final regulations, whichever comes first.

Information on the December 20, 2016 Monthly Public Meeting can be found at:
http://www.calrecycle.ca.gov/PublicMeeting/

Pre-Rulemaking Workshop – Finalizing Existing Emergency Rules

Also on December 20, 2016, CalRecycle will hold an informal pre-rulemaking workshop relating to other aspects of the CEW program that encompass the topics of definitions, limitations, recordkeeping, cancellation, CRT and treatment residuals, claims, and civil liabilities. This effort stems from a need to finalize two emergency regulation packages adopted late 2015, and provides the opportunity to conduct minor clean-up on regulations first adopted over a decade ago.

A Public Notice for this workshop is posted at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1935&aiid=1770

The workshop is scheduled to begin at 1:30PM, however it will follow the CalRecycle Monthly Public Meeting at which certain items may run long. The workshop will commence in as timely a manner as possible.

A workshop agenda, background document, and proposed regulatory language will be posted approximately 10 days prior to the workshop.

Other Resources

Covered Electronic Waste (CEW) Recycling Program Information:
http://www.calrecycle.ca.gov/Electronics/Act2003/

CEW Recycling Payment System Regulations:
http://www.calrecycle.ca.gov/Laws/Regulations/Title14/Chap08pt2/default.htm

DTSC Universal Waste Electronics Handler and Recycler Information:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/

Information relative to fundamental CRT management -- DTSC Emergency Regulations:
http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/CRT_Glass_Disposal.cfm

California Statutes and Bills, including Public Resources Code (PRC) and Health and Safety Code (HSC):
http://leginfo.legislature.ca.gov/

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Please note that e-mail correspondence with the Department of Resources Recycling and Recovery (CalRecycle) related to e-waste management in general, and implementation of the Electronic Waste Recycling Act in particular, should be directed to ewaste@calrecycle.ca.gov

Also note that an archive of past distributions of this newsletter is available at:
http://www.calrecycle.ca.gov/Electronics/Act2003/Stakeholder/Updates/

Thank you for your interest in shaping California's e-waste management future.

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To subscribe to or unsubscribe from the E-Waste listserv or other listservs, please go to http://www.calrecycle.ca.gov/Listservs/. For information on California's Electronic Waste Recycling Act of

Mary Pitto

From: CalRecycle Electronic Waste Management ListServ [EWaste@calrecycle.ca.gov]
Sent: Wednesday, December 14, 2016 3:43 PM
To: Mary Pitto
Subject: California E-Waste Updates: Implementing the Electronic Waste Recycling Act

December 14, 2016

Dear Electronic Waste Stakeholder:

This electronic newsletter is an update on the implementation of California's Electronic Waste Recycling Act of 2003 (Act) and other electronic waste (e-waste) management developments in California.

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In this issue:

REMINDERS…

CEW PROGRAM RULEMAKING – DESIGNATED APPROVED COLLECTORS (REVISED)

PRE-RULEMAKING WORKSHOP – FINALIZING EXISTING EMERGENCY RULES AND MORE

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CEW Program Rulemaking – Designated Approved Collectors (REVISED)

The Department of Resources Recycling and Recovery (CalRecycle) is scheduled to consider an agenda item at it December 20, 2016 Monthly Public Meeting seeking approval to file proposed regulations with the Office of Administrative Law (OAL) on the topic of Designated Approved Collectors. A Public Notice containing additional information, including a revised version of the proposed rules, is posted on the CalRecycle website at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1951&aiid=1782

Only covered electronic waste (CEW) originating from a California source is eligible for payment in the CEW recovery and recycling payment system. Existing regulations specify the documentation required to demonstrate CEW eligibility. Approved collectors that are California local governments, or the Designated Approved Collector providing service to a California local government, are relieved of certain source documentation requirements. The proposed rules would clarify aspects of the Designated Approved Collector provision, including the definition of local government and the respective roles of local government and Designated Approved Collectors, as well as the connections to the annual Form 303 HHW reporting requirements.

The revisions address those circumstances when information contained in an existing Proof of Designation needs to be modified due to changes at the Local Government or Designated Approved Collector level.

CalRecycle intends to adopt the proposed rules as emergency regulations pursuant to Public Resources Code 42475.2. Once approved by OAL, the rules would remain in effect for two years, or until they are adopted as final regulations, whichever comes first.

Information on the December 20, 2016 Monthly Public Meeting can be found at:
http://www.calrecycle.ca.gov/PublicMeeting/

Pre-Rulemaking Workshop – Finalizing Existing Emergency Rules and More

Also on December 20, 2016, CalRecycle will hold an informal pre-rulemaking workshop relating to other aspects of the CEW program in particular and the Electronic Waste Recycling Act in general. The workshop is scheduled to begin at 1:30PM, however morning meeting scheduled for the same room possibly will run long. The workshop will begin as promptly as possible.

The workshop will cover a range of affected areas within Chapter 8.2 of Division 7 of Title 14 of the California Code of Regulations, primarily serving as a vehicle to finalize two existing emergency regulation packages adopted in 2015 that address: 1) the assessing of civil liabilities pursuant to the authority granted under Public Resources Code (PRC) 42474, et al, and 2) the management of treatment residuals derived from the dismantling of CEW. In addition to other general edits, the proposed rules are also proposing to clarify aspects of definitions, applicability, limitations, documents and records, net cost reports, applications, prohibited activities, appeals, requirements for collectors and recyclers, claims, cancellation, and manufacturer payments.

A Public Notice for this workshop, along with draft proposed rules and guidance material, is posted at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1935&aiid=1770

Other Resources

Covered Electronic Waste (CEW) Recycling Program Information:
http://www.calrecycle.ca.gov/Electronics/Act2003/

CEW Recycling Payment System Regulations:
http://www.calrecycle.ca.gov/Laws/Regulations/Title14/Chap08pt2/default.htm

DTSC Universal Waste Electronics Handler and Recycler Information:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/

Information Relative to Fundamental CRT Management -- DTSC Regulations:
http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/CRT_Glass_Disposal.cfm

California Statutes and Bills, including Public Resources Code (PRC) and Health and Safety Code (HSC):
http://leginfo.legislature.ca.gov/

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Please note that e-mail correspondence with the Department of Resources Recycling and Recovery (CalRecycle) related to e-waste management in general, and implementation of the Electronic Waste Recycling Act in particular, should be directed to ewaste@calrecycle.ca.gov

Also note that an archive of past distributions of this newsletter is available at:
http://www.calrecycle.ca.gov/Electronics/Act2003/Stakeholder/Updates/

Thank you for your interest in shaping California's e-waste management future.

Mary Pitto

From: CalRecycle Electronic Waste Management ListServ [EWaste@calrecycle.ca.gov]
Sent: Monday, January 09, 2017 1:10 PM
To: Mary Pitto
Subject: California E-Waste Updates: Implementing the Electronic Waste Recycling Act

January 9, 2017

Dear Electronic Waste Stakeholder:

This electronic newsletter is an update on the implementation of California's Electronic Waste Recycling Act of 2003 (Act) and other electronic waste (e-waste) management developments in California.

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In this issue:

NOTICE: UWED HANDLER REPORTS DUE FEBRUARY 1, 2017

REMINDER: NET COST REPORTS DUE MARCH 1, 2017

STATUS OF NEW DESIGNATION RULES

FINALIZING EXISTING EMERGENCY RULES AND MORE

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Notice: UWED Handler Reports Due February 1, 2017

Annual reports for universal waste electronic device (UWED) handlers are due to the Department of Toxic Substance Control (DTSC) by February 1, 2017 for any facility or location, including collection events, which accepted in 2016 more than 220 pounds of electronic waste from offsite sources (e.g., households, businesses, etc.). DTSC has posted general guidelines and frequently asked questions through a new notice on its E-waste Newsletter to assist with the submission of annual reports:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/Newsletters.cfm

More information about handler notification and reporting requirements can be found at:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/

Note that the annual UWED reporting requirement should NOT be confused with the Net Cost Report discussed below.

Reminder: Net Cost Reports Due March 1, 2017

The Department of Resources Recycling and Recovery (CalRecycle) reminds all approved collectors and recyclers in California's covered electronic waste (CEW) recovery and recycling program of their obligation to calculate and submit Net Cost Reports for operations conducted in 2016. Reports are due on or before March 1, 2017. A Public Notice detailing the requirement can be found here:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1984&aiid=1809

CalRecycle recently sent emails to all approved collectors and recyclers reminding of the report requirement and inviting participants to submit their reports online. If you are an approved collector or recycler and did not receive this email, or have trouble accessing the CalRecycle online reporting portal, please contact the CEW program at ewaste@calrecycle.ca.gov

It is recognized that a growing number of non-CRT devices will enter the CEW recycling system in the coming years. To augment its information gathering efforts, CalRecycle is seeking supplemental cost and revenue data specific to the management of non-CRT CEW. While separate CRT and non-CRT Net Cost Reports cannot be submitted through the online report system at this time, an expanded recycling net cost worksheet (Form 220B) to capture this information is available at the Net Cost Report website:
http://www.calrecycle.ca.gov/Electronics/Recovery/NetCost/default.htm

CalRecycle encourages all recyclers with detailed net cost information unique to non-CRT CEW recycling to review, complete, and submit this adjunct worksheet via email at ewaste@calrecycle.ca.gov

Status of New Designation Rules

On December 21, 2016, CalRecycle approved proposed emergency regulations to reform portions of the designated approved collector facet of the CEW recovery and recycling program. CalRecycle is now preparing the rulemaking package for filing with the Office of Administrative Law (OAL). Barring complications, the rules will become effective 10 days after filing with OAL.

Local governments that have issued designations and approved collectors who hold a valid designation will need to issue and secure, respectively, new designations compliant with the new rules within five months of the effective date. CalRecycle will post and publicize revised Proof of Designation forms to assist with this process.

The new rules seek to emphasize that the issuance of a designation is the prerogative and responsibility of the local government, and are intended to improve communication between designated approved collectors and designating local governments.

More information about these rules is available at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1951&aiid=1782

Finalizing Existing Emergency Rules and More

CalRecycle intends to present an agenda item at the January 24th Monthly Public Meeting seeking approval to initiate the formal rulemaking process to finalize two current emergency rule packages as well as modify and clarify other rules with in the CEW recovery and recycling program. A placeholder Public Notice for that item can be found at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1994&aiid=1818

Draft content of proposed rules was previously presented at a December 20, 2016 stakeholder workshop. The Public Notice for that workshop, along with an agenda, presentation documents, draft proposed rules and guidance material, is posted at:
http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1935&aiid=1770

The proposed rules affect areas within Chapter 8.2 of Division 7 of Title 14 of the California Code of Regulations, primarily serving to finalize two existing emergency regulation packages adopted in 2015. Those

rules address: 1) the assessing of civil liabilities pursuant to the authority granted under Public Resources Code (PRC) section 42474, and 2) the management of treatment residuals derived from the dismantling of CEW. In addition to other general edits, the proposed rules also clarify aspects of definitions, applicability and limitations, documents and records, net cost reports, applications, prohibited activities, appeals, requirements for collectors and recyclers, claims, cancellation, and manufacturer payments.

Other Resources

Covered Electronic Waste (CEW) Recycling Program Information:
http://www.calrecycle.ca.gov/Electronics/Act2003/

CEW Recycling Payment System Regulations:
http://www.calrecycle.ca.gov/Laws/Regulations/Title14/Chap08pt2/default.htm

DTSC Universal Waste Electronics Handler and Recycler Information:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/

Information Relative to Fundamental CRT Management -- DTSC Regulations:
http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/CRT_Glass_Disposal.cfm

California Statutes and Bills, including Public Resources Code (PRC) and Health and Safety Code (HSC):
http://leginfo.legislature.ca.gov/

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Please note that e-mail correspondence with the Department of Resources Recycling and Recovery (CalRecycle) related to e-waste management in general, and implementation of the Electronic Waste Recycling Act in particular, should be directed to ewaste@calrecycle.ca.gov

Also note that an archive of past distributions of this newsletter is available at:
http://www.calrecycle.ca.gov/listservs/archive/?ListID=10
Pre-2005:
http://www.calrecycle.ca.gov/Electronics/Act2003/Stakeholder/Updates/

Thank you for your interest in shaping California's e-waste management future.

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To subscribe to or unsubscribe from the E-Waste listserv or other listservs, please go to http://www.calrecycle.ca.gov/Listservs/. For information on California`s Electronic Waste Recycling Act of 2003 (SB 20) implementation efforts, as well as other relevant developments go to http://www.calrecycle.ca.gov/Electronics/.

Mary Pitto

From: CalRecycle Electronic Waste Management ListServ [EWaste@calrecycle.ca.gov]
Sent: Thursday, February 16, 2017 1:42 PM
To: Mary Pitto
Subject: California E-Waste Updates: Implementing the Electronic Waste Recycling Act

February 16, 2017

Dear Electronic Waste Stakeholder:

This electronic newsletter is an update on the implementation of California's Electronic Waste Recycling Act of 2003 (Act) and other electronic waste (e-waste) management developments in California.

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In this issue:

WORKSHOP NOTICE -- FUTURE OF ELECTRONIC WASTE MANAGEMENT IN CALIFORNIA, PART 2

REGULATORY HEARING POSTPONED

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Workshop Notice -- Future of Electronic Waste Management in California, Part 2

The California Department of Resources Recycling and Recovery (CalRecycle) will hold a second stakeholder workshop in relation to its "Future of Electronic Waste Management in California" project. This event, scheduled for the morning of March 15, 2017, follows on the first workshop held in September 2016. A Public Notice containing details for the upcoming event is posted here:

http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1953&aiid=1783

The September workshop presented panelists who shared their perspectives on the current state of electronic waste management in California and what should be considered as the state looks towards an increasingly complex future electronic waste stream. That workshop also included breakout sessions to individually explore different approaches that could be used in the future.

The upcoming March 15 workshop intends to build on the somewhat theoretical discussions of last September by focusing on a more tangible possibility: the addition of a new device into the mix of covered devices currently addressed by California law. Workshop participants will explore what it would look like to add printers to a California electronic waste management program using differing administrative and operational approaches.

Printers were selected for these hypothetical scenarios because they are frequently mentioned when discussing expansion of the covered electronic waste program. Please note that this selection does NOT represent a CalRecycle proposal to add printers to the electronic waste recycling system. Instead, the intent is to open a dialog regarding issues that would need to be considered under any particular approach. Specifically what would it take to add printers under the current framework established via the Electronic Waste Recycling Act of

2003? What would need to be addressed if printers were to be managed under a different framework, such as a product stewardship approach?

This workshop anticipates using a more interactive webinar format intended to allow for better real-time engagement with remote participants. More information, including agenda, background document, and webinar instructions, will be posted soon via the Public Notice and announced via this listserv.

General information about the "Future of Electronic Waste Management in California" project, including links to past workshops and activities, can be found here:

http://www.calrecycle.ca.gov/Electronics/Future/Default.htm

Regulatory Hearing Postponed

CalRecycle is postponing a previously scheduled public hearing relating to a formal rulemaking that addresses existing emergency rules as well as other aspects of the covered electronic waste (CEW) recycling program. That hearing was scheduled for the afternoon of March 15, 2017. The Public Notice associated with this event has been updated:

http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1978&aiid=1804

Review and finalization of required documents, including the Initial Statement of Reasons (ISOR) and an Economic and Fiscal Impact Statement, make the timing of the original hearing date infeasible. CalRecycle will reschedule the public hearing to better coincide with the required 45-day public comment period that begins after the proposed rule package is filed with the Office of Administrative Law.

For more information about this rulemaking effort, please refer to the Public Notice that was associated with the January 24, 2017 Request for Approval:

http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1994&aiid=1818

In summary, the proposed regulations will affect areas within Chapter 8.2 of Division 7 of Title 14 of the California Code of Regulations. They will serve as a vehicle to finalize two existing emergency regulation packages that address: 1) the assessing of civil liabilities pursuant to the authority granted under Public Resources Code (PRC) section 42474, and 2) the management of treatment residuals derived from the dismantling of CEW. In addition to other general edits, the proposed rules will also amend and clarify aspects of definitions, applicability and limitations, documents and records, net cost reports, applications, prohibited activities, appeals, requirements for collectors and recyclers, claims, cancellation, and manufacturer payments.

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Other Resources

Covered Electronic Waste (CEW) Recycling Program Information:
http://www.calrecycle.ca.gov/Electronics/Act2003/

CEW Recycling Payment System Regulations:
http://www.calrecycle.ca.gov/Laws/Regulations/Title14/Chap08pt2/default.htm

DTSC Universal Waste Electronics Handler and Recycler Information:
http://www.dtsc.ca.gov/HazardousWaste/EWaste/

Information Relative to Fundamental CRT Management -- DTSC Regulations:
http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/CRT_Glass_Disposal.cfm

California Statutes and Bills, including Public Resources Code (PRC) and Health and Safety Code (HSC):
http://leginfo.legislature.ca.gov/

Please note that e-mail correspondence with the Department of Resources Recycling and Recovery (CalRecycle) related to e-waste management in general, and implementation of the Electronic Waste Recycling Act in particular, should be directed to ewaste@calrecycle.ca.gov

Also note that an archive of past distributions of this newsletter is available at:
http://www.calrecycle.ca.gov/listservs/archive/?ListID=10
Pre-2005:
http://www.calrecycle.ca.gov/Electronics/Act2003/Stakeholder/Updates/

Thank you for your interest in shaping California's e-waste management future.

To subscribe to or unsubscribe from the E-Waste listserv or other listservs, please go to http://www.calrecycle.ca.gov/Listservs/. For information on California`s Electronic Waste Recycling Act of 2003 (SB 20) implementation efforts, as well as other relevant developments go to http://www.calrecycle.ca.gov/Electronics/.

CalEPA
California Environmental Protection Agency

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for Environmental Protection

UNIFIED PROGRAM NEWSLETTER FOR DECEMBER 2016

IN THIS ISSUE:

CalEPA- California Environmental Protection Agency

CERS Central Gets an Upgrade

CERS Central will have a NEW look in 2017! Aligning with web design standards set by California Department of Technology, CERS Central is being re-designed to meet the current state website template. While most of the content will remain the same, there will be some new information available, such as CERS Release Plans. Some information may be relocated to different webpages within CERS Central, so if you can't find what you're looking for please let us know. The CERS Central URL will remain the same, www.cers.calepa.ca.gov, it will just have a new look. For questions and additional help, please contact CERS@calepa.ca.gov.

New Regulator Reports

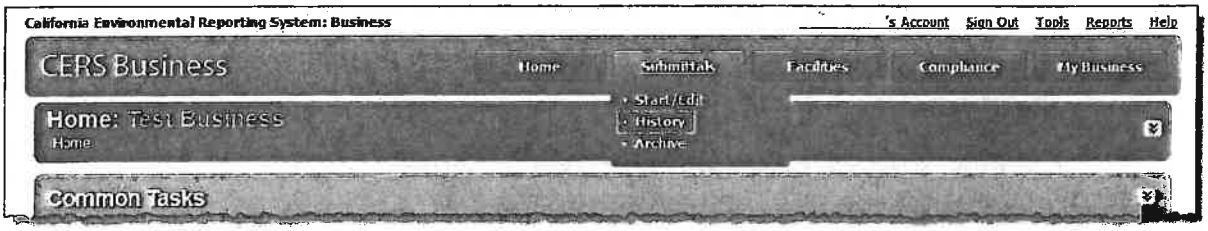
In December 2016, new reports will be released in the Regulator Portal. The new reports are focused on facility inspection and compliance information and are intended to replace several legacy CUPA reports. The following are included in the new reports release package:

- Summary Enforcement Report: This report replaces the legacy "Report 4" CUPAs were required to submit as hard copy until 2013. This report provides a summary of enforcement activities for regulated facilities for each program element.
- Summary Regulated Facilities by Unified Program Element Report: This report replaces some of the facility count portions of the legacy "Report 2" and "Report 3" CUPAs were required to submit as hard copy until 2013. This report summarizes the count of regulate facilities for each program element managed by the selected CUPA.
- Summary Regulated Facility Inspections Report: This report replaces the "Inspection" related portion of the legacy "Report 3" CUPAs were required to submit as hard copy until 2013. This report will display the number of regulated facilities along with the number of routine and other inspections.

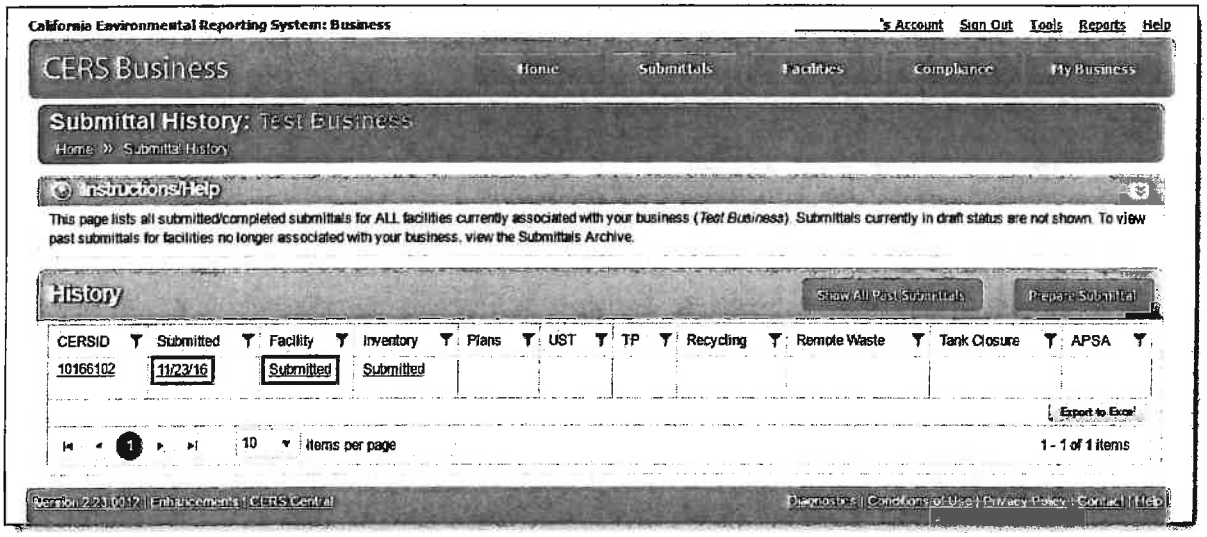
CERS Tips and Tricks
CERS Tips and Tricks includes helpful explanations and resolutions regarding current issues recently received by the CERS Technical Support Team. If you have questions or concerns please email the CERS Technical Support Team at cers@calepa.ca.gov.

How Businesses can view Submittal Element History in CERS

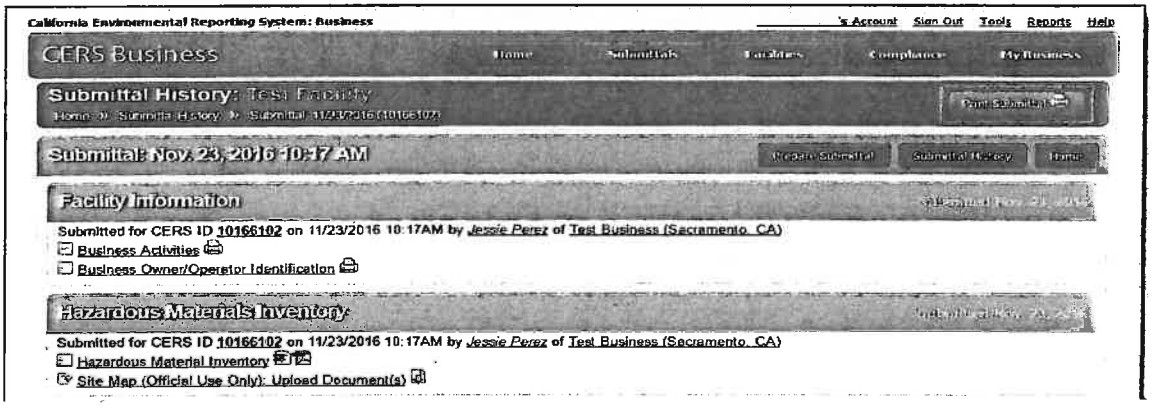
- Sign-in to CERS Business, from the "Submittals" menu bar, select "History" from the drop down menu.



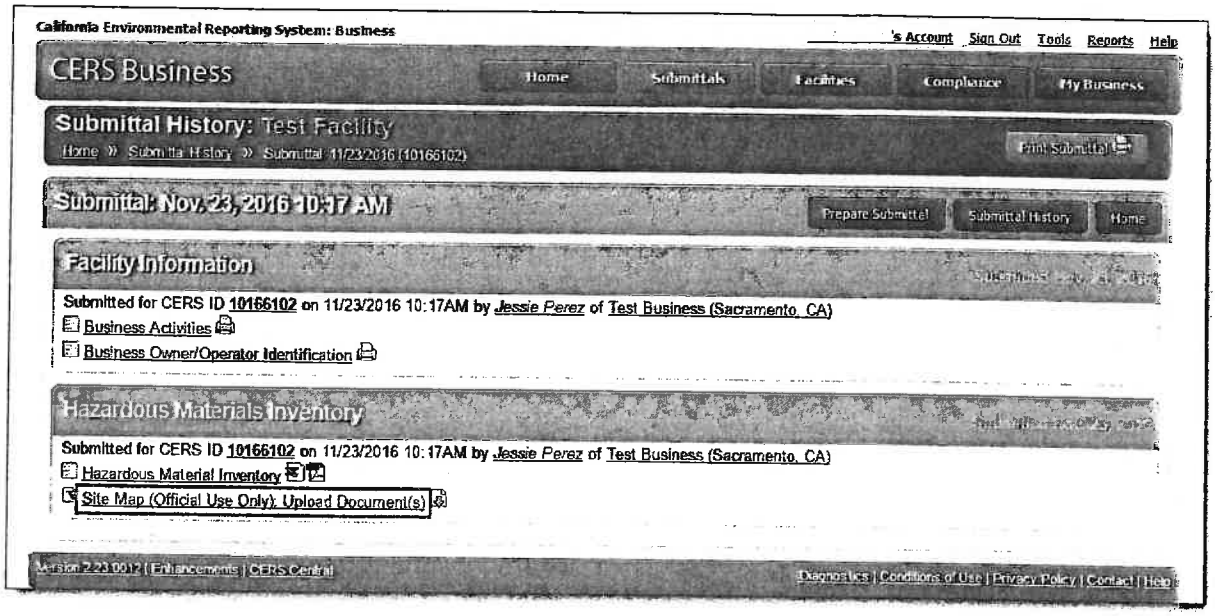
- Select the ***date*** link from the "Submitted" column or select a ***status*** link (i.e. Submitted, Under Review, Not Accepted, Accepted) from any "Submittal" section to view the previous submittal (i.e. Facility, Inventory, Plans, UST, TP, Recycling, Remote Waste, Tank Closure, APSA).



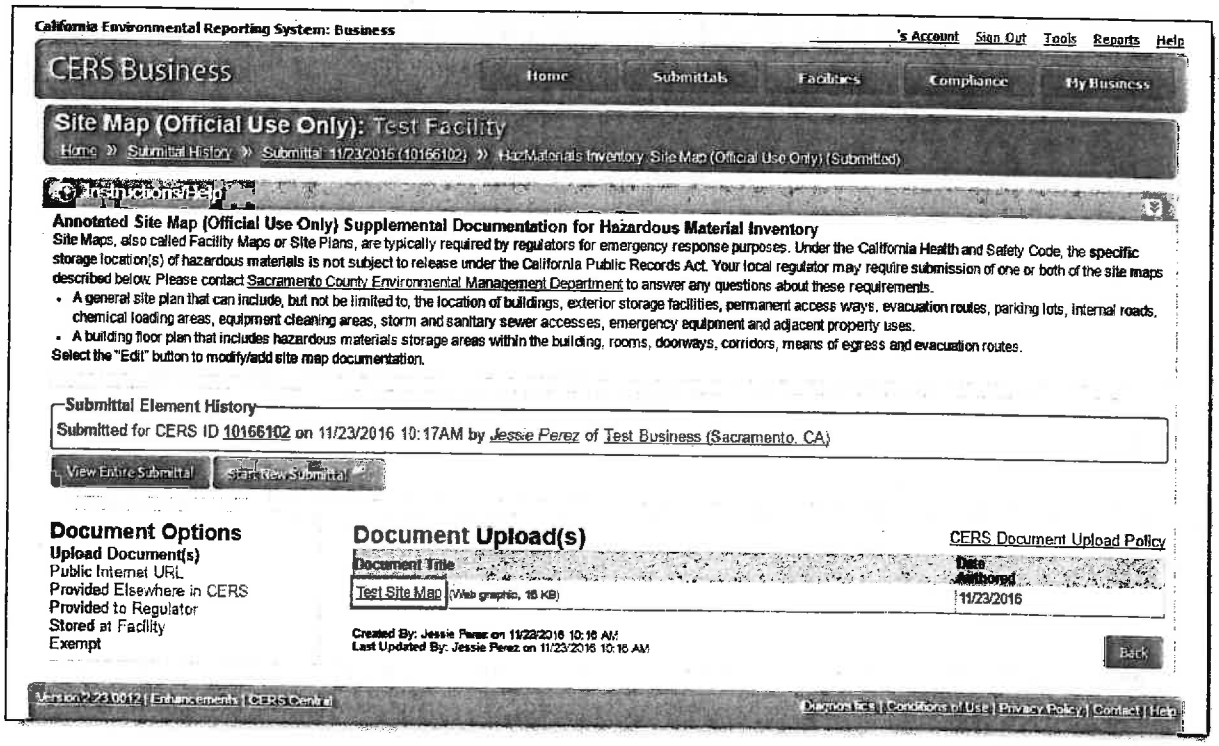
- Select the "Print Submittal" button to create a PDF copy/printable version of the submittal.



- To download a copy of an uploaded document, select the ***upload document(s)*** link.



- Then select the ***document*** link to download a copy of the uploaded document.



State Water Resources Control Board

When to Review Underground Storage Tank (UST) Records
The State Water Resources Control Board (State Water Board) has updated the letter "When to Review Underground Storage Tank Records" to advise Unified Program Agencies (UPAs) when to review UST records submitted via the California Environmental Reporting System or other means. These revisions are intended to address concerns regarding UPA staffing limitations while still protecting public health, safety, and the environment and ensuring that the needs of the regulated community are met.

All facility information is required to be reviewed during the annual inspection [Health and Safety Code, Chapter 6.7, § 25288 (a)]. This makes the deadline for reviewing UST records the same as the annual inspection date, and under no circumstances longer than one year. State Water Board expects UST testing and maintenance records to be reviewed as soon as possible, but no later than 30 days after the submittal date, and all other records to be reviewed for completeness and accuracy (though not necessarily field verified), as soon as possible, but no later than 60 days after the submittal date.

The letter can be found on our website at:
http://waterboards.ca.gov/water_issues/programs/ust/adm_notices/rvw_ust_records.pdf. If you have any questions regarding this letter please contact Ms. Lisa Jensen at (916) 319-0742 or lisa.jensen@waterboards.ca.gov.

Amended UST Regulations Requiring Electronic Reporting Effective January 1, 2017
The proposed electronic reporting amendments to the underground storage tank (UST) regulations have completed the rulemaking process and become effective January 1, 2017. The purpose of the amended regulation is to clarify or make specific existing reporting requirements under the UST program by stating the method by which UST owners or operators and UPAs must submit specified information and documents to the State Water Bard, Regional Water Boards, or the applicable UPA. The proposed amendments address electronic reporting requirements and define which documents and information must be submitted electronically.

The State Water Board will issue more resources later iin December to highlight the changes to the regulations that have occurred. In the meantime, an underline and strikeout copy of the amended sections of the UST regulation and other useful resources related to the rulemaking process are available at: http://www.waterboards.ca.gov/water_issues/programs/ust/adm_notices/elect_rpt_regs/.

For more information, please contact Cory Hootman at Cory.Hootman@waterboards.ca.gov or (916) 341-5668.

CalEPA
California Environmental Protection Agency

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for Environmental Protection

UNIFIED PROGRAM NEWSLETTER FOR FEBRUARY 2017

IN THIS ISSUE:

CalEPA- California Environmental Protection Agency

The CalEPA Regulated Site Portal combines regulated site and facility information

The California Environmental Protection Agency (CalEPA) has implemented a new tool that collects and displays environmental data from many diverse sources. The CalEPA Regulated Site Portal combines data about regulated sites and facilities in California into a single, searchable database and interactive map. Query results can be viewed online, printed as a report, or exported for use in further analytical activities. A site is viewed in a profile page that combines the information from several sources and includes location, regulatory, chemical inventory, inspection, and enforcement information. The profile page also includes live links to the source systems where available.

The portal was created to provide a more holistic view of regulated activities statewide. By combining data from a variety of state and federal databases, the portal provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste management, state and federal cleanups, impacted ground and surface waters, and toxic material release reporting. The portal has information on over 230,000 sites and is updated every night. The portal is available through the CalEPA and Unified Program websites or directly at: https://siteportal.calepa.ca.gov.

CERS Central Gets an Upgrade

CERS Central will have a NEW look in 2017! Aligning with web design standards set by California Department of Technology, CERS Central is being re-designed to meet the current state website template. While most of the content will remain the same, there will be some new information available, such as CERS Release Plans. Some information may be relocated to different webpages

within CERS Central, so if you can't find what you're looking for please let us know. The CERS Central URL will remain the same, www.cers.calepa.ca.gov, it will just have a new look. For questions and additional help, please contact CERS@calepa.ca.gov.

TRAINING: Western States Project "Inspector Safety Course" March 29-30, 2017
Western States Project is offering a course focused on field safety for regulatory inspectors including classroom and hands on components. Participants will learn how to recognize incidents requiring de-escalation and techniques to help deflect and redirect assault in the field through a better understanding of intent, body language and appropriate responses. For additional course information, please see the attached announcement.

This course will be held in Sacramento and is limited to employees of CalEPA, its Boards, Departments and local partner agencies. There is no registration fee for the class. There are no scholarships for travel costs. Class space is limited to 30 students. Applications must be received by 4:00 PM on Tuesday, February 28th. You must be able to attend both days of the training course for the time required. No substitutions are allowed.

To apply, send an email to Jessica Diedesch at Jessica.Diedesch@calepa.ca.gov with all of the following information:

- Name, Title, Agency/Department and Program you work in
- Email address, mailing address and phone number
- Supervisor's name, phone number and email address
- Duties (particularly as they relate to enforcement)

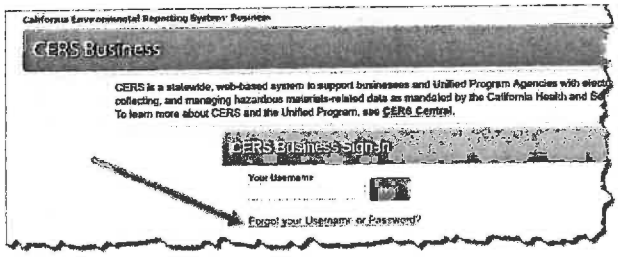
If you are selected to participate, you will be notified via email and receive further instructions.

CERS Tips and Tricks
CERS Tips and Tricks includes helpful explanations and resolutions regarding current issues recently received by the CERS Technical Support Team. If you have questions or concerns please email the CERS Technical Support Team at cers@calepa.ca.gov.

How to reset the password for a CERS user log in account

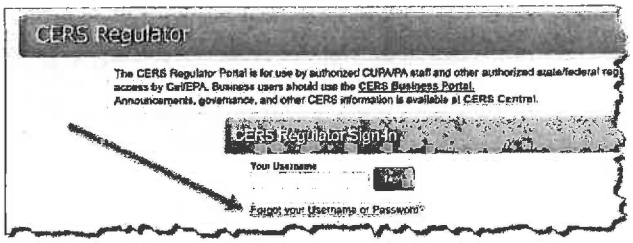
For Business Users

1. Open the web browser and navigate to the "CERS Business Sign In" page.
2. Select the "Business Portal Sign In" link from the top of CERS Central: http://cers.calepa.ca.gov
3. Select the "Forgot your Username or Password?" link.

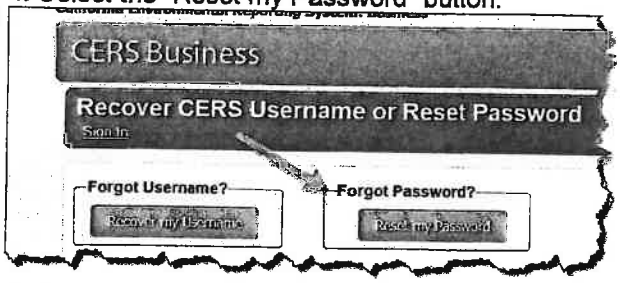


For Regulator Users

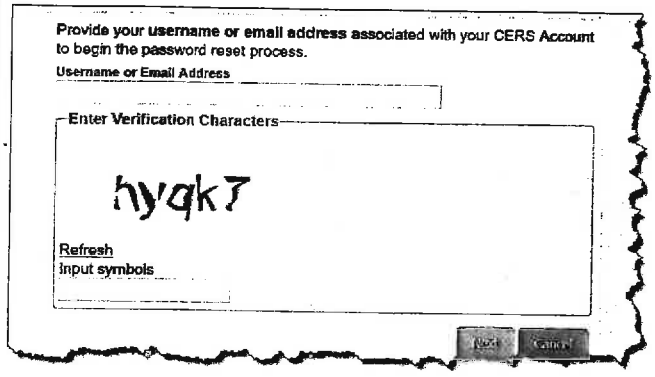
1. Open the web browser and navigate to the "CERS Regulator Sign In" page.
2. Select the "Regulator Portal Sign In" link from the top of CERS Central: http://cers.calepa.ca.gov
3. Select the "Forgot your Username or Password?" link.



4. Select the "Reset my Password" button.



5. Enter your username or email address and the verification characters shown in the image provided. Then, select the "Next" button. A "Password Reset Request" notification message will be sent to your email.



6. Open the link provided in the "Password Reset Request" notification message. If you do not receive the notification message, be sure to check your SPAM email folder. If you are still unable to locate the notification message, send an email to CERS Tech Support (cers@calepa.ca.gov). CERS Tech Support will be able to resend the notification message.

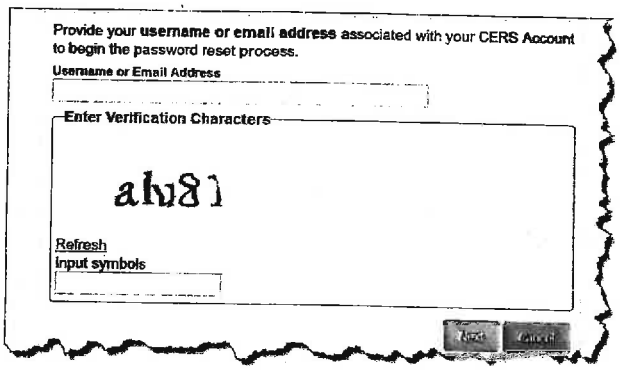
7. Once you can access the link provided in the "Password Reset Request" notification message, you will be able to enter a new CERS user account password. Once you enter a new CERS user account password, select the "Next" button.

8. A confirmation page will inform you that your CERS user account password has been successfully reset.

9. Return to the "CERS Business Sign In" page and sign in with your username and new password.

4. Select the "Reset my Password" button.

5. Enter your username or email address and the verification characters shown in the image provided. Then, select the "Next" button. A "Password Reset Request" notification message will be sent to your email.



6. Open the link provided in the "Password Reset Request" notification message. If you do not receive the notification message, be sure to check your SPAM email folder. If you are still unable to locate the notification message, send an email to CERS Tech Support (cers@calepa.ca.gov). CERS Tech Support will be able to resend the notification message.

7. Once you can access the link provided in the "Password Reset Request" notification message, you will be able to enter a new CERS user account password. Once you enter a new CERS user account password, select the "Next" button.

8. A confirmation page will inform you that your CERS user account password has been successfully reset.

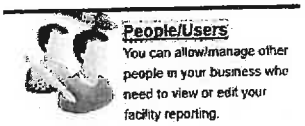
9. Return to the "CERS Business Sign In" page and sign in with your username and new password.

For Business Users: How to Add or Delete Users from a Business in CERS

1. Sign into CERS Central: http://cers.calepa.ca.gov

2. Select the "Business Portal Sign In" link at the top of the page and sign in.

3. From the CERS Business "Home" page, select the "People/Users" icon.



OR

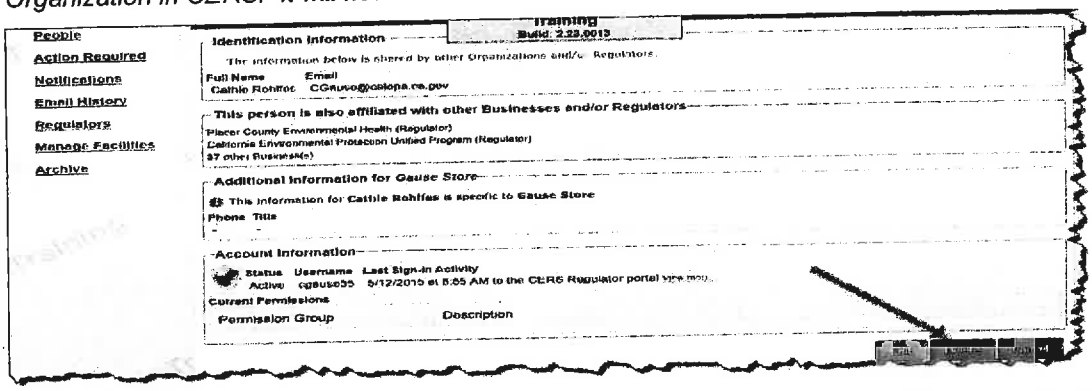
3. From the main navigation menu bar at the top of the page, select "My Business" and then select the "Manage People" link from the sub-menu.

4. Use the "Select" button next to an existing user's name/information to select that business user.

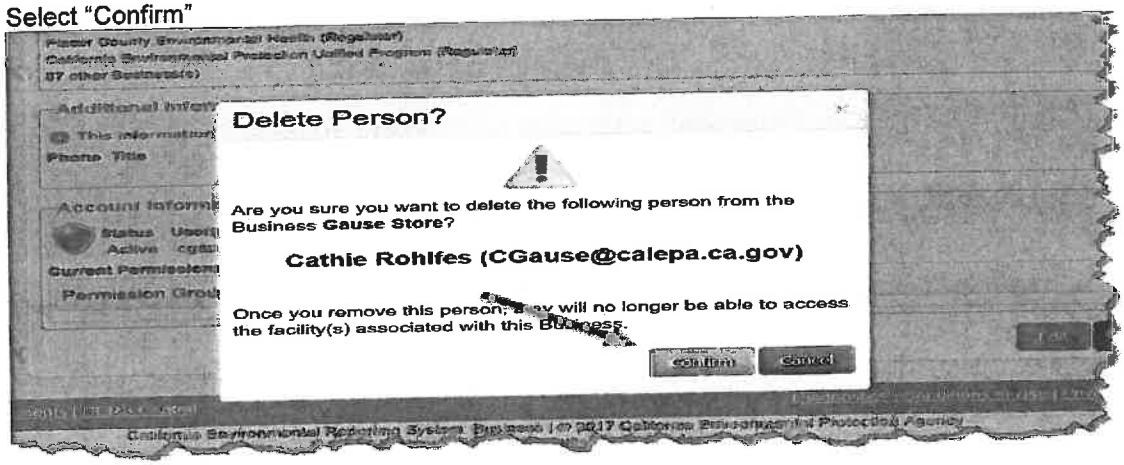
To DELETE a User

Select the "Delete" button to remove a business user from the Business Organization.

Note: Selecting the "Delete" button will only remove the business user's permissions for that Business Organization in CERS. It will not remove the business user's account completely from CERS.

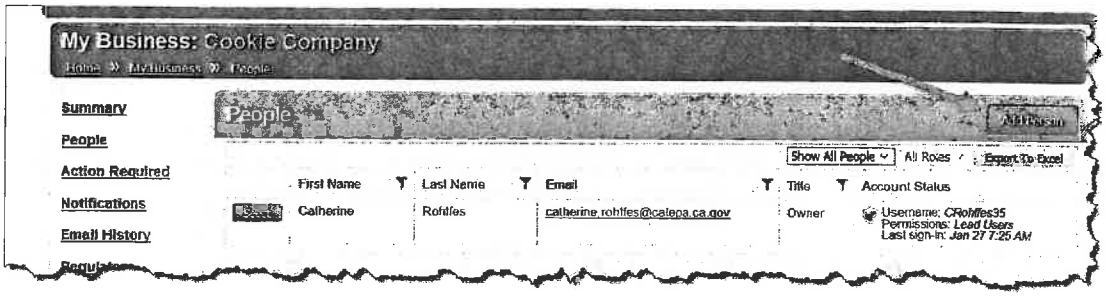


Select "Confirm"

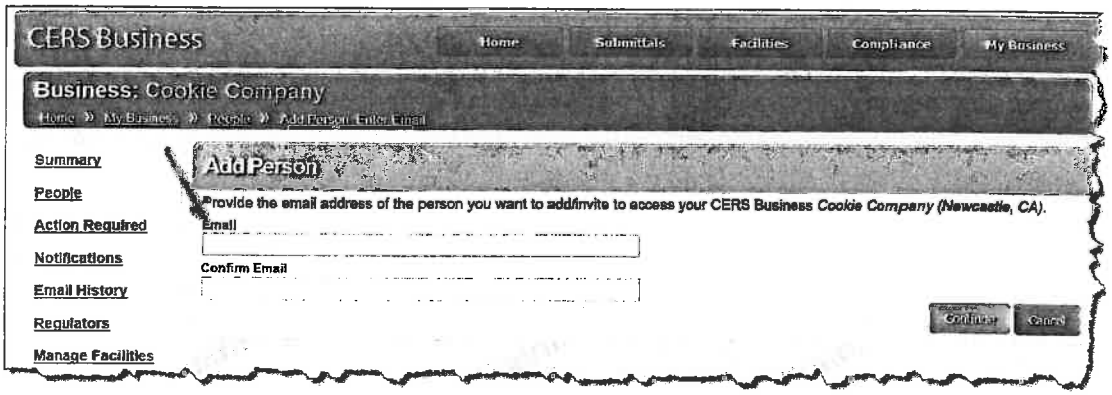


To ADD a User

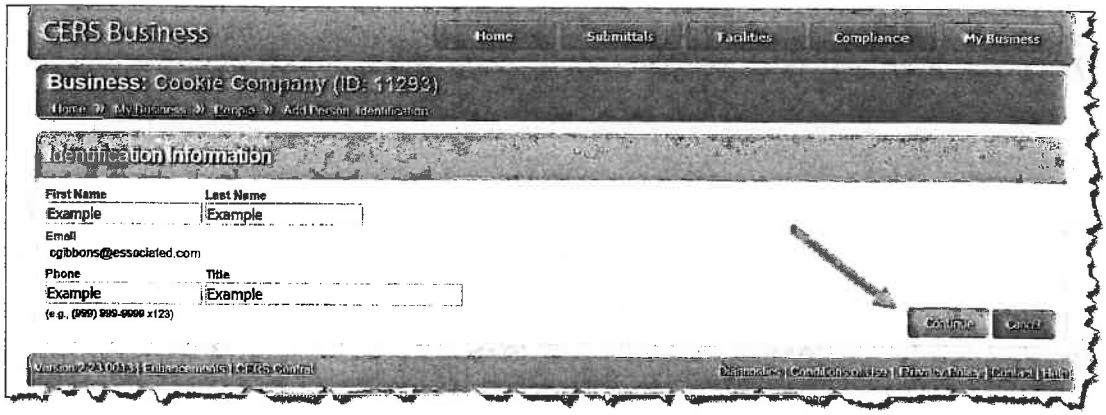
Select the "Add Person" button to add a business user to the Business Organization.



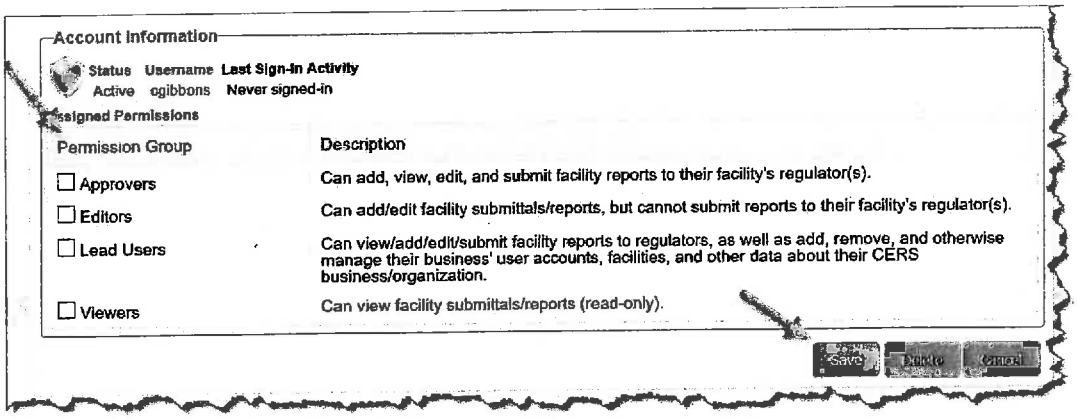
Enter the business user's email address.



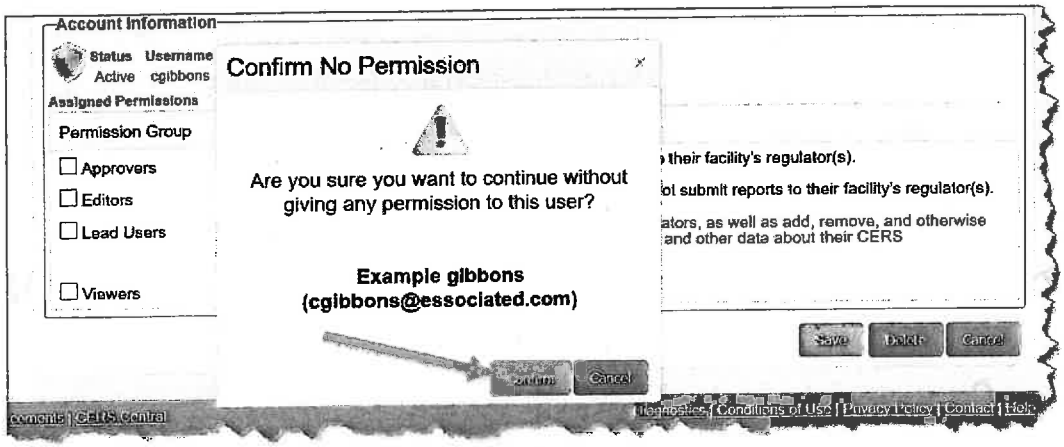
Select "Continue"



Select "Permission Group" and "Save"



Select "Confirm"



Department of Toxic Substances Control

EPA's Final Rule: Hazardous Waste Generator Improvements Rule
The EPA Administrator signed the final Hazardous Waste Generator Improvements Rule on October 28, 2016 and it was published in the *Federal Register* (FR) on November 28, 2016. A link to the *Federal Register* can be found at the following web-site: https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-generator-improvements. This final rule is effective on May 30, 2017.

EPA's Final Rule: Hazardous Waste Export-Import Revisions
The EPA Administrator signed the Hazardous Waste Export-Import Revisions final rule on October 28, 2016 and it was published in the *Federal Register* (FR) on November 28, 2016. With this rule, EPA finalized changes to existing regulations regarding the export and import of hazardous wastes from and into the United States. The final rule establishes mandatory electronic reporting to EPA, and linking the consent to export with the electronic export information submitted to U.S. Customs and Border Protection (CBP). https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-export-import-revisions

State Water Resources Control Board

$14 Million Settlement Reached with British Petroleum for Underground Storage Tank Violations

On November 17, 2016 Attorney General Kamala D. Harris announced a $14 million settlement with British Petroleum (BP) West Coast Products LLC, BP Products North America, Inc., and Atlantic Richfield Company over allegations that the companies violated state laws regarding operating and maintaining motor vehicle underground storage tank (UST) laws. The Attorney General's office and several district attorneys across the state allege that BP failed to properly inspect and maintain underground tanks used to store gasoline for retail sale at approximately 780 gas stations in California over a period of 10 years and violated other hazardous material and hazardous waste laws.

More information about the settlement can be found at https://www.oag.ca.gov/news/press-releases/attorney-general-kamala-d-harris-announces-14-million-settlement-bp-underground. A copy of the complaint and stipulation of judgment is attached to the online version of this release at https://www.oag.ca.gov/news.

For more information, please contact Ms. Laura Fisher at laura.fisher@waterboards.ca.gov or (916) 341-5870.

When to Review UST Records

The State Water Resources Control Board (State Water Board) has updated the correspondence *When to Review Underground Storage Tank Records* to advise Unified Program Agencies (UPAs) when to review UST records submitted via the California Environmental Reporting System (CERS) or other means. These revisions are intended to address concerns regarding UPA staffing limitations while still protecting public health, safety, and the environment and ensuring that the needs of the regulated community are met. All facility information is required to be reviewed during the annual inspection (Health and Safety Code, Chapter 6.7, § 25288 (a)). This makes the deadline for reviewing UST records the same as the annual inspection date, and under no circumstances longer than one year. State Water Board expects; UST testing and maintenance records to be reviewed as soon as possible, but no later than 30 days after the submittal date, and all other records be reviewed for completeness and accuracy, though not necessarily field verified, as soon as possible, but no later than 60 days after the submittal date.

The above referenced correspondence can be found on our website at http://waterboards.ca.gov/water_issues/programs/ust/adm_notices/rvw_ust_records.pdf. For more information, please contact Ms. Lisa Jensen at lisa.jensen@waterbaords.ca.gov or (916) 319-0742.

December 2016 Quarterly UST Status Report

The December 2016 Quarterly UST Status Report was submitted to the U.S. EPA December 20, 2016 and posted to our website at http://www.waterboards.ca.gov/water_issues/programs/ust/adm_notices/updates/index.shtml. The report outlines the status, by UPA, of the effort to enter UST related business and compliance, monitoring, and enforcement data into CERS. The report shows continued progress by many UPAs.

For more information, please contact Mr. Dan Firth at daniel.firth@calepa.ca.gov or (916) 445-5049.

Updated CERS FAQs Posted

The existing CERS frequently asked question (FAQ) "How a changed UST Tank ID should be handled?" has been revised to reflect the appropriate actions a UPA should take when a facility owner/operator has changed an existing tank ID. UPAs should not accept a submittal with a modified tank ID. UPAs should refer to the Business Owner CERS FAQ "Can (or should) I change a UST Tank ID Number?" to assist the business owner in closing the tank and opening a new one with the desired tank ID. The FAQ "Can (or should) I change a UST Tank ID Number?" was also updated to help assist business owners on what to do if they are considering changing a tank ID number.

The link to the updated CERS FAQs can be found at https://cersregulator.calepa.ca.gov/Help and/or http://waterboards.ca.gov/water_issues/programs/ust/cers/faqs.shtml.

For more information, please contact Mr. Dan Firth at daniel.firth@calepa.ca.gov or (916) 445-5049.

"Inspector Safety Course"
March 29-30, 2017
Sacramento, CA

This pilot training is a 1½ day course focused on field safety including classroom and hands on components. Participants will learn how to recognize incidents that require de-escalation. They will learn techniques to help deflect and redirect assault in the field through a better understanding of intent, body language, and appropriate responses. Practical exercises will allow participants to practice appropriate responses to an assault.

The course will discuss situations an inspector could be faced with in the field, and teach techniques to deal with these situations and stay safe. The training will re-touch on the skills used in Verbal Judo, but will also teach someone to recognize when a verbal attack could be escalating to a physical attack. Similar to the Verbal Judo training, this course will include lots of class interaction, discussion and practical exercises.

The target audience for this class is regulatory inspectors. There is no registration fee for the class; no scholarships for travel costs are available.

This training is limited to employees of Cal/EPA, its Boards and Departments and local partner agencies. This training is provided at no charge to attendees as part of our membership in the Western States Project. For more information on the instructor, agenda and the Project, see the back of this flyer. Attendees will be expected to participate in a variety of practical exercises and must be there the entire time.

Class space is limited to 30 students. **Your application must be received by 4:00 p.m. Tuesday February 28th.** In order to apply to be a participant, you must have the approval of your supervisor and be able to attend both days of the training. **Please do not apply unless you are sure you can attend 8am-5pm on Day 1 and 8 am-1pm on Day 2.**

To apply, send an email to Jessica Diedesch at Jessica.Diedesch@calepa.ca.gov with **ALL** of the following information:

- *Name, Title, Agency/Department, and the Program you work in*
- *Email address, mailing address and phone number*
- *Supervisor's name, phone number and email address*
- *Duties (particularly as they relate to enforcement)*

If you are selected to participate, you will be notified via email and receive further instructions at that time. No substitutions are allowed after acceptance.

About the Western States Project

The Western States Project is a consortium of governmental agencies from eleven western US States and 3 Canadian Provinces. The Project's membership is composed of representatives from those agencies responsible for environmental regulatory activities, civil enforcement, and criminal investigation/prosecution. The Project exists for the express purpose of supporting and enhancing the environmental enforcement programs of its member agencies, primarily through trainings and information research. The Project is funded by a combination of contributions received from its members. Similar Projects exist in the Northeast, Midwest, and the South.

About the instructor

The instructor for this course is Michael Freeman. Michael Freeman is a Criminal Investigator with the Oklahoma Department of Environmental Quality. Mr. Freeman graduated from the University of Illinois at Urbana-Champaign in 1993 with a bachelor's degree in Psychology. He was hired by the DEQ in September of 1994 as a regulatory inspector in the Hazardous Waste program. Mr. Freeman helped build the agency's criminal investigation program shortly thereafter, in addition to assisting with the formation of the Oklahoma Interagency Environmental Crimes Task Force. Mr. Freeman's investigations have resulted in a variety of successful state and federal criminal prosecutions, ranging from minor infractions such as waste tire violations to major cases involving illegal disposal of hazardous waste, bribery, and conspiracy to defraud the United States Government.

CLASS AGENDA

Day One

8:00-8:30 Registration
8:30 – 11:30
SAFER Concept (Staying safe in the field)
AWARENESS: Use of verbal defense
1. Recognition
2. Types of verbal assault
3. Anatomy of a verbal assault
RESPONSE: Easy techniques to make your life in the field more productive
1. Deflection
2. Redirection
3. Body Language
11:30 – 12:30 LUNCH
12:30 – 2:30 Practical I (Techniques used in de-escalation)
2:30 – 2:45 Break
2:45 - 4:30 Laws governing Physical Assault

Day Two

8:00 – 12:30
Workplace Violence Prevention
"Real Life" Scenarios
Physical Assault
1. Threat recognition and avoidance
2. Self–defense (How to escape safely)
3. Practical II (Simple self-defense techniques)

CalEPA
California Environmental Protection Agency

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for Environmental Protection

UNIFIED PROGRAM NEWSLETTER FOR MARCH 2017

IN THIS ISSUE:

CalEPA- California Environmental Protection Agency

FREE TRAINING: Rail Safety & Hazmat Emergency Response, March 20th and 21st
Transportation Community Awareness and Emergency Response (Transcaer) is hosting two ***free*** 1-day Rail Safety and Hazmat Emergency Response training sessions in Richmond, CA. Each day, the same classroom sessions and field exercises will be offered. Learn about railroad operations, hazardous material safety and emergency response. The physical and chemical properties of toxic gases (chloine and hygrogen chloride), corrosive liquids (hydrochloric acid and caustic soda) and flammable gases (vinyl chloride) as well as transportation methods, health effects of acute exposure, proper selection of personal protective equipment, first aid and medical treatment will also be topics of presentation. For additional information, please see the attached flyer.
Pre-registration is strongly recommended: www.Transcaer.com

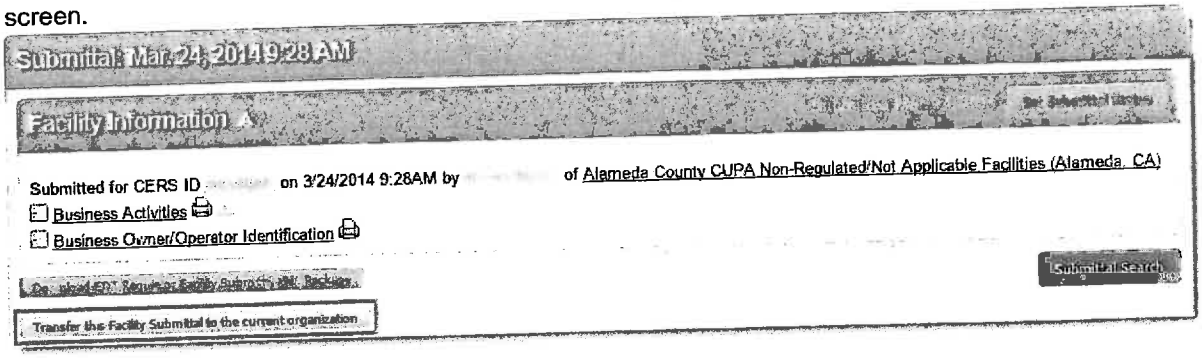
TRAINING: World Food Logistics Institute (WFLO)- Ammonia Refrigeration, March 22nd
The WFLO, in conjunction with the International institute of Ammonia Refrigeration (IIAR) and the United States Environmental Protection Agency are sponsoring an education session on ammonia refrigeration. The 3-hour session will be held at the UCLA Luskin Conference Center in Los Angeles, CA from 9:00 a.m. – noon on March 22nd and is intended for interested environmental program agency regulators. Topics will include industrial refrigeration, ammonia safety and warehouse operations. To attend, please contact Lowell Randel at lrandel@gcca.org.

2017 CUPA Conference Training Session Presentations and Distributed Information
The California Certified Unified Program Agency (CUPA) Forum Board, in association with the California Environmental Protection Agency, its Boards, Offices and Departments, the Office of the State Fire Marshall and the Office of Emergency Services held the 19th Annual Unified Program Conference on February 6th – 9th, 2017 in San Diego, CA. Training session presentations and other information distributed at the Conference are available online at the California CUPA Forum Training Center. Login at https://calcupa.org/ to access training session presentations and other distributed information.

CERS Tips and Tricks
CERS Tips and Tricks includes helpful explanations and resolutions regarding current issues recently received by the CERS Technical Support Team. If you have questions or concerns please email the CERS Technical Support Team at cers@calepa.ca.gov.

Can Archived CERS Submittals be transferred to a current Submittal History?
Yes. When a facility that has previously reported in CERS is transferred to a new business organization, due to an owner or operator change, the submittal history from the previous business is moved to the "Archived Submittal History." The submittals within the "Archived Submittal History" of the previous business can be transferred to the current "Submittal History" of the new active business by the local Certified Unified Program Agency (CUPA). Here's how:

1. The local regulator user will select the "Facilities" button from the menu bar.
2. Enter the facility information into "Search" and select the "CERS ID" button to open the facility record.
3. Select the "Submittals" link from the menu on the left-hand side of the page.
4. Open the archived submittal by selecting the "Submitted date/time" link or the "Submittal Element Status" link.
5. Select "Transfer the Facility Submittal to the Current Organization" button at the bottom of the screen.



Department of Toxic Substances Control

DTSC Fee Summary Document
The Department of Toxic Substances Control (DTSC) is the lead agency in California for hazardous waste management. DTSC enforces the state's Hazardous Waste Control laws, issues permits to hazardous waste facilities, and mitigates contaminated hazardous waste sites. This document summarized the fees charged by DTSC. Many of the fees descried in this document are collected for DTSC by the State Board of Equalization (BOE). In addition to the fees described in this document, DTSC also received revenue from the United States (U.S.) Environmental Protection Agency (EPA), the Department of Defense, fines and penalties collected for violations of the Hazardous Waste Control laws, reimbursement agreements, and cost recoveries from responsible parties.

The purpose of this document is to conveniently summarize state law as it relates to fees charged by DTSC or collected by BOE for DTSC. The DTSC Fee Summary document is available here: https://www.dtsc.da.gov/IDMainifest/upload/Fee_Summary.pdf.

New Regulations for Copper-Free Brake Pads Sold in California
Regulations for copper-free brake pads became effective on January 1, 2017. Please refer to the following link for regulations and compliance information: https://www.dtsc.ca.gov/PressRoom/upload/News_Release_T-22-16.pdf.

Calculating Inflation Factor for PBR/CA Facilities
View the Bureau of Economic Analysis Implicit Price Deflators for Gross Domestic Product in Table 1.1.9 by going to https://www.bea.gov/itable/error_NIPA.cfm and selecting the link "Begin using the data..." Then, select "Section 1 – Domestic Product and Income" and choose the link for "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product (A) (Q)." The 2017 inflation factor for PBR/CA facilities can be calculated by dividing the 3rd quarter price deflator of 2016 by the 3rd quarter price deflator of 2015, each of which are located on line 27 of Table 1.1.9. The 2017 inflation factor is 1.013, derived from 111.729 divided by 110.344.

State Water Resources Control Board

Informational Workshop on Revising California Underground Storage Tank Regulations to Comply with Federal Underground Storage tank Regulations
The United States Environmental Protection Agency (U.S. EPA) issued revised Federal underground storage tank (UST) regulations on July 15, 2015. State Water Resources Control Board (State Water Board) staff have drafted revised language in chapter 16 of title 23 of the California Code of Regulations to reflect current requirements imposed by the Federal UST regulations. Two workshops have been scheduled to share and discuss the initial draft language to receive feedback from various stakeholders before pursuing the formal rulemaking process. This workshop will cover the revised text and associate the requirements with the Federal UST regulations. Comments, concerns, and suggestions discussed during these workshops willb e noted so that State Water Board staff can better understand concerns between various stakeholders. Please find the dates, times and locations of the workshops below. No RSVP is required to attend.

Monday, March 13, 2017 12:00 – 3:00 PM Joe Serna Jr. CalEPA Building Byron Sher Auditorium, Second Floor 1001 I Street Sacramento, CA 95814	Tuesday, March 28, 2017 9:00 AM – 12:00 PM Junipero Serra Building Carmel Room, First Floor 320 West 4th Street, Suite 100 Los Angeles, CA 90013

Please direct all questions regarding this informational workshop to Amanda Flores by telephone at (916) 341-5860, or by email at Amanda.flores@waterboards.ca.gov.

U.S. EPA Underground Storage Tank Flood Guide
In consideration of the current flood scenarios playing out in California, the State Water Resources Control Board underground Storage Tank Leak Prevention Program would like to remind Unified Program Agencies, owners/operators, maintenance personnel, and other stakeholders of the U.S. EPA *Underground Storage Tank Flood Guide*.

The U.S. EPA *Underground Storage Tank Flood Guide* provides simple guidelines and useful information in the event of a threatened or actual flood. The guide provides information about preparing for a flood, important actions after the disaster strikes, and information on financial assistance. It consolidates information from various federal, state, nongovernmental, and UST industry resources. This guide will help prepare for, prevent, or lessen the catastrophic effects and environmental harm that could occur because of flooded SUT systems, as well as help return USTs to service as soon as possible.

The U.S. EPA *Underground Storage Tank Flood Guide* is available at:
http://waterboards.ca.gov/water_issues/programs/ust/tech_notices/ust_flood_guide.pdf.

For more information, please contact Mr. Cory Hootman at cory.hootman@waterboards.ca.gov or (916) 341-5668 or Mr. Tom Henderson at tom.henderson@waterboards.ca.gov or (916) 319-9128.

CERS Information Live on Geotracker

The link between Geotracker and CERS is now live. The Geotracker public portal will depict the permitted UST facility address and the permitting agency. The Geotracker regulator portal will show additional information, including the CERS ID number, the number of existing USTs and the most recent UST inspection date. This information will be updated on a weekly basis. The Geotracker webpage is located at https://geotracker.waterboards.ca.gov.

For more information, please contact Mr. Matthew Cohen at matthew.cohen@waterboards.ca.gov or (916) 341-5751.

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RAIL SAFETY & HAZMAT EMERGENCY RESPONSE TRAINING

FEATURED HAZMAT: **Toxic Gases (Chlorine & Hydrogen Chloride); Corrosive Liquids (Hydrochloric Acid & Caustic Soda) & Flammable Gases (Vinyl Chloride)**

TRAINING INCLUDES:

CLASSROOM SESSIONS:

Railroad 101: Learn about railroad operations, hazards and safety rules. Rail hazmat safety and emergency response procedures are reviewed.

Hazmat Safety & Emergency Response: Learn about the physical and chemical properties of toxic gases (chlorine & hydrogen chloride); corrosive liquids (hydrochloric acid & caustic soda) and flammable gases (vinyl chloride). Transportation methods, health effects of acute exposure, proper selection of personal protective equipment, first aid, and medical treatment measures are reviewed.

FIELD EXERCISES:

Understanding Tank Cars: Learn about the anatomy of general service and pressure tank cars including protective housings; valves and fittings; truck components; safety appliances; jacket, shell and head construction; placards and markings.

A-Kit Workshop: Learn about potential leak scenarios for chlorine 150-lb cylinders and how to mitigate those leaks. Install new and old versions of the Emergency Kit "A" on chlorine cylinders.

B-Kit Workshop: Learn about potential leak scenarios for chlorine ton containers and how to mitigate those leaks. Install new and old versions of the Emergency Kit "B" on ton container training devices.

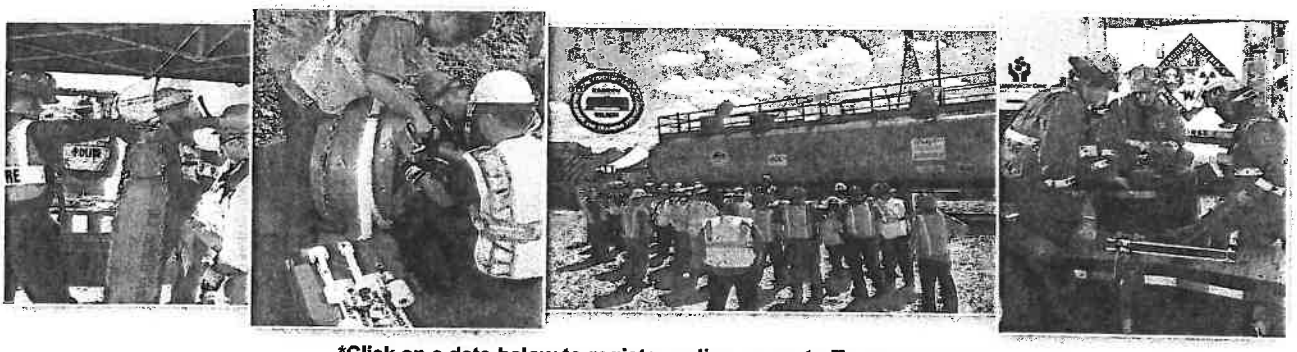
C-Kit Workshop: Learn about potential leak scenarios for chlorine rail tank car valves and fittings and how to mitigate those leaks. Install the Emergency Kit 'C' on chlorine tank car valve arrangements for standard and next generation (dual valve system) assemblies.

Midland ERK Workshop: Learn about potential leak scenarios for flammable gas tank car valves and fittings and how to mitigate those leaks. Install the Midland Emergency Response Kit on a typical flammable gas assembly.

Kelso ERK Workshop: Learn about potential leak scenarios for compressed gas tank car valves and fittings and how to mitigate those leaks. Install the Kelso response kit on a typical compressed gas assembly.

Magnetic Patch Workshop: Participants are able to practice installing the Magnetic Patch on the side of a tank car. This is a standard method of mitigating a hazardous materials leak on the side of a railcar. The leak is simulated using water.

Required Safety Gear: **Hard hat, gloves, safety glasses, long pants & sturdy leather work boots with a defined heel & safety toe.**



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Please contact RaeAna Eiley at The Chlorine Institute for additional information: (703) 894– 4117 or reiley@cl2.com

Pre-Registration Strongly Recommended!

Agenda Item IX

ARTICLES OF INTEREST

AGRICULTURE JANUARY 10, 2017 7:02 PM

EPA honors Crystal Creamery for reducing waste from Modesto plant

1 of 3

BY JOHN HOLLAND
jholland@modbee.com

Crystal Creamery received a national award Tuesday for how it handles the sludge left after making ice cream, yogurt and other dairy foods.

The U.S. Environmental Protection Agency honored the Modesto-based company for turning the waste into electricity and other byproducts. It presented the annual Food Recovery Challenge National Innovation Award, part of a federal effort to reduce food waste estimated at 37 million tons a year.

The sludge is collected at the main Crystal plant on Kansas Avenue and trucked to Fiscalini Cheese Co., west of Salida. There it goes into a digester that also handles manure from Fiscalini's dairy cattle. Bacteria turn the waste into a gas that is burned to produce power. The digester also produces fertilizer for feed crops and bedding for cattle.

"You're saving money, you're putting less pressure on infrastructure and then, most importantly, you're protecting the environment," said Zoe Heller, manager of the Zero Waste Section at the EPA regional office in San Francisco.

Crystal already has cut its overall waste by 98 percent through reuse, recycling, composting and other efforts. It aims to get to zero by 2020, said Tiffany Hooser, sustainability and environmental program manager for the company. This includes five dairy farms that it owns and another 18 that supply milk under contract.

The federal program on food waste starts with crops left behind on farms and moves through processing and grocery stores and finally to kitchens.

John Holland: 209-578-2385

RELATED CONTENT

- EPA honors Crystal Creamery

LOCAL DECEMBER 6, 2016 3:03 PM

Supervisors unanimously approve trash fee increases

BY MARK EVAN SMITH
msmith@sierrastar.com

Trash collection customers in unincorporated areas of Madera County will likely see a higher monthly bill after the Board of Supervisors, on Tuesday, unanimously approved increased fees at county landfills, including for contracted haulers Emadco Disposal Service, Inc. and Redrock Environmental Group.

Effective Jan. 1, fees for contracted haulers to Fairmead Landfill will increase from $22.28 to $40 per ton, while self-hauling fees for non-contracted customers at the North Fork Transfer Station will also increase from $45.58 to $67.12 per ton.

The increases are expected to generate some $887,000 in additional revenue a year. That will bring the county out of the financial red, officials said, due to growing operating costs and the expense of $1 million in attorney's fees on a lawsuit with former trash haulers.

The revenue is also intended to reach goals of a $1.5 million solid waste reserve, adequately fund nearly $6 million in landfill capital and operating costs, and pre-fund a landfill liner construction project in five years, according to documents filed by solid waste consultant group Gershman, Brickner & Bratton, Inc (GBB).

"Madera County residents benefited from the lower rates for a number of years," said John Carlton, Senior Vice President of GBB. "So really, now there's a hole, an economic hole that needs to be filled. This is the way to do it that you have the most control over, that I think are still within the bounds of reason."

Emadco is contracted to collect trash for unincorporated areas in Eastern Madera County, while Redrock is contracted for Valley locations such as the Madera Ranchos.

The fee increase will raise customer costs about 12% - almost $3 a month - but won't affect residents in the cities of Madera, Chowchilla, or Fresno, which transports some waste to the Fairmead Landfill.

Dan Rule, director of the Oakhurst Area Chamber of Commerce, told the board the chamber thinks that's unfair to many county residents and businesses.

"We think it's unfair that the unincorporated areas pay the burden of these expenses that are not completely clear," said Rule, who requested an audit of the county's waste hauling operations. "We do not think this is fair or equitable. We think there needs to be more homework done."

Carlton said the increases don't rule out the possibility of future ideas to cut costs or improve efficiency in the county's waste hauling practices, which could lower bills for customers.

Fairmead Landfill is located near Avenue 22 and Highway 99 north of the City of Madera, while the North Fork Transfer Station is located off Malum Ridge Road shortly north of the intersection with Road 274 and 225.

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RESOURCE RECYCLING

Study explores what works — and what doesn't do much — in curbside recycling (http://resource-recycling.com/recycling/2016/12/12/study-explores-what-works-and-what-doesnt-do-much-in-curbside-recycling/)

Posted on December 12, 2016 (http://resource-recycling.com/recycling/2016/12/12/study-explores-what-works-and-what-doesnt-do-much-in-curbside-recycling/)

by Jared Paben (http://resource-recycling.com/recycling/author/jared-paben/)

A report from The Recycling Partnership and U.S. EPA lays bare the reality there is no silver bullet for creating a stellar curbside recycling program. That being said, researchers did paint a detailed portrait of what successful programs look like.

"There was not one individual attribute that indicates success, but several that affect performance and trends became evident," according to the report. "The majority of the highest-performing programs collect material single-stream, collect curbside recycling automatically, use an automated cart-based system, and have public engagement that influences curbside recycling to occur in their community."

The 2016 State of Curbside Report (https://therecyclingpartnership.app.box.com/s/i0wvano7hi3dr3ivqxv689y4zzo583l2), released Tuesday, Dec. 13, was written by the nonprofit group The Recycling Partnership with grant funding from the U.S. EPA. The project's lead researcher was Cody Marshall of The Recycling Partnership (see the related question-and-answer piece (http://resource-recycling.com/recycling/2016/12/12/qa-takeaways-from-the-state-of-curbside-report/) with Marshall). He and other experts gathered data on recycling programs in 465 cities across the U.S., making sure to include the 250 most-populous cities and each state capital. In all, the communities represent 29 percent of the homes in the U.S. that could potentially receive curbside recycling service.

Their report points to steps communities can take that are likely to significantly increase recycling weights. But the report also demonstrates that other oft-discussed strategies, such as collecting recycling on a weekly basis, may not boost recycling weights all that much.

Factors driving diversion

The research found the 465 incorporated communities collected an average of 357 pounds per household per year (note: This refers to all households in the studied jurisdictions, not just the households that actively recycle).

More than 8 in 10 of the communities utilized single-stream collection, and more than half of them collected material every week.

To find factors potentially driving higher recycling weights, researchers examined 20 percent of the top-performing communities, or those collecting at least 400 pounds per household per year.

More details on what they found:

One bigger stream: Among top performers studied, 96 percent utilized single-stream collection. Across the country, single-stream programs collected an average of 364 pounds per household annually. In contrast, communities that collect fibers and containers separate in dual streams averaged 277 pounds per households.

Cart before the bin: Among the top-performers, 83 percent use carts instead of bins. Nationwide, carts collected an average of 389 pounds per household, compared to 271 pounds for bins.

If you provide it, they will come: Among the top-performers, 93 percent provide recycling containers and service to residents automatically, without requiring the household to take any action. Across the country, communities that did this collected 374 pounds per household, compared to 264 pounds per household for those requiring residents to opt-in to service.

Key role of government: Among the top-performers, 100 percent took some action to incentivize recycling. One example is creating licensing agreements or franchises that bundle garbage and recycling service together, regardless of whether residents have to opt-in to garbage service. Across the country, programs taking "public actions" to incentivize recycling collected 359 pounds per household, compared to 247 pounds for those that didn't.

Less important factors

The report found other attributes that may not have as significant of an impact as some may guess.

Resource Recycling Search

in (https://www.linkedin.com/company/resourc recycling-inc-)

(http://rrconference.com/)

The latest recycling industry news

Q&A: Takeaways from the State of Curbside Report (http://resource-recycling.com/recycling/2016/12/12/qa-takeaways-from-the-state-of-curbside-report/)

The State of Curbside Recycling Report offered one of the most comprehensive assessments to date of the factors affecting municipal collection. The lead researcher for the study discusses some of the statistics and surprises (see related story).

Solutions for cleaning up glass at the MRF (http://resource-recycling.com/recycling/2016/12/12/solutio for-cleaning-up-glass-at-the-mrf/)

Resource Management Companies (RMC) wasn't chomping at the bit to get into the glass beneficiation business. It was more or less forced to by the realities of glass collections and markets.

Los Angeles adopts commercial franchise recycling (http://resource-recycling.com/recycling/2016/12/12/los-angeles-adopts-commercial-franchise-recycling/)

The City of Los Angeles has approved commercial franchise hauling zones after more than two years of planning. Proponents say the change puts the nation's second largest city on the path to achieving a 90 percent diversion rate by 2025.

Green Mountain State proves it's green (http://resource-recycling.com/recycling/2016/12/12/green-mountain-state-proves-its-green/)

The state of Vermont is celebrating, after declaring its universal recycling law successful. Act 148 includes a disposal ban on certain materials and requires universal recycling access.

Atlanta to run trial on Rubicon's route and recycling software (http://resource-recycling.com/recycling/2016/12/12/atlanta to-run-trial-on-rubicons-route-and-recycling-software/)

Waste and recycling technology company Rubicon Global will provide its software capabilities to the City of Atlanta free of charge for six months.

For example, researchers found that jurisdictions with high landfill tip fees tended to collect more recyclable materials than those with lower fees, but it wasn't as big of a spread as they expected. Jurisdictions with tip fees in excess of $40 a ton collected about 380 pounds of per household per year. Those with tip fees less than $40 collected 340 pounds per household.

"This was largely due to a number of municipalities in high-tip fee environments with low recovery rates, as well as municipalities in low tip fee environments having high recovery rates," according to the report. "More detailed research on this specific topic is needed to draw further conclusions."

Additionally, picking up recycling weekly, as opposed to once every other week, resulted in only a slight increase in collection weights. Communities collecting weekly brought in 366 pounds per household, and those collecting every other week brought in 362 pounds.

Lastly, who does the collecting doesn't seem to matter too much: Researchers didn't find a major weight difference between communities where private workers collect recyclable materials and those where municipal workers collect them, they wrote. Communities with private haulers averaged 371 pounds per household, while those with public haulers averaged 345 pounds per household.

"There appears to be no correlation to effective collection of recyclables and whether the material was collected by private or public entities," according to the report.

(https://go.ssiworld.com/plastics/)

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In other news: Dec. 12, 2016 (http://resource-recycling.com/recycling/2016/12/12/in-other-news-dec-12-2016/)

A Vermont materials recovery facility shuts down, and Ikea announces efforts to boost its already high recycling rate.

What will Trump's pick for EPA mean for recycling? (http://resource-recycling.com/recycling/2016/12/12/what-will-trumps-pick-for-epa-mean-for-recycling/)

After several weeks spent considering a handful of candidates, President-elect Donald Trump has chosen Oklahoma Attorney General Scott Pruitt as his nominee to head the Environmental Protection Agency.

See more Resource Recycling headlines (http://resource-recycling.com/recycling/category/news/)

BHS What's next.
(http://www.bulkhandlingsystems.com/mat
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MACHINEX Experience Results
(http://www.machinexrecycling.com/en.htn

nrt In-Flight Sorting
(http://www.nrtsorters.com/)

DEDICATED Harris
(http://www.harrisequip.com/)

VAN DYK recycling solutions
(http://vdrs.com/)

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Landfills

Salinas Valley Solid Waste Authority: A Future Without Landfills

December 1, 2016

With a mission to eliminate the need for landfills through an integrated system of innovative waste recovery and reduction technologies, education and customer service, the Salinas Valley Solid Waste Authority has remained

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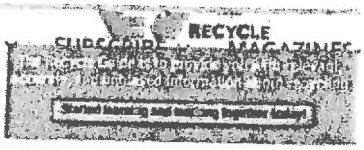
committed to developing renewable energy projects and diverting the incoming waste streams.



The Salinas Valley Solid Waste Authority, aka Salinas Valley Recycles (SVR), is a Joint Powers Agency (JPA) made up of six local governments located in the eastern half of Monterey County, CA. The JPA was formed in 1997 and is responsible for providing secure long-term solid waste disposal and resource recovery services to all of its members in an environmentally sound and cost-effective manner. To accomplish this goal, SVR currently owns four landfills (one open and three closed) and two transfer stations, and oversees the operation of these facilities across a 2,400 square mile service area. SVR is also responsible for overseeing materials recovery processing operations and planning, and future landfill siting or expansion to meet the area's long-term solid waste disposal needs. However, their mission is to "... *eliminate the need for landfills through an integrated system of waste reduction, reuse, recycling, innovative technologies, customer service and education, advanced waste recovery technologies and education.*"

Today, the agency employs more than 50 employees and operates one of only two open and active landfills in the County of Monterey. SVR serves the following areas in Monterey County: the eastern portion of the unincorporated county and the cities of Gonzales, Greenfield, King City, Salinas and Soledad. In FY 2015-16, 240,000 tons of waste was received at their collective facilities with 59,000 tons recovered or reused and 182,000 landfilled at the Johnson Canyon Landfill just outside of Gonzales. Each of the three SVR facilities operates material recovery centers for free public drop off of source-separated recyclables including metal, plastics, cardboard, paper, glass, e-waste, textiles and mattresses. Each facility also accepts green waste and wood waste which is processed at the landfill and is either composted or turned into wood chips, mulch and soil amendment for use in garden or landscape projects. SVR's Sun Street Transfer Station in Salinas operates a permanent Household Hazardous Waste (HHW) Facility, which is free for residents to drop off chemicals, paints, fertilizers, batteries and other toxic chemicals or materials. The Johnson Canyon Landfill and Jolon Road Transfer Station in King City both host free drop-off

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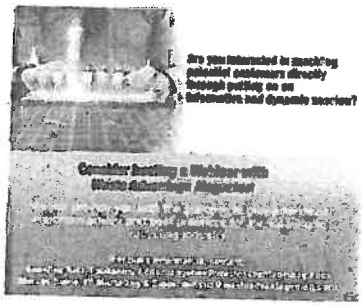

Long Term Rental Plans

centers for antifreeze, paint, oil and batteries (ABOP) materials, and conducts periodic one-day HHW collection events in the more rural areas it serves.

Financial Planning and Program Funding

SVR has remained committed to ending reliance on landfill tipping fees to fund programs outside of landfill operations. Often referred to as the "Financial Death Spiral" in the solid waste business, as the industry gets better at diverting waste from the landfill, SVR reduces their historic revenue streams based on burying waste that have subsidized waste diversion efforts. "SVR now collects fees separately from the landfill operations to fund our non-landfill based programs such as education, recycling center operations, HHW collections, and C&D and organics processing. These are all now stand-alone, financially stable programs funded thorough California "AB 939" fees that are proportionally allocated to each member agency's franchise hauler. These programs are no longer dependent on subsidization from landfill disposal tipping fees. Our long-range goals is to continue to self-fund all non-landfill programs so we are in a better financial position to operate an integrated system that anticipates ongoing declines in landfill tipping fees and that can better weather economic downturns," says Ray Hendricks, Finance Manager.

SVR has also taken advantage of lower interest rates and refinanced the agency's original start-up bonds, creating savings that have been used to fund deferred capital investments and repairs, and reduce agency costs.

Overall, SVR has seen some significant upticks in both tonnages of waste and recyclables over the last several years, and the resulting improved revenues have allowed them to increase their reserves and prepare for the next rainy day downturn in the economy.

Internal Operations

Training

SVR provides extensive training to prepare employees to succeed and advance within the agency. It all starts with the "Buddy Program" that pairs up all new employees with a seasoned employee to help them integrate more quickly and better into the work force community and learn about the agency's culture and process. "We offer a 'Mentor Program' matching up a senior manager/supervisor with an employee outside their department to offer career advice, counseling and guidance to employees who want to both excel at their current job and prepare for advancement in the agency," says Rose Gill, Human Resources/Organizational Development Manager. "We also provide 'cross-training' for employees interested in moving up or laterally in the agency by providing training opportunities in work areas or assisting existing staff outside their normal work environment." The goal is to prepare employees for their next job, here or with another employer, and to keep employees engaged through work diversity.

Upcoming Events

COMPOST 2017

January 23, 2017 - January 26, 2017

Plastics Recycling Conference 2017

March 6, 2017 - March 8, 2017

World Bio Markets

March 27, 2017 - March 30, 2017

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In addition to these formal training programs, SVR has all employees engage in leading staff meetings and safety meetings to build speaking and organizational skills, and create more employee ownership in the agency.

Community Outreach

SVR has a robust community outreach program with three full-time employees dedicated to working with local schools, businesses and multifamily complexes to implement comprehensive recycling and waste reduction programs to meet multiple state waste diversion mandates. Staff provides technical assistance and infrastructure support, conducts one-on-one outreach and education, provides presentations and trainings, and hosts free public tours of the facilities. In addition, SVR provides free school assembly shows and a field trip experience of the Monterey Bay aboard the O'Neill's Sea Odyssey's 65ft. catamaran for 4th through 6th graders in the Salinas Valley, where they learn about recycling and environmental/ocean stewardship. SVR also offers free community composting workshops to encourage residents to begin vermicomposting (composting with worms) to recycle food scraps and yardwaste in their own backyards. Outreach staff also attends community events on an annual basis. In FY 15-16, staff participated in more than 130 community events, presentations and trainings.

Safety Programs

With a very strong safety culture at SVR, employees conduct monthly safety meetings at all job sites using a wide variety of training tools they have accumulated over the years, such as OSHA trainings, safety videos, powerpoints and actual events to bring awareness of all hazards. "Our Injury, Illness Prevention Plan (IIPP) is the core of our safety programs and is used extensively as the basis for our monthly trainings and tailgate meetings at job sites," explains Cesar Zuñiga, Assistant General Manager. "We also have a Safety Committee, composed of employees from our operational and administrative facilities that meet monthly to discuss safety topics, review incidents and employee safety suggestions, and provide oversight of all agency safety programs and the IIPP." Safety Committee members are paired up with other employees each quarter to conduct full safety inspections of all facilities, providing many different perspectives on safety. The inspections allow non-operational staff to visit each site and see things that may not be seen by staff who are onsite daily. These reports are then reviewed and acted upon by the Safety Committee. "Currently, we are preparing to undergo a "voluntary" OSHA inspection to help identify any additional safety issues we may have missed," says Zuñiga. He explains that OSHA will come out and inspect without enforcing penalties. Employers can request from the agency a voluntary inspection to determine whether they are in compliance. These voluntary inspections are often conducted on behalf of OSHA by third-party consultants that receive federal grant money. Following an inspection, the consultants draft written reports detailing their findings and recommendations. Under OSHA's regulations, these written reports are deemed confidential and may only be

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disclosed to the employer for whom it was prepared, allowing the employer to make corrections in areas that require it.

A Visionary Pathway

SVR's vision is to eliminate the need for landfills; however, to make that a reality requires implementing new technologies or systems for continuing to deal with the waste stream. SVR has found that the political and public perception and/or fear associated with that change or new technology has been a challenge. Concerns associated with perceived risk of new technology, costs and liabilities can often inhibit progress, which can often result in defaulting back to "low cost" landfilling as a preferred pathway.

Since 2005, SVR has been actively moving to replace the landfill based system with one that focuses on individual and corporate responsibility, maximizes waste reduction potential through the existing recycling systems, and advancement of new technologies to replace landfilling and simplify recovery of resources within the current recycling market system. In 2004, SVRs Board of Directors created a Conversion Technology Commission (CTC) of staff and elected officials to specifically study and recommend new technology pathways to end its dependence on landfilling.

The CTC identified and studied several technology pathways to achieve further reduction of waste going to its community landfill. One of the recommended technologies is now part of SVR's long range study to achieve greater reduction in its landfill dependency. SVR has created the template for a public-private partnership with Global Organics Energy (GOE) for use of their proprietary separation technology to recover paper fiber and organics from the mixed waste stream which accounts for 60 to 70 percent of the material currently going to SVR's landfill today. The primary end products would include manufacturing ready paper pulp, bio-energy through anaerobic digestion and recovery of stranded conventional recyclables remaining in the waste stream (5 to 10 percent).

SVR is also evaluating contracted use of other conventional waste recovery programs already in place such as the Monterey Regional Waste Management District's Materials Recovery Facility planned for upgrade in 2017. SVR is also studying continued use of its or other regional landfills for continued disposal of waste (status quo) as this remains the current lowest cost option, but with potential long term cost and environmental liability consequences. To this end, SVR has undertaken a three-part due diligence effort to understand and contrast/compare the impacts of the various options for achieving the goal of reducing long-term dependence on landfills for the community's waste management needs in the future. This fact-finding work includes preparation of a full Environmental Impact Report (EIR), a comprehensive long-range financial and rate impact study, and an Economic Benefits/Impacts study for each off the project options under consideration.

"The overall goal of this project is not only to achieve a significant reduction in our landfill dependence, but to also align ourselves with our local economic development planning efforts to attract new and innovative businesses, create jobs, and stimulate demand for existing services in our community and the State," says Patrick Mathews, General Manager. "We are also trying to reduce our dependence on unstable foreign markets for our recovered resources and, Instead, create and build on regional demand for products within the State." One of the most interesting projects SVR is studying is the creation of manufacturing ready paper pulp, mined from mixed MSW that would be supplied directly into local paper manufacturing companies that are in turn providing paper to local packaging manufactures for the agricultural industry.

Currently, Mathews believes that recovering organics from the waste stream for the highest and best use while balancing rates and services is one of the industry's biggest challenges. However, SVR's public-private partnership project outlined previously also involves a unique process that will recover most of the organics from the mixed waste stream as a by-product of mining paper fiber from mixed MSW and converts it to renewable energy. "This project has the potential to not only maximize organics recovery, but eliminate the need for extensive and expensive collection programs for source separation of organics that is the most current practice," says Mathews.

Future Developments

Implementing AB 939 Fees **(see the the "California Integrated Waste Management Act of 1989 below)** as an additional revenue source to fund non-landfill based programs was a great step towards ending the region's dependence on landfills. However, ending the importation of waste to the landfill from outside the County (and the revenue that went with it) was a major accomplishment and statement that landfills are not part of SVR's long-term picture. Members of the community, especial those near the landfill, have been very happy with this decision.

SVR has also partnered with the private sector to install a 1.6 mega-watt LFG-energy project, turning Johnson Canyon Landfill into a clean energy resource recovery facility not just a disposal site. Plans to expand this plant are in progress. Further development of renewable energy projects, such as solar and wind, are underway on some of SVR's closed landfills to help offset the cost of long term post-closure landfill care. Says Mathews, "Right now, our highest priority is to complete our due diligence process for our future facility needs and fully engage the public, stakeholders and elected officials in a discussion of what is best for the community in the long term as we move forward towards a 'future without landfills'".

For more information, contact Patrick Mathews via e-mail at patrickm@svswa.org.

The California Integrated Waste Management Act (IWMA) of 1989

California Assembly Bill AB 939 Established the "California Integrated Waste Management Act (IWMA) of 1989" which created an integrated waste management hierarchy to guide the State-run Board, now known as CalRecycle, and local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. It established quantified, tiered diversion goals for public jurisdictions (25% diversion of all solid waste from landfill or transformation by Jan 1, 1995 through source reduction, recycling and composting activities and 50% diversion by Jan 1, 2000) with reporting requirements, and assessed fines on jurisdictions that failed to meet those goals. Amongst other mandates, it provided that state planning, implementation and operating costs be funded by a fee collected by every operator of a solid waste landfill and paid quarterly to the Board of Equalization, based on all solid waste disposed of at each disposal site.

AB 939 fees are one proven way to recovery the full cost of meeting the state's AB 939 mandates and can provide a more stable source of revenues to support these non-landfill based, waste diversion programs. CA Public Resources Code, 41901-41902 provides for the direct recovery of these costs through the waste hauler. Ongoing reliance on revenue derived from landfilling waste is not sustainable as our waste streams decline from improved recycling and waste reduction efforts.

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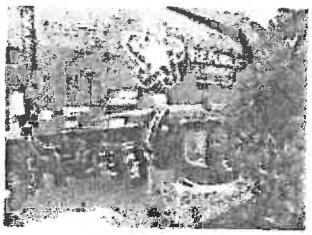

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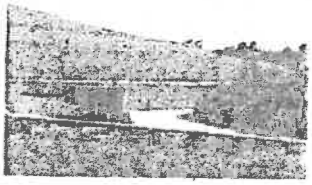

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COST-EFFECTIVE CLEANUPS

Municipalities and the federal government spend billions of dollars to handle debris caused by storms and other natural disasters. Experts in the field of debris management explain how community leaders can take steps to minimize aftermath expenditures. BY JOHN BURI AND ANNE CABRERA

In 2015 and 2016, the United States experienced 86 weather-related major disasters caused by flooding, wildfires, ice storms, snowstorms, tornadoes, severe storms and hurricanes. Disasters of this magnitude are not unique to any one state or region – they can strike any community at any time.

In the aftermath of disasters, communities and local governments face the daunting task of conducting a large-scale debris removal operation. Disaster-generated debris includes trees, household items and even hazardous materials. Severe wind and swift floodwaters can scatter debris throughout the community, affecting public areas and private properties and blocking small streets and major thoroughfares.

For this reason, debris removal represents an enormous cost to impacted communities and the federal government. Between 2000 and 2010, the Federal Emergency Management Agency (FEMA) and local governments spent over $8 billion in disaster-generated debris removal costs.

SOURCES TO HELP YOU PLAN

In an effort to understand and prepare for a debris-generating disaster, many communities have adopted a disaster debris management plan (DDMP). Those that don't have such a plan in place would be wise to take action to draft one.

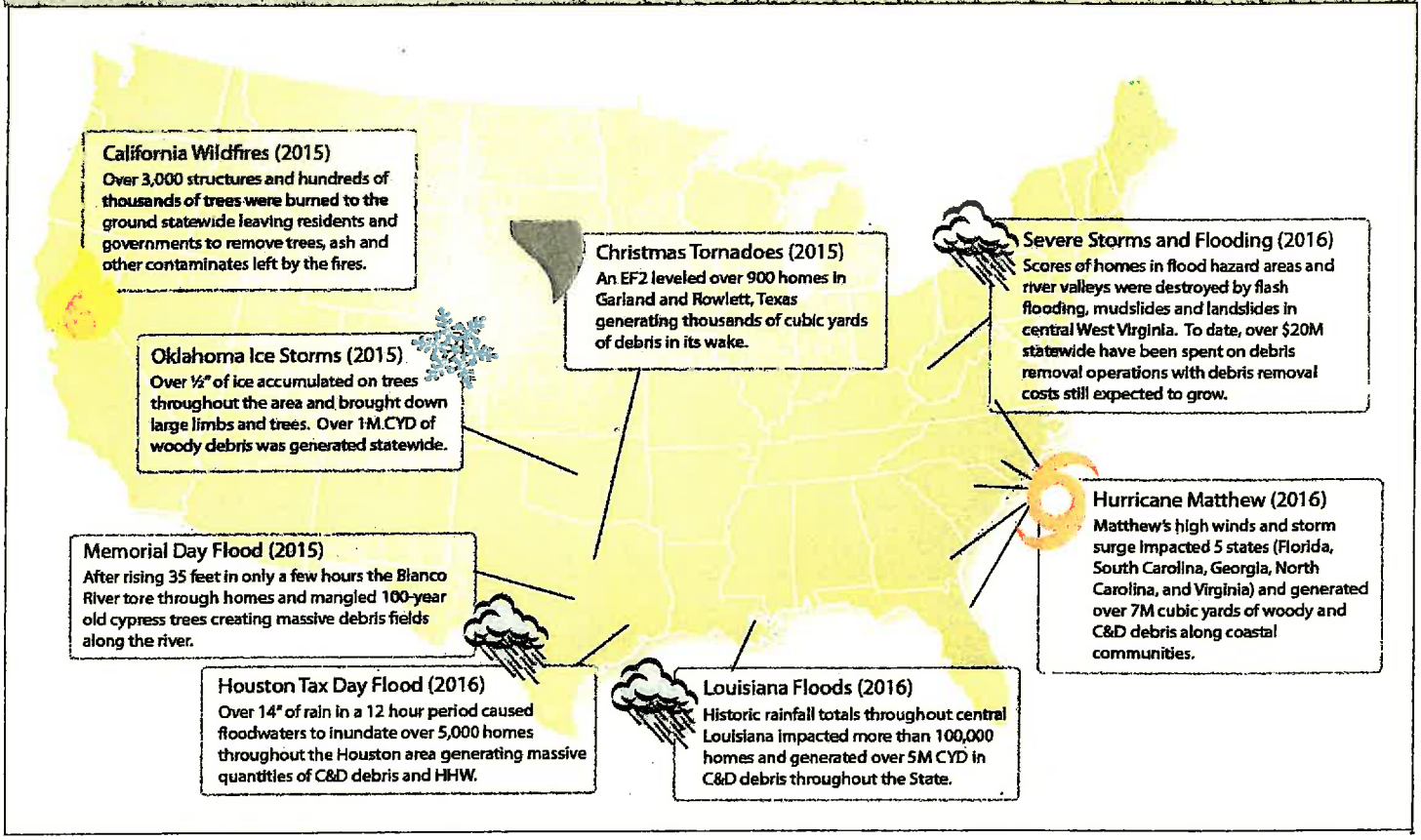
Several resources provide assistance to communities that are looking to develop a plan for disaster debris removal. The FEMA Planning Guide, for instance, describes the planning process, offers strategies to engage local stakeholders and provides guidance that communities need to develop a viable plan. FEMA's Debris Management Plan Review Job Aid illustrates the critical components that the plan must include in order to be accepted by FEMA and describes the financial incentives for approved plans.

The planning team should begin by setting objectives and goals for the plan, identifying the development team, and describing the plan adoption and approval process. The planning process includes conducting debris estimates, mapping debris management and disposal locations, and developing a strategy and method for debris collection. The plan should also identify priority roads and critical infrastructure components that may be incapacitated in a disaster. It should also designate all roles and responsibilities. Coordination among all departments and agencies is crucial for successful debris operations.

Due to the sheer magnitude of disaster operations, affected communities are often not able to conduct all debris removal operations on their own. Therefore, communities rely on mutual aid from neighboring communities and contractors to conduct much of the work under the supervision of the local government. This involves a procurement process wherein contractors are acquired through competitive evaluations, as required by FEMA and in compliance with federal procurement requirements.

One of the critical services that may be solicited and contracted is debris hauling. Another is called debris monitoring, which consists of oversight and documentation of the entire removal process for FEMA compliance. Communities should identify contractors

EXAMPLES OF RECENT DEBRIS-CREATING INCIDENTS



that are capable of performing debris work of varying size and complexity. The contractors' qualifications must align with the approved debris management plan. Ideally, contractors should be identified and contracts should be in place on a standby basis long before a disaster is imminent.

Debris management can be a long and complex process due to the severe social and economic impact debris can have on a community. Preparing for debris management is an ongoing process that should be periodically revised and updated with new information.

PUTTING PLANS INTO ACTION

In the first few days following a debris-generating disaster, local officials and debris management personnel carry out a number of tasks to begin the removal process with as little delay as possible. Surveys need to be conducted to assess the damage and estimate the amount of debris that has been generated, and critical roads must be cleared to restore mobility. Using ground, aerial and computer modeling, a damage assessment can be conducted to give insight to the estimated volume of trucks needed as well as the duration of pick-up operations. Data collected should be reported to the state for a determination regarding whether federal aid will be available.

Communities will also begin to plan for the second phase of the disaster – the long-term debris mission. It will be important to assess the financial burden of a debris operation, operational requirements, recycling options, and any environmental and historical considerations that may exist.

Throughout this entire process, data must be collected and meticulous records must be kept. Accurate debris documentation is critical for reimbursement, and communities must implement consistent systems to record all financial and time keeping information throughout debris collection.

As debris operations begin, temporary debris management sites (DMS) will be prepared, and truck assignments will begin in order to start the debris removal process. Local officials will meet frequently with their teams, including legal, administrative, and environmental professionals. Meetings also typically take place with federal officials and any debris contractors to discuss strategies, timelines and issues that arise.

Debris that is a result of a disaster may be placed along a public right-of-way, or curbside, for collection. Debris is divided among four categories: vegetative debris (tree limbs, branches or other leafy material); construction and demolition debris (damaged components of buildings); household hazardous waste (paints, stains, solvents); and white goods (refrigerators, air conditioners and other appliances).

Public education is key for operations

ELEMENTS OF A DEBRIS PLAN

1. Debris management overview
2. Events and assumptions
3. Debris collection and removal plan
4. Debris disposal locations and debris management sites
5. Debris removal on private property
6. Use and procurement of contracted services
7. Use of force account labor
8. Monitoring of debris operations
9. Health and safety requirements
10. Environmental considerations and other regulatory requirements
11. Public information
12. Identification of one or more prequalified debris removal contractors

to run smoothly, and local officials must provide instructions regarding how and where to set out debris for pick-up. Household trash will usually not be collected at this time, and field personnel will not remove debris left on private property unless a special program is implemented.

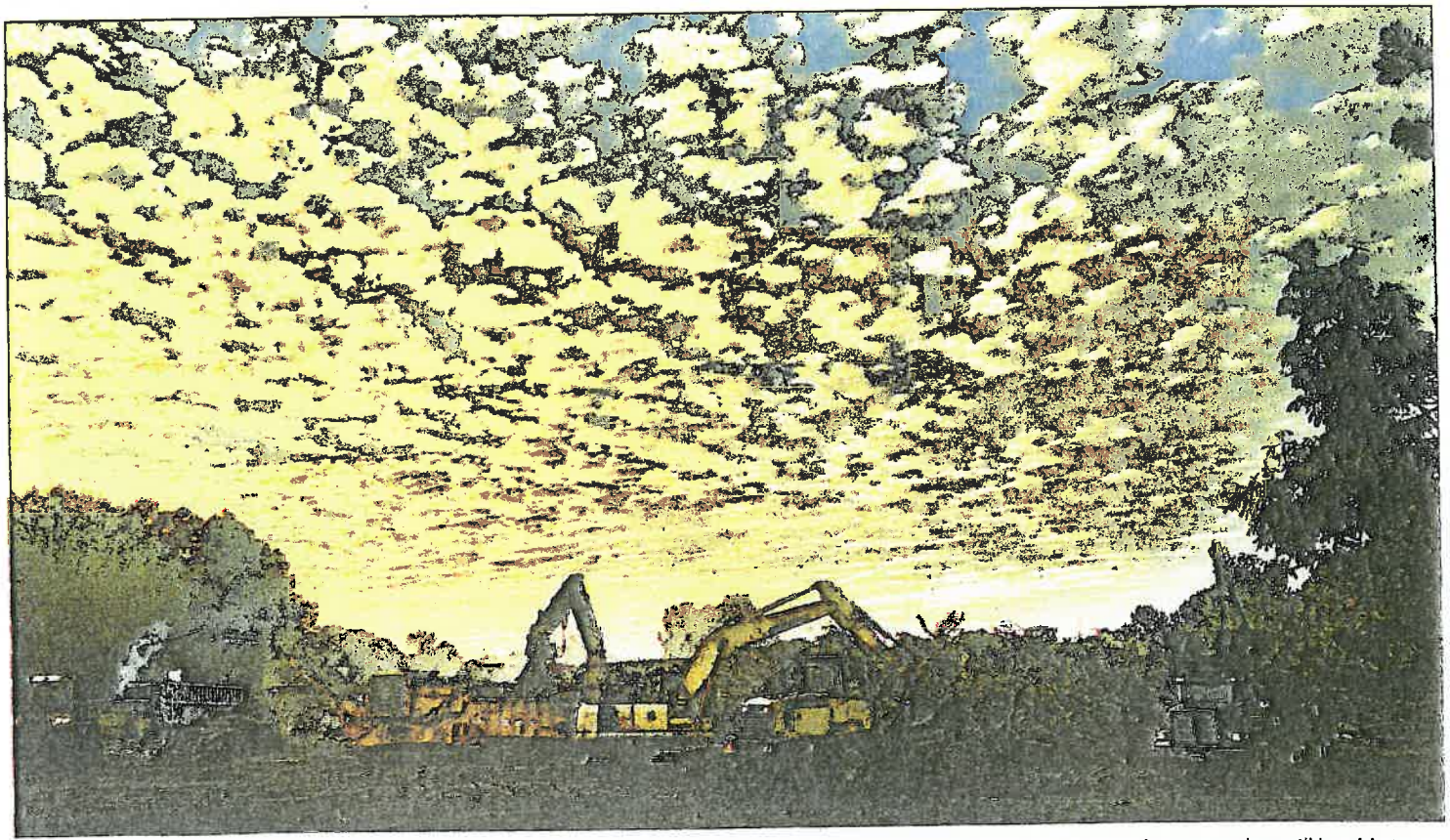
LEGISLATION ADDRESSING COST STRUCTURE

In January 2013, the Sandy Recovery Improvement Act was signed into law. The Sandy Act implemented legislative changes to FEMA by reducing the cost of federal government assistance and increasing the administrative flexibility of the Public Assistance (PA) Program. These changes also expedite the process of providing and expending assistance and create incentives for applicants to complete projects in a timely and cost-effective manner.

The Sandy Act specifically addresses debris removal assistance and allows for the use of a sliding scale to determine cost share. This means that the federal cost share is increased for debris disposal completed within a specified time frame. For example, debris collected within the first 30 days after the incident will result in an 85 percent federal cost share; debris collected between 31 and 90 days after results in an 80 percent federal cost share; and debris collected between 91 and 180 days after results in a 75 percent cost share. However, there is no federal cost share for debris removal after 180 days.

Disaster debris has a visible effect on a community, and clearing those materials in a timely manner can have a positive impact on the overall emotional and economic recovery of the region.

The Sandy Act also allows for the use of program income for recycled debris. Prior to this pilot program, if a community decided to recycle its debris and there was some income gained from it in some way, FEMA would deduct this amount from the community's ultimate reimbursement. This did little to offer incentivizes to communities to explore the recycling or end-use options for disaster debris. Given an overall understanding that it is beneficial to divert disaster debris from landfills when possible, Congress set out to ensure that the Sandy Act would reflect these priorities. While it cannot be



As communities develop plans for handling materials generated during a disaster, they should identify contractors and partners that will be able to handle projects of varying size and complexity.

claimed as a direct project cost, communities may retain revenue received by recycling eligible disaster-generated debris. Any revenue must be utilized either to pay the local cost share or to fund improvements for future debris-removal operations or planning.

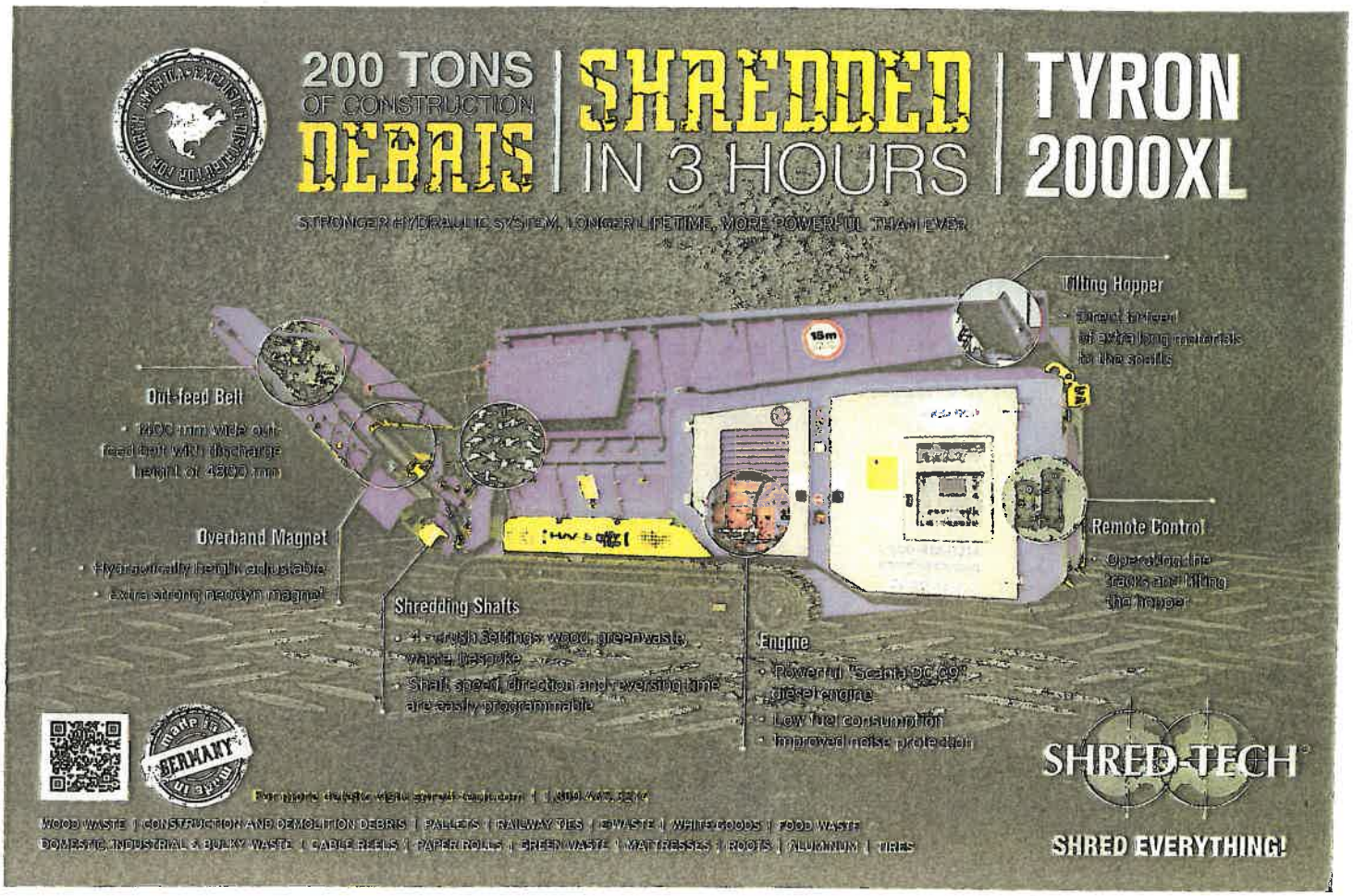
TANGIBLE STEP TOWARD COMMUNITY RECOVERY

Disaster debris can be among the most costly items for a community to handle after a disaster because it is typically an uninsured loss. In addition, disaster debris has a very visible effect on the community, and clearing debris in a timely manner can have a positive impact on the overall emotional and economic recovery of the region.

This is why it is so imperative for local leaders to consider debris management before it is necessary. Having a DDMP in place and having relationships with contractors who can participate in recovery can help ensure compliance with FEMA's PA Program and ultimately protect a community's reimbursement for debris management and removal expenses. **RR**

A well-designed system of debris management will have pre-established debris management sites and trucking assignments for movement of material.

John Buri and Anne Cabrera are debris subject matter experts working for project management consultancy Tetra Tech. They have been deployed nationwide on major post-disaster efforts over the past 12 years. In addition to their work on debris removal projects and post-disaster recovery operations, they have both helped numerous clients during implementation of the FEMA Public Assistance program. They can be contacted at john.buri@tetratech.com and anne.cabrera@tetratech.com.



Weighing Options

Changes and improvements have been made in scales and software moving from analog to digital methods. BY CAROL BRZOZOWSKI

Anyone who has been in the solid waste industry for some time appreciates just how far scales and software have come in increasing operational efficiencies and accuracies. In the analog world, onboard scales—specifically wheel loaders—used to be static, "meaning the operator would need to stop and weigh, slowing down the operation productivity, and increasing the cost per ton of material handled," points out Nigel Kurtz, regional manager for Trimble Aggregate Division.

Scales were once relegated to the role of measuring weight only, but, "now, much more reporting and accountability is attached to onboard weighing," he says.

Martin Ambros, president of Air-Weigh, contends that "when it comes to on-board scales, things are just getting rolling across the industry. Many fleets are beginning to see the benefits of an on-board scale that is integrated to a truck computer or telematics system while competitors are still guessing at weights or, worse yet, not managing weight at all.

"Drivers without any weight management solution are still ending their routes each day waiting for the surprise at the landfill when they arrive overloaded or grossly 'underloaded.' Without a measurement tool, it's pretty hard to optimize pickups or identify unprofitable customers," he adds.

Kurtz points out that in the last four years, there has been a manifestation of more people interested in using scales on loaders, excavators, and conveyers to report on inventory stockpiles, productivity of assets and operators, as well efficiency in operations, among other metrics.

Air-Weigh made its entry into the electronic on-board scale era nearly 30 years ago. "It began when a local trucker got fed up with receiving tickets after coming into town off of rural roads," notes Ambros.

The major benefit back then was a simple tool for the driver to avoid overweight tickets, he says, adding, "and that benefit is still strong today, but now with integration and on-board route man-

agement the benefits are multiplying. The ability to see weight performance over time, by truck, by driver, by route and by customer are all possible today."

Developing the technology to weigh each individual bin has been a major game-changer for the waste industry, notes Ambros.

Scales and software are now being used as an integral measuring and reporting tool to monitor the flow of operations, Kurtz points out, adding Trimble has recently updated its Loadrite product line "to reinvent the way the way the industry uses this data in key decision-making processes."

The release of Trimble's Insight HQ reporting package was designed to offer those in the industry a "whole operation overview," explains Kurtz. "InsightHQ is a quarry management portal for a Web browser or mobile device," he says. "It shows near-real-time productivity; availability and performance dashboards; and reports for extraction, processing, and load-out."

InsightHQ provides visibility to respond to issues, as well as optimize productivity, availability, and performance in real time, Kurtz adds. The software also is designed to provide access to live reports with totals for each customer, product, and machine. To view changes over time, users can adjust reports to suit either the shift, day, week, month, or year.

Automation is in high demand, notes Jon Leeds, vice president of Carolina Software. "Our WasteWORKS—the core product on which everything else is based—and WasteWIZARD options are the primary systems for facilities with scales, including landfills, transfer stations, recycling facilities, and mulch yards," he says.

Designed to provide the tools needed to operate a facility, the software provides end users with a point-of-sale ticketing interface for processing vehicles, an integrated billing module, and comprehensive reporting. WasteWORKS features fully integrated billing and reporting.

"The ticketing, billing, and reporting system are one in the same, and there is no requirement to move or post data to another system to make it useful," says Leeds.

WasteWORKS provides for Balance Forward Accounting, Open Invoice Accounting, or a combination of both. It comes standard with a range of built-in or stock reports. Those waste operations needing customization can have it through such external tools as Crystal Reports and Microsoft SQL Report Builder. WasteWIZARD is utilized for those who want to automate the processing of transactions. A vehicle is automatically scanned with an RFID reader, or a driver is presented with an interface to identify the vehicle and enter additional information about the load type. The rest of the transaction, including weighing and printing, happens automatically, Leeds says.

The software presents different combinations of interface solutions and peripheral options. For instance, "some people think of automation as just a solution for unmanned facilities, but automation can be used at manned sites too," notes Leeds. "A facility with two inbound scales and one outbound scale can dedicate one of the inbound lanes to being an express lane. This minimizes the need for an additional weighmaster and allows the existing weighmaster to concentrate on the customers needing more attention."

WasteWIZARD is designed to work seamlessly with WasteWORKS. "A transaction can be started with WasteWIZARD and finished with WasteWORKS, and vice versa," says Leeds.

There are other uses for automation, Leeds adds. "We have facilities that have a single scale and use WasteWIZARD. During the day, they use WasteWORKS to process vehicles, and at the end of the day the weighmaster shuts down WasteWORKS and opens WasteWIZARD for automatic, unmanned processing. During the night, county vehicles can come and go, and their transactions are processed automatically. A long list of peripherals—such as lights, gates, cameras, intercoms, and printers—are available to round out the automated solution, and provide additional security and traffic control."

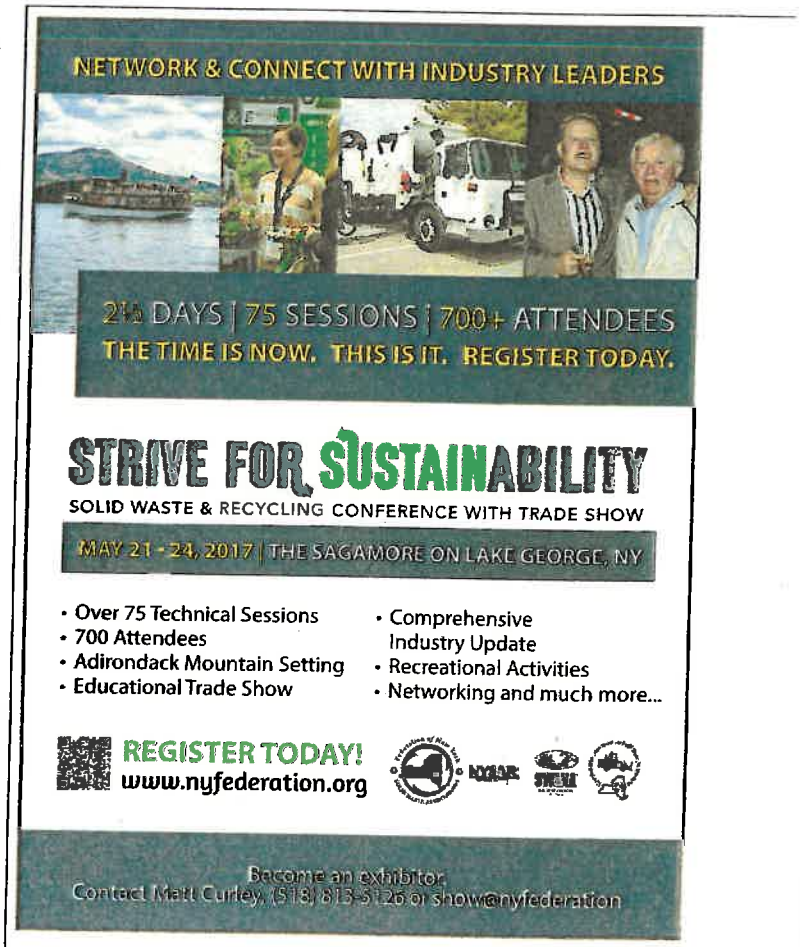
Air-Weigh offers two different types of scales. LoadMaxx provides overweight protection and indicates to the driver the truck's overall weight. BinMaxx weighs each individual lift of a bin, enabling companies to view how much they are paying in dump fees so they can in turn charge their own customers correctly, says Ambros.

On-board weighing systems provide significant benefits to waste companies; "and, given today's high cost of time and equipment, installing a scale system can have a dramatic impact on the profitability of operating vehicles," notes Byron Mucke, marketing liaison for Vulcan On-Board Scales.

"Given the rising cost of operating waste collection vehicles, it is becoming more important to evaluate the use of on-board weighing systems to reduce operating costs, meet new safety standards, and improve fleet efficiency," he adds.

Mucke points out that when electronic on-board scales were introduced more than 30 years ago into trucking applications, monitoring gross vehicle or payload weight was necessary, but platform scales were not readily available.

"Over the years, improvements were made to these early electronic on-board scales," he adds. "Load cells were improved, and specialty load cells were developed for fifth wheel applications. Center



hanger solutions were created for four-spring applications, single-point load cells for single-point suspensions, and other solutions for most other spring suspensions.

"Air sensors were added for an increasing number of air ride suspensions, and deflection transducers for certain types of spring suspensions. Hydraulic sensors were designed for vehicles equipped with hydraulic lift cylinders. Today, on-board scales can be installed on most trucks or trailers with air, spring, or mixed suspensions."

The applications for on-board scales are rapidly expanding and are found in almost every trucking industry, Mucke points out. "Organizations using on-board scales are reaping benefits far beyond just monitoring gross vehicle weight to avoid overweight fines," he says. "Given the high cost of time and equipment, on-board scales are having a dramatic impact on the efficiency and profitability of operating a vehicle or fleet."

One benefit: vehicle efficiency, enabling a driver to haul the maximum legal payload on every trip to the landfill or transfer station without going to a platform scale.

"Searching for and using a platform to determine payload involves an additional step that diminishes efficiency," says Mucke. "The fee to obtain a weight from a platform itself involves a cost of approximately $9 per trip, but that is the least of the additional expenses incurred. The driver time to travel to the scale, use the scale, and return is an expense incurred at the driver's hourly compensation rate.

"The additional mileage traveled is an expense incurred at the operating cost of the vehicle. Knowing and then maximizing payload weight while loading helps avoid these added costs."

Eliminating overweight fines typically is a secondary benefit to the many benefits of operating more efficiently, says Mucke. "Paying less in fines saves money that could otherwise go to the bottom line," he says. "Fines often compound as the amount over the legal limit increases, and many public entities continue to seek alternate streams of revenue, so the trend to fine for overweight loads is likely to continue. Additionally, in some jurisdictions, overweight fines escalate to misdemeanors as the amount over the legal limit exceeds, affecting both drivers and their employer."

Scales and software are now being used as an integral measuring and reporting tool to monitor the flow of operations.

Vulcan On-Board scales are designed to enable end users to load transfer trailers to the maximum legal weight quickly at the loading point without waiting in scale lines, or driving to the nearest platform scale. "You never have to off-load and then reload to get it right," says Mucke. "Waiting in line to load costs in operator time at hourly compensation rates, vehicle operating costs, and unnecessary fuel costs. When a driver is unable to know or maximize a load the first time, the result is often either being overloaded, or underloaded."

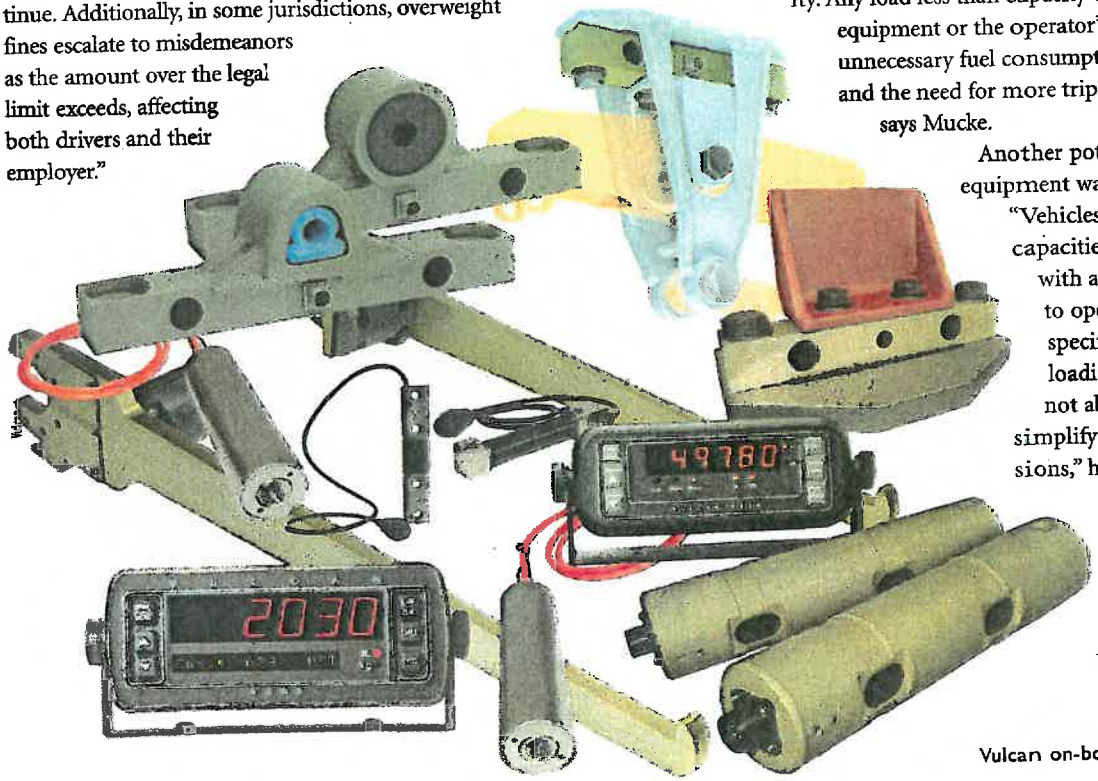
In either case, this can result in a second or third trip to either add more or remove more weight, says Mucke. "By loading to a maximum legal weight the first time, these operator vehicle and fuel costs are incurred once instead of multiple times. An added benefit is to reduce the potential that an operator will decide to proceed when overloaded to avoid a second or third trip, rather than removing the overload or proceed underloaded, thereby under-using the capacity instead of adding more load."

Hauling loads that the vehicle was designed to carry reduces maintenance costs and increases vehicle life, Mucke points out. "Many maintenance managers claim that on-board scales pay for themselves with reduced engine, brake, and structural maintenance costs," he adds.

Vehicles and related equipment are specified for a certain capacity. Any load less than capacity does not fully use the capital equipment or the operator's capacity, and creates unnecessary fuel consumption via an inefficient trip and the need for more trips to haul the same payload, says Mucke.

Another potential benefit involves equipment warranty, notes Mucke. "Vehicles with specified payload capacities typically carry warranty with a time limit and are subject to operating a vehicle within specified limits; so, consistently loading and operating a vehicle not above the legal limit helps simplify warranty claims and discussions," he says.

Safety and liability exposure is decreased by keeping weight within legal limits, allowing braking distance to remain constant and tracking around corners to be



Vulcan on-board weighing systems

more predictable, Mucke says.

"Braking distance increases with weight," he points out. "If a vehicle is overloaded, the braking distance requires increases. Cornering also degrades when a vehicle is overweight, which is another safety concern. If an accident occurs involving an overloaded vehicle, that is an element that is considered fault and damages."

Driver retention can be increased by assuring a safe load and no exposure to overweight fines, Mucke explains. "Providing drivers with tools to perform their job efficiently and safely is one key element to obtaining and retaining the best operators," he says.

"Additionally, providing an on-board weighing system that allows them to maximize payload without overloading reduces exposure to overweight fines, and even misdemeanors in some jurisdictions."

Operational efficiency can be improved by recording weights, load cycles, dump cycles, route, and service times, says Mucke. "Knowing your loaded truck weight is a critical component to the overall efficiency of your fleet," he adds. "This information allows you to make decisions regarding your routes, billing, and maintenance. With the increasing use of on-board computers, wireless communications, and GPS equipment, weight information can be collected and transmitted real time back to the home office, so decisions can be made on the fly, or records kept monitoring the capacity and efficiency of the operation over an extended time period."

In utilizing up-to-date software and scale technology, there are external factors to consider, such as the impact of government agency regulations.

According to Kurtz, those considerations include reporting on current inventory and safety in the operation, with less over-weighing. Other factors include increased productivity through monitoring idle or wasted run time with no under-loading.

Accountability reporting is another factor. As customers of waste operations, government agencies are seeking to ensure they are abiding by the regulations they have set, notes Ambros. "From a regulatory standpoint, they are enforcing weight management in many areas," he adds.

Mucke notes the typical payback from an on-board scale investment ranges 3–12 months. He anticipates the timeframe to shorten in the future, as the cost to haul without on-board scales continues to increase due to the increase of the following industry trends:

- competition and the need to improve efficiency and reduce costs
- enforcement of overweight regulations
- the need to reduce liability exposure
- difficulty finding and retaining competent drivers
- the demand for more information

"On-board weighing systems provide significant benefits to waste companies, and, given today's high cost of time and equipment, installing a scale system can have a dramatic impact on the profitability of operating vehicles," says Mucke. "There are many types of scale technologies, and it is critical to invest in a system that meets the vehicles specific requirements and your company's long-term goals."

Given the numerous benefits of today's scales and software, there are still ways the technology can be improved. Removing the reliance on the operator to enter data is something the industry is working on, notes Kurtz. "With current GPS location tracking, this is something that could be seen in the near future," he adds.

In seeking ways to improve technology that includes greater accuracy, Air-Weigh recently developed an app that pairs with its LoadMaxx scale. "This means the driver has a weight log for the truck and can even email weights to the dispatcher, manager, or any other email address," says Ambros.

Operators are asking for ways to make their jobs faster and safer, he notes.

Additionally, they want to be empowered to be able to improve their daily tasks and be more productive, Kurtz points out. "Giving them the ability to monitor and improve their performance is something that is very well-received and used," he says. "They want a fully dynamic system that does not slow down current operations."

Reporting is a big focus for waste operations these days, says Leeds. "They want specific data in specific formats, and they want it daily," he notes. "Our job is to make sure we collect the data on the ticketing side of things, and then deliver it in the way the end user expects. We have a wide range of tools for built-in or stock reports, custom reports, and automating report delivery. If you are a solid waste supervisor and you want to get an email each morning at 5 a.m. so you can review yesterday's tonnages while you drink your coffee, we can deliver that information to you."

Called the Auto-Email Module, it provides automated report/ticket/billing delivery to anyone needing regular report information, such as staff and customers. "We can set things up to deliver reports to customers who regularly request this information," says Leeds. "Images and scanned documents can also be imbedded in these ticket and report documents." MSW

For related articles:
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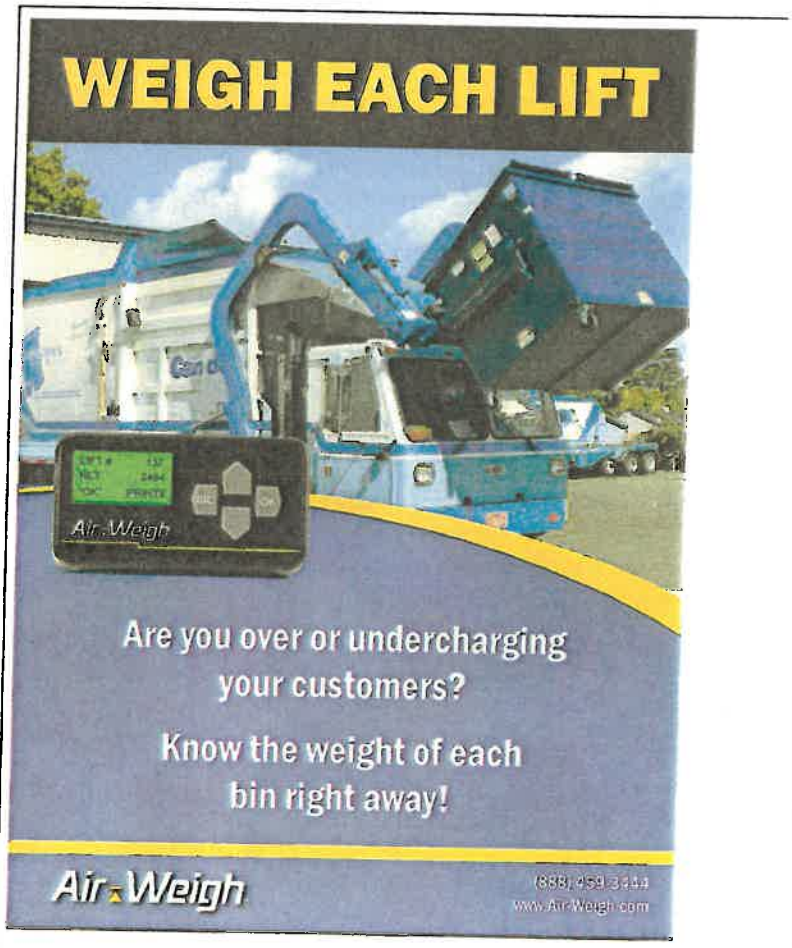
Carol Brzozowski specializes in topics related to waste management and technology.



Time to Think Outside the Box

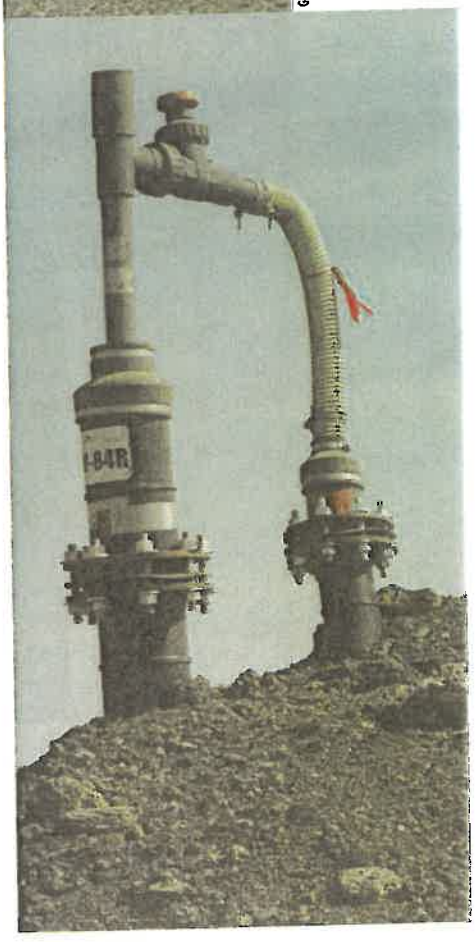
BY RYAN BIRKENHOLZ, STEPHEN DESCHER, DAVID KNAPP, REID MATTHEWS, AND ANDY NICKODEM

On August 29, 2016, USEPA updated regulations concerning design, operations, and monitoring requirements for landfill gas (LFG) systems at municipal solid waste (MSW) landfills. The updated regulations are contained in the New Source Performance Standards (NSPS) Subpart XXX of 40 CFR Part 60 and pertains to LFG systems at new MSW landfills and landfills for which construction, reconstruction, or modification commenced after July 17, 2014. Subpart Cf of 40 CFR Part 60 pertains to LFG systems that were constructed or modified prior to July 17, 2014; Subpart Cf will essentially replace Subpart WWW. Modification here is "an increase in the permitted volume design capacity of the landfill by either lateral or vertical expansion."

A landfill that is currently subject to NSPS WWW and has not permitted a new vertical or horizontal expansion after July 17, 2014, is not yet subject to NSPS XXX. Keep in mind that operational or structural changes made to comply with NSPS WWW are not considered to be construction,

An LFG well

Golder Associates



reconstruction, or modification. The effective date of Subpart XXX was October 28, 2016. Subpart Cf will be implemented by delegated states through implementation plans. States have nine months to prepare the plan, and EPA has four months to review the plan.

Methane is the second most prevalent greenhouse gas emitted by human activities in the United States, and nearly 20% of those emissions come from landfills. EPA estimates that more than 1,000 active landfills will be subject to the new guidelines. Through the new emission and NSPS guidelines, EPA concluded that a well-designed and well-operated LFG collection and control system is the best way for controlling LFG emissions.

The newly promulgated Subparts Cf and XXX made changes in four areas of compliance. The most noticeable change is the decrease in the non-methane organic compounds (NMOC) threshold at which the installation of a gas collection and control system (GCCS) is required. The previous threshold of 50 Mg per year NMOC has been reduced to 34 Mg per year. This could potentially mean many more landfills will be required to install a GCCS where they previously would not have been. Along with this change in the NMOC threshold there is now a Tier 4 procedure that can be utilized to determine if a GCCS must be installed.

The second area that the new regulations have changed concerns the monthly wellfield monitoring. The well compliance parameters have been modified so that now only deviations from the temperature and pressure standards could be considered an exceedance. The wellfield operation must still monitor oxygen; however, there is no longer a compliance limit. Actions taken in

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response to an exceedance are still similar; but, if the exceedance cannot be resolved within 15 days, a root cause analysis must be conducted, and the issue resolved within 60 days. If this isn't possible, then a corrective action analysis and implementation schedule must be developed and submitted within 75 days to have the exceedance corrected within 120 days.

The third change involves how various permit required documentation is submitted to EPA. Some testing reports and leachate circulation reports, for instance, will need to be submitted through EPA's CEDRI/CDX online website. Also, GCCS design plans must be updated and submitted to the regulatory agency within 90 days of expanding to an area not previously covered by the design plan or when installing a portion of the system not consistent with a previous design plan.

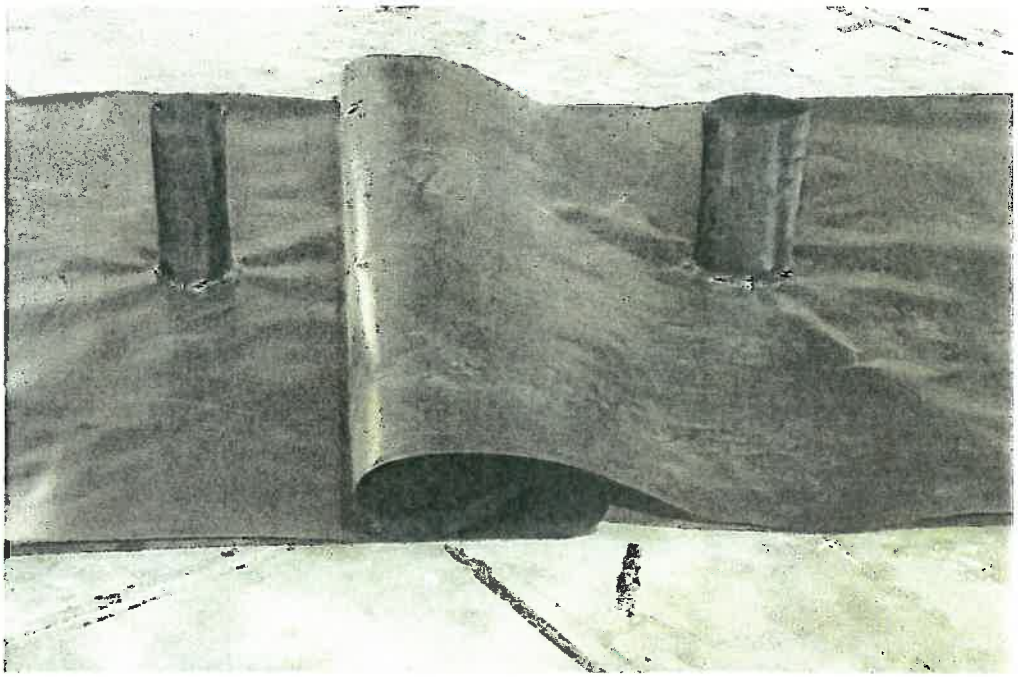
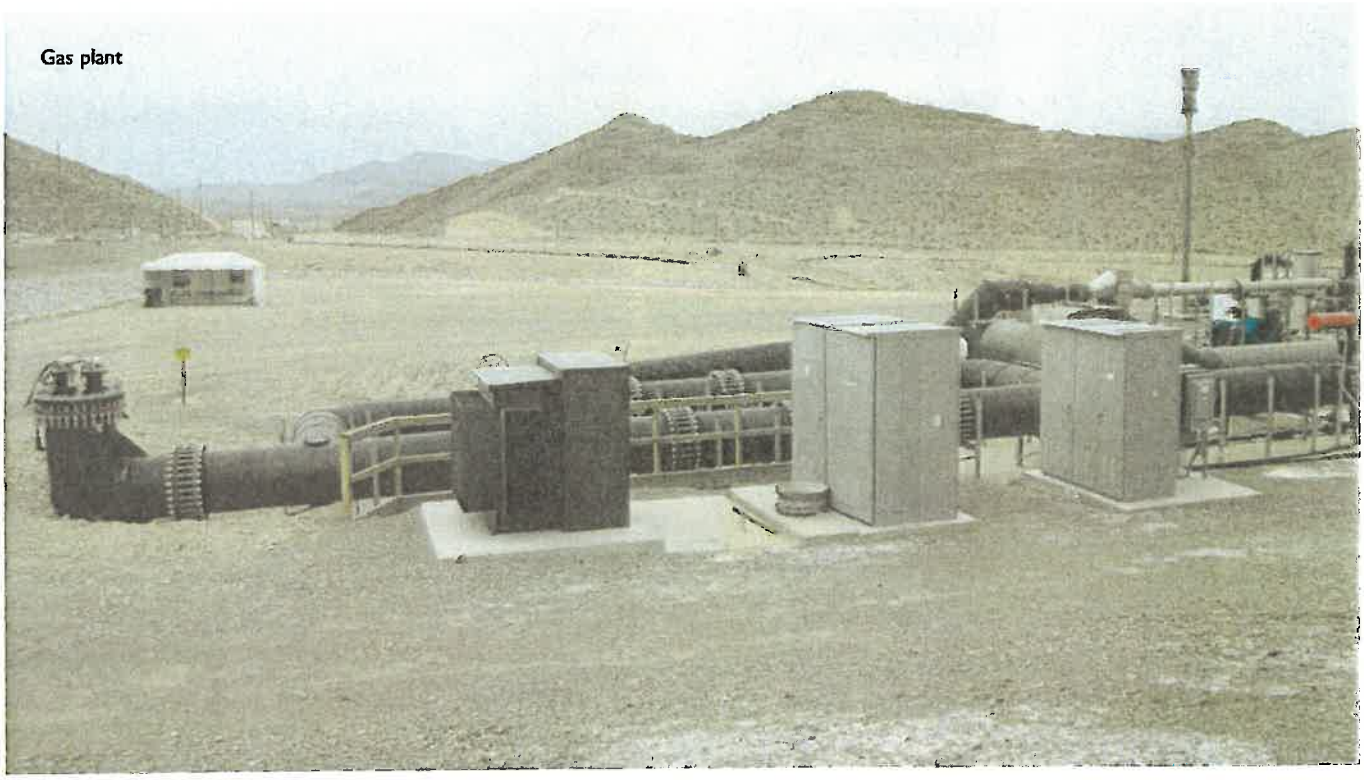


Photo Courtesy of GSE

Pipe boot skirt

The fourth area of change is the one we are interested in exploring further in this article. The new regulations require affected facilities to monitor all penetrations of the landfill cover, including intermediate soil cover areas, during the quarterly surface scan. There is also a new requirement to note the latitude


Gas plant

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and longitude of each exceedance with an accuracy of 4 meters and out to five decimal places.

Outlined below are issues and potential mitigation efforts related to monitoring and reporting exceedances at landfill cover systems surface penetrations. Cover penetrations such as LFG wells, LFG vacuum risers, condensate sumps, air/force main isolations loops, etc., require monitoring, and could lead to an increase of exceedances. (Items such as survey stakes, fencing or litter fencing, flags, signs, trees, and utility poles do not require monitoring.)

While cover penetration monitoring is specifically identified in Subpart XXX, we believe EPA's intent is to require penetration monitoring of LFG systems at landfills regulated under Subpart WWW. Therefore, exceedances, both in general cover and at penetrations, should be included in semi-annual compliance reports for all landfills with regulated LFG systems.

The addition of penetration monitoring to compliance reports may significantly increase environmental liability exposure to landfill operators unless proper planning and installation of appropriate controls are implemented. Any site may have a limited number of exceedances during routine cover surface emission monitoring, the number of exceedances may increase significantly during monitoring of surface penetrations—especially in landfill areas with intermediate cover.

Through the new emission and NSPS guidelines, EPA concluded that a well-designed and well-operated LFG collection and control system is the best way for controlling LFG emissions.

Exceedances may be affected by construction practices (e.g., backfill methods and soil types used during LFG construction activities; LFG well tuning (e.g., reduction of LFG well vacuum to limit oxygen intrusion); and climactic conditions (e.g., desiccation cracking of clay soils during dry periods).

To limit penetration exceedances in areas where a gas collection is required to be in place, changes to standard LFG construction procedures may be required. For example, backfill around penetrations may require placement and compaction in moisture-conditioned lifts, as opposed to conventional dozer pushing and tracking. Emphasis on compaction of soils around penetrations (e.g., hand compaction with tampers) or installation of impermeable seals at the penetration (e.g., bentonite seals) may be required to control exceedances. Other methods to reduce exceedances include installation of additional soil cover at the penetration. If clay soils are present at the penetrations, hydration of the soils tends to seal cracks and limit exceedances.

While relatively passive improvements may work in the short-term, climatic conditions could adversely impact the effectiveness of these measures. As indicated above, weather conditions may cause these

impenetrable seals to crack, potentially negating their intended performance and requiring the landfill operator to periodically monitor the integrity of these types of remedies.

A more effective and long-term method of controlling penetration exceedances is the installation of pipe boots and skirts. Boot/skirt installations can be implemented using a combination of prefabricated and field fabricated boot/skirts.

For a typical LFG well/vacuum riser pipe, oversized skirts can be fabricated with boots for both the LFG well, and the LFG well vacuum source (riser). The distance between the boots can be established so that excess skirts can be folded accordion style, with the boots being pulled over existing LFG wells and vacuum pipes.

Afterwards, clamps can be installed at each pipe/pipe-boot location, and the skirt covered with soil to hold it in place. LLDPE geomembrane, as typically used in final cover system construction, is an appropriate material for skirts due to its relative flexibility. Skirt materials will need be of suitable thickness to avoid damage due to underlying materials or placement of cover soils over the skirt. These skirts may be temporarily removed and reinstalled when LFG gas wells are raised as required by additional waste placement in an area.

Field fabricated boot/skirts can also be installed at condensate sumps, air/force main isolation loops, valves, LFG wells with couplings, etc. Coordinating prefabricated boot/skirt installation such that a sufficient quantity of these can be installed at one time, should lessen the impact of equipment rentals and/or mobilization costs associated with use of subcontractors.

In addition to reducing exceedances at the penetration, boots/skirts inhibit oxygen intrusion allowing the vacuum within the LFG system to be increased. Increasing the vacuum, the volume of LFG available for beneficial use is increased, gas emissions through the cover are decreased, and odor issues likely decrease. Other considerations could be to redesign gas extraction well systems that minimize the actual number of surface penetrations. Some potential considerations may be for the designer to develop a manifold system of subsurface extraction wells that break the surface or cap through one oversized penetration. Of course, in designing this type of system, the operator has to weigh the added maintenance costs against the monitoring effort using the older designs.

The addition of cover penetrations to monitoring requirements by USEPA can pose significant compliance issues for landfill operators. Landfill operators need to become more creative with their designs and consider compliance impacts resulting from surface penetration monitoring. Thinking outside the box can minimize exposure and provide appropriate controls. MSW

Ryan Birkenholz is a Project Engineer; Stephen Descher is a Senior Project Environmental Scientist; David Knapp is a Senior Landfill Gas Consultant, Associate; Reid Matthews is a Principal, Practice/Program Leader; and Andy Nickodem is a N.A. Waste Business Line Leader, all with Golder Associates Inc.

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Drones and Waste Industry

What you should know about this emerging technology

National surveys show that more than 65% of landfills develop an annual topographic map, and most of those topo maps are created using traditional aerial photogrammetry. This is a process that two years ago we would have called "state of the art." Today, we call it "old-fashioned," because we can now produce those same maps using what are technically known as Unmanned Aerial Vehicles, otherwise known as drones.

Drones are becoming more and more mainstream, with talk of instant delivery by Amazon, and the ability for filmmakers and video hobbyists alike to produce dramatic aerial footage for a low cost. Drones are cool and fun to fly, but there is much more to the technology than just the fun factor. In fact, drones are often faster, more accurate, and less expensive than traditional methods of data-gathering. Early discussions about the how to use drones at solid waste facilities were filled with skepticism: Would it work? … Could it work? Much like early application of GPS to provide surveying guidance on heavy equipment, many people are skeptical.

This is a Déjà vu' moment—we've been here before. Back in 1991, I was involved in developing some early prototypes of GPS equipment for landfill compactors and dozers—making presentations to Waste Management and Caterpillar. Shortly thereafter, Caterpillar came out with their CAES GPS unit. Today, seeing GPS units on heavy equipment is commonplace, but in those early days there were plenty of experts who said it was interesting, but couldn't be done … and certainly would never catch on for landfills. What they missed seeing was the energy that could propel a new technology into its full potential.

Yes, drones are fun to fly, but that doesn't mean they are toys. These are state-of-the-art instruments; they are tools. A modern drone is equipped with a very sophisticated GPS system, gyroscope, accelerometer, and a robust communication link. There is more computer horsepower in one of these drones than NASA had when it sent Neil Armstrong to the moon.

And, it's not just the drone. If you want to generate an accurate topographic map of your landfill, you must also have a high-quality camera (20+ megapixels), an interface program, and controller—so you can communicate with the drone from the ground and set up a flight plan to take aerial photos. Once the flying part is done, you'll need a sophisticated program to process the photos and convert them from photos into a point cloud, from which you can generate a three-dimensional model, topographic map, etc.

Of course, you'll also need a CAD (computer-aided design)program and a fast, powerful computer. Our company, Blue Ridge Services Inc., received an FAA (333) exemption in 2015 to fly drones commercially—and was one of the first to use drones for landfill mapping. That requirement was recently eliminated, but you still must take an FAA (Federal Aviation Administration) test and be certified in order to fly drones commercially. I know, it sounds a bit funny. Any 10 year old can fly a drone right out of the box, but your engineer needs to take an FAA test to fly a drone commercially.

The Flight Process

The process for producing a topographic map with a drone is similar to the process used by the old-fashioned aerial photogrammetry systems, where a pilot flew an airplane over your landfill and snapped photos. It's just that the drone process is much more automated and significantly safer. Drone pilots don't die in airplane crashes. The biggest risk is that the drone could fail in flight, fall out of the sky, and hurt someone. That's not likely to happen—but it could. And just to be on the safe side, all of our drones are equipped with parachutes, which deploy automatically when the parachutes' accelerometer senses a too-rapid descent.

That's right—even these drone parachute systems are smart. In the instant they sense that the drone stops flying and starts falling, the parachute deploys. And your drone will come floating down out of the sky, like a small, mechanical paratrooper.

Drone mapping is also fast. Once the ground control points are set, the pilot opens the protective case, pulls out the drone, spends about 10 minutes programming the flight, and then launches. Flying a small site might take 15 minutes. A larger site could take an hour or more. Drones can fly large areas, but it may require multiple flights that are digitally stitched together. The area that can be flown in a single flight is limited by battery life. Multi-rotor drones (with 4+ motors) typically have 15–20 minutes of flight time, while fixed-wing drones (with only 1 motor) may fly for 30–45 minutes. Once the flying is done, the drone

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goes back in the case, and that's it.

All of the necessary data from that flight is stored in a tiny SD card on the drone. That information is transferred to a computer, and the previously described processing begins.

Once the processing is done, the map preparer must clean up the data. Remember this process is automated, and the software doesn't know the difference between a GMC pickup and a pile of concrete rubble. It treats everything as topography. That means the technician deletes the contour lines that define the pickup and makes adjustments to sift through the noise created by trees, brush, or other heavy vegetation. Every site—and every project—is a little different, but with a typical flight, the process takes a week or so.

Let's Talk Accuracy

When it comes to selecting a method to map your landfill, you have a lot of options, many of which affect accuracy. How high do you fly? How fast do you fly? What percentage of overlap do you select for the individual photos? But most importantly, what type of camera and lens do you use? Now, we've heard a lot of different opinions about the accuracy that drone maps can provide.

Even the drone manufacturers will quote accuracies of 1 inch (2.5 cm), 4 inches (10 cm), 6 inches (15 cm), or even 1 foot (25 cm). Accuracy quotes are all over the board. So why the discrepancy? I don't know, but the interesting thing is: When we ask these folks what sort of testing they have done to confirm those accuracies, most of them confess that they have done no accuracy testing. These accuracies are theoretical.

Our company is currently in the process of conducting detailed accuracy tests to determine just how accurate our drones are when it comes to gathering data for topographic maps. We are testing several different flight/camera scenarios. As of press time, we have not completed that analysis, but when it's finished, I'll post something here.

Other Applications

Drones have potential applications beyond topographic mapping. Drones and mapping technology are being used at waste facilities to improve the quality of fill sequence planning, conduct time-motion studies on machine productivity, and allow for in-depth analysis of traffic patterns, cell construction, litter control, and more. Drones can also be used to quickly measure stockpile or compost windrow volumes—something that can help facilities manage inventory. Finally, drones equipped with thermal imaging cameras can detect surface heat that could indicate a sub-surface landfill fire.

Just a Passing Trend?

You might be asking: is this drone stuff for real? Well, you can bet your microprocessor it is. It is as real as the GPS in your car or tractor. It's as reliable as the computers we use in our offices and smartphones. And it's as mainstream as the Wi-Fi you use to connect to your home network, office network, or to get online at your local coffee shop.

Some folks just don't take to technology as quickly as others. It has taken 25 years for GPS to be considered normal on heavy equipment—and now most heavy equipment manufacturers offer GPS equipment as an option on their machines, and GPS has become an integral component of waste facility operations.

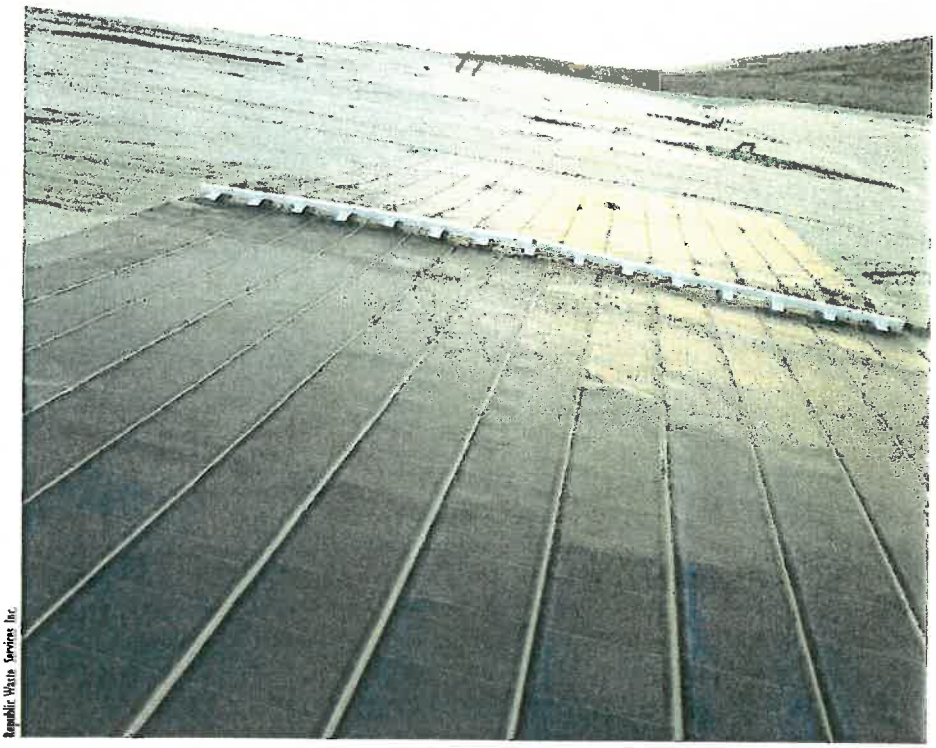
Using Drones

I have been utilizing drone technology for my clients for some time, and in my opinion, drone technology is not only here to stay, but also has vast potential to improve many aspects of the solid waste industry. So does that mean every landfill should have a drone? It depends. If you want have a drone in order to get a birds-eye view of your cell, traffic patterns, or a wetland area that you can't drive to, then sure, a basic drone would work. And, oh, did I mention drones are fun to fly?

You can get a quality drone, camera, gimbal, and controller—which is what you'd need to fly up into the air and get video of your operation—for under $1,000. If you want to create maps, a basic system will run you $15,000–$20,000, depending on whether or not you already have a fast computer and AutoCAD.

As a point of reference, we have invested approximately $50,000 into our company's drone program. We have four drones in our fleet—three multi-rotor units and one fixed wing. Two of the multi-rotor drones are set up with GoPro cameras and are used for time-motion studies, facility observation, and basic recon. We used them when we conduct a comprehensive operations review (CORE Assessment) and also as a great visual aid when providing field training. The third multi-rotor drone and the fixed wing unit have high-quality cameras and are used for mapping. MSW

*Consultant **Neal Bolton** specializes in landfill operations and management.*



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Transforming Landfills Into Resources

Accessing, managing, and harvesting the resources found in landfills BY DAVID C. RICHARDSON

A landfill can be like a baby: It is helpless to care for itself; while it's growing, it eats all day; at night when resting, it must be protected from the elements; and it belches constantly. If you're lucky, it won't stir up much fuss. If you're not lucky, the neighbors can become quite annoyed.

Landfills can grow to tremendous size; Puente Hills landfill (now retired) outside Los Angeles—once the largest landfill in the US—grew in 60 years to a 500-foot-tall mountain of trash on a 1,300-acre site. Sadly, for every landfill, the day also comes when it too must be retired and put to rest permanently. While it may sound a little strange, in its afterlife, a landfill can become an even more complex creature than during its heyday. It continues to belch; it continues to require protection from the elements such as rain, wind, and foraging creatures; and the environment around it must be shielded from effluents leaching out from below. Ultimately, a retired landfill will require ongoing care for up to 100 years or more.

A former landfill can be a nuisance or a treasure. It can reflect a troubled past or help light the way to a brilliant future. The difference between a pleasant productive life and afterlife, and a problem child with an unpleasant legacy can lie on the fabric of the thinnest of films.

Garbage and Resources at River Birch

The goal of landfill operations is to make sure that what goes into a landfill stays in the landfill. However, innovative landfill operators have begun to realize there are two kinds of things in a landfill: garbage and resources. The objective is to control the former and to access, manage, and in some cases, profitably harvest the latter. The challenge is to do so at a reasonable cost with minimal disturbance to neighbors and the surrounding environment. Vic Culpepper sought to achieve such results in harvesting the landfill-generated gas at the River Birch landfill just outside of New Orleans, LA.

Federal regulations for landfills under Subtitle D require that waste in a landfill be covered at the end of each day. Protecting the landfill every evening from precipitation, controlling gases produced by decaying organics, and discouraging foraging by fauna including troublesome birds and vermin are major responsibilities for landfill operators. According to Culpepper, technical director of River Birch landfill, one of the most labor-intensive and costly tasks in landfill management is making sure the garbage gets tucked in safely every evening.

Initially, says Culpepper, daily cover operations at River Birch landfill followed EPA's guideline of applying 6 inches of soil over the entire working surface of the active face at the close of each operational day.

But there were problems with this approach for River Birch, he says. "It was extremely difficult for us, especially with the type of clay in our area. A lot of times you had to apply more than six inches—more like a foot—to get adequate cover." Culpepper also tried using a spray-applied cover material, which, he notes, "worked moderately well, but was expensive and difficult to put down to ensure adequate cover."

River Birch's operators continued looking at different options to fulfill the mandated daily cover requirement. In the search, says Culpepper, the important criteria for selecting a daily cover system for included cost efficiency and simply "how well it covers." In addition, he says, it was important to find a technology that would conserve airspace to maximize the volume of permitted space available for trash. He wanted a thin material to avoid sacrificing

6 inches to a foot of airspace just to deploy cover material every evening.

The operators of River Birch landfill had built up a revenue stream harvesting methane gas, generated by decaying garbage, and selling it on the fuel market. Therefore, says Culpepper, the landfill would require a daily cover method that would facilitate the "trash-to-trash contact" needed to support the biological breakdown processes responsible for generating the raw landfill gas resource.

Culpepper opted for EPI Environmental Products' Enviro Cover System. The system consists of the Enviro Cover—a nonreusable polyethylene film developed to meet requirements for alternative daily covers—along with the Enviro Cover Deployer, a versatile and efficient applicator for placement of the cover. A third element is the method of application, which provides ballast and seal at panel overlaps to create a continuous impermeable barrier between the waste and the surrounding environment.

Culpepper explains that the Enviro Cover System is simple to deploy using the Enviro Cover Deployer, which spools the cellophane-like cover over the treatment area in continuous sheets. As it proceeds over the treatment area, the vehicular-mounted system lays down an anchoring ballast of sand or soil along the overlapped edges of each sheet, significantly reducing the time it takes to complete daily coverage of the landfill's working surface compared to traditional daily covers.

EPI Environmental Products


EPI Environmental Products

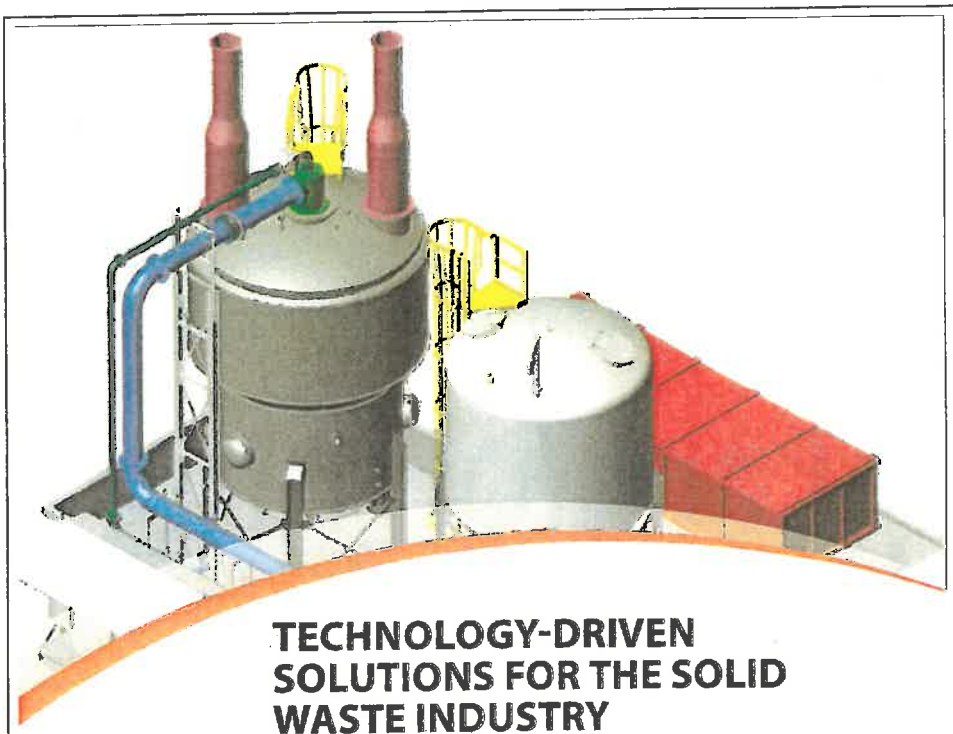
"Where it used to take three-and-a-half hours to cover the area with clay and about three hours to cover with the spray-applied cover, it takes about an hour with the Enviro Cover System—with only one person and one machine," he notes.

In contrast, he says, using a clay cover, "you'd have to have dump trucks and bulldozers and all the people to drive them."

Culpepper describes the streamlined workflow: toward the end of the workday, as crews begin laying down the Enviro Cover, they leave a small portion of the landfill open for late-arriving loads. "Then, once you're closed, go ahead and close that area out as well."

Considering the random constituents of trash, Culpepper says that sharp-edged objects might occasionally punch through the thin-ply Enviro Cover, but that, nonetheless, no surface preparation is needed before applying the cover.

Occasional punctures, he says, are "not an issue. Overall, the amount of complete coverage you get and the shedding of rain from your garbage minimizing your



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leachate intrusion is still greater, we think, than most other technologies."

Along with ease of application, Culpepper says the advantages to using an alternative daily cover, such as Enviro Cover, includes its more predictable material cost control and reduced labor costs compared to soil covers. It also enables quick and dirty trash-to-trash contact when the next day's load comes in.

"All we have to do is drive on top of it the next day and shred it under the truck tires, so we get garbage-to-garbage contact" with trash arriving on subsequent days, says Culpepper.

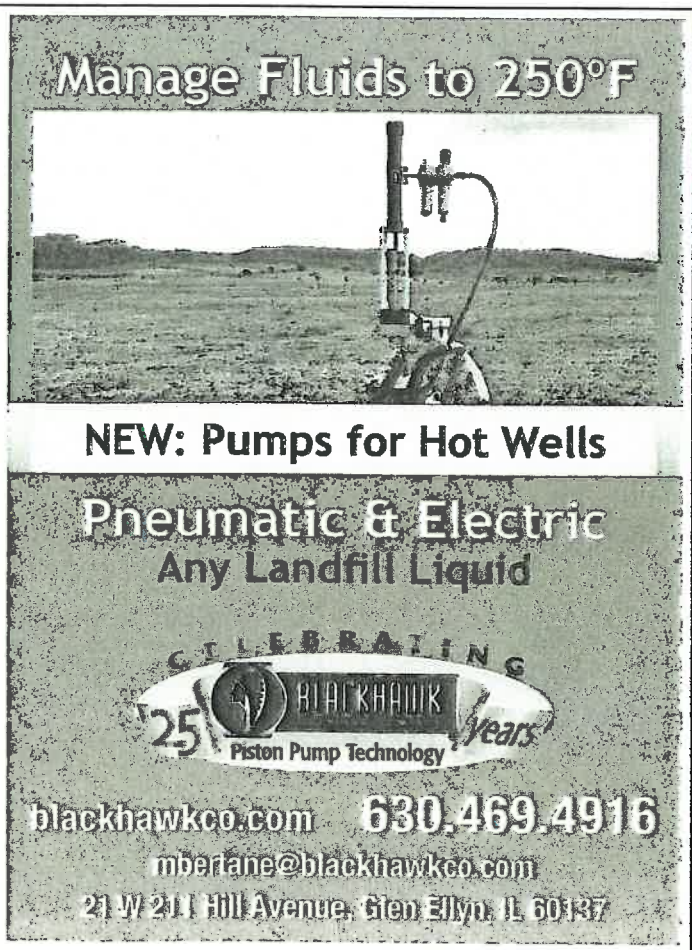
Culpepper says the smooth learning curve for the crews operating the Enviro Cover System makes the solution very accessible. "You can get a good operator performing this with a week or less of training."

Deploying innovative operational controls, including "a good gas collection system to pull the gas out of the landfill, good intermediate cover" for dormant sections of the landfill, and the Enviro Cover as an alternative daily cover for the active faces, has helped control odors and maintain River Birch's standing as a good neighbor, says Culpepper. "I don't know why more landfills don't use it," he adds.

Shining the Light on a Retired Landfill

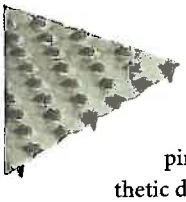
It is not often that people talk about the convenience of living close to a landfill, but one of the prime functions of any municipality is sanitation, and having some sort of waste disposal facility within convenient reach of homes, businesses, and institutions is part of what makes life in urban districts viable. The Hartford, CT, landfill wasn't just convenient to neighboring homes and businesses—it was actually within the city of Hartford.

The landfill began accepting trash as far back as 1940. Initially, trash delivered to the site was burned in the open. Incinerators were



later constructed, but residents complained about the soot and ash, prompting an end to incineration and implementation of an urban landfill that, by the turn of the century, had approached its full capacity. With expansion of the site under consideration, the neighboring communities voiced their objections, and in 2008, the landfill received its final delivery. Changing times have brought new technologies since then, and today, the former Hartford landfill has worked its way into a secure future delivering clean energy, with a major helping hand from erosion control technology.

ired Turf 1-2"



Of the 96-acre Hartford landfill site, 66 acres were capped in the traditional manner. According to Chris Eichelberger, vice president of technical marketing for Agru America, this traditional Subtitle D landfill capping method uses a 40-mil geomembrane with a geosynthetic drainage layer.

"Typically, two to three feet of soil is placed above that, with vegetation such as grass planted on top of that," says Eichelberger.

It sounds simple, but he notes, "If you are the owner of a landfill and don't have the volume of soil onsite to build up the erosion protective layer, there can be a big logistic and financial challenge of finding that soil and trucking it in."

In addition, he says, owners face the challenge of not only constructing the slopes from the imported soil, but also planting them with sufficient vegetation to prevent erosion and financially addressing the challenge of ongoing maintenance to those plantings—a responsibility that could trail off into the next century. Such maintenance issues can include providing irrigation, applying fertilizers, and mowing, which can itself be a daunting task on landfill slopes often engineered to a 3:1 ratio.

Agru America's Closure Turf can provide an alternative to these obligations. Eichelberger says the technology was developed by a group of civil engineers with a background in solid waste management to address some of the tough issues in landfill closure and post-closure activities.

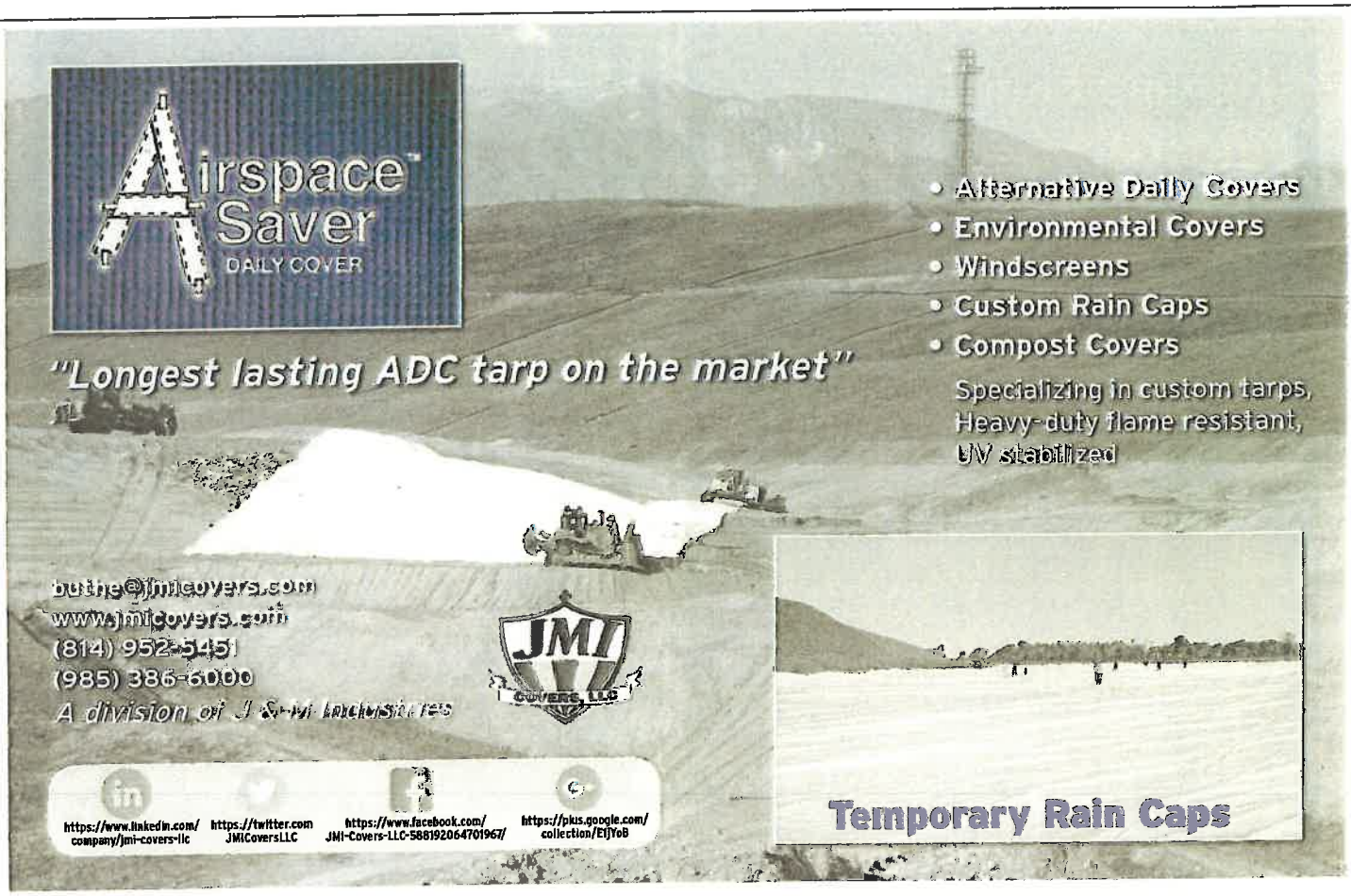
The technology utilizes Agru America's geomembrane product with an engineered synthetic turf from Watershed Geosynthetics on top to form the patented system called Closure Turf. The company now has 30 million square feet of Closure Turf installed at more than 25 project sites. Eichelberger says landfill facilities that employ Closure Turf can expect a 90% reduction in post-closure care and maintenance needs.

Making Lemonade From Lemon Peels

In 2008, after close to 70 years of receiving trash from 70 municipalities in Connecticut, Hartford landfill shut its gates to dumping operations for good. David Bodendorf—senior environmental engineer for the Materials Innovation and Recycling Authority (MIRA), the agency that took responsibility for the closed landfill—says installation of the final landfill cap over the entire 96 acres of the working face and slopes was planned and organized around a phased timetable.

"It was a matter of logistics," he says. "The north and west faces were closer to neighbors, so we wanted to cap them first."

The south side of the site, fronting the Connecticut River and inaccessible to the public, had a lesser impact on neighboring communities



and was scheduled for capping in the later stages of closure. By 2013, with the north and west faces capped and three-quarters of the working surface permanently closed in the traditional manner, what remained was a 35-acre lemon on the south side of the landfill. Bodendorf says MIRA got a brilliant idea: What could be better for a lemon than sunshine? As an alternative to the customary fate of retired landfills as fallow land, the final 35-acre capping and closure installation would embrace the power of the sun and come into a new life as a solar photovoltaic (PV) energy-generation facility.

Noting advances in solar technology and the availability of government incentives for clean energy initiatives, says Bodendorf, "We saw the possibility of doing something other than the traditional capping and closure."

In 2013, MIRA began accepting bids for an alternative landfill capping technology appropriate for housing a 6-acre, 1-MW solar generation facility. "We wanted to look at more than one technology so prices would come in as competitively as possible," says Bodendorf.

MIRA "was aware of at least two capping technologies" that could render the site suitable for use as a solar power plant. As they had anticipated, two firms responded, offering differing solutions.

One bidder envisioned a thermoplastic olefin (TPO) exposed membrane deployed over the final 35-acre parcel of the landfill. The proposal specified anchor trenches to hold the membrane in place on the face and slopes. The design envisioned chemically welding a thin-film PV solar material on top of this capping installation as the solar collector.

The competing proposal hinged on the application of the Closure Turf system, a permeable synthetic turf carpet placed over Agru America's Super Gripnet geomembrane to serve as a platform for an array of ballasted trestle-mounted solar panels.

The Closure Turf synthetic turf protects the underlying geomembrane from ultraviolet (UV) and puncture degradation and allows stormwater to infiltrate through the woven geotextile to either a swale, or drainage downchute, or sub-drain piping. A half-inch nominal thickness of sand spread over and between the tufts of synthetic turf strands adds holding power through the force of gravity while protecting the synthetic turf carpet from UV degradation and puncture damage from above.

Comparing the two technologies, says Bodendorf, he imagined a worst-case scenario in which a final cover material might be degraded. "What if the turf carpet was degraded by the sun and starts blowing away in 10 years—what do we do?"

He could see some potential shortcomings in using a TPO exposed membrane as a final landfill cap. "It's a smooth-faced product."

Lacking the textured facing of Agru America's Super Gripnet to provide the friction to hold a layer of soil on its top, the TPO would not have frictional characteristics to allow the application of a remedial soil cover on a side slope to fix things, feared Bodendorf. "If you did see it start to degrade, and you said, 'Oh, my god, we've got to cover this up with something,' you couldn't just throw soil on top of it and walk away," he says.

Envisioning this same worst-case outcome, Bodendorf believed the Closure Turf solution would fare much better if the top layer were somehow to degrade. "We'd be left with the Super Gripnet polyethylene that is chemically the same as what we've already got on the site. In the worst case, we'll just put a bunch of dirt over the site, then we'd have a cap that's a normal membrane cap."

Sweeping Erosion Away

To achieve installation, after the initial grading to meet subgrade, sand was placed as a cushion layer also serving as a gas vent layer on top of the subgrade. Installers pulled the Super Gripnet out at a rate of about an acre and a half per day "when the weather cooperated," says Bodendorf. Immediately over the Super Gripnet, they deployed the synthetic turf product. As soon as practical after that, they placed the sand infill by broadcast spreading, booming, and high-speed conveyor to spread the sand up the slopes.

"It's amazing how easily the Closure Turf can be slid over the membrane, but once it is in place with the sand infill down, it doesn't slide any further down the hill. When you're walking on it, it doesn't feel like it's sliding down the hill; you can even drive on it," says Bodendorf.

At the edges, the geomembrane was welded to the adjacent previously installed membrane, to interface with the existing linear low-density polyethylene product called MicroSpike that had been installed on other sections of the landfill. Clean stone filling in the grade between the depth of soil on the

old cap and the synthetic turf anchors ties in the new Closure Turf installation to the existing sections of capping.

Although Bodendorf says it took "some effort with broadcast spreaders and high-speed conveyors to cast the sand onto the steeper slopes" and some manpower using brooms to get the sand between the tufts of synthetic grass, the installation went off without a hitch, sidestepping the problems that can arise using traditional capping techniques. "We used traditional caps on 66 acres, and ultimately, it worked out fine, but in each of the preceding phases, we did have times when it rained pretty heavily before the grass started growing, and the contractor lost a lot of soil. When they lose soil, they are losing time and money; the relationship gets strained because they are not as profitable as they would have been if the weather had cooperated. With Closure Turf you take that risk away, or at least minimize it."

With soil requirements for a traditional cap ranging 18–24 inches, "you might require 100,000 cubic yards of soil cover," says Bodendorf. "But the half-inch-thick layer of sand over the 35 acres translates into a couple of thousand cubic yards of material, so it's only 2% of the material that would have to be employed with a traditional cap."

He adds, "With Closure Turf, once you've got your membrane layer installed, the risk of erosion is really eliminated compared to the traditional cap."

Although he concedes he didn't run a cost comparison between the Closure Turf system and a traditional cap, Bodendorf notes, "With a traditional cap, so much of the cost of the project is wrapped up in the procurement and placement of the soil. In some cases, there may not be a nearby low-cost source of soil."

With the alternative membrane cap there is less budgetary uncertainty. "You know about how much the membrane will cost; you know what it will take to install it—how much manpower and about how long it will take," he says. "It's probably pretty easy to price for a contractor, but soil can be a lot harder to price."

With the capping installation complete, MIRA installed the solar panels, and the former Hartford landfill now sells enough power to the grid to electrify 1,000 homes. MIRA is also in the process of establishing a connection to provide power for a Hartford Public Works facility. Bodendorf says the solar array sitting on top of the cap "certainly doesn't hurt" the cap's functionality, adding that, because the turf surrounding the panels is synthetic.

"We don't have to worry about overgrown vegetation ever shading the panels."

He says the Closure Turf blends aesthetically with the rest of the restored site, consisting of meadows with "diverse populations of birds, deer, and nesting bald eagles nearby."

In addition to winning a Solid Waste Association of North America (SWANA) Excellence award, the project has gotten great response from the community, and MIRA has led more than a dozen delegations onsite tours.

Bodendorf notes, "People have known the area in the past as a source of odors and nuisance birds, but now they are impressed when they ride to the top of the slope and see the skyline and the turf and the solar installation. We're convinced we made the right decision." MSW

David C. Richardson is a frequent contributor to Forester Media publications.

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Structural Integrity That Lasts

Photos: Watershed Geosynthetics LLC

Strategies and materials to use when capping or expanding a landfill BY DON TALEND

Capping and closing a municipal solid waste (MSW) landfill can be a civil engineering challenge. The goal is to eliminate any need for further erosion control work onsite to ensure that the landfill keeps its structural integrity. True, landfill owners are required to adhere to EPA's post-closure rules as defined by Subtitle D of the Resource Conservation and Recovery Act, which include maintenance of the leachate collection system, groundwater monitoring system, methane gas monitoring system—and, germane to erosion control activities, the final cover system. But having more structural work done after a landfill has been capped and closed can be costly and can damage the owner's reputation.

This article includes an example of a project in which a landfill was capped to prevent outflow of leachate and sediment to groundwater sources. It also includes an example of a capacity improvement project,

The 25-acre Saufley Field C&D landfill was capped using a "soiless" system.

i.e., expansion of an existing landfill. Finally, it includes a section on designing and constructing the drainage system, which is a critical aspect of capped landfill design.

Protecting Groundwater in Florida

One of the biggest concerns with closing and capping landfills is keeping stormwater runoff from commingling with leachate within the landfill and contaminating nearby groundwater. In some cases, previously capped landfills need remediation to ensure that this problem does not continue to occur.

The 25-acre Saufley Field construction and demolition (C&D) landfill in Pensacola, FL, is one such case. The site was abandoned by its previous owner in 2008. Prior to the abandonment of the facility, the Florida Department of Environmental Protection (FDEP) documented numerous compliance issues since the site was permitted in 1990. The most severe noncompliance issues included operation of the facility at elevations approximately 40 feet higher than the permitted design height and the presence of hydrogen sulfide emissions. In fact, the air pollution associated with the operations of the facility became so extreme in 2007 that the Florida Department of Health issued a report declaring a public health warning with regard to elevated levels of hydrogen sulfide around the facility that were affecting the local community.

Additionally, the stormwater management design of the facility allowed both sediment and leachate to be released offsite, discharging into neighboring stormwater systems maintained and operated by Escambia County. Last but not least, groundwater contamination was recorded with elevated levels of aluminum, arsenic, and manganese, which also resulted in significant fines and violations.

FDEP and Escambia County leadership quickly realized that while this site remained open, it posed a threat to the environment and the health of the citizens surrounding the facility. The only answer to the problem was to close the facility, which in itself posed several significant challenges. Funds were not available to construct a closure, and the closure plan would involve significant site improvements to address the noncompliance issues. After evaluating other traditional soil cover systems in 2012, both FDEP and Escambia County selected the ClosureTurf system based on several criteria.

The system was determined to be the most economical approach to performing a closure. The "soilless" technology reduced the need for natural resources, i.e., soil for constructing the system. It would offer superior protection against erosion along slopes and in down chutes and perimeter conveyance channels. The system promised to reduce infiltration of stormwater into the waste, minimizing impacts to groundwater quality. The remediated site would also have enhanced emission control. And the system would reduce sediment loadings of stormwater runoff to the surrounding watershed.

ClosureTurf is a patented three-component system consisting of Agru America Super Gripnet geomembrane, an engineered synthetic turf layer, and a specified infill, usually ASTM C-33 sand or Hydrobinder, a cementitiously bound infill for concentrated hydraulic flow areas. The impermeable, highly transmissive structured Super Gripnet geomembrane reportedly provides the highest interface friction values on the market. The engineered synthetic turf—consisting of

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ultraviolet-resistant, HDPE grass fibers—is designed to provide the natural look and feel of grass, while protecting the geomembrane from extreme weather conditions and trafficking stresses over the long-term. The specified infill component is placed between the blades of the engineered synthetic turf and allows the system to sustain vehicle loading while also providing additional protection from weathering.

During construction, advantages included a reduced need for soil because the system uses a tufted geosynthetic erosion layer, i.e., engineered synthetic turf, and typically installs at least 40% faster than traditional vegetative cover systems. Over the long-term post-closure period and beyond, surface water rapidly drains off and is not restricted by the hydraulic conductivity of the cover drainage system, reducing cap infiltration and minimizing the impermeable layer hydraulic head and subsequent waste infiltration. The system is designed to be a virtually maintenance-free cover system, and its dust-inhibitive design eliminates the need for watering. Finally, the system is engineered with increased geotechnical factors of safety so it provides increased protection from sloughing and veneer failures.

The geosynthetic erosion layer concept used on the project yielded significant savings by eliminating the need for large amounts of soil that otherwise would be used to cover the geomembrane. The design also promises stability and resilience during severe weather events. The ClosureTurf maintained the landfill's structural integrity during a historic flash flood event in April 2014. The system performed despite rainfall levels of 5.68 inches in a single hour and between 22 to 26 inches of rain over a 24-hour period. According to the National Oceanic and Atmospheric Administration (NOAA), it was the highest calendar day total dating to 1879. The NOAA HDSC Precipitation Frequency Map indicates that it was a 1-in-200-year to 1-in-500-year single hourly amount, and the 24-hour rainfall total was a 1-in-50-, to 1-in-100-year event.

The system is also designed for functional longevity and significantly low long-term care costs. Most importantly, the system is expected to virtually eliminate any stormwater infiltration into the C&D landfill and resulting leachate outflows.

Supporting the Capacity Improvement Segment

A segment of the landfill construction market for which soil stability is critical is capacity improvement, or expansion. John Bolton, business director for Tensar Engineered Structures, says this segment is growing as landfill airspace is increasingly at a premium, which drives tipping fees higher. Permitting new cells can be challenging because protecting groundwater is so important and applicable regulations are very tight and well defined, he adds. This is why so many landfill owners seek to maximize the capacity of an existing landfill within its permitted footprint.

View of relatively clean stormwater runoff in a sediment pond at the Saufley Field landfill

An additional factor driving expansion issues now, says Bolton, is the fact that some municipal landfills are taking coal ash, which is taking up more capacity. Ash used to be stored onsite at coal plants, but large energy producers that operate older coal-fired power plants are under new regulations to dispose of that byproduct in a different way to protect groundwater.

"They're having to find new ways to dispose of their coal ash, and landfill disposal is one alternative," says Bolton. "It's a new wastestream that did not traditionally go into landfills; their capacity is being taken up by new waste that didn't exist for landfills before."

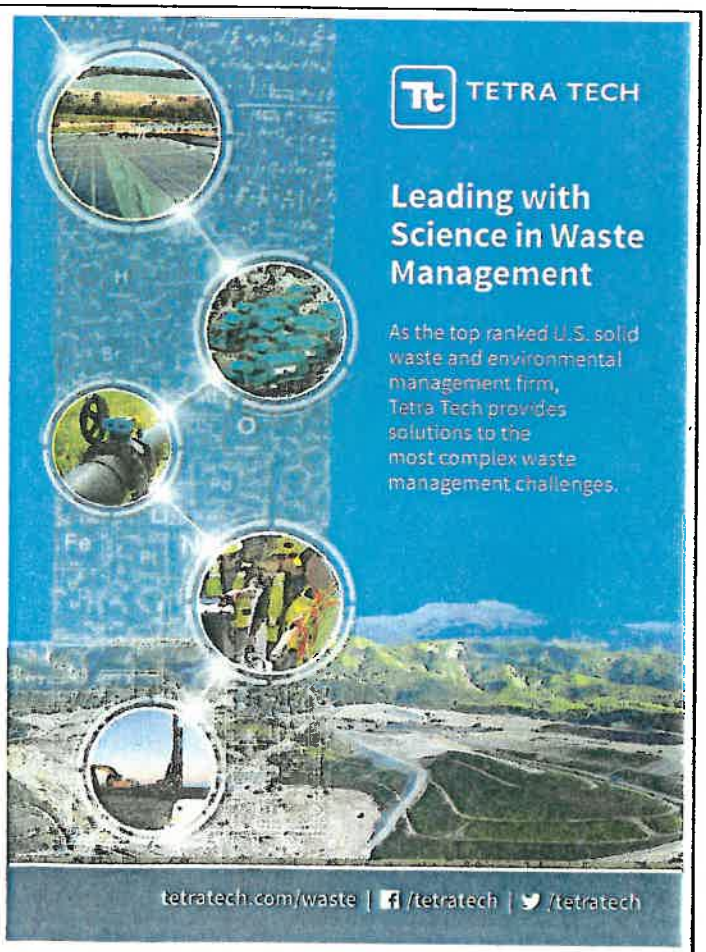
Tensar developed its ADD³ Capacity Improvement Systems to provide lateral and vertical stabilization to perimeter structures of landfills that increase their capacity. "The overall objective of the stabilization of any cell is to protect the lining system," says Bolton. "We design these structures with geosynthetic materials—primarily geogrids—and the system is designed to support the landfill cell so that the integrity of the liner is not compromised."

The ADD³ system consists of four components, explains Bolton. First is the conceptual scoping out of the project. Tensar evaluates several aspects of the project, such as property lines, cell dimensions, and topography.

The second component is the design. Tensar looks at factors such as the loading conditions, the height of the landfill, and the strength of the subsurface strata beneath the landfill to develop design that meets the given design criteria.

The third part is the materials that go into the structure: primary HDPE geogrid, erosion control products, and welded wire forms or concrete block at the face of the mechanically stabilized earth (MSE) structure. These structures reconfigure the outboard slopes of perimeter berms to maximize the inboard airspace of the landfill cells.

And, the fourth component is onsite assistance that Tensar provides the contractor during construction. Tensar representatives attend preconstruction meetings and make site visits to ensure that contractors install the ADD³ structures as efficiently as possible and



to clarify any issues relating to the site plan.

Bolton reports that, as capacity improvement becomes more common, many landfill owners are open to the concept but need help from a third party to design an expanded structure that maintains structural integrity. "Landfill owners attempt to maximize what they get out of each cell and to go steeper or near-vertical with perimeter structures," he notes. "Key drivers include the challenge of permitting a new cell, coupled with the difficulty of maximizing the airspace out of a given permitted landfill footprint. In places where you see the end coming soon for the cell and tipping fees are higher, you're going to think of new ways to get more out of what you have."

Pennsylvania Landfill Expanded Ahead of Schedule

An ADD³ system MSE berm was used to increase the capacity of Cumberland County, PA's MSW landfill back in 2008. Plans to expand the landfill were submitted by the owner-operator, Interstate Waste Services, in August 2005 and by the Pennsylvania Department of Environmental Protection in December 2007. Hershey, PA-based environmental and geotechnical engineers ARM Group Inc., with assistance from Tensar International, developed the project design, as well as all permit and construction documents.

The design included a vertical expansion area over an existing landfill area and a lateral expansion area. ARM Group designed an MSE berm to optimize the volume and permitted the rechanneling of two streams to make the project feasible. The engineer had previously specified an MSE berm for a Chester County, PA, landfill expansion in 2004–2005.

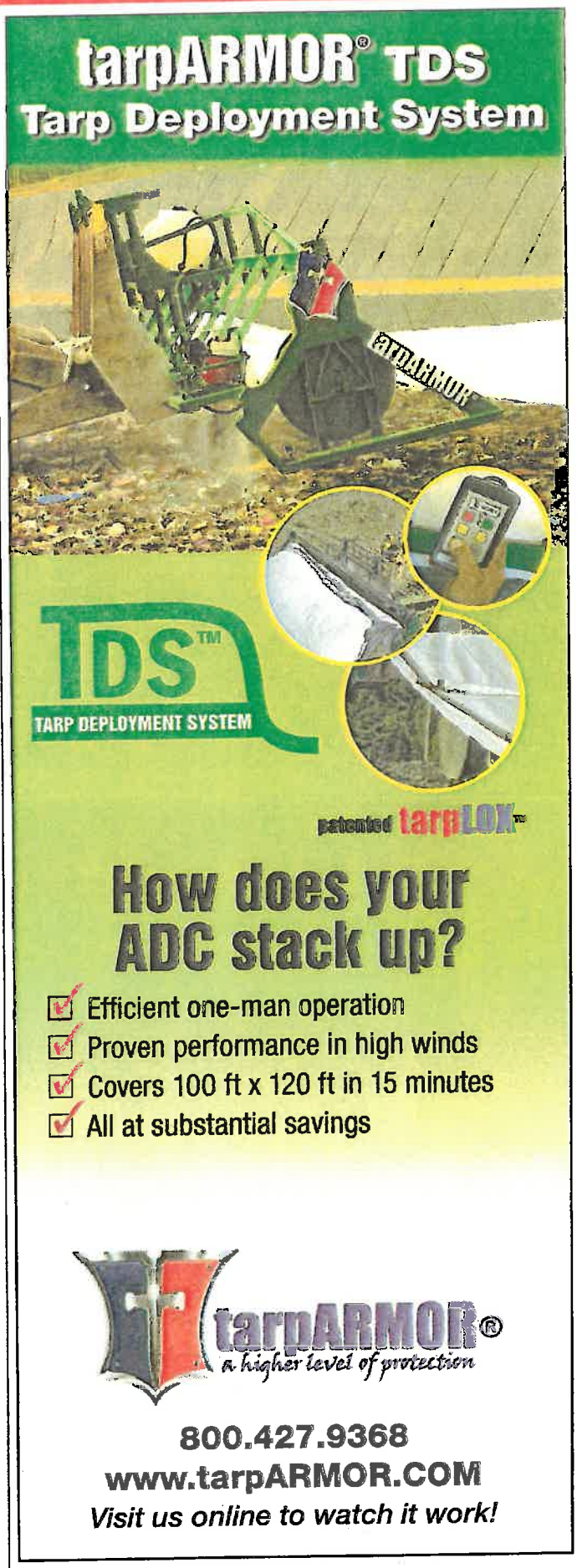
The project was submitted for bid in January 2008 and awarded to Pavex Inc. of Camp Hill, PA. Pavex provided all earthwork services within the berm footprint. Elverson, PA-based Pickering Valley Landscape Inc. was subcontracted to install the Tensar products. The project was the second MSE berm installation for Miguel Servin, a project foreman for Pickering Valley who had also worked on the Chester County facility. Servin and a crew of nine built two MSE berms on the Cumberland County site, steepening the existing slopes with welded wire forms, reinforcing them with Tensar geogrids, and topping them with erosion control mats from North American Green, a sister company to Tensar.

The crew installed nearly 46,500 square yards of Tensar uniaxial (UX) geogrid and 21,800 square yards of Tensar biaxial (BX) geogrid in the process of constructing the berms over three months. One berm measured 1,100 feet long and had a maximum height of 58 feet, and the other measured 305 feet long and peaked at 19.5 feet tall.

"The project went great," says Robbie Sochovka, Interstate Waste Services' capital projects manager. "The technology demonstrates how we can help save valuable airspace. We're very pleased with the product and engineering design."

Sochovka projects an additional 20 years of service for the landfill. The Tensar MSE berm was a first for Les Stotler, Pavex's project superintendent and 30-year veteran of the site development industry.

"The walls are beautiful," he says. "And, they were completed ahead of construction schedule."



Designing for Release of Water

When it comes to protecting the structural integrity of landfills, it's important to approach the tremendous power of water flow with a jujitsu-like mentality: leverage the momentum of the "attacker" to advantage, rather than try to resist the momentum. Steven Mayes, P.E., senior technical manager for North America at GSE Environmental, notes how critical it is to provide a release mechanism for runoff seepage water through a capped landfill. Not doing so may result in soil sloughing—saturated soil loses its cohesion and falls down slopes in large sheets. Landfill sloughing has two causes: sediment buildup in swales, which timely maintenance prevents; and under-designed landfill cap drainage system capacity.

Regarding the latter, Mayes refers to a New Jersey landfill that underwent significant sloughing due to clogged geocomposite material that prevented the inflow of runoff and seepage water into a perforated drainage pipe at the bottom of the slope. The landfill was referenced in a Geosynthetic Institute (GSI) report by Bob and George Koerner titled "On the Need for Water Release from Drainage Composites at the Toe of Slope."

In this case, the clogged geocomposite material caused increased pore pressure and, ultimately, caused the soil to begin sliding down the slope, notes Mayes. "For everything associated with a landfill, the cap is the most visible to the public, and the public generally doesn't want a landfill in its backyard," he says. "So, if you think about the most scrutinized part of your design, that very well could be it."

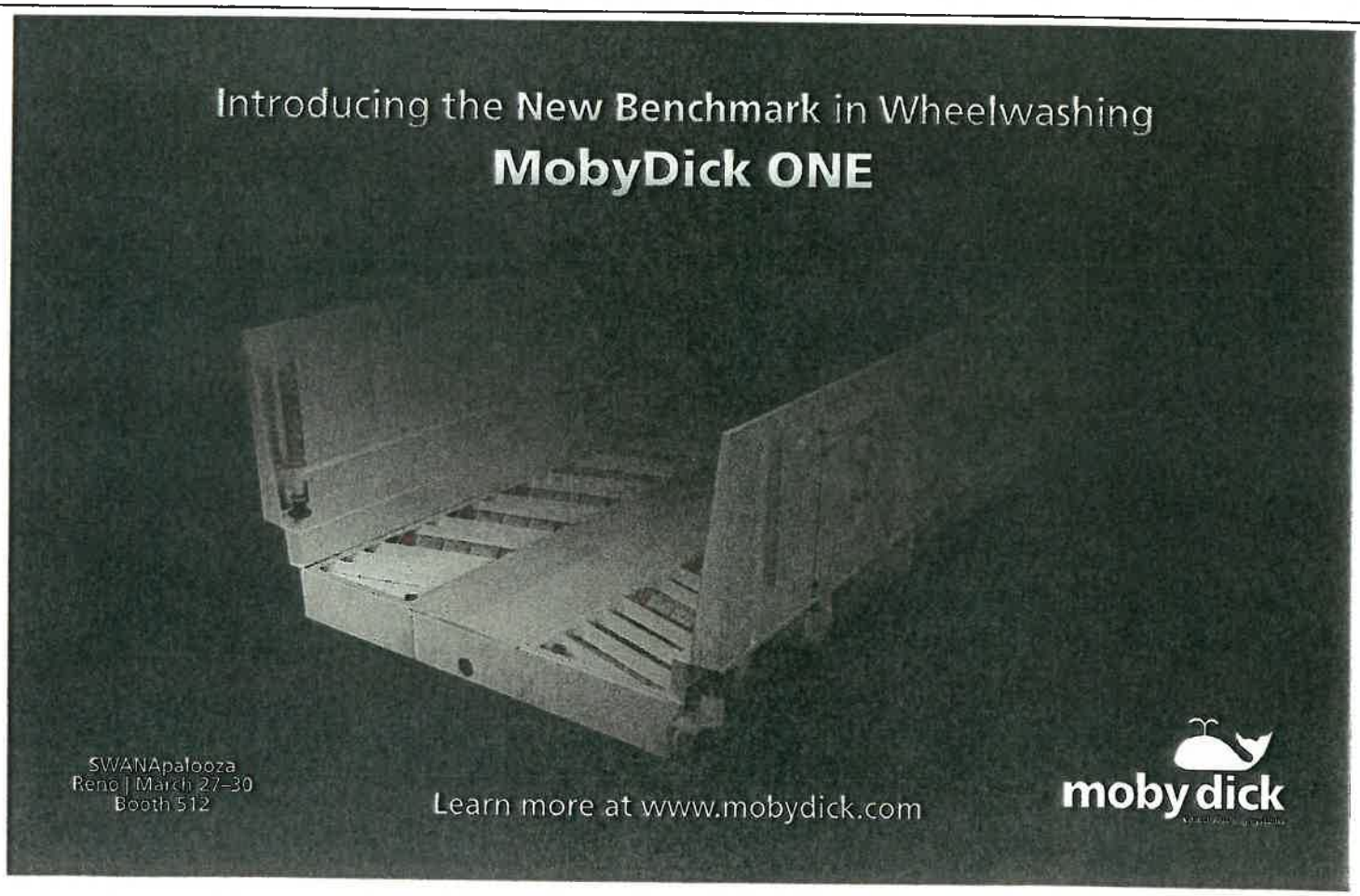
The 25-acre Saufley Field C&D landfill was capped using a "soiless" system.

While the geocomposite material on the New Jersey landfill was indeed clogged, the bigger contributing factor was the manner in which the geocomposite drainage layer was terminated at the perforated drainage pipe. For terminating the geocomposite drainage layer, Mayes points out the importance of rapid and free water release from the geocomposite drainage layer into the drainage collection system, such that buildup of hydrostatic pressure within the geocomposite drainage layer and the buildup of pore pressures within the cover soil are avoided.

Due to the under design of the landfill cap drainage layer capacity, water saturated the soil, causing increased pore pressures up to some undetermined elevation of the landfill slope. The resulting sloughing eventually caused large cracks in the soil, consequently causing a snowball effect by letting in even more runoff water, and eventually leading to a veneer stability failure of the landfill cap.

Unit Gradient Method

In Mayes' professional opinion, landfill capping drainage system design should be based on the Unit Gradient Method. The most common design methodology, it assumes that



cover soil is saturated, so the maximum flow velocity equals the permeability of the cover soil. (This calculator can be found online, at *www.landfilldesign.com/calculators.html).*

"The Unit Gradient Method is the most straightforward," states Mayes. "You're using the worst-case design scenario and designing around that; not all engineers take that approach, though."

Another method—Hydrologic Evaluation of Landfill Performance—is not appropriate for landfill capping drainage design, according to GSE Environmental, because it uses the daily average rainfall in the water balance calculation, which does not simulate the worst-case condition.

The Unit Gradient Method gives engineers a great deal of latitude to design for site-specific water infiltration rates with reduction factors and safety factors.

Reduction factors include, but are not limited to:

- L_h: Drainage pipe spacing or length of slope measured horizontally; the spacing between lateral pipes in swales
- k_{veg}: Permeability of the vegetative supporting soil, as measured by length/time; typically 1.05 or 1.1
- i: Hydraulic gradient; i = sin (ß), where ß is the slope, typically 3:1 (gradient = 32%)

Safety factors include, but are not limited to:

- FS_d: Overall factor of safety for drainage 2.0–10.0, typically 2.0
- RF_{in}: Intrusion Reduction Factor; adjusts for effects on infiltration rate due to variables such as the choice of geocomposite material; range = 1.0–1.2; engineers might opt for a slightly higher value to allow for short-term impacts on the infiltration rate under a 100-hour transmissivity test.
- RF_{cr}: Creep Reduction Factor
- RF_{cc}: Chemical Clogging Reduction Factor, 1.0–1.2

GSI has a standard guide, GC-8 (Geocomposite 8), "Determination of the Allowable Flow Rate of a Drainage Geocomposite," for which reduction factors to include based on the anticipated flow rate. According to Mayes, these factors can address uncertainty that may exist in translating the 100-hour transmissivity laboratory test results to field performance. Sometimes, though, engineers don't use the Unit Gradient Method—or, if they do, they do not utilize appropriate reduction factors, says Mayes. He adds that this may have been the case on the New Jersey landfill.

Selecting Geocomposite Material

Mayes says that, in addition to the reduction and safety factors cited above, it's important for engineers to take into consideration loads on the soil when selecting geocomposite material. For example, the load on soil above geocomposite material should not exceed the geocomposite material's compressive strength. For instance, if the compressive strength of a geocomposite is 10,000 pounds per square foot, add in a minimum FS_d of 2.0, and the load should not exceed 5,000 psf.

"Generally, when you're trying to decide what type of geocomposite to specify, you have two considerations initially," he says. "You're always looking at its flow capacity, but you're also considering the structural design of the geonet material itself because it has to accommodate any structural loading, and that's not something all design engineers consider."

Besides structural loading, Mayes says that engineers may need to account for live loading from construction equipment such as bulldozers. MSW

__Don Talend__ specializes in covering sustainability, technology, and innovation.

Environmental Services Joint Powers' Authority
Board of Directors' Meeting

Thursday, March 16, 2017

Technical Advisory Group

Breakout Session

ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA
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PROGRAM MANAGER – MARY PITTO

MEMORANDUM

To: ESJPA Board of Directors

From: Mary Pitto
Program Manager

Date: March 8, 2017

RE: Beverage Container Recycling Program

ESJPA staff continues to monitor the Beverage Container Recycling Program (Bottle Bill), which has been operating in a structural deficit for quite some time. Now that the recycling rate is so high (up to 85 percent), the payments to consumers and the myriad of extra programs (city/county payments, handling fees, curbside supplemental payments, and state educational program) exceeds the beverage container fees collected. CalRecycle had anticipated that funds would become insufficient for the extra programs and would need to impose "proportionate reductions" beginning July 2017.

Bottle Bill reform has been discussed for many years to no avail. There has been talk of expanding the container types, increasing the container fees, paying less per container than is collected per container ($0.05 in/$0.04 out), and doing away with the program. There are so many stakeholders involved with different perspectives that no progress has been made to date.

Bottle Bill reform is currently being addressed as part of the Governor's 2017-18 proposed Budget. A framework was outlined in January (attached), with details to be worked out throughout the budget process. The policy principles in the framework include improving recycling and remanufacturing, sharing responsibility, and enhancing adaptability and sustainability.

Over the past twelve months, many rural counties have experienced closures of Certified Recycling Centers. This has occurred due to the crippling decline in scrap values, the 15-month lag time in calculating "processing payments" (which are supposed to cover the gap between the actual and calculated scrap value), and the increase in minimum wage. Low-volume centers simply could not operate at a profit. Approximately one-third of the centers have now closed within the state, with the greatest impact felt in rural counties. These buy-back centers are critical to the recycling infrastructure. RCRC will be advocating for a tiered handling fee to augment low volume centers, maintaining city/county payments, and curbside payments.

In the most recent CalRecycle Quarterly Report on the status of the Beverage Container Recycling Fund, forecasted proportional reductions may not be required within the forecasted period, FY 2016-19. In light of this, some of the SWIG expressed their belief that Bottle Bill reform will not remain as a priority in the budget, and will likely be pursued in separate legislative bills. However, the SWIG concurred that the public and private sector must work together as partners to improve

recycling opportunities for the public, and maintain sustainable solid waste programs for all parties.

Attachment

- Modernizing the Beverage Container Recycling Program - CalRecycle

Modernizing the Beverage Container Recycling Program

Summary

Combatting climate change requires strategies to reduce the amount of landfilled waste and increase recycling for multiple types of materials. Recycling reduces greenhouse gas emissions by lessening the need for natural resource extraction, saving energy in the manufacturing of new products, and minimizing landfill emissions.

Over the past 30 years, the Beverage Container Recycling Program (Program) has raised consumer awareness of the environmental impacts of littering and the benefits of recycling single-use beverage containers. The Program has successfully prevented hundreds of billions of single-use beverage containers from becoming litter and has promoted a robust recycling collection infrastructure. However, the Program is limited in its abilities to adapt to changes in consumer products and behavior, developments in recycling systems, and fluctuations in the global commodities market. These limitations have created challenges and missed opportunities to maximize the benefits of recycling beverage containers, especially climate change benefits. To maximize the environmental and economic benefits of recycling beverage containers, the Program requires comprehensive reform that aligns with the state's climate change goals, the state's 75 percent solid waste reduction, recycling, and composting goal (AB 341, Chapter 476, Statutes of 2011), and fiscal sustainability.

Background

The 1986 California Beverage Container Recycling and Litter Reduction Act (Act) includes the following findings and declarations:

- Ensure that every container type proves its own recyclability.
- Make redemption and recycling convenient to consumers.
- Create and maintain a marketplace where it is profitable to establish sufficient recycling centers and locations to provide consumers with convenient recycling opportunities through the establishment of minimum refund values and processing fees and, through the proper application of these elements, to enhance the profitability of recycling centers, recycling locations, and other beverage container recycling programs.

The Act notes the responsibility to provide convenient, efficient, and economical redemption opportunities rests jointly with manufacturers, distributors, grocers, retailers, recyclers, processors, and the Department of Resources Recycling and Recovery (CalRecycle).

Recycling beverage containers into new products creates environmental and economic benefits by conserving resources and preventing pollution. When a beverage container is successfully collected, processed, and remanufactured into a new beverage container in the state, for example, Californians reduce the need for extraction of new natural resources, save energy through remanufacturing, reduce greenhouse gas emissions, create California jobs, and prevent littering and pollution. These achievements align with the state's climate goals and the state's 75 percent solid waste reduction, recycling, and composting goal.

In the early years of the Act, the Program brought focus to resource conservation by successfully educating consumers on the environmental impacts of littering and the benefits of collecting beverage containers for recycling. Although collection is a key first step, resource conservation is contingent upon the processing and remanufacturing of recyclable material into new products. The Program supports the development of beverage container collection

systems as well as in-state processing capacity. However, changes in beverage container packaging, the collection infrastructure, and the global commodities market have created challenges for conserving and recovering recyclable material from beverage containers.

Beverage Packaging. Modern beverage container packaging is more diverse and complex. Today, the Program manages significantly more plastic and composite packaging than was initially anticipated, which creates challenges for handling and sorting beverage containers. In addition, not all beverages are in the Program by virtue of their packaging. For example, water sold in a carton is excluded from the Program, whereas water sold in a plastic bottle is included. At the same time, not all beverages in existing Program material types are covered. For example, wine and distilled spirits sold in glass are excluded from the Program, whereas beer and water sold in glass are included. These exclusions from the Program and the continuing evolution of packaging has, in many instances, outpaced the Program's ability to maximize the recycling of beverage container materials into new commodities.

Collection Systems. The current collection system includes curbside operations and recycling centers, which differ in terms of direct redemption opportunity and quality of recycled material. In conjunction with the Program, the 50 percent solid waste diversion mandate (AB 939, Chapter 1095, Statutes of 1989) led to the adoption of curbside collection in California. Curbside collection is efficient at capturing large amounts and types of recyclable materials, including beverage containers. However, mixing all recyclables together in curbside bins leads to loss of material and increased contamination, raising the cost of recycling. For example, curbside operations capture significant amounts of glass packaging, but these operations also experience substantial breakage of glass packaging, making recovery difficult and increasing the amount of glass landfilled. Furthermore, the broken glass contaminates and reduces the value of other recyclable materials. Some curbside operators have made the necessary investments and demonstrated the ability to address these challenges, but the infrastructure varies across the state. In contrast, recycling centers provide consumers direct redemption opportunities and generally produce cleaner recyclable materials. Despite the quality differences, the Program supports both curbside operations and recycling centers with nearly identical mechanisms.

Global Markets. Recyclable materials are commodities subject to fluctuations in the global commodities market. Recent declines in global demand and scrap values for recyclable commodities have impacted all levels of California's recycling infrastructure, including the robust network of recycling centers. In 2016, the state experienced a net loss of over 350 recycling centers. The Program plays an important role in supporting the recycling center infrastructure when the cost of recycling is more than the scrap value of the material. However, the Program lacks the ability to rapidly adjust processing payments that support the recycling infrastructure and mechanisms to bolster in-state markets for recycled materials in times of low commodity scrap values and decreased global demand.

The Administration is committed to collaborating with stakeholders on a comprehensive reform that aligns with the state's climate change goals and the state's 75 percent solid waste reduction, recycling, and composting goal, and is fiscally sustainable. To that end, CalRecycle proposes the following policy framework outlining key components of reform.

Modernization Proposal

Principles

To maximize the environmental and economic benefits of recycling beverage containers, the program requires comprehensive reform that aligns with the state's climate change goals, the state's 75 percent solid waste reduction, recycling, and composting goal, and is fiscally sustainable based on the following principles:

- Improving Recycling and Remanufacturing
- Sharing Responsibility
- Enhancing Adaptability and Sustainability.

Improving Recycling and Remanufacturing

The Program has been successful in its initial goal of reducing litter by providing recycling collection opportunities for consumers. However, collection does not ensure that a product is recycled into a new commodity. Future investments should be dedicated to creating clean, recyclable streams of material to facilitate recycling and remanufacturing. To facilitate recycling and remanufacturing, CalRecycle will focus reform efforts on maintaining redemption opportunities for consumers and increasing the stream of clean recyclable materials.

Recycling Center Infrastructure. Recycling centers provide consumers the opportunity to directly redeem their beverage containers and produce clean material streams for recycling. CalRecycle proposes to strengthen recycling center infrastructure by reorganizing payments to support lower volume and rural recycling centers, maintaining grocer responsibility, and increasing local responsibility to support opportunities for consumers to redeem their containers.

A. A substantial portion of the recycling centers that have closed over the last year handled low volumes of materials. In addition, these centers were disproportionately located in rural regions with limited access to recycling collection. Based on its cost surveys, CalRecycle has identified that lower volume sites have higher costs per container than higher volume sites; this difference is not reflected in the current processing payment or handling fee. **CalRecycle proposes to restructure the processing payments and handling fees to support lower volume and rural sites through a tiered structure that combines these payments.**

B. Grocery and retail locations are the primary distributors of beverage containers to consumers in California. Currently, grocers and retailers have a responsibility under the Program to provide redemption opportunities to consumers. However, the Program currently provides limited options for compliance: (1) establish a recycling center in the grocer/retailer parking lot, (2) allow for in-store redemption, or (3) pay a $100 per day in-lieu fee. In the past three decades, consumer behavior for redemption has changed and there has been a recent contraction in the number of recycling centers due to fluctuations in the global commodities market. Recycling center closures have left grocers and retailers with the responsibility to provide in-store redemption or pay the in-lieu fee. CalRecycle continues to support redemption opportunities near the point of sale, but recognizes there may be other mechanisms for redemption and the

responsibility to establish these opportunities must be shared. **CalRecycle proposes to continue a form of grocer and retailer responsibility, and seeks the ability to approve innovative, local compliance options that enhance consumer redemption opportunities.**

B. As mentioned above, the Program currently has a limited set of options for providing consumer redemption opportunities and CalRecycle supports the adoption of new mechanisms, such as mobile recycling, that increase direct redemption. While grocers and retailers have a responsibility to provide redemption opportunities, the Program does not fully account for the role of local jurisdictions in local land use decisions that allow for recycling centers to operate. Currently, local governments receive Program payments even if local land use decisions do not support recycling center operations or other mechanisms that provide direct redemption opportunities for their constituents. At the same time, local governments are best equipped to implement effective redemption opportunities that suit their communities. **CalRecycle proposes to restructure the current city and county payments into a competitive grant program for local governments and implement new opportunities for redemption. In addition, CalRecycle proposes to allocate Program payments based on the extent to which a local jurisdiction has supported sufficient direct redemption opportunities for consumers.**

Curbside Operations. Consumers may choose to forego redemption of their beverage containers and, instead, use curbside services. When consumers use curbside services, curbside operators may claim payments for that CRV material. While other states with beverage container deposit systems do not allow for curbside operations to receive redemption payments, CalRecycle recognizes that curbside operators support the accessible collection of beverage containers in the Program. However, as discussed earlier, system improvements are needed to meet California's environmental and economic goals. In addition, current methodologies used to calculate the amount of CRV handled by curbside operators must be reevaluated so that Program payment methodologies accurately capture the true amount of CRV material handled. CalRecycle also recognizes that theft of curbside materials is a problem faced by curbside operators and that collaboration is needed to develop solutions. Lastly, CalRecycle seeks to support and provide incentives encouraging clean recycled material streams collected through curbside collection.

A. Curbside operators currently receive CRV and processing payments for collected beverage containers. **CalRecycle proposes to modify these program components by providing a new payment based on recycled feedstock quality and system efficiency.** This program modification would be implemented gradually in order to allow curbside operators sufficient time to adjust operations to adapt to the new payment system.

B. The current curbside supplemental payment is $15 million and is paid based on the number of processed beverage containers. In order to produce high quality recycled feedstock and increase system efficiency from curbside operations, **CalRecycle proposes replacing the curbside program with a competitive grant program supporting collection modernization and processing infrastructure.**

Beverages and Beverage Containers. Beverage containers included in deposit systems are collected and recycled at high rates. However, not all beverages sold in California are covered by the Program. Although the Program was expanded in 2000 to include water, among other beverages, the Act artificially limits the types of beverage containers that are included. This creates confusion for the consumer, since the same beverage may or may not be in the Program based on its packaging material, and creates a disparity between related beverages types. In order to establish equity within the Program, **CalRecycle proposes to add additional beverages packaged in existing Program materials (e.g., plastic, glass, and aluminum), such as wine, distilled spirits, and large juices, beginning on July 1, 2018.** This proposal supports the state's waste diversion and climate change goals, eliminates existing inequities in the marketplace, and facilitates the collection of these containers at recycling centers producing cleaner material streams.

CalRecycle is also cognizant of the evolving market for beverage container materials. As a result, **the Department seeks authority to develop and implement regulations that would add other beverage container material types.** This would include aseptics, cartons, and flexible packaging. The proposal is designed to give CalRecycle the authority to adopt these changes in a way that is efficient, allows for the necessary development of the recycling infrastructure, and minimizes potential fraud risks.

Sharing Responsibility

Historically, the consumer has shouldered most of the financial burden to sustain the program. Program responsibilities and financing should be rebalanced among all program participants.

Under the current Program, the financial responsibility for recycling beverage containers rests primarily on the consumer. Consumers pay $0.05 or $0.10 on each beverage container purchased, and in order to get their deposit back, consumers must travel to a recycling center to return their container. In contrast, beverage manufacturers pay $0.00024 for each PET container they sell in California.

A. When the Program was first implemented, beverage manufacturers had the financial responsibility to cover the costs of recycling beverage containers. The shift to unredeemed CRV covering the beverage manufacturers' share of the processing fee has limited the Program's opportunities to support critical recycling infrastructure. **CalRecycle proposes to restore the requirement that beverage manufacturers cover the cost of recycling.**

B. Currently, beverage manufacturers do not play a strong enough role in supporting markets for post-consumer recyclable material especially when the cost of virgin beverage container material is less than recycled material. **CalRecycle proposes to require beverage manufacturers to support recycled material markets through one or more of the following: minimum content requirements, material buy-back requirements, refillable beverage container options, and designs for recyclability.**

C. The current resin identification codes (RIC) do not adequately distinguish between plastic polymers used for beverage containers. For example, plastic beverage containers made of polyethylene terephthalate (PET) are labeled as RIC 1, but may contain polymers or other components that render the material incompatible with the PET recycling infrastructure. **CalRecycle proposes to reform the RIC system to require that beverage containers labels reflect their recyclability.**

Enhancing Adaptability and Sustainability

Increases in the recycling rate have resulted in a structural deficit in the Beverage Container Recycling Fund. In addition, the program does not respond quickly to fluctuations in the global commodities market. The program must be both nimble and fiscally sustainable to advance the state's economic and environmental goals. A comprehensively reformed program must be fiscally stable and include a mechanism preventing future structural deficits.

Over the last 30 years, the Act has been amended repeatedly and reflects a patchwork of various changes. **CalRecycle proposes to remove antiquated Program provisions and create program efficiencies.** These changes include, but are not limited to, clarifying definitions and reporting requirements, optimizing Program payments, and implementing other Program improvements.

The Program must also become nimbler to respond to fluctuations in the global commodities market. For example, the current statutorily prescribed formula for calculating processing payments includes variables that lag behind real-time changes in both recycling costs and scrap value calculations. This lag, combined with other factors, causes lower processing payments during times that recycling operators are most negatively impacted by global markets. As a part of comprehensive reform, existing mechanism must be modified to reduce the lag, thereby facilitating timely adaptation to market changes.

CalRecycle is proposing significant reforms to the Program, which must be implemented incrementally over time. In the course of reforming the Program, CalRecycle seeks to address the current $50 million structural deficit and limit adverse impacts such as the need to proportionally reduce payments.

Appendix:

Policy Principles

To maximize the environmental and economic benefits of recycling beverage containers, the program requires comprehensive reform that aligns with the state's climate change goals, the state's 75 percent solid waste reduction, recycling, and composting goal, and fiscal sustainability based on the following principles:

- **Improving Recycling and Remanufacturing**—The program has been successful in its initial goal of reducing litter by providing recycling collection opportunities for consumers. However, collection does not ensure that a product is recycled into a new commodity. Future investments should be focused on creating clean, recyclable streams of material, which will improve the recycling and remanufacturing segments of the current system.
- **Sharing Responsibility**—Historically, the consumer has shouldered most of the financial burden to sustain the program. Program responsibilities and financing should be rebalanced among all program participants.
- **Enhancing Adaptability and Sustainability**—Increases in the recycling rate have resulted in a structural deficit in the Beverage Container Recycling Fund. In addition, the program does not respond quickly to fluctuations in the global commodities market. The program must be both nimble and fiscally sustainable.

Modernization Proposal Outline

Improving Recycling and Remanufacturing - Redemption Opportunities and Clean Material Streams

a) Recycling Center Infrastructure
   i) Restructure processing payments and handling fees to support lower volume and rural sites through a tiered structure that combines these payments.
   ii) Maintain grocer and retailer obligation and give the Department the authority to expand compliance options.
   iii) Increase local responsibility to support solutions for consumers to redeem.
      (1) Restructure city/county payments and competitive grants to provide competitive grant funding.
      (2) Option to link Program payments to local opportunities to redeem.

b) Curbside Operations
   i) Create a single curbside payment based on recycled feedstock quality and system efficiency.
   ii) Convert curbside supplemental payment into a competitive grant program to support modernization of collection and material recovery infrastructure.

c) Beverages and Beverage Containers
   i) Include beverages in current materials, and add wine and distilled spirits, on July 1, 2018.
   ii) Authority to add additional container material types, including but not limited to aseptics, cartons, and flexible packaging

Sharing Responsibility

a) Require beverage manufacturers to cover the full cost of recycling.
b) Require beverage manufacturers, or an organization representing manufacturers, to create markets for recycled products through one or more of the following:
    i) Minimum content requirements
    ii) Material buy-back
    iii) Refillable containers
    iv) Design for recyclability
c) Reform Resin Identification Codes to enhance recyclability.

Enhancing Adaptability and Sustainability

a) Cleanup antiquated program provisions.
b) Evaluate and improve program efficiency.
c) Provide authority to respond to changes in the global commodities market.
d) Limit adverse impacts such as the need to proportionally reduce payments.

FY 2016-17—First Quarter

Quarterly Report on the Status of the Beverage Container Recycling Fund

FY 2016-17—First Quarter Report

This report covers the first quarter of 2016-17 (July through September 2016).

Key features:

- Actual and projected program expenditures and payments, including transfers.
- Actual and projected revenues.
- An assessment of the fund's structural deficit.
- A fund adequacy determination necessary to support program expenditures.

Structural Deficit

This Report projects the structural deficit over the course of FY 2016-17 to be $48.7 million.

- This is a $1.3 million decrease in the deficit projected for the period reflected in the November 2016 Quarterly Report.

The Department projects the structural deficit to decline further in FY 2017-18 to $27.7 million

- This is a slight increase of $1.0 million from our previous projection for the same period.

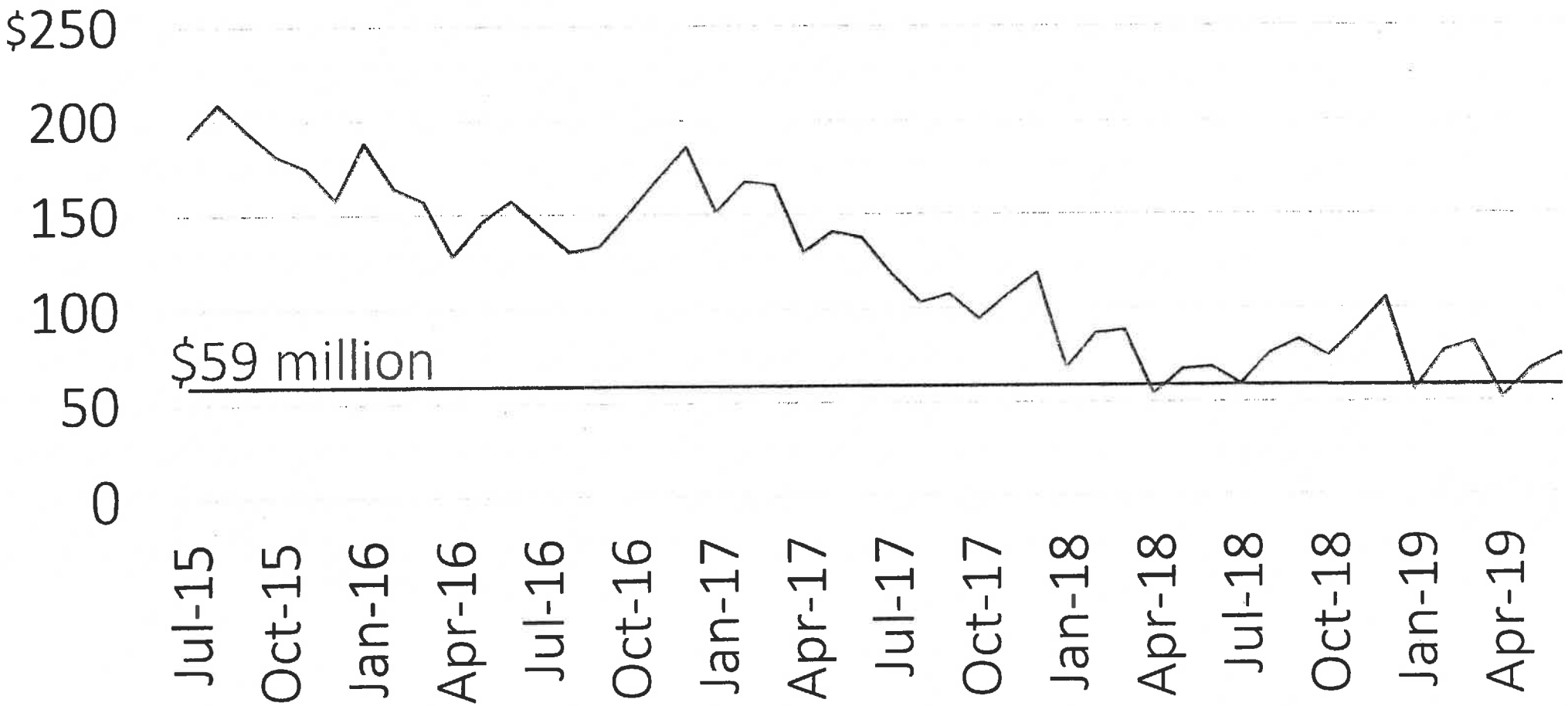
Structural Deficit (continued)

Changes since the last Report reflect:

- A revenue increase (more CRV-In).
- An expenditure decrease (less CRV-Out).
- A net increase in reconciliation payments to processing fee offset accounts.
- The anticipated sunset of Plastic Market Development payments, effective January 1, 2018.

Proportional reduction may not be required within the forecast period.

Cash Balance Of Fund 0133 *(Millions Of Dollars)*



Recycling Rates Inferred from Revenues and Expenditures

	2016-17	2017-18
Aluminum	97.1%	97.0%
Glass	74.6%	72.4%
PET Plastic	78.5%	76.6%
HDPE Plastic	78.7%	79.2%
Overall	83.5%	82.0%

ENVIRONMENT

California's recycling blues

For some, California's recycling centers are places to make a little extra money. But now some of the centers are closing.

DEC 14, 2016 By Saul Gonzalez

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How can you help the environment while putting some fast money in your pocket?

In California, you can go a recycling redemption center. Often found in supermarket and strip mall parking lots; these are businesses where people can turn in used aluminum cans, plastic packaging and glass bottles and get cash in return. The amount received depends on the quantity of recyclables brought in.

Norberto Ulloa frequently goes to a redemption center in the San Gabriel Valley community of Baldwin Park, where he unloads garbage bags full of used bottles and cans from his car.

"Basically, once I have four or five bagfuls at home, I get over here," said Ulloa. "So whatever I can get back, it goes in the pocket, and it goes to bills, gas, whatever it is."

Laura Adams, who makes weekly trips to a facility in mid-city Los Angeles says the $10 to $50 she makes per trip helps her survive when money is low. "It's very important," she said. "And when you are low on cash, you can always come here and get some extra cash from recycling."

Adams said she uses the cash she earns from recycling to buy food.

A recycling redemption center in Los Angeles. Thousands of Californians earn extra income by bringing recyclables, both their own and what they collect on the street, to the centers. (Photo: Saul Gonzalez)

But as redemption center customers struggle to survive, so to do the centers themselves. California's recycling redemption center system is in a financial crisis, with hundreds of the facilities closing in recent years.

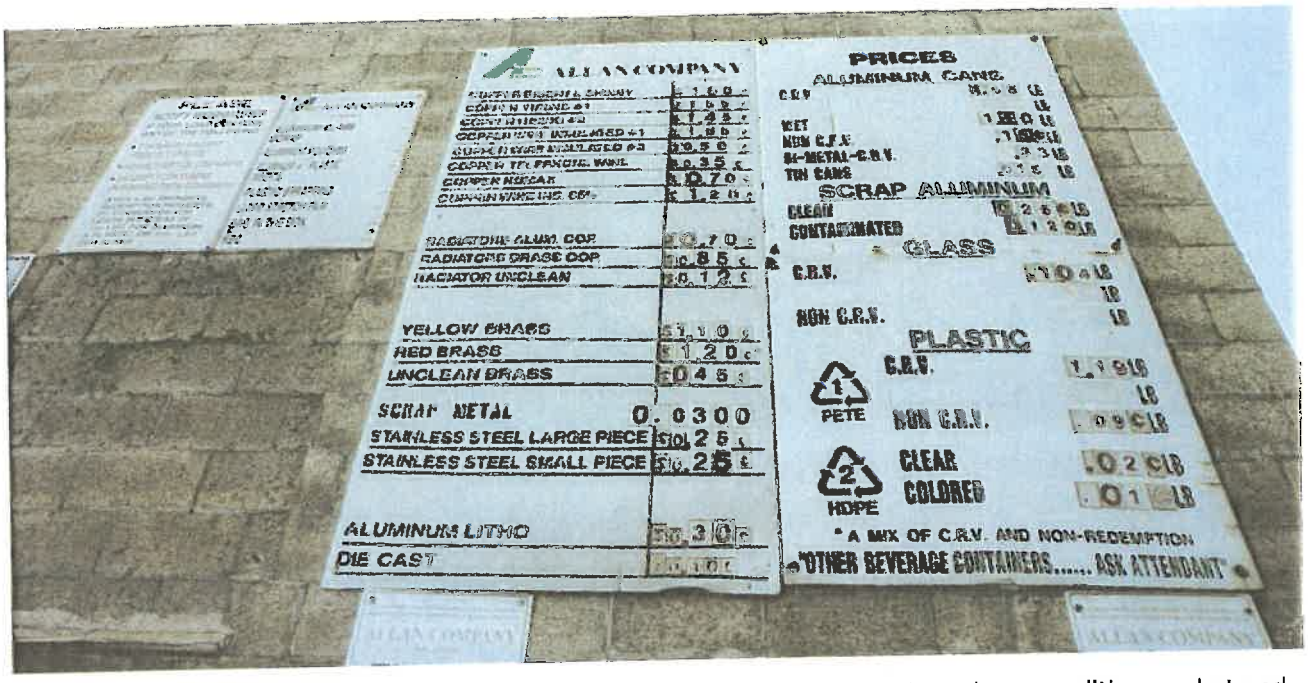
What's the root of the problem? Well, even in eco-conscious California, it's increasingly difficult to make a profit in the recycling business, especially if you're trading in the raw material of recycling, all of those used cans, bottles and packages.

"Unfortunately we have had four years of the row of the commodities prices going down and down and down," said Susan Collins, executive director of the Container Recycling Institute, a non-profit group that studies the recycling market.

Collins says a worldwide glut in recyclables has led to a sharp decline in the value of scrap metal, plastics, glass and paper. The result is that it's much more difficult for California's redemption centers to make money when they try to resell recyclables to larger raw materials processors.

"And it's meant that the redemption centers have lost money, continue to lose money, as a whole throughout the state," said Collins.

Because of the soft recyclables market, more than 800 California redemption centers have gone out of business in recent years, that's roughly a third of their total number in the state.



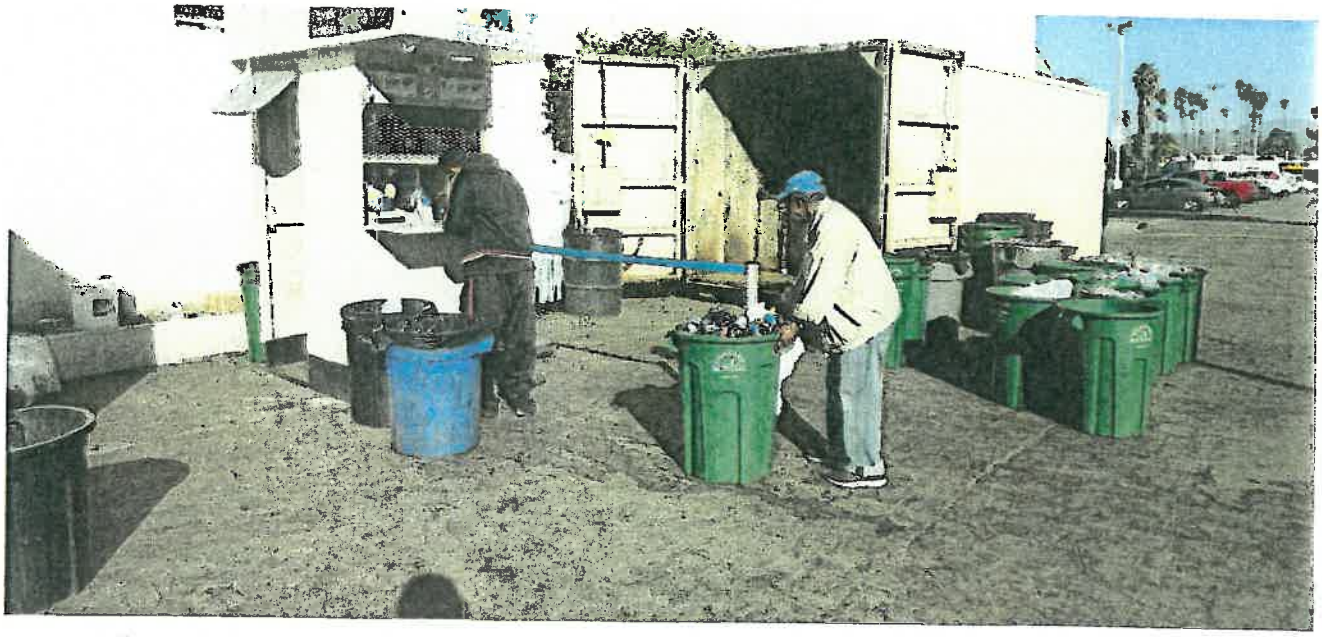
A worldwide glut of recyclable products has lowered prices in the recycled good commodities market and led to the closure of hundreds of recycling redemption centers in California. (Photo: Saul Gonzalez)

The redemption center closures, in turn, have made it more difficult for the people who earn extra income by bringing recyclables to the facilities. Many don't own cars and rely on the convenience of centers within walking distance when hauling in their bagfuls of recyclable goods.

Seeing them integral to recycling goals, the state of California does provide subsidies to redemption centers to help cover their operating costs when prices are low in the recycling market. That money comes from the charge placed on recyclable cans and bottles in the state, 5 cents for small containers, 10 cents for larger ones.

But Susan Collins says that the recyclables market is now so depressed that the subsidies aren't nearly large enough to keep the redemption centers open. She says over a billion dollars is in California's recyclable fund and the state can just use a fraction of that to keep the redemption centers open.

"So there is plenty of room within the program to increase the payments to make them fair payments and fix that now," said Collins.



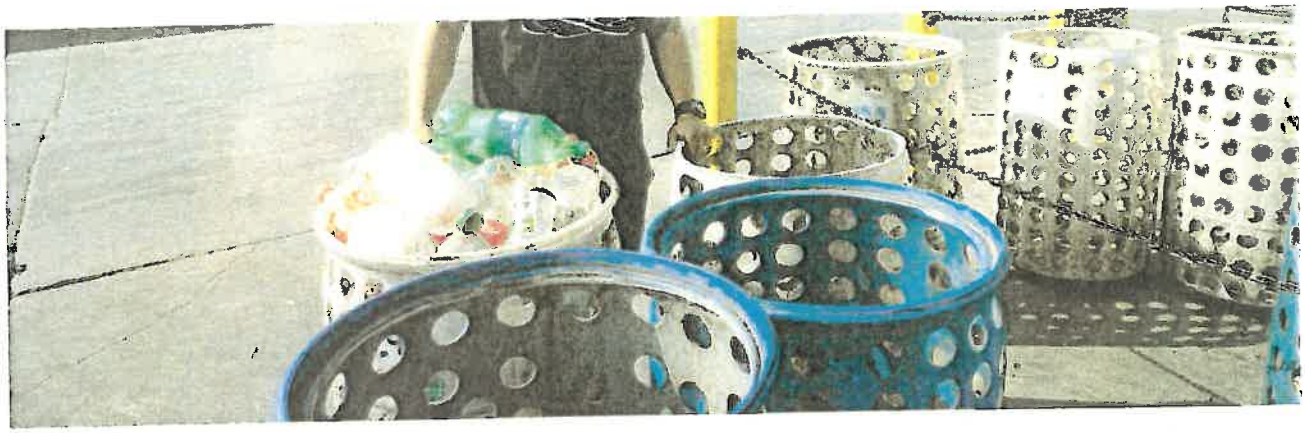
Environmentalists say the state of California can do more to help struggling recycling redemption centers by boosting subsidies. That money comes from the 5 and 10 cent redemption charge placed on recyclable goods in the state. (Photo: Saul Gonzalez)

However, California has already hiked subsidies for the centers in response to changes in the market, but that state law prevents additional immediate increases, according to Mark Oldfield of CalRecycle, the state agency that administers the state's recycling subsidy program.

"We are allowed to adjust it every quarter and that's what we are doing according to the statute that we are obligated to follow," said Oldfield.

Oldfield also notes that redemption centers are private businesses and like other businesses have to survive as markets change and commodities prices fluctuate.

Back at one of the remaining recycling centers in California, Norberto Ulloa is counting the cash he's gotten back in return for his bags of old bottles and cans. It adds up to over $17, money he says he'll use to pay for gas to get work.



Norberto Ulloa waits for his recyclables to get weighed at a redemption center in Baldwin Park. (Photo: Saul Gonzalez)

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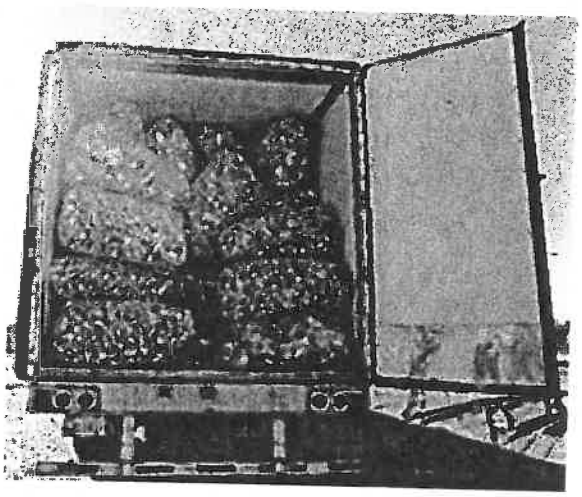
CDFA, CalRecycle work together to stop fraud suspect at Border Protection Station

Posted on March 7, 2017 by Office of Public Affairs



A load of beverage containers stopped at CDFA's Border Protection Station at Blythe

A Corona man hauling seven-thousand pounds of used beverage containers from Arizona was stopped by personnel at CDFA's Blythe Border Protection Station (I-10) and now faces potential felony charges of fraud, attempted grand theft, and conspiracy.

CDFA and CalRecycle partner under an interagency agreement aimed at preventing the illegal redemption of out-of-state beverage containers. It's one of several partnerships between the border stations and sister agencies to help prevent illegal activity and protect the environment.

The suspect at Blythe, 27-year old Eduardo Herrera, told inspectors his truck-trailer was empty. However, it was found to actually be carrying a load of aluminum and plastic beverage containers with a potential redemption value of more than $10,000.

Following the detection the case was referred to the California Department of Justice's Recycling Fraud Team and is now in the hands of the Riverside County District Attorney's Office to determine formal charges.