

Understanding Recycling Facilities and Required Permits

Introduction

Understanding the types of recycling facilities that might operate in a community and the regulations guiding their development is necessary when undertaking a recycling infrastructure project. Local elected and appointed officials and staff members, a recycling operator considering developing a new recycling

facility, or a member of the community concerned with the impacts and benefits of a proposed new recycling facility each have a stake in understanding how recycling facilities are operated and regulated. This guide provides general information about the different types of recycling facilities and the permits required. It also offers resources to learn more about solid waste and recycling facilities. The information in this guide is intended for local officials and others interested in understanding the basic options, types of facilities and different roles of agencies issuing permits.

"Building new and up-grading existing facilities will face multiple challenges including: multiple permits and regulatory compliance requirements, the length of time for approval processes, CEQA issues, and local community and regional planning and acceptance, including environmental justice concerns." page 9, September 17, 2013

What is a Recycling Facility?

In this document, recycling infrastructure refers to a broad range of facilities that support recycling. Examples include facilities that collect, sort and process recyclable materials, turn organics or green waste into compost or fuels, or use recycled materials in manufacturing. In general, "solid waste facility" is a technical term that includes both solid waste *disposal* facilities (including landfills) and some types of *recycling* and *processing* facilities. For more information about the types of recycling facilities see: "Primer on Recycling Facilities."

All recycling facilities require land use permits from the host city or county and must comply with the California Environmental Quality Act (CEQA) to make sure that the environment is protected. Depending upon the type of facility, they also may need to obtain permits from the local enforcement agency (usually the city or county), which regulates solid waste facilities on behalf of the California Department of Resources Recycling and Recovery (commonly referred to as CalRecycle). Some facilities may also require permits from other state and local agencies, such as regional air or water quality agencies. The intent of most regulations and permit requirements is to make sure that new development does not cause unacceptable problems for the people near the facility, nor create pollution or environmental impacts that have wider effects. For example, the purpose² of CEQA is to (1) disclose environmental impacts, (2) prevent or reduce environmental damage, (3) disclose agency decisions, (4) promote interagency coordination, and (5) encourage public participation.

With so many permits required the process can feel overwhelming, but with an understanding of the "what and why" behind the necessary permits we can help find appropriate locations for the recycling facilities needed to support our communities' recycling needs.

Overview of Recycling Facilities

The terms "recycling center," "recycling facility" and "solid waste facility" all have different legal definitions, although they are often used interchangeably in everyday language. While all these facilities may accept and process recyclable materials, there are important differences in terms of required permits and potential impacts. It is important to understand the regulatory framework under which each operates when evaluating a proposed facility. This paper covers those facilities that fall under the broad term "solid waste facility." The following discussion offers an explanation of the different types of facilities to help you, the reader, understand the recycling landscape.

What is Solid Waste?

The terms "solid waste" and "municipal solid waste" (sometimes called "MSW") generally refer to trash or garbage produced by homes and businesses. Most of the trash produced includes recyclable materials. California law specifically defines the details of what constitutes solid waste for use in state regulations. This definition also includes recyclable materials. A key thing to remember when using this term is that the definition of solid waste in state law does not include household hazardous waste, 4 such as antifreeze, batteries, paint, oil and other chemicals.

Recycling Centers are Different from Solid Waste Facilities

"Recycling centers" primarily process recyclable materials that have already been separated for re-use and are not intended for disposal. To be considered a recycling center, the facility must meet three conditions established in law, also referred to by CalRecycle as the "Three-Part Test." The Three-Part Test identifies recycling centers that are not regulated by CalRecycle. It evaluates whether the material is separated for use, produces no more than 10 percent residual and contains no more than 1 percent putrescible material. Putrescible waste describes solid wastes that are capable of being decomposed by micro-organisms quickly enough to cause nuisances because of odors, vectors, gases or other offensive conditions, and include materials such as, but not limited to fruits and vegetables, meat products and dead animals. An example of a recycling center is a construction and demolition debris facility that receives concrete, asphalt and roofing shingles. Recycling centers do *not* fall under the regulatory authority of CalRecycle, and therefore do not need the permits listed on page 7 (Overview of Solid Waste Facility Permit Types).

When determining which permits will be necessary, it is important not to confuse recycling centers and so-called "beverage container convenience zone collection centers." The latter are located near supermarkets and collect beverage containers that are part of California's beverage container recycling program, and have very different requirements for permitting.

Solid Waste Facilities Include Different Types of Recycling Facilities

A facility is considered a solid waste operation rather than a recycling center, and thus is subject to CalRecycle's regulatory authority, if it fails any part of the "Three-Part Test."

Processing recyclable materials occurs at different types of solid waste facilities, including those described below. Depending on the facility, they may be required to obtain a solid waste facility permit to make sure that the facility is designed and will be operated safely.

Material Recovery Facilities (also known as MRFs)

- What goes in? A material recovery facility receives recyclable materials and sorts them by type or
 grade to meet commonly accepted quality standards needed for further processing or manufacturing.
 This type of facility is sometimes referred to as a "clean MRF." A "dirty MRF" is a mixed waste facility
 that accepts recyclables combined with solid waste (or trash).
- What comes out? After they have been sorted, different material types come out of a material recovery facility. These include, for example, baled paper or cardboard, rigid plastic containers sorted by plastic type, glass, concrete, wood, green waste, and aluminum or steel cans. Some facilities also receive and handle construction and demolition waste, such as concrete, lumber, drywall, packaging, asphalt shingles and metal.
- Where is it done? Material recovery facilities can be stand-alone facilities or co-located at a landfill or a transfer station. (A transfer station receives, temporarily stores and ships unprocessed waste and recyclables.⁸)

Organics (Green Waste) Facilities

- What goes in? Organic waste, also known as green waste, includes lawn and tree clippings, painted and untreated wood waste, forest waste and other organic waste, including consumer food scraps from restaurants, cafeterias and homes.
- What comes out? Green waste can be processed to produce compost, fertilizer, soil amendments, mulch or boiler fuel. Some organic wastes can also produce biofuels through a technology known as anaerobic digestion. This is a process where the green waste is broken down through biological process in an oxygen-free environment, producing methane gas. This process creates biogas which can be used to produce fuel (compressed natural gas) for vehicles or to generate electricity. Anaerobic digestion also produces residual solid and liquid material known as digestate. Digestate may be used as fertilizer or as a base for compost. Organic materials also can also be processed through pyrolysis, a process that heats organic wastes in an oxygen free environment to produce fuels. However no pyrolysis facilities are currently operating in California.
- Where is it done? Green waste facilities may be located as stand-alone facilities, co-located at a
 landfill or material recovery facility (MRF), or co-located at a transfer station or a solid waste or
 recycling collection facility. Some anaerobic digestion facilities located at collection facilities produce
 compressed natural gas to fuel the collection vehicles. Green waste can also be processed at
 chipping or grinding facilities and then used at compost facilities or as fuel for biomass plants that
 generate energy.

Recycling Facilities Are Not the Same as Landfills

Municipal solid waste landfills⁹ – also known as solid waste disposal facilities – accept solid waste (not hazardous waste) for land disposal. Household hazardous waste collection and storage may be under Certified Unified Program Agencies (CUPA) program, but hazardous waste disposal sites (class I landfills) are regulated by the Department of Toxic Substances Control (DTSC). Landfills may be owned and operated by a city, a county, joint powers authority, regional agency or by a private company. Some landfills are owned by a local agency and operated under contract by a private company or another agency.

All landfills must receive a land use permit from the jurisdiction where they are located. Landfills must also obtain air and water permits from regional air and water quality agencies. They must also obtain a "full solid waste facility permit" with permit conditions established by the local enforcement agency. Local agencies may impose additional requirements on landfills (beyond those included in the solid waste facility permit issued by the local enforcement agency) as part of their land use authority. ¹⁰

Because of the size and potential environmental impact of landfills, their permit requirements are generally more extensive than those for recycling facilities. Some landfills include recycling facilities within their boundaries or adjacent to the landfill

Recycled Content Manufacturing (Remanufacturing) Facilities

- What goes in? Recycled content manufacturing facilities (sometimes called remanufacturing or intermediate processing facilities) accept sorted recyclable materials.
- What comes out? These facilities turn recyclable materials into either consumer products or products
 used in further manufacturing. For example, a plastics remanufacturing facility turns rigid plastic
 containers into pellets for use at another facility that makes products with recycled plastic content.
 Manufacturing facilities that produce consumer products with recycled content include, for example,
 facilities that manufacture cardboard boxes made from recycled paper or boxes, or factories that
 produce picnic tables made of recycled plastic pellets.
- Where is it done? Recycled content manufacturing or intermediate processing facilities can be
 located as stand-alone facilities, co-located at a landfill or material recovery facility (MRF), or colocated at a transfer station or a solid waste or recycling collection facility. Recycled content
 manufacturing facilities that produce consumer products with recycled content are generally located
 with other manufacturing facilities in industrial or heavy commercial areas.

Understanding Local Enforcement Agencies

Local enforcement agencies (sometimes referred to as LEAs) have the primary responsibility for ensuring the correct operation and closure of solid waste facilities, including some organics facilities. ¹¹ Local enforcement agencies are designated by the governing body of a county or city and certified by CalRecycle to implement certain programs on behalf of the State of California. This includes solid waste facility permitting, inspection and enforcement authority. In most cases the local enforcement agency is the city or county department of environmental health.

Local enforcement agencies prepare and issue solid waste facility permits for new or expanded facilities. CalRecycle reviews and concurs with the permit proposed by the local enforcement agency. This is done to ensure that the permit and the facility meet state minimum standards and all other applicable California laws and regulations. CalRecycle may not impose additional permit requirements beyond those that the local enforcement agency sets, unless needed to meet state minimum standards. ¹² (More information about local enforcement agencies is available at www.calrecycle.ca.gov/lea/.)

Different Types of Recycling Facilities – Different Types of State and Local Permits

California uses a "tiered" system of permits for solid waste facilities, including recycling and processing facilities. ¹³ The system consists of five permit tiers for different facilities, depending upon the type, size and material accepted. ¹⁴ The requirements range from "excluded" (that is, the facility is outside of the scope of the tiers) to a "full solid waste facility permit." The tiers and examples of facility types are illustrated in the table on page 7. ¹⁵

Additional air and water quality permits may also be needed, as well as other state and local agency permits, depending upon the type of facility. For example, facilities that use scales might be required to obtain a permit from the California Department of Food and Agriculture under the "weights and measures" regulatory standards. Regardless of which tier a facility falls in, it requires local land use approval, so project advocates need to understand that there will still be a permit process to go through with the local agency, even when the project is excluded from the state's solid waste facility permits.

Overview of Solid Waste Facility Permit Types¹⁷

Tier	Facility Examples
Excluded Solid Waste Handling (Does not require a tiered permit)	 Vermicomposting operations (composting of green waste by worms).
	Construction and demolition waste at transfer or processing facilities (less than 15 cubic yards per day of separated material).
Enforcement Agency Notification	Green material/green waste composting operations (less than 12,500 cubic yards per day).
	Wood debris chipping and grinding operations (less than 200 tons per day).
Registration Permit	Wood debris chipping and grinding operations (between 200 and 500 tons per day).
	Medium volume transfer or processing facilities (60 cubic yards per day or between 15 and 100 tons per day of municipal solid waste).
Standardized Permit	Contaminated soil disposal facilities.
	Non-hazardous ash disposal facilities.
Full Permit	Municipal solid waste landfills.
	Green material composting facilities (more than 12,500 cubic yards per day).
	All composting facilities that use food material as feedstock.
	Wood debris chipping and grinding facilities (more than 500 tons per day).
	Large volume transfer or processing facilities (more than 100 tons per day of municipal solid waste).

Other Permits Required for Recycling Facilities

Local Land Use Approval and Permits. As noted above, all solid waste facilities must comply with local

zoning and land use laws, including conforming to the city or county's general plan and zoning ordinance, and any other applicable municipal or county codes. As part of complying with these laws, a local land use permit, such as a conditional use permit (CUP), will often be required. A conditional use permit allows a city or county to consider special uses which may be desirable, but which need special controls to respond to localized conditions. In addition to the conditions included in the solid waste facility permit issued by the local enforcement agency, the city or county in which the facility is located may impose land use conditions that relate to the facility's

Why Are Permits Needed?

Different permits have different purposes, but they are each intended to ensure that a proposed project is completed safely, both for the applicant, for the people in the community and the environment.

operations.¹⁸ For example, the city or county might include height limits, business hours and transportation limits (such as number of trucks per day) as part of the conditional use permit it issues. Conditional use permits typically require a public hearing.¹⁹

In addition to local land use review, solid waste facilities must also be reviewed for compliance with the California Environmental Quality Act (mentioned below). Common issues of concern can include biological impacts, agricultural impacts, traffic, odor issues, noise impacts and air quality impacts.

Some local agencies have adopted policies that help to streamline the review and approval process for recycling facilities. These include, for example, recycling zone overlays as part of an agency's general plan or zoning ordinance. Facilities that meet specific criteria included in the policies or overlays may be eligible for faster permitting approval.

Recycled Content Manufacturing Be Aware of Potential Solid Waste Permit Requirements

Manufacturing facilities that produce products with recycled content must meet the same land use and permit requirements that other manufacturing facilities must meet. That is, they must receive local land use approval, comply with the California Environmental Quality Act and obtain air, water, and other permits from local, regional, or state agencies, as appropriate to the facility.

Operators of facilities that process recyclable materials or produce products using recycled materials should be aware of possible circumstances that may trigger the need to obtain a solid waste facility permit as well. For example, a carpet recycler may need to obtain a solid waste facility permit if the operation does not pass the "Three-Part Test" discussed above on page 3. To pass the test, the carpet feedstock must be less than 1 percent putrescible 20, not contaminated and have less than 10 percent residual (solid waste destined for disposal or further processing) on a monthly basis. Manufacturers need to be aware of these criteria to be in compliance with California law.

Local Health and Safety Permits. Permits from local environmental health and public safety agencies may be required. For example, facilities that use (and therefore store) household hazardous waste materials may need a permit from the agency administering hazardous materials management laws at the local level. ²² Other facilities may need a permit from the local fire agency for fire-safety requirements.

Air and Water Permits. Recycling and solid waste facilities are under the purview of the local air district and the regional water quality control board. Regional air quality districts²³ establish permit conditions based on the specific location, regional air quality and proposed project. For instance,

composting and incineration facilities produce air contaminants regulated by the air district. Water quality or waste discharge permits are issued by the state's regional water quality control boards.²⁴

Department of Food and Agriculture. Some facilities, such as rendering plants or those that process certain types of food waste, may need licenses from the <u>California Department of Food and Agriculture</u>. Facilities that use scales may need a permit from the <u>Division of Measurement Standards</u>.

Department of Industrial Relations. Facilities that use air compressors over a certain size may need a permit from the <u>Department of Industrial Relations</u>.

California Environmental Quality Act. All solid waste facilities must comply with the California Environmental Quality Act (also referred to as CEQA). ²⁵ The required level of review will be established by the lead agency, which is usually the city or county that is processing the land use permit. The LEA and CalRecycle are both considered responsible agencies under CEQA since they have discretionary approvals on Solid Waste Facility Permits.

Conclusion

As discussed in ILG's companion document, "Connecting the Dots: Recycling, Climate and Economic Development," with the anticipated increase in recyclable materials collected in California more recycling infrastructure will be needed, either here in California, in other states, or abroad. In California, this translates into new or expanded facilities – both recycling processing facilities and manufacturing facilities that use recycled content.

As local agencies and the private sector consider whether such facilities make sense for their communities and businesses, an understanding of the different types of facilities, and permit processes, the community can make informed decisions about what facilities best meet their local needs and conditions.

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Resources to Learn More

Institute for Local Government Resources

- Understanding the Basics of Land Use and Planning Series. Institute for Local Government.
 Available at: www.ca-ilg.org/land-use-planning-basics
 - "Guide to Local Planning."
 - "Understanding the Basics of Land Use and Planning: The Nuts and Bolts of Project Review."
 - "A Glossary of Land Use and Planning Terms"
- Land Use One-Pagers in English and Spanish (covers topics such as CEQA Overview, variances, conditional use permit, general plan, preparing for public hearing, and zone changes) www.ca-ilg.org/onepagers

CalRecycle Resources

- CalRecycle Online Glossary of Terms. www.calrecycle.ca.gov/FacIT/Glossary.htm
- Selected <u>Waste Management Working Papers for Updated AB 32 Scoping Plan</u>. September 2013. Prepared by CalRecycle.
 - Overview of Waste Management Sector
 - Recycling, Reuse, and Remanufacturing
 - Composting and Anaerobic Digestion
- Anaerobic Digestion Facilities Program Environmental Impact Report.
 www.calrecycle.ca.gov/swfacilities/compostables/AnaerobicDig/default.htm

Other State of California Resources

CalGold

CalGold, an online resource provided by the California Office of Business and Economic Development, offers assistance in learning about which permits are required businesses, as well as contact information for agencies that administer and issues the permits. (www.calgold.ca.gov)

The material included in this short guide is for information purposes only and should not be viewed as legal or financial advice. Local agencies and others should consult with their attorneys about their individual agencies' circumstances.

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Endnotes

http://www.calrecycle.ca.gov/Actions/Documents%5c77%5c20132013%5c935%5cRecycling%20Reuse%20and%2 ORemanufacturing%20FINAL.pdf

http://www.calrecycle.ca.gov/Actions/Documents%5c77%5c20132013%5c935%5cRecycling%20Reuse%20and%2 ORemanufacturing%20FINAL.pdf - CalRecycle Report for AB 32 Scoping Plan

http://www.calrecycle.ca.gov/Actions/Documents/77/20132013/935/Recycling%20Reuse%20and%20Remanufactur ing%20FINAL.pdf – and "Composting and Anaerobic Digestion"

http://www.calrecycle.ca.gov/Actions/Documents/77/20132013/935/Composting%20and%20Anaerobic%20Digesti on%20FINAL.pdf

- ⁶ "Residual" means the solid waste destined for disposal, further transfer/processing as defined in section 17402(a)(30) or (31) of Article 6.0, or transformation which remains after processing has taken place and is calculated in percent as the weight of residual divided by the total incoming weight of materials. Notwithstanding, for purposes of this Article, "residual" excludes any inert debris that is destined for or disposed in an inert debris engineered fill operation. Further notwithstanding, for purposes of this Article, "further transfer/processing" does not include processing that occurs at a CDI recycling center or an inert debris recycling center, as described in Section 17381.1(a) of this Article, or at a recycling center as defined at Section 17402.5(d) of Article 6.0 of this Chapter.
- ⁷ For more information about the Beverage Container Recycling and Litter Reduction Act and convenience zones, see California Public Resources Code § 14500 and following and www.calrecycle.ca.gov/bevcontainer/.
- ⁸ See CalRecycle Glossary of Terms/Definitions at www.calrecycle.ca.gov/FacIT/Glossary.htm#transferstation.
- ⁹ Municipal Solid Waste Landfill" means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile. Title 40 of the Code of Federal Regulations (40 CFR), Part 258 (Subtitle D) Section 258.2-Definitions For more information about solid waste landfills, see CalRecycle's permit toolbox at www.calrecycle.ca.gov/swfacilities/Permitting/FacilityType/Landfill/.

¹ 2013 AB 32 Scoping Plan Update: Waste Management Sector Plan Revised Technical Papers- Recycling Reuse and Remanufacturing available online:

²http://www.calrecycle.ca.gov/SWFacilities/Permitting/CEOA/Overview/Purpose.htm

See California Health and Safety Code § 25117 for a definition of hazardous waste.

⁴ See California Public Resources Code §40191 for a definition of solid waste.

⁵ For more information about different types of processing facilities, see "Recycling, Reuse and Remanufacturing", September 17, 2013

¹⁰ See California Public Resources Code § 40053.

¹¹ See www.calrecycle.ca.gov/LEA to learn more about the roles and responsibilities of Local Enforcement

¹² See www.calrecycle.ca.gov/swfacilities/ for more information about regulations related to solid waste facilities including landfills.

¹³ See California Public Resources Code § 44000.5 and following. See also Title 14, § 18100 California Code of Regulations.

¹⁴ See "Who Needs A Solid Waste Facility Permit" for more details about Tiered Permits, what facilities fall into the different tiers and what the permit conditions require. www.calrecycle.ca.gov/SWFacilities/Permitting/Facts.htm#Who

¹⁵ See CalRecycle's Tiered Permitting Chart at www.calrecycle.ca.gov/LEA/Regs/Tiered/TierChart.htm and www.calrecycle.ca.gov/swfacilities/permitting/Tiers/Tasks.htm for more information about tiered permitting.

¹⁶ See www.cdfa.ca.gov/dms/

¹⁷ More details about the permit tiers, permit processes and requirements are available at www.calrecycle.ca.gov/swfacilities/permitting/Tiers/Tasks.htm

18 See California Public Resources Code § 40053.

¹⁹ See "Understanding the Basics of Land Use and Planning: Glossary of Land Use and Planning Terms" page 13. Institute for Local Government, www.ca-ilg.org/post/understanding-basics-land-use-and-planning-series.

²⁰ Putrescible waste means solid wastes that are capable of being decomposed by micro-organisms with sufficient rapidity to cause nuisances because of odors, vectors, gases or other offensive conditions, and include materials such as, but not limited to food wastes, offal, and dead animals. See California Code of Regulations Title 14; § 17381(w).

 ²¹ See California Public Resources Code § 40200(b)(2). For more information about the Three-Part Test, see www.calrecycle.ca.gov/lea/Advisories/58.
 ²² See California Health and Safety Code § 25404 and following. Certified Unified Program Agencies (also known

²² See California Health and Safety Code § 25404 and following. Certified Unified Program Agencies (also known as CUPAs) administer hazardous materials laws at the local level. The six programs under the "unified program" are: hazardous materials business plans, underground and above ground hazardous materials storage tanks, hazardous waste, and the accidental release prevention program. Some local agencies combine all of the CUPA elements under one agency, while in some agencies the different CUPA programs are covered by different agencies, such as a local fire or environmental health department. For more information about CUPAs, see www.calcupa.net/. Regional air quality districts (called air quality management districts or air pollution control districts, depending upon their location) regulate mobile (vehicles) and stationery (equipment and facilities) sources of air pollution. For more information about California's 35 regional air quality agencies, see www.aven.edu.gov/capcoa/roster.htm.

²⁴ For more information about California nine regional water quality control boards, see www.ww.www.ww.ww.ww.ww.ww.ww.ww.aven.edu.gov/waterboards map.shtml.

www.waterboards.ca.gov/waterboards map.shtml.

25 See California Public Resources Code § 21000 and following. For a layperson's discussion of CEQA, see "Understanding the Basics of Land Use and Planning: Guide to Local Planning" pages 31 and following. Institute for Local Government. URL