



Zero Waste Project Standard

Environmental Certification Services Division

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1. Summary

The SCS Zero Waste Project Standard provides a basis for certification of municipal solid waste diversion from landfill for a time-bound, place-bound project.¹ In the context of this Standard, a Project is an activity that takes place at a facility but is not bound by management at that facility. For example: construction project, landscaping project, interior design renovation project, cleanup project, and remodeling project. Certification provides third-party assurance that waste elements are diverted from landfills using any of the following methods: reuse, reclamation, sale/ donation, recycling, composting, and waste-to-energy.

This standard seeks to recognize the waste diversion practices and environmentally friendly waste management efforts of companies who do not have facilities but that provide services which generate waste. The Standard is also tailored for companies that want to demonstrate waste diversion efforts of specific activities, for example remodeling projects. It also seeks to encourage visibility into downstream flow of waste removed from the Project. Operators that can identify where the material flows, can potentially claim higher diversion rates.

Projects demonstrating at least 75% waste diversion can be recognized through certification under this standard. The actual percentage of waste diverted within the constraints of each project is certified under the scope of the certification assessment. Further, if a project achieves 99% waste diversion, it can make a 'Zero Waste Project' certified claim.

The Project's achievements in waste diversion are made publicly available in a certificate.

The certificate shall include a transparent overview of the achievement, including the following required information:

- The percent of waste diversion the Operator has achieved for the duration of the Project. Percentage is calculated by (diverted waste - residuals) / (total waste)
- Each method of diversion used (e.g., recycling, composting, waste-to-energy) as well as the percentage diverted using each method
- The duration of the Project (Ex: June to August 2020)
- The location of the Project
- Project parameters and notable project exclusions, for example: Waste generated during interior design remodel at office, excluding food waste generated by construction workers

2. Zero Waste Definitions

- 2.1 **Ash:** The material collected after incineration. This includes 'fly ash' which is the airborne ash collected after incineration and 'incinerator bottom ash' which is the heavy ash found in the bottom of an incinerator post burning.

¹ Scope of the audit excludes non-municipal solid waste such as but not limited to wastewater or wasted energy.

- 2.2 **Average Residual Percentages:** Industry averages of residuals calculated in formal studies. For example, in the state of California, the California Environmental Protection Agency (CEPA) conducted a study which showed that the residuals percentages for the year 2005 are: Single-Stream Materials Recovery Facility (MRF): 14%, Multi-Stream: 6%, Mixed Waste: 81%, Construction and Demolition (C&D) 23%.² These can be applied to an Operator's outgoing materials if an affidavit with a specific percentage cannot be provided by the recycling facility.
- 2.3 **Composted Material:** Materials, organic in nature, which are sent to a compost facility where they are allowed to decay to form relatively homogeneous and stable humus-like substance [ISO 14021].
- 2.4 **Construction and Demolition Debris:** Materials resulting from the construction and demolition (C&D) of buildings and other structures, including materials such as metals, wood, gypsum, asphalt shingles, roofing, concrete, rocks, rubble, soil, paper, plastics and glass, but excluding putrescible wastes (SWANA Technical Policies, Attachment B).
- 2.5 **Diverted Waste:** Internally processed waste and/or non-landfill-bound waste sent for external processing.
- 2.6 **E-Waste:** Consumer and business electronic equipment that is near or at the end of its useful life (such as computers, televisions, and cell phones) (CalRecycle).
- 2.7 **Hazardous Waste:** A waste listed by EPA; or a waste that is characterized by being ignitable, reactive, corrosive, or extraction procedure toxic (USDA Agricultural Resource Service).
- 2.8 **Mixed Waste Processing Facility:** A facility where recyclable materials are separated from waste that is landfill-bound.
- 2.9 **Multi-Stream Materials Recovery Facility (MRF):** A facility at which source separated recyclables (recyclables that are separated into categories by the initial user before being picked up) are processed for sale to various markets.
- 2.10 **Operator:** Entity that manages the Project.
- 2.11 **Re-claimed Material:** Material that would have otherwise been disposed of as waste or used for energy recovery, but has instead been collected and recovered [reclaimed] as a "NEW" material input, in lieu of new primary material, for a recycling or a manufacturing process [ISO 14021]. Example: floorboards that are slated for disposal that are then used as wall decoration in another interior design project.

² See Table 4, page 3:

<https://www2.calrecycle.ca.gov/WasteCharacterization/PubExtracts/34106005/ExecSummary.pdf>

- 2.12 **Reasonable Distance:** Length of space defined by the Project's location relative to the nearest recycling/composting/reuse facility and nearest Waste-to-Energy Plant: in situations where the nearest MRF is more than twice the distance to the nearest Waste-to-Energy Plant, disposal via Waste-to-Energy can be an acceptable approach under this standard.
- 2.13 **Recycled Material:** Material sent to a recycling facility to be shredded, pelletized, or chemically altered to be remade into objects or substances for commercial use. Common materials include glass, metal, cardboard, and plastics, but may apply to other materials, as well.
- 2.14 **Re-used Material:** Material that would have otherwise been disposed of as waste or used for energy recovery, but has instead been collected at the end of the process to be used again for its initial purpose. Example: Chairs slated for disposal at one company that are collected, refurbished, and used in another interior redesign project.
- 2.15 **Residuals:** Waste material that remains after processing has taken place. Residuals percentages are specific to the type of recycling facility as well as to the state or city (depending on available data). Operator is responsible for obtaining these percentages in an affidavit from the facilities used for processing. Average Residual Percentages may be used if affidavits from facilities cannot be provided. See Average Residual Percentages above.
- 2.16 **Single-Stream Materials Recovery Facility (MRF):** A recycling facility into which commingled recycling materials (recyclables that are mixed together by the initial user) are accepted and processed.
- 2.17 **Sold Waste Material:** Material defined as waste within the bounds of the Project, which is sold as input into another Manufacturer's Process towards production of a good. Donated Material would also count under this category.
- 2.18 **Waste Diversion:** The practice of disposing of materials defined as wastes in an environmentally beneficial manner using the following methods: recycling, composting, re-use, reclaiming, waste-to-energy (instead of sending it to the landfill). Percentage is calculated by (diverted waste – residuals) / (total waste).
- 2.19 **Waste Diversion Achieved:** 75% – 100% of all waste material is diverted in the duration of the Project.
- 2.20 **Waste-to-Energy (WTE):** Energy recovered from material that would have been disposed of as waste but instead has been collected through managed processes [ISO 14021]. This method includes incineration, pyrolysis, and anaerobic digestion where the main purpose and output of the process is to create energy.
- 2.21 **Zero Waste Project:** 99%+ of all waste material is diverted in a space for a given duration of a project.

3. Claims and Logos

- 3.1 Projects are 'Zero Waste certified' if they achieve 99%, or more, diversion; all other Projects can claim their exact diversion percentage (minimum 75% diversion required).
- 3.2 The Operator of Project can claim what percentage of their diversion activities is comprised of each diversion method on off-product claims (promotional material/ websites). This will be stated on their certificate.
- 3.3 For use of the SCS logo, the Operator shall follow SCS Logo Use Guidelines.
- 3.4 Auditor will verify correct use of on-product and off-product (online) claims prepared and/or made by Operator during the audit, as applicable.

4. Requirements for Waste Diversion

- 4.1 A minimum of 75% diversion must be achieved for the Project to be considered for certification.
- 4.2 The following list shows the requirements for materials handled during the Operator's Project as well as how to calculate diversion amounts. Materials must be consistently tracked by either weight or volume.
 - 4.2.1 Ash: No ash sent to landfill shall be considered diverted,³ and shall instead be considered a waste.
 - 4.2.2 Composted material
 - a. Calculate diverted amount as amount picked up by hauler for composting minus (-) residuals (as stated in affidavit or average residual percentage)
 - b. Affidavit with residual percentage is to be provided by Composting facility; affidavit can either state
 - i. the exact percentage of residuals in the waste sent by Operator, OR
 - ii. the percentage of waste sent to landfill by receiving Compost facility as a whole.
 - c. Operator must identify if the residuals has been landfilled or used for waste-to-energy, which shall be counted towards the waste-to-energy diversion calculation.⁴ Affidavit with this information is to be provided.
 - 4.2.3 Electrical equipment (E-waste): 100% of waste electrical equipment must be sent to certified e-waste disposer at the end-of-life. Certified e-waste disposers include e-Stewards and R2. If using other e-waste services, contact SCS for approval.

³ Calrecycle: As of January 1, 2020, the use of green material as ADC does not constitute diversion through recycling and shall be considered disposal pursuant to PRC Section 41781.3. (2)(A).

⁴ <https://www.calrecycle.ca.gov/docs/cr/75percent/mrfperfstds-092012wksp.pdf>

- 4.2.4 Re-used/ re-claimed material: Count all re-used or re-claimed material that would otherwise have been landfilled towards diversion
- Calculate diverted amount as amount that is reused or reclaimed at the end of the process minus (-) residuals from process
 - Operator is to calculate the residual from their own process as it pertains to the Project
- 4.2.5 Recycled material
- Calculate diverted amount as amount picked up by hauler for recycling minus (-) residuals (as stated in affidavit or average residual percentage)
 - Affidavit with residual % is to be provided by Recycling facility; affidavit can either state:
 - the exact percentage of residuals in the waste sent by Operator OR
 - the percentage of waste emitted by Recycling facility as a whole
 - Operator must identify if the residuals has been landfilled or used for waste-to-energy, which shall be counted towards the waste-to-energy diversion calculation.⁵ Affidavit with this information is to be provided.
- 4.2.6 Sold material
- Calculate diverted amount as waste material sold minus (-) residuals (as stated in affidavit or average residual percentage)
 - Affidavit with residual percentage is to be provided by purchaser of waste material; affidavit is to state the percentage of residuals generated from the purchased material. Affidavit must also state whether the residuals have been landfilled, used as waste to energy or otherwise diverted.
 - If it is not possible to obtain an affidavit, an industry accepted residual percentage can be used, instead. Supporting documentation must be provided. Residuals shall be marked as sent to landfill unless other evidence can be provided.
- 4.2.7 Waste-to-Energy
- Maximum percentage allowed without further review: 25% of total waste stream.
 - Calculate diverted amount as amount picked up by hauler for Waste-to-Energy (-) residuals (as stated in affidavit or average residual percentage)
 - Affidavit with residual percentage is to be provided by Recycling facility; affidavit to state the percentage of residuals emitted by Waste-to-Energy facility which is sent to landfills
 - Note that the average residual percentage for Waste-to-Energy is 20% and shall be counted towards landfilled total.⁶
 - Some companies may be located in a region where their waste is not easily recycled. To use Waste-to-Energy as a diversion method for more than 25% of the total waste stream, the Operator must demonstrate that there are no facilities that can recycle, compost, or otherwise reuse the material within a *reasonable distance* (see definition above) from the location where the Project takes place.

⁵ <https://www.calrecycle.ca.gov/docs/cr/75percent/mrfperfstds-092012wksp.pdf>

⁶ <https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw#03>

4.2.8 Hazardous materials

- a. To comply with the standard, the Operator must only demonstrate that the hazardous material has been disposed of in accordance with legal requirements. The amount of hazardous waste is not calculated in the diversion calculation.
- b. However, if the Operator can demonstrate that the hazardous material has been re-purposed, or re-used (in a safe manner), the amount can be counted towards diversion, on a case-by-case basis.

5. Requirements for Audits

5.1 Operator must demonstrate that they meet all local, state, and national laws regarding waste management including licenses, and evidence of proper disposal of all wastes.⁷ Operators cited with violations related to waste handling and disposal during the prior twelve months shall not be eligible for certification.

5.2 Affidavits, from external diverting facilities, are to include:

- Addresses and names of Operator and entity writing affidavit, respectively
- Volume or weight of material received
- Time boundary, for example: “For the waste received in the year 2021...” Must include the time period that is being certified
- Information regarding residuals from received waste. There are options:
 - the exact percentage of residuals in the waste sent by Operator OR
 - the percentage of waste emitted by the receiving entity as a whole (rate should be no older than ten years old)
- Whether residuals from their own process has been landfilled, send for further processing, or used for waste-to-energy
- Affirmative statement indicating that all information provided is accurate and free of errors
- Name and signature of person with authority and knowledge of information provided

5.3 Desk Assessment:

The following documents and activities are necessary to meet requirements of the standard and shall be reviewed for each project in scope.

5.3.1 Review of Operator’s Waste Management Program. Operator must have a Waste Management Program, which includes the following aspects:

- a. Defines the Operator’s Zero Waste Project policy
- b. Lists all applicable waste regulations and a summary of how the Operator conforms with each one, including hazardous waste, if relevant

⁷ If local regulations prohibit a diversion method allowed by the standard, the diversion calculation shall be calculated both with the diversion method and without. A footnote shall be added to the certificate to indicate what the diversion percentage would be considered under local laws.

- c. Lists all wastes generated in the course of the Project, including hazardous waste, if applicable
- d. Lists staff responsible for implementing the Waste Management Program as well as their responsibilities
- e. Defines practices for disposing of electrical equipment and ash, if applicable
- f. Internal practices: Describes how waste is reclaimed, reused (or recycled, composted, etc. if done on site), if applicable
- g. External practices: Describes where waste is sent for recycling, composting, or waste-to-energy, or sold an input into another manufacturer's process
- h. Defines internal audit process including reviewers, documents, deadlines, and action plans for findings
- i. Definition of critical control points and responsibilities of workers at these points to assure diversion

5.3.2 Waste Tracking Spreadsheet

- a. The Waste Diversion Calculator is a tool that may be used to calculate the Project's diversion. Each line represents a waste material. Calculations are based on the following inputs:
 - i. Material Name
 - ii. Waste Category
 - iii. Amount of material and date it was diverted
 - iv. Method of primary diversion or disposal & receiving facility information
 - v. Residual rates of receiving facilities
 - vi. Total weight or volume diverted or landfilled; include conversion factors if using volume of material disposed
 - vii. Corresponding identifier for disposal: Date of disposal; Corresponding bill of lading number/ invoices number

Note: Project waste must be tracked separately from Facility waste.

5.3.3 Traceability Documents/ Records

- a. All contracts, invoices, bills of lading, and any other document which track the movement of waste materials are kept on file and shall be made available to the auditor
- b. Records of training regarding handling of wastes
- c. Records of internal audits of waste management

5.3.4 Training Documents

- a. General training for all staff to understand diversion goals of program
- b. Control point specific training for staff or contractors key in ensuring success of the program
- c. Onboarding waste diversion training for all new staff within 12 months; of those involved in critical control points
- d. Training for contractors involved in ensuring waste diversion at critical control points

5.4 **On-Site Audit of Infrastructure and Activities**

Note: An on-site audit shall be done for every Project audited.

- 5.4.1 Auditors will review activities at critical control points and conduct interviews with staff (to assure training)
- 5.4.2 Auditors will assess suitability of Project site infrastructure that supports diversion activities (e.g., receptacles)
- 5.4.3 Review of signage at Project site to confirm the correct communication for disposal of waste materials
- 5.4.4 Review of any documents Operator would prefer to show in person, rather than sending on-line, (e.g., invoices, contracts).

5.5 **Post-audit activities**

- 5.5.1 Operators shall have the opportunity to address any non-conformities found during the audit.
 - a. Major Non-compliances are a fundamental failure to meet a requirement. These non-compliances must be resolved or closed out before a certificate can be awarded. The Operator has three months from the closing meeting to close the Major non-conformity.
 - b. Minor Non-compliances are characterized as an unusual lapse in the system and do not pose a threat to overall compliance with the standard.
 - c. Opportunity for Improvement is an observation made about an occurrence which does not impact compliance but could potentially affect the Operator's compliance in the future.
- 5.5.2 Auditor has two weeks to prepare report, which is then sent to SCS for technical review.
- 5.5.3 SCS finalizes report and sends to Operator for review, along with request for non-conformity closure and/or action plan, if applicable.
- 5.5.4 Once evidence and action plan are submitted, and payment is received in full, SCS will publish the Zero Waste certificate and send final certificate and report to Operator.

6. **Certification**

- 6.1 Upon completion of a successful audit, SCS will issue a checklist and certificate indicating:
 - a. The percent of waste diversion the Project has achieved. Percentage is calculated as:
(diverted waste - residuals) / (total waste)
 - b. Each method of diversion used (e.g., recycling, composting, waste-to-energy) as well as the percentage diverted using each method
 - c. Percent of waste sent to landfill

- d. The duration of the Project (Ex: June to August 2020)
 - e. The location of the Project
 - f. Project parameters and notable project exclusions.
- 6.2 If the Project audit does not demonstrate conformance with this standard, the Operator shall receive the checklist indicating the non-conformities. See Complaints Resolution Mechanism for more information on the recourse available to the Operator.

7. Complaints Resolution Mechanism

- 7.1 Operator has the right to appeal the certification decision within 30 days of receiving the final checklist. Upon evaluation of the appeal, SCS shall communicate any change in the certification decision to Operator, including justification for the decision.



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