

Enhancing Organic Materials Management by Improving Coordination, Increasing Incentives & Expediting Decision-Making



November 2018

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CalEPA's Mission

Our mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality.

We fulfill our mission by developing, implementing and enforcing environmental laws that regulate air, water and soil quality, pesticide use and waste recycling and reduction. Our departments are at the forefront of environmental science, using the most recent research to shape the state's environmental laws.

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Section One: Executive Summary

This California Environmental Protection Agency (CalEPA) report provides information and recommendations to promote the development of policies and actions to help expedite the siting and building of organic materials management infrastructure. The recommendations are crafted to respect and support strong statewide public health and environmental protections and local control over land use decisions, while seeking to expedite government decision-making. They are also intended to enhance early public outreach and involvement, transparency, and accountability for decision-making. They emphasize frontloading information and input to help to identify potential problems early in the project development process. This provides an opportunity to address such problems and reduce the likelihood of project delays.

This report is written pursuant to AB 1045, which directs “the California Environmental Protection Agency, in coordination with the Department of Resources Recycling and Recovery, the State Water Resources Control Board, the California Air Resources Board, and the Department of Food and Agriculture, to develop and implement policies to aid in diverting organic waste from landfills by promoting the composting of specified organic waste and by promoting the appropriate use of that compost throughout the state.” AB 1045 calls on CalEPA to “develop recommendations for promoting organic waste processing and recycling infrastructure statewide...”

This report is only one part of a broader state effort to promote organic material management. For example, SB 1383 requires a host of activities to reduce short-lived climate pollutants, such as methane resulting from the decomposition of organic material. This law has spurred important work to productively and safely utilize dairy manure, divert organic material from disposal, and create markets for organic feedstocks. Other state laws that also promote organic material management include AB 32, the California Global Warming Solutions Act of 2006; AB 341, the Mandatory Commercial Recycling Program; and AB 1826, the Mandatory Commercial Organics Recycling Program. The California Air Resources Board’s (CARB) 2017 Scoping Plan Update also provides additional detail on efforts to reduce short-lived climate pollutants from organic material.

State officials have recognized the need to expedite decision-making on organic waste processing and recycling infrastructure, and have already taken steps to help achieve this goal. For example, CARB, the California Air Pollution Control Officers Association, and Department of Resources Recycling and Recovery (CalRecycle) have worked together to develop options for addressing technical barriers to permitting compost facilities. Last year, CalRecycle and the Office of Planning and Research (OPR) expanded the General Plan Guidelines to include a section describing how recycling, anaerobic digestion,

composting, and remanufacturing facilities should be addressed in the land use element. CalRecycle also administered a California Climate Investment program providing grants and loans for anaerobic digestion and composting projects. As part of this program, CalRecycle required applicants to engage the local community during project planning phase.

The State Water Resources Control Board adopted the General Waste Discharge Requirements for Composting Operations to streamline the permitting process for composting operations. This resulted in reducing the amount of time required to permit a compost facility by almost half.

All of this work and the other information contained in this report recognizes some fundamental realities regarding the development of organic management infrastructure in this state. Statewide laws and planning requirements set minimum pollution control standards that apply to organic materials management infrastructure. Local and regional authorities establish rules and enforce laws to reduce greenhouse gas (GHG) emissions and criteria air pollutants (e.g., smog and ultrafine air pollution particles); divert organic waste from landfills; and protect water quality. Therefore, expediting the development of needed infrastructure requires greater engagement and focus by representatives at each level of government; enhanced coordination and collaboration between project proponents, officials and the public; and respect for public health and environmental protections and local land use decision-making.

In line with these realities, this report describes existing tools and recommends additional actions that would help to expedite decisions on organic management infrastructure to promote the following policy goals:

- **Facilitate Local Government Decision-Making:** Provide local governments with guidance on siting and permitting infrastructure and conducting California Environmental Quality Act (CEQA) analysis.
- **Enhance Transparency and Community Input:** Comply with all public health and environmental safeguards, while working to assess and address community concerns in a transparent fashion early in the process.
- **Incentivize Organic Material Management Infrastructure:** Incentivize the organics industry to invest resources in constructing new organics materials management infrastructure by enhancing demand for such materials, including compost and value-added composting products and soil amendments.
- **Expedite Permit Decision-Making:** Expedite the processing of state and regional environmental permits for organics management infrastructure through providing

enhanced guidance, coordination and administrative tools to facilitate permit reviews and decisions.

- **Enhancing Supply:** Help to enhance the supply of organics in urban and rural areas.

Our hope is that this report will encourage a continuing and important conversation on this subject with the public, representatives from the organic material management industry, local governments, and others. The state has established significant goals to restructure our utilization of organic material. This report is another step forward in helping the state to achieve these goals, while promoting public health, environmental quality, and economic investments in organic management infrastructure.

Section Two: The Benefits of Appropriately Managing and Reusing Organic Materials

Appropriately managing and reusing organic materials can help reduce or eliminate many of the harmful public health and environmental impacts associated with landfilling this material and promote the use of organic waste as a valuable resource. However, building and maintaining the infrastructure needed to appropriately manage organic materials can also create public health and environmental impacts. Therefore, efforts to expedite decision-making on the permitting of infrastructure must ensure the proper management of organic materials.

1. Appropriate Management of Organic Materials Reduces or Eliminates Harmful Impacts of Disposal

California disposed roughly 35 million tons of waste in landfills in 2016; more than 40 percent of the disposed waste was organic material that could be composted, mulched, or processed in anaerobic digesters. Another 30 percent was made up of recyclable materials that could be recovered, such as paper, metal, or glass. (CalRecycle, 2016) Landfilling organic materials can negatively impact public health and the environment. The decomposition of organic materials in landfills can create methane, a potent GHG; municipal solid waste landfills are also the second largest anthropogenic source of methane in the state. (CARB, 2017)

The threats to public health and the environment from climate change are well documented, and include droughts that are more persistent; more frequent, intense, and longer heat waves; and higher sustained temperatures that can increase heat-related deaths and smog. (Resources, 2012) Additional adverse impacts include increased sea level rise, greater risks of flooding in coastal and other areas, and more intense and numerous wildfires. (Resources, 2012) Many of these harmful impacts represent an especially acute threat to the most vulnerable people in our communities. (Resources, 2012)

Diverting organic materials from landfills can also extend the usable life of existing landfills. Extending the life of landfills and reducing the amount of organic material disposed in them can reduce the potential adverse impacts associated with the creation and operation of such facilities. (CalRecycle, 2017) These potential impacts include odor, blowing litter and dust, emissions from equipment, and increased numbers of insects, rodents and other vectors. (CalRecycle, 2017)

Beneficially reusing organic material diverted from landfills can produce valuable benefits, including reducing landfill GHG emissions; replacing fossil fuels with renewable biogas

from organic materials; and the creation of high-carbon soil amendments, like compost. (Resources, 2017)

Compost can be a key component in improving soil health for the state's agriculture sector. The California Department of Food and Agriculture's (CDFA) Healthy Soils Initiative has described multiple benefits of improving soil health. (CDFA, 2016) These benefits include improving plant health and yields, increasing water infiltration, which can assist in flood management, decreasing water use by enhancing water retention, reducing GHG emissions from agriculture, improving water quality, and enhancing biological diversity and wildlife habitat. (CDFA, 2016)

California's agricultural sector plays a critical role in the state's economy. California's farms and ranches produce more than 400 commodities, including more than a third of the country's vegetables and two-thirds of the country's fruits and nuts. (CDFA, 2017) In 2017, California remained the leading US state in farm receipts, with \$50 billion in production. (CDFA, 2017) Diverting organic materials from landfills to creating and applying compost is just one way that beneficially reusing organic waste can help California's environment and economy.

2. Appropriately Managing Organic Materials Includes Complying with Public Health and Environmental Protections

Appropriate organic materials management includes ensuring the beneficial reuse of this material complies with public health and environmental safeguards and appropriate land use designations. As discussed earlier, organic materials, when managed poorly, can cause pollution, odors, and other problems for nearby residents. (CalRecycle, 2017a and CalRecycle, 2017b)

Runoff from improperly managed composting operations can threaten water quality. (Waterboards, 2015) Compostable materials contain nutrients, salts, pathogens, and oxygen-reducing compounds that can degrade water quality if they migrate into water supplies. (Waterboards, 2015) This can increase the need for costly water treatment technologies. (Waterboards, 2015a) It can also harm fish and wildlife, and reduce recreational opportunities in rivers and lakes. (USGS, 2016 and Waterboards, 2016)

Both landfills and composting facilities can produce air pollution, including volatile organic compounds, particulate matter, and ammonia emissions. (CARB, 2016) Volatile organic compounds can contribute to the creation of ground-level ozone, an important constituent of smog. Smog is associated with coughing, worsening asthma symptoms, reducing lung function, and increasing hospitalizations for respiratory illnesses. (CARB, 2016a) According to CARB, "Children, adolescents and adults who exercise or work

outdoors, where ozone concentrations are the highest, are at the greatest risk of harm from this pollutant.” (CARB, 2016a)

(CARB, 2017) Research shows that for composting, upwards of 85 percent of active phase volatile organic compound emissions are alcohols, which have low or very-low ground-level ozone-forming potential. (Anuj Kumar, 2011) However, regulators treat volatile organic compounds from composting and landfill operations the same because both types of compounds can produce smog.

Composting operations and landfills can also emit ammonia, which may contribute to the creation of ultrafine air pollution particles (PM 2.5). (CARB, 2017a) Short-term exposure to PM 2.5 is associated with increased asthma attacks, acute and chronic bronchitis, emergency room visits, respiratory symptoms, hospital admissions for heart or lung ailments, and premature mortality. (CARB, 2017b)

However, moving organic materials out of landfills and into properly run composting operations can help the state reduce air pollution as compared to landfills, while also protecting environmental quality. For example, properly run advanced technology composting operations, such as facilities that use solar power to generate electricity or facilities that use aerated static piles and biofilters, can significantly reduce both volatile organic compounds and ammonia emissions. (SJVTAP, 2013)

These facilities can also produce compost that results in a reduction in the use of fossil fuel-based inputs and products. For example, such facilities can create renewable biogas that can reduce our reliance on fossil fuels for electricity and transportation fuels. (CARB, 2017) In these and other ways, properly run composting operations represent vitally important infrastructure that produces needed products and services that can benefit business, agriculture, and public health and the environment.

Section Three: Regulatory Overview of Organic Materials Management

Ensuring the appropriate management of organic materials in California begins with decisions at the local level and continues through regional and state regulatory decision-making. Assisting businesses in navigating the regulatory process and making timely permitting decisions will help the state achieve its far-reaching goals for increasing the use of organic materials, which is no small task. CalRecycle estimates that 30 to 100 new or expanded composting and anaerobic digestion facilities will be needed statewide by 2025 to achieve waste and GHG reduction goals.

This section provides an overview of government decision-makers and legislation on organic materials management issues. California has unique and highly successful public health protection and environmental regulatory programs. These programs, as well as the local governments responsible for making land use decisions, must continue to work together to meet the state's mandates for organic materials management.

1. The Permitting Process Starts with Local Governments

Local governments (e.g., cities and counties) establish zoning requirements that dictate land uses within their jurisdictions, including the siting of organics management infrastructure. Local governments approve or deny permit requests to construct and operate such businesses. If a business type is not allowed in a particular area, local government can approve or deny a “conditional use permit” to construct and operate such a business in that area.

Local governments develop general plans that describe the allowed uses on parcels of land within the local government's control. When they develop these plans, local governments must utilize the state's General Plan Guidelines. CalRecycle recently worked with the Office of Planning and Research (OPR) to expand the General Plan Guidelines to include a section on how to address additional recycling, anaerobic digestion, composting, and remanufacturing facilities in the land use element. Local governments also initiate the CEQA process for a local permitting decision involving an organic management facility. Zoning, planning, CEQA, and permit processes also require public input, which local governments must take into account in their decision-making.

Local governments also staff Local Enforcement Agencies (LEAs) that inspect organic management facilities for compliance with solid waste management laws. CalRecycle oversees LEAs' activities, can assist LEAs in their activities and can directly oversee facilities' compliance with solid waste laws, where needed.

2. State and Regional Agencies Continue the Permitting Process

A. California Environmental Protection Agency

CalEPA is a state cabinet level agency that includes six boards, departments, and offices. The mission of CalEPA is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality. State law mandates each board, department and office to protect public health and the environment from particular forms of pollution. Working with its constituent entities, CalEPA fulfills its mission by developing, implementing, and enforcing laws that regulate air, water and soil quality, pesticide use, and waste recycling and reduction.

Three of CalEPA's boards and departments have regulatory oversight of organic materials management facilities: CalRecycle, the California State Water Resources Control Board (SWRCB), and CARB. Each of these regulatory organizations relies on regional or local regulatory authorities to directly regulate such facilities. These regional and local bodies have varying levels of independence to issue regulations and oversee facility operations.

CalRecycle, SWRCB, regional water boards, and local air districts establish standards through rules, operating permits, and orders that apply to facility operations. Regional officials can often modify the regulatory approach, but the modifications cannot result in weaker safeguards than exist under state or federal law. If site conditions warrant, regional officials can generally apply more protective standards than state or federal law.

SWRCB, CARB and CalRecycle provide regional and local authorities with assistance in running regulatory programs. They provide guidance and technical assistance on program implementation. This assistance can take the form of model rules, methodologies used to determine compliance with safeguards, guidance documents, and training and other programmatic assistance. However, local regulatory officials must make decisions to adopt or use such guidance and technical assistance.

1) Department of Resources Recycling and Recovery

CalRecycle implements programs designed to ensure the safe management of solid waste, increased organic materials diversion from landfills, and the production and use of value-added products such as compost, fertilizers, and biofuels made from diverted organic material. The department implements regulations that apply to solid waste facilities and compostable material handling facilities or operations. As mentioned above, CalRecycle works with LEAs, which are local regulatory entities that directly oversee compliance with solid waste management and organic materials handling standards.

2) State Water Resources Control Board and Regional Water Quality Control Boards

A key part of SWRCB's mission is to preserve, enhance, and restore the quality of California's water resources for the protection of the environment, public health, and all beneficial uses. Among other things, SWRCB protects water quality by setting statewide policies, coordinating and supporting the efforts of the nine Regional Water Quality Control Boards, and reviewing petitions that contest regional board actions. SWRCB recently issued a General Order that established consistent water quality protections at commercial composting operations.

SWRCB works with the regional water boards to achieve their mission of developing and enforcing water quality objectives and implementing plans that will best protect the state's waters. This regional approach allows flexibility in protecting water resources, which recognizes local differences in climate, topography, geology, and hydrology. Each regional board makes water quality decisions for its region, including setting standards, issuing regional and individual permits, determining compliance with those requirements, and taking appropriate enforcement actions.

General Waste Discharge Requirements for Composting Operations

Historically, regional water boards regulated composting operations with individual waste discharge permits or conditional waivers of waste discharge permits. In 2015, SWRCB issued a statewide General Order for composting operations that includes waste discharge requirements for such facilities. (Waterboards, 2015) The General Order includes requirements to minimize the threat to water quality from discharges from composting operations, such as nutrients (e.g., nitrate), salinity (e.g., sodium chloride), pathogens, oxygen-reducing materials, sediment, and other constituents.

SWRCB developed and adopted the General Order to support the diversion of organic materials from landfills to composting operations by creating a consistent set of standards for these facilities. Standardized requirements help to streamline the permit application review process. Existing facilities have a six-year phase-in period and new facilities must comply when they commence operations.

The General Order applies to commercial composting operations that do not have a regional water board waste discharge permit or conditional waiver to such a permit. Composting operations covered by a waste discharge permit or a conditional waiver may continue discharging under that permit or conditional waiver until it expires or comes up for renewal. At that time, or earlier at the discretion of a regional water board, the regional water board should enroll eligible composting operations under the General Order, as applicable.

In 2018, SWRCB staff issued a report on the General Order's implementation. (Waterboards, 2018) This report found that 116 composting operations are operating under a waste discharge permit, conditional waiver to such a permit, or have enrolled or are in the process of enrolling for a permit. (Waterboards, 2018) As of September 2018, there are 103 composting operations that are operating under a waste discharge permit, conditional waiver to such a permit, or have enrolled or are in the process of enrolling for a permit. Of the 71 composting operations enrolled or in the process of enrolling under the General Order, 40 operations are fully enrolled. Of these fully enrolled operations, 60 percent are already in compliance, are being built to comply, or are scheduled to come into compliance by the end of 2018. The remaining operations are proposing to come into compliance within the General Order's six-year phase-in period.

The Report also describes how the General Order has expedited timelines for composting operations to receive a permit. Processing an individual waste discharge permit for a compost operation takes roughly 230 calendar days. In contrast, enrolling a composting operation under the General Order has taken an average of 169 days. Therefore, the General Order has significantly reduced permitting times, making the General Order a successful tool for streamlining regional water boards' permitting processes.

Developing a statewide order also has helped to improve the consistency of requirements for composting facilities between regional water boards. For example, the San Diego Regional Water Board developed a conditional waiver for composting facilities. However, the Lahontan Regional Water Board developed individual orders pursuant to California Code of Regulations, Title 27. The General Order provides regional water boards with a tool that provides consistent standardized statewide requirements for composting operations, while still allowing adjustments for local conditions.

In March 2018, the State Water Board directed staff to propose revisions to the General Order to improve consistency with other regional board requirements for organics management, such as manure handling at dairies. The proposed revisions will also clarify requirements for an agricultural exemption, allowing for feedstocks to be transported from other agricultural operations. SWRCB intends for these revisions to improve consistency for handling similar materials and encourage composting of agricultural materials.

3) California Air Resources Board and Air Pollution Control and Air Quality Management Districts

CARB is charged with the overall responsibility for protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change. CARB is responsible for regulating mobile source emissions and sets statewide ambient air quality standards that are generally more health protective than federal standards. CARB also oversees the regulatory activities of 35 local air districts. These districts are

regional entities that regulate stationary sources of air pollution, which can include composting operations.

The air districts must ensure the air within their boundaries comply with federal and state ambient air quality standards for ozone (smog), particulate matter and other air pollutants. CARB sets state standards at a level that is generally more protective of environmental quality and public health, including consideration of vulnerable populations. Air districts are considered to be in “nonattainment” if air pollution levels within the district’s area exceeds either federal or state standards. Air districts in “nonattainment” must submit plans that include emission reduction strategies that demonstrate how the area will comply with the applicable standards. Air districts with greater nonattainment needs may find it challenging to permit composting operations because the facilities have the potential to increase air pollution levels and hinder the ability of the areas to reach attainment.

The New Source Review Program is an air pollution control program that applies to newly constructed facilities and modifications made to existing facilities that emit or will emit over a certain level of a regulated air pollutant. State law establishes the minimum requirements for this program, which are generally more protective than the requirements under the federal Clean Air Act. Air districts must adopt New Source Review programs that meet or exceed state and federal requirements.

Under the New Source Review program, if a new or modified composting operation has the potential to emit over a specified amount of an air pollutant, the air district may require the facility to install the Best Available Control Technology to reduce the emissions of that pollutant. In addition, depending on the type and quantity of pollutants emitted, an air district may require a composting operation to mitigate or “offset” increases in emissions that occur after installation of such technology.

If a facility shuts down a permitted emission unit, or decreases emissions more than is required by any local, state, or federal rule, the facility may receive emissions reduction credits. The facility can use these credits to offset new emissions, or can sell the credits to another facility that may be increasing its emissions. Purchasing these emissions reduction credits is a potential compliance option for some composting operations, though the increased costs associated with purchasing credits can limit the utility of this option. Furthermore, some areas have no air emission reduction credits available for purchase.

B. California Department of Food and Agriculture

CDFA’s mission includes promoting and protecting a safe and healthy food supply and a commitment to environmental stewardship. The Department has focused on ways it can help to enhance the agricultural use of organic materials through the Healthy Soils Initiative. The initiative is a collaboration of state agencies and departments, led by

CDFR, to promote the development of healthy soils on California's farm and ranchlands. It is also a key part of California's strategy to reduce GHG emissions by increasing carbon sequestration in and on natural and working lands, and to make use of organic materials diverted from landfills.

The Healthy Soils Initiative relies on five primary actions to help achieve the program's goals:

- Protect and restore soil organic matter in California's soils.
- Identify sustainable and integrated financing opportunities to facilitate healthy soils.
- Provide for research, education and technical support to facilitate healthy soils.
- Increase governmental efficiencies to enhance soil health on public and private lands.
- Promote interagency coordination and collaboration to support soils and related state goals.

In addition to the Healthy Soils Initiative, CDFR also administers the Dairy Digester Research and Development Program. This program provides financial assistance for the installation of dairy digesters in California. These digesters reduce GHG emissions from manure compared to traditional forms of manure management. In 2017, the program received \$99 million to fund dairy and livestock manure management projects, of which \$69.5 million was awarded to dairy digesters in July 2018.

Another important organic materials management program is CDFR's Alternative Manure Management Program. This program provides financial assistance for the implementation of non-digester manure management practices in California. These practices must also result in reduced GHG emissions, especially from dairy and livestock operations where digesters are not economically viable. In addition to reduced methane emissions, these practices involve treatment of manure resulting in the generation of materials such as compost. Of the \$99 million allocation in 2017, roughly \$25 million will be awarded to Alternative Manure Management Program projects.

CDFR's Organic Input Material (OIM) Program registers fertilizing materials to be used in organic crop and food production. The program is mandated by the Legislature and supported by industry. Products claiming to be appropriate for use in organic production are verified to comply with the California Fertilizing Materials Law and Regulations and

the United States Department of Agriculture's National Organic Program Standards. All OIMs distributed in California must be registered with the OIM Program.

The Fertilizer Research and Education Program (FREP), which CDFA administers, facilitates and coordinates research and demonstration projects by providing funding, developing and disseminating information, and serving as a clearinghouse for information. FREP serves growers, agricultural supply and service professionals, extension personnel, public agencies, consultants, and other interested parties. FREP has funded several important studies involving compost and other organic fertilizing materials.

3. Organic Materials Management Laws

The State of California has passed several important and far-reaching laws, in addition to AB 1045, that are designed to help promote the use of organic materials. The following provides a brief overview of some of these laws.

A. Short Lived Climate Pollutants SB 1383 (Lara, Chapter 395, Stats. 2016)

SB 1383 establishes methane emissions reduction targets that will also lead to a reduction of the amount of organic waste disposed in landfills. The law requires a 50 percent reduction below 2014 levels by 2020, and a 75 percent reduction by 2025. It also requires that not less than 20 percent of currently disposed edible food be recovered for human consumption by 2025.

CalRecycle is the regulatory authority charged with achieving these organic waste disposal reduction targets. The department is currently engaged in the rulemaking process to help guide the implementation of SB 1383, and expects to have the formal regulations in place by early 2019.

SB 1383 also set a target for statewide reductions of methane of 40 percent below 2013 levels by 2030, as well as reduction targets for other short-lived climate pollutants (SLCP). The statute codified CARB's Short-Lived Climate Pollutant Reduction Strategy, which described a host of activities needed to reduce statewide emissions of these pollutants. The law provides specific direction for SLCP emissions reductions from dairy and livestock operations. It requires the formation of a dairy and livestock sector Working Group to identify and address technical, market, regulatory, and other barriers to the development of dairy methane reduction projects.

B. Mandatory Commercial Recycling Program AB 341 (Chesbro, Chapter 476, Stats. 2011)

AB 341 established a goal of recycling, composting, or reducing at least 75 percent of state's solid waste by 2020, and required a statewide mandatory commercial recycling program to help achieve this goal. The law was designed to reduce GHG emissions by diverting commercial solid waste to recycling efforts. It also encouraged expanded opportunities for additional recycling services and recycling manufacturing facilities in California. AB 341 requires businesses and public entities that generate four cubic yards or more of commercial solid waste per week, as well as multifamily residential dwelling of five units or more, to arrange for recycling services. However, the law prohibits CalRecycle from raising the state's 50 percent diversion mandate on local governments.

C. Mandatory Commercial Organics Recycling Program AB 1826 (Chesbro, Chapter 727, Stats. 2014)

AB 1826 mandates businesses recycle their organic waste on and after April 1, 2016. It phases in requirements over time based on the business' amount and type of waste, with full implementation required in 2019. Additionally, the law contains a 2020 trigger that will increase the scope of affected businesses if waste reduction targets are not met. The law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units. The law provides CalRecycle with authority to oversee implementation of the program.

D. California Global Warming Solutions Act of 2006 AB 32 (Nunez, Chapter 488, Stats. 2006)

AB 32 created a comprehensive, multi-year program to reduce GHG emissions in California to 1990 levels by 2020. The law requires CARB to develop a Scoping Plan, and update it at least every five years that describes the approach California will take to reduce GHGs emissions. Consistent with the Scoping Plan, CARB and CalRecycle work jointly to conduct research and undertake actions that will reduce methane emissions by increasing the diversion of solid waste from landfills. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels.

CARB's 2017 Climate Change Scoping Plan establishes a framework for the approaches that can be implemented to meet the 40 percent reduction target, including proposals to reduce methane emissions from organic materials slated to be diverted from landfills. (CARB, 2017c)

Section Four: Expediting Permit Decision-Making

State, regional, and local regulatory authorities already have several existing mandates and programs to expedite permit decision-making. Examples of these current tools include consolidated permits, where one agency coordinates all applicable state environmental permits; mandatory timelines for agency decision-making and approval by operation of law if timelines are exceeded; and precertification processes to expedite permit decisions. The organic materials management industry can make use of some of these existing tools to help accelerate agency decision-making. Regional and local permitting authorities can also choose to develop and apply these tools to organic materials management infrastructure projects. Using these tools for such infrastructure projects can help to streamline decision-making.

1. Permit Streamlining Act

The Permit Streamlining Act (Gov. Code, § 65920, et seq.) (Streamlining Act) establishes timelines that apply to lead and responsible public agencies with discretionary authority under CEQA to review and approve or deny applications to construct private development projects. If a project proponent requests that a permit application be subject to the Streamlining Act, then local, regional, and state agencies with discretionary decision-making authority must comply with the Act's requirements, with certain exceptions. The Act provides applicants with increased transparency on permit information requirements, timelines for agency decisions-making, limitations on agencies' ability to request additional information, authority to compel agency action, and the ability to have decisions on permits be deemed approved by operation of law.

The Streamlining Act's purpose is to expedite agency decisions on applications to construct such projects. The act uses seven approaches to achieve this goal:

- Transparent Permit Information Requirements and Timelines
- Time limits for Decision-Making on Applications
- Guidelines for Deeming Applications Complete
- Limitations on Agencies' Information Requests
- Time limits for Decision-Makings on Permits
- Guidelines for Deeming Permits Approved
- Shorter Timelines on Decisions Where Possible

The following summarizes how the Streamlining Act implements these approaches.

A. Transparent Permit Information Requirements and Decision-Making Timelines

Agencies must specify the information needed for a development project, including the requirements for a complete application, and provide this information in a list to a project proponent. Agencies must also inform an applicant of the applicable timelines for decision-making under the Act.

B. Time Limits for Decision-Making on Applications

Agencies have tight timelines for deciding whether an application is complete. Agencies must determine in writing whether an application is complete within 30 days of receiving an application, and immediately transmit this information to the applicant. If an agency provides appropriate notice of an incomplete application, the applicant can resubmit the application, which triggers a new 30-day review period. If the agency makes a second determination of incompleteness, the agency must explain how the applicant can correct the application's deficiencies. The applicant can appeal this second determination to the Secretary for Environmental Protection, unless an air pollution control district or Certified Unified Program agency made the completeness determination.

C. Guidelines for Deeming Applications Complete

If an agency fails to make the required determination within the applicable 30-day period, the application is deemed complete by operation of law. The Act also prohibits an agency from requiring the applicant to submit information equivalent to a CEQA Environmental Impact Report as a prerequisite to determining an application is complete.

D. Limitations on Agencies' Information Requests

Once an agency determines an application is complete or the application is deemed complete, the Streamlining Act prohibits the agency from requesting new or additional information not included on the information list. However, the agency can require that the applicant clarify, amplify, correct, or supplement required information.

E. Time limits for Decision-Makings on Permits

After an agency accepts an application as complete or it is deemed complete, the agency must issue public notice on a project and approve or disapprove the application within a set number of days. The number of days for making a determination varies from 60 to 180 days, depending on the type of CEQA determination and the role of the agency in the CEQA process.

F. Guidelines for Deeming Permits Approved

If an agency fails to make a permit decision within the applicable time, the permit is deemed approved by operations of law. However, deeming a permit approved can only occur after applicable notice requirements are satisfied. The Streamlining Act provides applicants with authority to compel the agency to provide such notice or to issue the notice after providing the agency with an opportunity to first issue such notice.

G. Shorter Timelines on Decisions Where Possible

The Act specifies that all required timelines are maximum limits and mandates permit decisions in shorter periods of time, if possible.

2. Air Pollution Permit Streamlining Act

The Air Pollution Permit Streamlining Act (Health & Saf. Code, § 42320, et seq.) (Air Permit Streamlining Act) requires large air pollution control districts (i.e., population of greater than 250,000) to adopt regulations expediting permitting systems. These streamlining provisions apply to new and modified facilities. Importantly, streamlined permitting must not prevent or interfere with the attainment or maintenance of any applicable air quality standard, and no permit can be issued until the appropriate air pollution control officer is satisfied the source will comply with all applicable district and state board orders, rules, and regulations. Districts subject to the Air Permit Streamlining Act must include seven types of streamlining tools in their regulations, while districts with more than 500,000 people must include several other tools.

The following text provides a summary of some of these streamlining tools:

A. Precertification Program for Equipment

Districts must include a precertification program for mass-produced equipment operated by numerous sources under the same or similar conditions. This allows permit applicants who purchase such equipment to receive permits in an expedited fashion.

B. Consolidated Permitting Process

Districts must develop a consolidated permitting process for any source that requires more than one permit. This provides a single point of contact for the permit applicant, and allows a source to be reviewed and permitted on a single, consolidated schedule.

C. Expedited Permit Review Schedule

An expedited permit review schedule based upon the types and amount of pollution emitted from sources. This must include a permit action schedule with specific deadlines for an air pollution control officer to notify an applicant in writing of the approval or disapproval of a permit application.

D. Training and Certification Program for the Private Sector

A private sector training and certification program. This establishes a pool of professionals who can certify businesses' compliance with district rules and regulations.

E. Standardized Permit Application Forms

A standardized permit application form must be provided and written in clear and understandable language. This provides applicants with straightforward information on completing forms.

F. Consolidated Construction and Operational Permit Process

The processes of permitting a facility to construct and operate should be consolidated into a single permit process to eliminate the process of inspecting and analyzing a facility after it is constructed to ensure it complies with permit conditions. This can reduce processing time and paperwork for applicants. However, a district must determine such consolidation will not adversely affect public health and safety or the environment before allowing its use.

3. California Office of Permit Assistance

The Governor's Office of Business and Economic Development (Go Biz) houses the Permit Assistance Program. This program provides businesses with one centralized information source on permitting and regulatory compliance issues. (Gov. Code, § 12097 et seq.) The program provides mediation and third-party facilitation to help resolve conflicts between applicants and permitting and regulatory entities. The program also works with federal, state, regional, and local permitting and regulatory entities to exchange best practices and implement improvements to permitting processes.

4. Consolidated Permitting Process at CalEPA

A consolidated permitting process exists at CalEPA that allows a permit applicant to request one agency to coordinate all of their state environmental permits, including permits issued by regional water boards and air pollution control districts. (Pub, Resources Code, § 71020 et seq.) A consolidated permit process helps

facilitate permitting decisions by providing a single point of contact for multiple permits, identifying needed permits and information earlier in the permitting process, and reducing the need to provide duplicate information to different agencies. However, the consolidated permitting process does not authorize CalEPA to require local permitting authorities to participate in this process.

Applicants interested in utilizing the consolidated permitting process can request a pre-meeting to discuss the proposed project and applicable permits. If the applicant decides to use the consolidated permitting process, the applicant can request that CalEPA designate a consolidated permit agency to administer the processing and issuance of a consolidated permit. The Secretary of CalEPA reviews the information and must designate a consolidated permit agency within 30 days of receiving a complete request.

Within five days, the consolidated permit agency must notify the applicant of the designation and schedule a meeting to occur within 15 days of the designation for representatives of all participating permitting agencies to meet with the applicant. The consolidated permit agency gives each participating agency and the applicant the information needed to complete each permit, and the parties agree to a plan, including timelines for each participating agency to process the permit. Agencies establish timelines for determining the completeness of the application, reviewing the applications, processing each permit, and for consolidating the issued permits.

Following the meeting, applications are submitted to the permitting agencies, and each agency has 30 days to determine if the application is complete. The agreed upon plan guides the participating agencies' processing of the application and review of information. The agencies can request additional information to clarify or supplement the information the applicant originally provided within 30 days of receiving the application. The consolidated permit agency is responsible for ensuring participating agencies perform the work needed to process the permits within the agreed-upon timelines. The consolidated permit agency must compile permits and provide them to the applicant within 30 days after the last participating agency issues its permit.

Section Five: Recommendations for Action

This section describes recommended actions that state, regional, and local agencies may consider taking to help facilitate siting and permitting decisions for organic materials management infrastructure. These recommendations provide options that can be implemented individually or in conjunction with other actions to help accelerate decision-making. Any such expedited decision-making must occur while meeting or exceeding all applicable local, regional, state, and federal requirements for public input and safeguards for public health and the environment. The intent of expediting decision-making for organic materials management infrastructure is to make timelier decisions and help achieve the state’s organic waste diversion and GHG reduction goals. These recommended actions promote the following five policy goals:

- **Facilitate Local Government Decision-Making:** Provide local governments with further guidance, as appropriate, on siting and permitting infrastructure and conducting a CEQA analysis.
- **Enhance Transparency and Community Input:** Comply with all federal public health and environmental safeguards, while working to assess and address community concerns in a transparent fashion early in the process.
- **Incentivize Organic Material Management Infrastructure:** Incentivize the organics industry to invest resources in constructing new organics materials management infrastructure by enhancing demand for such materials, including compost and value-added composting products and soil amendments.
- **Expedite Permit Decision-Making:** Expedite the processing of state and regional environmental permits for organics management infrastructure through providing enhanced guidance, coordination and administrative tools to facilitate permit reviews and decisions.
- **Enhancing Supply:** Help to enhance the supply of organics in urban and rural areas.

Developing and implementing these actions should occur with more intensive engagement and on-going dialogue with representatives from local governments, regional permitting officials, organics management industry, and environmental justice communities. These actions should build on existing administrative transparency

protections in current processes, with opportunities for input from all interested stakeholders.

Much of the work on expediting permit reviews must occur in conjunction with regional air and water permitting officials because they are the key decision-makers for these facilities. The San Joaquin Valley Air Pollution Control District, South Coast Air Pollution Control District, Bay Area Air Quality Management District, San Diego Air Pollution Control District, Central Valley Regional Water Quality Control Board and San Francisco Regional Water Quality Control Board are some examples of these important decision-making bodies. “Regional permitting officials,” when used in these recommendations includes the California Air Pollution Control Officers Association (CAPCOA) and regional water boards.

These recommendations provide tools to help address issues that may arise when making siting and permitting decisions on organic materials management infrastructure. Some of these tools build on each other and others overlap. Regulatory officials may decide to apply some tools at a specific location or for a particular operation, while applying others more programmatically. Ultimately, officials will make decisions on which tools to apply and the scope of such application based on various factors, including available resources, the participation of regional officials, and the views of people in local communities.

1. Recommendations to Assist Local Governments

A. Local Government Organics Management Survey

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with regional permitting officials, should consider surveying an array of local government representatives at the county and municipal level and organic materials management representatives to better understand local government’s needs when making siting decision for infrastructure. This could include asking questions about common issues that arise in the siting processes (e.g., availability and effectiveness of nuisance controls and transportation impacts). This could be done as part of developing new or additional guidance as described in Recommendation 1B, below. The survey’s results could provide state and regional officials with information to bolster their on-going coordination on projects.

B. Local Government and Project Proponent Technical Assistance

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with the Office of Planning and Research and regional permitting officials, should consider developing and providing information and draft guidance to local governments to help facilitate siting and CEQA decision-making for organic materials management infrastructure. This could include information that responds to the survey results from 1A, above. This guidance should also

provide project proponents with information on working with local governments to navigate these decision-making processes.

2. Working with Local and Vulnerable Community Groups

A. Community Surveys and Outreach

Project proponents could work with local governments to conduct surveys of communities to understand community questions and perceptions about proposed organic materials management projects. These surveys could be conducted prior to initiating the siting or permitting processes. CalEPA, CalRecycle, SWRCB and CARB could help to facilitate input from community organizations to assist in such surveys.

B. Community Forums

CalEPA, CalRecycle, SWRCB and CARB should consider participating in Community Forums for certain high-priority organic materials management infrastructure projects early in the project's development. Project proponents, working with community members and officials from local government and state permitting departments, can host these forums. This could provide an opportunity for project proponents, local government, and permitting officials to gather input from community members about a project and discuss ways of addressing potential concerns before the project is fully developed. A Community Forum could also provide community representatives with an opportunity early in the process to understand the project's scope, its range of potential benefits and impacts, the process used to make siting and permitting decisions, and to provide a space for discussion about the potential development of agreements related to the project. Early community engagement in the process is one way to avoid later delays.

C. Standardized Terms and Conditions for Permits

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with regional permitting authorities and environmental justice representatives, should consider developing standardized language to address environmental justice issues that may arise with organic materials management infrastructure. While permitting authorities would be free to modify such language, crafting standardized text can help to jumpstart the conversation about how best to address potential community concerns. A similar effort could be considered with local government officials that make siting decisions for organic materials management infrastructure.

3. Working with Organic Materials Management Representatives

A. Organic Materials Management Permitting Workgroup

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with regional permitting officials, should consider creating a permitting workgroup. This workgroup would facilitate permitting decision-making for high-priority projects. The workgroup could solicit input from industry representatives on siting and permitting issues. This could provide officials with an opportunity to hear about difficulties in constructing organic materials management infrastructure and develop ways to help overcome such challenges.

B. Public Siting and Permitting Roundtables

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with regional permitting officials and local governments, should consider conducting public roundtable discussions in different areas of the state to describe and engage the public in a discussion about the siting and permitting process for different types of organic management facilities. Representatives of permitting and siting departments could broadly describe the project planning and application review process; key decision-making points; and important information needs to help expedite siting and permitting decision-making. Individual roundtables could discuss different types of facilities using various types of production and pollution control technologies. Roundtables likely should be divided between facilities located on-farms and off-farms, given the unique factors between these types of facilities.

4. Working to Enhance Market Demand for Organic Materials

A. Organic Materials Procurement Goals

CalEPA, CalRecycle, CARB, and CDFA should consider working with other state offices to determine if opportunities exist to enhance state and local government procurement of compost and other value-added soil amendments, as well as biogas products for the transportation sector to help drive the market for such products. CalRecycle should consider including local government procurement requirements in its SB 1383 regulations as an additional incentive to help to foster a more vibrant market for value-added organic materials products. CDFA's Healthy Soils Initiative also holds great potential for supporting the increased application of compost on agricultural land. The state government entities listed above should work together to develop actions to provide additional incentives for the production and use of value-added organic materials products, such as compost.

B. Researching Organic Materials and Energy Management Benefits

CalEPA, CDFR, CalRecycle, SWRCB, and CARB should conduct a literature review to identify existing high-quality information on economic, energy and other issues related to organic material management. The review could identify methods to quantify and monetize the benefits of using compost, mulch, digestate, and value-added soil amendment products. This could include research on using such products to enhance soil water retention, soil health, the relative levels of air pollutant emissions from producing different types of organic materials, stormwater controls, and job creation effects from creating infrastructure. As resources allow, the literature review should also identify knowledge gaps to provide direction on future research needs.

This research could provide useful insights into how such benefits can be enhanced. It could also be used to develop plainspoken educational material describing the benefits to agricultural sectors, local governments and other entities from using organic materials.

5. Expediting Permit Reviews

A. Plainspoken Permitting Guidance

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with regional permitting officials, should consider developing guidance documents that describe how different permit requirements (i.e., compost facility permits, air pollution control permits, waste discharge permits) apply to different types of organic materials management infrastructure. Such guidance could describe the application of these requirements to composting operations that use different types of technologies to create compost and mixed-use facilities, such as landfills with composting operation. The guidance could include a narrative on the permitting process, permitting flowchart, and easy-to-understand information on permitting requirements.

The development of such guidance could benefit from an interactive dialogue with representatives from the organic materials management sector. This guidance should also describe the areas where decision-making at the local level transitions to include permitting through regional permitting officials, as described in 1B, above.

B. Enhance CalEPA's Consolidated Permit Review Process

1) Survey Industry Representatives on the Consolidated Permitting Process

CalEPA, CalRecycle, and Go Biz should consider surveying organic materials management representatives about whether they plan to use the existing consolidated permit review process for infrastructure projects. This outreach could also include input on suggested enhancements to this process.

The survey should query stakeholders on the utility of the next two recommendations to determine whether the recommendations should be pursued and, if so, the timeline for any such development.

2) Early Coordination Teams with Permit Applicants

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with Go Biz and regional permitting officials, should consider creating a team of permitting officials designated to work with people who intend to submit applications for consolidated permits to operate organic materials management infrastructure. This group could overlap with the organic materials management permitting workgroup described in 3A, above.

C. Creating On-Line Tools for Organics Materials Management Infrastructure

CalEPA, CalRecycle, SWRCB, and CARB, in conjunction with Go-Biz and regional permitting officials, should consider developing on-line tools for organic materials management infrastructure. The survey in B1, above, can provide additional information on the utility of these and other potential actions to help facilitate decision-making on the development of organic material management infrastructure. The following recommendations provide some examples of the types of tools that can be included in any such survey.

1) Best Practices Information Exchange

Provide a centralized online location for local, regional and state government information on Best Practices used in project development, siting, CEQA, and the provision of information during permit reviews.

2) Mapping Information Relevant to Organic Materials Infrastructure

Develop a mapping tool that allows stakeholders to visualize information on relevant factors when considering organic materials management infrastructure. The tool could include information on areas containing large amounts of nitrogen and carbon, local zoning designations, transportation corridors, existing levels of pollution and demographic information (e.g., CalEnviroScreen) and other useful data. The tool's purpose is to provide stakeholders with information that will facilitate their participation in decision-making on policy-based questions and practical issues that may arise in the development of organic materials management infrastructure projects.

D. Standardized Emission Factors

CARB, in conjunction with the CAPCOA, should issue standardized emission factors for organic materials management infrastructure to help facilitate siting, CEQA, and permitting decisions. Emissions factors are representative of the emissions expected from regulated activities or permitted units within a facility. In addition to being used in making permitting decisions, air districts can use emissions factors to develop an inventory of emissions within their area to help in developing attainment plans. Issuing such emissions factors could help to standardize assumptions used in permitting organic materials management infrastructure, and would provide transparency on anticipated requirements. It should be noted that even if CARB issued such emissions factors, air districts may use other emission factors in their decision making if data is available that better quantifies the emissions from any individual facility.

E. Standardized Emissions Control Measures

CARB, in conjunction with the CAPCOA, should issue recommended control measures for organic materials management infrastructure to help facilitate CEQA and permitting decision-making. Such control measures can help to standardize assumptions used in permitting decisions. State law allows local air districts to use other control measures or to adopt standardized measures.

F. Recommended Mitigation Measures for Organic Materials Management Infrastructure

CalRecycle, SWRCB, and CARB should develop and issue recommended mitigation measures to help facilitate siting, CEQA compliance, and permit decision-making for organic materials management infrastructure. All three processes require information about a facility's potential impacts. Providing this information can help facilitate more rapid decision-making by relevant government agencies. This work can build on CARB and the CAPCOA's work creating examples of mitigation measures for GHG emissions. This information would help to inform guidance documents described in 1B and 5A, above.

G. Potential Application of Net Air Emissions Analysis to Expanded Facilities

CARB, in conjunction with CalRecycle and CAPCOA, should provide guidance on specific project types that are allowed by the Clean Air Act to net air emissions from expanding existing operations, such as a landfill, to include an organic management facility for the purposes of ensuring compliance with New Source Review. In order to net air emissions between two facilities, both facilities being must be owned and operated by the same entity, and be considered a single stationary source. For example, a "net" air

emissions analysis could examine emissions at a landfill that proposes to build a compost operation onsite rather than continuing to landfill organic matter. This guidance could allow a project to analyze net air pollution emissions before and after a project is constructed at such facilities. If this methodological tool is available to infrastructure project developers, it could help facilitate improved management of organic material using required air pollution controls practices and technologies.

H. Survey Regional Organics Demand and Management Infrastructure Needs

CalRecycle and CDFA should consider periodically assessing and publishing supply data and market opportunities to enhance the demand for organic materials and the need for organic materials management infrastructure. This information can help to inform organic materials management industry representatives and local governments about potential development opportunities. CalRecycle is already undertaking an infrastructure study as part of its implementation of SB 1383. This can provide a good model for future surveys. Surveys could also query state agencies, such as the California Department of Transportation, that purchase large amount of compost material for projects.

I. Continue to Assess Implementation of the Compost General Order

CalEPA should continue to work with SWRCB to assess the status of the Compost General Order's implementation, associated water quality benefits, effectiveness of stakeholder outreach, compliance costs, and other issues.

References

Anuj Kumar, 2011: Anuj Kumar, et al., Volatile organic compound emissions from green waste composting: Characterization and ozone formation, 45 Atmospheric Environment 1841 (2011)

CARB, 2016: California Air Resources Board, 2016 SIP Emissions Projection Data, Annual Average Emissions, Statewide, Waste Disposal, 199-Other (Waste Disposal) (located at: https://www.arb.ca.gov/app/emsinv/2017/emseic_query.php?F_YR=2012&F_DIV=-4&F_SEASON=A&SP=SIP105ADJ&SPN=SIP105ADJ&F_AREA=CA&F_EICSUM=199) (last checked on: 11-21-2018)

CARB, 2016a: California Air Resources Board, Facts About Ozone and Health (2016)

CARB, 2017: California Air Resources Board, Short-Lived Climate Pollutant Reduction Strategy (2017)

CARB, 2017a: California Air Resources Board, Ammonia Emission Inventory Methodology Documentation (located at: <https://www.arb.ca.gov/ei/areasrc/ammonia.htm>) (last checked on: 11-21-2018)

CARB, 2017b: California Air Resources Board, Inhalable Particulate Matter and Health (PM_{2.5} and PM₁₀) (located at: <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>) (last checked on: 11-21-2018)

CARB, 2017c: California Air Resources Board, California's 2017 Climate Change Scoping Plan (2017) (located at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf) (last checked on: 11-21-2018)

CalRecycle, 2017: CalRecycle, Permit Toolbox: CEQA, Disposal Facility Outline for Environmental Review Documents (located at: <https://www.calrecycle.ca.gov/swfacilities/permitting>) (last checked on: 11-21-2018)

CalRecycle, 2017a: CalRecycle, Compostable Materials, Odor Webpage (located at: <https://www.calrecycle.ca.gov/swfacilities/compostables/odor>) (last checked on 11-21-2018)

CalRecycle, 2017b: CalRecycle, Permit Toolbox: CEQA Compost Facility Outline for Environmental Review Documents Webpage (located at:

<https://www.calrecycle.ca.gov/SWFacilities/Permitting/ceqa/Documents/Guidance/Compost>) (Last checked on 11-21-2018)

CDFA, 2016: California Department of Agriculture, Healthy Soils Action Plan (2016)

CDFA, 2017: California Department of Food and Agriculture, California Agricultural Production Statistics, 2017 Crop Year Report (located at: <https://www.cdfa.ca.gov/statistics/>) (last checked on: 11-21-2018)

California Natural Resources Agency, 2012: California Natural Resources Agency, Our Changing Climate (2012)

California Natural Resources Agency, 2017: California Air Resources Board, Short-Lived Climate Pollutant Strategy (2017)

USGS, 2016: U.S. Geological Survey, Nutrients in the Nation's Waters--Too Much of a Good Thing?, Circular 1136 (Last modified on November 23, 2016)

Waterboards, 2015: State Water Resources Control Board Order WQ 2015-0121-DWQ, General Waste Discharge Requirements for Composting Operations, Finding Number 6 (2015)

Waterboards, 2015a: State Water Resources Control Board, Safe Drinking Water Plan for California (2015)

Waterboards, 2016: California Department of Water Resources, Salt and Salinity Management (2016)

Waterboards, 2018: State Water Resources Control Board, Implementation of General Waste Discharge Requirements for Composting Operations (Order WQ 2015-0121-DWQ) (2018)